

INFORMATION TECHNOLOGY SERVICES ITQ

REQUEST FOR QUOTATIONS TO

**MIGRATE PLCB APPLICATIONS TO OA COMPUTING
SERVICES DATA CENTERS**

ISSUING OFFICE

**PENNSYLVANIA LIQUOR CONTROL BOARD
BUREAU OF PURCHASING AND CONTRACT ADMINISTRATION
ROOM 316, NORTHWEST OFFICE BUILDING
HARRISBURG, PENNSYLVANIA 17124**

RFQ NUMBER 20131104

DATE OF ISSUANCE

July 28, 2014

The Pennsylvania Liquor Control Board, Bureau of Purchasing and Contract Administration, has posted solicitation #20131104 to “Migrate PLCB Applications to OA Computing Services Data Centers” Please go to the Pennsylvania Department of General Service eMarketplace web site: <http://www.emarketplace.state.pa.us/> to view and download all documentation pertaining to this solicitation.

This is a restricted solicitation, only those contractors qualified in the following service category under the Commonwealth’s Information Technology (IT) Services Invitation to Qualify (ITQ) Contract, [4400004480](#), prior to the bid opening date may respond:

- IT Consulting - General

Organizations interested in doing business with the Commonwealth through this contract must begin by registering with the Commonwealth as a Procurement Supplier. For more information about registration, please view the [Registration Guide](#).

Once an organization is registered with the Commonwealth, they must develop and submit a bid through the [PASupplierPortal Website](#) in order to qualify for one, all, or any combination of the service categories associated with this contract. The Commonwealth will evaluate the bid along with all supporting documentation to determine whether the organization meets the minimum eligibility requirements.

For more information about the Commonwealth’s Invitation to Qualify contracts and their policies, please visit the [ITQ Website](#).

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TO

MIGRATE PLCB APPLICATIONS TO OA COMPUTING SERVICES DATA CENTERS

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CALENDAR OF EVENTS

The Pennsylvania Liquor Control Board will make every effort to adhere to the following schedule:

Activity	Responsibility	Date
Deadline to submit first round of questions via email to the Issuing Officer: Philip Friedrich at pfriedrich@pa.gov	Contractors	10:00 AM Monday, August 4, 2014
Pre-proposal Conference – Room 117, Northwest Office Building, 910 Capital Street, Harrisburg, PA 17124.	Issuing Office/ Contractors	1:30 PM Monday, August 11, 2014
Answers to questions from Pre-proposal conference posted to the DGS website http://www.emarketplace.state.pa.us/Search.aspx no later than this date.	Issuing Office	Monday, August 18, 2014
Please monitor the DGS website for all communications regarding the RFQ.	Contractors	Regularly until proposal due date
Sealed proposal must be received by the Issuing Office at: Pennsylvania Liquor Control Board, Bureau of Purchasing and Contract Administration, Room 316 Northwest Office Building, 910 Capital St., Harrisburg, PA 17124-0001.	Contractors	1:00 PM Tuesday, September 9, 2014

PART I

GENERAL INFORMATION

I-1. Purpose

This Request for Quotes ("RFQ") provides to those interested in submitting proposals for the subject procurement ("Contractors") sufficient information to enable them to prepare and submit proposals for the Pennsylvania Liquor Control Board ("PLCB")'s consideration on behalf of the Commonwealth of Pennsylvania ("Commonwealth") to satisfy a need to "Migrate PLCB Applications to OA Computing Services Data Centers" ("Project").

I-2. Issuing Office

The PLCB ("Issuing Office") has issued this RFQ on behalf of the Commonwealth. The sole point of contact in the Commonwealth for this RFQ is Philip Friedrich, the Issuing Officer for this RFQ, Bureau of Purchasing and Contract Administration, Northwest Office Building, 910 Capital Street, Room 316, Harrisburg, PA 17124-0001, pfriedrich@pa.gov. Please refer all inquiries to the Issuing Officer.

I-3. Scope

This RFQ contains instructions governing the requested proposals, including the requirements for the information and material to be included; a description of the service to be provided; requirements which Contractors must meet to be eligible for consideration; general evaluation criteria; and other requirements specific to this RFQ.

I-4. Problem Statement

The Commonwealth of Pennsylvania's Office of Administration (OA) is implementing a new datacenter service model that will transition the Commonwealth from what is currently a number of individually managed datacenters with different levels of service to an enterprise level datacenter architecture. The enterprise level datacenter will offer a common set of basic services combined with specialized services dependent upon specific customer requirements.

The purpose of this RFQ is to select a Contractor to provide a solution to migrate all applications identified in Appendices P, Q, and LL to OA's chosen Contractor for enterprise-level datacenter architecture and through that increase self-service options, reduce costs, develop an automated cloning process, and simplify disaster recovery. The selected Contractor will provide knowledge transfer to PLCB staff throughout this process while also allowing the PLCB to continue to operate its retail and regulatory businesses. Additional detail is provided in **Part IV** of this RFQ.

The Commonwealth's Data Center Computing Services initiative is defined in RFP 6100022698, "[Data Center Computing Services](#)" issued on November 30, 2012.

I-5. Pre-proposal Conference

The Issuing Office will hold a pre-proposal conference as specified in the Calendar of Events. The purpose of this conference is to provide opportunity for clarification of the RFQ. Contractors should forward all questions to the Issuing Office in accordance with **Part I Section I-6** to ensure adequate time for analysis before the Issuing Office provides an answer. Contractors may also ask questions at the conference. In view of the limited facilities available for the conference, Contractors should limit their representation to two (2) individuals per Contractor. The pre-proposal conference is for information only. Any answers furnished during the conference will not be official until they have been verified, in writing, by the Issuing Office. All questions and written answers will be posted on the

Department of General Services' ("DGS") website (www.emarketplace.state.pa.us) as an addendum to, and shall become part of, this RFQ. Attendance at the Pre-proposal Conference is optional.

I-6. Questions and Answers

If a Contractor has any questions regarding this RFQ, the Contractor must submit the questions by email (with the subject line "IT ITQ RFQ 20131104 Question") to the Issuing Officer. Questions must be submitted via email no later than the date and time specified in the Calendar of Events. The Contractor shall not attempt to contact the Issuing Officer by any other means and questions may not be submitted through any other method. The Issuing Officer will post the answers to the DGS website.

All questions and responses as posted on the DGS website are considered as an addendum to, and part of, this RFQ. Each Contractor shall be responsible to monitor the DGS website for new or revised RFQ information. The Issuing Office shall not be bound by any verbal information nor shall it be bound by any written information that is not either contained within the RFQ or formally issued as an addendum by the Issuing Office. The Issuing Office does not consider questions to be a protest of the specifications or of the solicitation.

I-7. Addenda to RFQ

If the Issuing Office deems it necessary to revise any part of this RFQ before the proposal response date, the Issuing Office will post an addendum to the DGS website. Answers to the questions asked during the questions and answer period will also be posted to the DGS website as an addendum to the RFQ.

I-8. Electronic Version of RFQ

This RFQ is being made available by electronic means. The Contractor acknowledges and accepts full responsibility to insure that no changes are made to the RFQ. In the event of a conflict between a version of the RFQ in the Contractor's possession and the Issuing Office's version of the RFQ, the Issuing Office's version shall govern.

I-9. Response Date

To be considered, proposals must arrive at the Issuing Office on or before the time and date specified in the RFQ Calendar of Events. Contractors that mail proposals should allow sufficient mail delivery time to ensure timely receipt of their proposals. If, due to inclement weather, natural disaster, or any other cause, the Issuing Office location to which proposals are to be returned is closed on the proposal response date, the deadline for submission shall be automatically extended until the next Commonwealth business day on which the office is open, unless the Issuing Office otherwise notifies Contractors by posting an Addendum to the RFQ. The time for submission of proposals shall remain the same. Late proposals will not be considered.

I-10. Incurring Costs

The Issuing Office is not liable for any costs the Contractor incurs in preparation and submission of its proposal, in participating in the RFQ process or in anticipation of award of a purchase order.

I-11. Economy Of Preparation

Contractors should prepare proposals simply and economically, providing a straightforward, concise description of the Contractor's ability to meet the requirements of the RFQ.

I-12. Small Diverse Business Information

The Issuing Office encourages participation by small diverse businesses as prime contractors, and encourages all prime contractors to make a significant commitment to use small diverse businesses as subcontractors and suppliers.

A Small Diverse Business is a DGS-certified minority-owned business, woman-owned business, veteran-owned business or service-disabled veteran-owned business.

A small business is a business in the United States which is independently owned, not dominant in its field of operation, employs no more than 100 full-time or full-time equivalent employees, and earns less than \$7 million in gross annual revenues for building design, \$20 million in gross annual revenues for sales and services and \$25 million in gross annual revenues for those businesses in the information technology sales or service business.

Questions regarding this Program can be directed to:

Department of General Services
Bureau of Small Business Opportunities
Room 611, North Office Building
Harrisburg, PA 17125
Phone: (717) 783-3119
Fax: (717) 787-7052
Email: gs-bsbo@pa.gov
Website: www.dgs.state.pa.us

The Department's directory of BSBO-verified minority, women, veteran and service disabled veteran-owned businesses can be accessed from: [Searching for Small Diverse Businesses](#).

I-13. Proposals

To be considered, **Contractors should submit** a complete response to this RFQ to the Issuing Office, using the format provided in Part II, providing **fifteen (15) paper copies of the Technical Submittal and one (1) paper copy of the Cost Submittal and two (2) paper copies of the Small Diverse Business (SDB) participation submittal.**

In addition to the paper copies of the proposal, Contractors shall submit **two (2) complete and exact copies of the entire proposal (Technical, Cost and SDB submittals, along with all requested documents) on CD-ROM or Flash drive** in Microsoft Office or Microsoft Office-compatible format. The electronic copy must be a mirror image of the paper copy and any spreadsheets must be in Microsoft Excel. The Contractors may not lock or protect any cells or tabs. Contractors should ensure that there is no costing information in the technical submittal. Contractors should not reiterate technical information in the cost submittal. The CD or Flash drive should clearly identify the Contractor and include the name and version number of the virus scanning software that was used to scan the CD or Flash drive before it was submitted. The Contractor shall make no other distribution of its proposal to any other Contractor or Commonwealth official or Commonwealth consultant. Each proposal page should be numbered for ease of reference.

An official authorized to bind the Contractor to its provisions must sign the proposal. If the official signs the Proposal Cover Sheet (**Appendix A**) and the Proposal Cover Sheet is attached to the Contractor's proposal, the requirement will be met. For this RFQ, the proposal must remain valid until a purchase order is issued. If the Issuing Office selects the Contractor's proposal for award, the contents of the selected Contractor's proposal will become, except to the extent the contents are changed through Best and Final Offers or negotiations, contractual obligations.

Each Contractor submitting a proposal specifically waives any right to withdraw or modify it, except that the Contractor may withdraw its proposal by written notice received at the Issuing Office's address for proposal delivery prior to the exact hour and date specified for proposal receipt. A Contractor or its

authorized representative may withdraw its proposal in person prior to the exact hour and date set for proposal receipt, provided the withdrawing person provides appropriate identification and signs a receipt for the proposal. A Contractor may modify its submitted proposal prior to the exact hour and date set for proposal receipt only by submitting a new sealed proposal or sealed modification which complies with the RFQ requirements.

I-14. Alternate Proposals

The Issuing Office will not accept alternate proposals. The Issuing Office has identified the basic approach to meeting its requirements, allowing Offerors to be creative and propose their best solution to meeting these requirements.

I-15. Proposal Contents

- A. Confidential Information. The Commonwealth is not requesting, and does not require, confidential proprietary information or trade secrets to be included as part of Contractors' submissions in order to evaluate proposals submitted in response to this RFQ. Accordingly, except as provided herein, Contractors should not label proposal submissions as confidential or proprietary or trade secret protected. Any Contractor who determines that it must divulge such information as part of its proposal must submit the signed written statement described in subsection C. below and must additionally provide a redacted version of its proposal, which removes only the confidential proprietary information and trade secrets, for required public disclosure purposes.
- B. Commonwealth Use. All material submitted with the proposal shall be considered the property of the Commonwealth of Pennsylvania and may be returned only at the Issuing Office's option. The Commonwealth has the right to use any or all ideas not protected by intellectual property rights that are presented in any proposal regardless of whether the proposal becomes part of a purchase order. Notwithstanding any Contractor copyright and/or trademark designations contained on proposals, the Commonwealth shall have the right to make copies and distribute proposals internally and to comply with public record or other disclosure requirements under the provisions of any Commonwealth or United States statute or regulation, or rule or order of any court of competent jurisdiction.
- C. Public Disclosure. After the award of a purchase order pursuant to this RFQ, all proposal submissions are subject to disclosure in response to a request for public records made under the Pennsylvania Right-to-Know-Law, 65 P.S. § 67.101, et seq. If a proposal submission contains confidential proprietary information or trade secrets, a signed written statement to this effect must be provided with the submission in accordance with 65 P.S. § 67.707(b) for the information to be considered exempt under 65 P.S. § 67.708(b)(11) from public records requests (*See Appendix E, Trade Secret/Confidential Proprietary Information Notice*). Financial capability information submitted in response to **Part II, Section II-8** of this RFQ is exempt from public records disclosure under 65 P.S. § 67.708(b)(26).

I-16. Contractor's Representations and Authorizations

By submitting its proposal, each Contractor understands, represents, and acknowledges that:

- A. All of the Contractor's information and representations in the proposal are true, correct, material and important, and the Issuing Office may rely upon the contents of the proposal in making an award. The Commonwealth shall treat any misstatement, omission or misrepresentation as fraudulent concealment of the true facts relating to the proposal submission, punishable pursuant to 18 Pa. C. S. § 4904.

- B. The Contractor has arrived at the price(s) and amounts in its proposal independently and without consultation, communication, or agreement with any other Contractor or potential Contractor.
- C. The Contractor has not disclosed the price(s), the amount of the proposal, nor the approximate price(s) or amount(s) of its proposal to any other firm or person who is a Contractor or potential Contractor for this RFQ, and the Contractor shall not disclose any of these items on or before the proposal submission deadline specified in the Calendar of Events of this RFQ.
- D. The Contractor has not attempted, nor will it attempt, to induce any firm or person to refrain from submitting a proposal on this purchase order, or to submit a proposal higher than this proposal, or to submit any intentionally high or noncompetitive proposal or other form of complementary proposal.
- E. The Contractor makes its proposal in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive proposal.
- F. To the best knowledge of the person signing the proposal for the Contractor, the Contractor, its affiliates, subsidiaries, officers, directors, and employees are not currently under investigation by any Local, State, or Federal governmental agency and have not in the last **four (4)** years been convicted or found liable for any act prohibited by Local, State or Federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding or proposing on any public contract, except as the Contractor has disclosed in its proposal.
- G. To the best of the knowledge of the person signing the proposal for the Contractor and except as the Contractor has otherwise disclosed in its proposal, the Contractor has no outstanding, delinquent obligations to the Commonwealth including, but not limited to, any state tax liability not being contested on appeal or other obligation of the Contractor that is owed to the Commonwealth.
- H. The Contractor is not currently under suspension or debarment by the Commonwealth, any other state or the federal government, and if the Contractor cannot so certify, then it shall submit along with its proposal a written explanation of why it cannot make such certification.
- I. The Contractor has not made, under separate contract with the Issuing Office, any recommendations to the Issuing Office concerning the need for the services described in its proposal or the specifications for the services described in the proposal. (*See Pennsylvania State Adverse Interest Act*)
- J. The Contractor, by submitting its proposal, authorizes Commonwealth agencies to release to the Commonwealth information concerning the Contractor's Pennsylvania taxes, unemployment compensation and workers' compensation liabilities.
- K. The selected Contractor shall not begin to perform until it receives purchase order from the Commonwealth.

I-17. Restriction Of Contact

From the issue date of this RFQ until the Issuing Office selects a proposal for award, the Issuing Officer is the sole point of contact concerning this RFQ. Any violation of this condition may be cause for the Issuing Office to reject the offending Contractor's proposal. If the Issuing Office later discovers that the Contractor has engaged in any violations of this condition, the Issuing Office may reject the offending Contractor's proposal or rescind its purchase order award. Contractors must agree not to distribute any part of their proposals beyond the Issuing Office. A Contractor who shares information contained in its

proposal with other Commonwealth personnel and/or competing Contractor personnel may be disqualified.

I-18. Prime Contractor Responsibilities

The selected Contractor will be required to assume responsibility for all services offered in its proposal whether it produces them itself or by subcontract. The Issuing Office and Project Manager will consider the selected Contractor to be the sole point of contact with regard to contractual and purchase order matters.

I-19. Resources

Contractors shall provide all services, supplies, facilities, and other support necessary to complete the identified work, except as otherwise provided in this **Part I-19**.

The selected Contractor's team must work at the PLCB's Central Office in the Northwest Office Building, Harrisburg, PA. Unless otherwise agreed to by the PLCB selected Contractor's team member work schedules must, at a minimum, include the hours of 8:00 a.m. until 5:00 p.m. Monday through Friday, with the option to work off-site on Friday. Some night and weekend work is to be expected due to the nature of this project. The PLCB will provide work space for the selected Contractor's team members in the Northwest Office Building. The amount of workspace provided will be at the PLCB's discretion. Work space will consist of a desk or table and a personal computer attached to the PLCB's network with the PLCB's standard software and configuration. No telephone or clerical support will be provided.

To assist Contractors in evaluating the staffing and effort needed to accomplish the task, the PLCB has provided **Appendix N**. This appendix is a list of the PLCB's IT staff related to this project and the percentage of their time that can be dedicated to the project.

Selected Contractors should assume that they must provide any other personnel required.

I-20. Rejection Of Proposals

The Issuing Office reserves the right, in its sole and complete discretion, to reject any proposal received in response to this RFQ, or to negotiate separately with competing Contractors.

I-21. Discussions for Clarification

Contractors may be required to make an oral or written clarification of their proposals to the Issuing Office to ensure thorough mutual understanding and contractor responsiveness to the solicitation requirements. The Issuing Office will initiate requests for clarification. Clarifications may occur at any stage of the evaluation and selection process prior to issuance of a purchase order.

I-22. Best and Final Offer (BAFO)

A. While not required, the Issuing Office reserves the right to conduct discussions with Contractors for the purpose of obtaining "Best and Final Offers." To obtain Best and Final Offers from Contractors, the Issuing Office may do one or more of the following, in combination and in any order:

1. Schedule oral presentations;
2. Request revised proposals; and
3. Enter into pre-selection negotiations.

B. The following Contractors will **not** be invited by the Issuing Office to submit a Best and Final Offer:

1. Those Contractors which the Issuing Office has determined to be not responsible or whose proposals the Issuing Office has determined to be not responsive.
2. Those Contractors, which the Issuing Office has determined in accordance with **Part III, Section III-5**, from the submitted and gathered financial and other information, do not possess the financial capability, experience or qualifications to assure good faith performance of the purchase order.
3. Those Contractors whose score for their technical submittal of the proposal is less than 70% of the total amount of technical points allotted to the technical criterion.

The Issuing Office may further limit participation in the Best and Final Offers process to those remaining responsible Contractors which the Issuing Office has, within its discretion, determined to be within the top competitive range of responsive proposals.

- C. Evaluation Criteria found in **Part III, Section III-4**, shall also be used to evaluate the Best and Final Offers.
- D. Dollar commitments to Small Diverse Businesses can be reduced only in the same percentage as the percent reduction in the total price offered through negotiations.

I-23. Notification of Selection

- A. Negotiations. The Issuing Office will notify in writing the Contractor selected for negotiations after the Issuing Office has determined, taking into consideration all of the evaluation factors, the proposal that is the most advantageous to the Issuing Office.
- B. Award. Contractors whose proposals are not selected will be notified when negotiations have been successfully completed and the final negotiated purchase order has been issued to the selected Contractor.

I-24. Purchase Order – Payment Schedule

The successful Contractor will be issued a purchase order with reference to **IT ITQ Contract #4400004480**. The term of the purchase order will commence upon Notice to Proceed and will end in two (2) years with three (3) one (1) year renewal options at the PLCB's discretion. The PLCB reserves the rights to renew the purchase order in accordance with **ITQ 440004480** renewals. No work may begin or be reimbursed prior to issuance of the purchase order. The selected Contractor will be paid after submitting invoices, provided it is in accordance with the work plan and approved by the Commonwealth Project Manager. Final payment will not be made until all Project work has been successfully completed.

Payments will be made after the completion of each Task 1-8 and the acceptance by the PLCB Project Manager of all Deliverables associated with each Task 1-8 as identified in **Part IV, Section IV-4**, less ten percent (10%) hold back. Payment of the hold back will be made after successful completion of all Activities listed in **Task 10, End of Purchase Order Transition**.

Payments, less 10% hold back, will be made upon successful completion and the PLCB Project Manager's approval of:

Task 1- Planning/Initiation, less the 10% hold back.

Task 2 - Design, less the 10% hold back.

Task 3 – Develop, Build and Test Automated IBMS/ORCO Cloning Facility, less the 10% hold back.

Task 4 - Migrate Initial Subset of the Non-production Environments, less the 10% hold back.

Task 5 - Migrate IBMS/ORCO Production Environments, less the 10% hold back.

Task 6 - Migrate non-IBMS/ORCO Production Environments, less the 10% hold back

Task 7 - Migrate the Remaining Non-production Environments, less the 10% hold back

Task 8 - Implementation, less the 10% hold back.

Task 9 - Warranty Support. In accordance with DGS ITQ Contract **4400004480**, after completion and final acceptance of all deliverables associated with Tasks 4 – 8 of Section IV the selected Contractor will provide a ninety (90) day period of post go-live warranty support at no cost to the PLCB.

Task 10 - End of Purchase Order Transition (which shall be performed by the selected Contractor at no additional cost to the PLCB). All hold back funds will be released upon completion and approval of this task.

I-25. Debriefing Conferences

Upon notification of award, Contractors whose proposals were not selected will be given the opportunity to be debriefed. The Issuing Office will schedule the debriefing at a mutually agreeable time. The debriefing will not compare the Contractor with other Contractors, other than the position of the Contractor's proposal in relation to all other Contractor proposals.

I-26. News Releases

Contractors shall not issue news releases, internet postings, advertisements or any other public communications pertaining to this Project without prior written approval of the Issuing Office, and then only in coordination with the Issuing Office.

I-27. Terms and Conditions

The requirements and terms and conditions of **IT ITQ Contract #4400004480** shall govern the purchase order issued as a result of this RFQ.

I-28. Information Technology Bulletins, Management Directives, and Manuals

This RFQ is subject to, and the selected Offeror must comply with, the Information Technology Bulletins (ITB's), Management Directives, and Manuals issued by the Office of Administration, Office for Information Technology (OA-OIT).

ITB's may be found at:

<http://www.portal.state.pa.us/portal/server.pt?open=512&objID=416&PageID=210791&mode=2>

Management Directives may be viewed at:

[http://www.portal.state.pa.us/portal/server.pt/community/management_directives/711/management_administrative_support_\(205-260\)/208571](http://www.portal.state.pa.us/portal/server.pt/community/management_directives/711/management_administrative_support_(205-260)/208571)

Manual 210.8, specifically, item G009.004 “Disaster Recovery Plans/Vital Records/Continuity Plans” is available at:

http://www.portal.state.pa.us/portal/server.pt/gateway/PTARGS_0_2_1452_0_51_43/http://pubcontent.state.pa.us/publishedcontent/publish/cop_general_government_operations/oa/oa_portal/cog/documents/vital_records/m210_8.pdf?fbr=1169756848099

All proposals must be submitted on the basis that all ITB’s are applicable to this procurement. It is the responsibility of the Contractor to read and be familiar with the ITB’s. Notwithstanding the foregoing, if the Contractor believes that any ITB is not applicable to this procurement, it must list all such ITB’s in its technical response, and explain why it believes the ITB is not applicable. The Issuing Office may, in its sole discretion, accept or reject any request that an ITB not be considered to be applicable to the procurement. The Contractor’s failure to list an ITB will result in its waiving its right to do so later, unless the Issuing Office, in its sole discretion, determines that it would be in the best interest of the Commonwealth to waive the pertinent ITBs.

PART II

PROPOSAL REQUIREMENTS

II-1. General Requirements

Contractors must submit their proposals in the format, including heading descriptions, outlined below. To be considered, the proposal must respond to all requirements in this part of the RFQ. Contractors should provide any other information thought to be relevant, but not applicable to the enumerated categories, as an appendix to the Proposal. **All cost data relating to this proposal and all Small Diverse Business cost data should be kept separate from and not included in the Technical Submittal. Each Proposal shall consist of the following three (3) separately sealed submittals:**

- A. Technical Submittal, which shall be a response to RFQ **Part II, Sections II-1 through II-9 and II-12 and;**
- B. Small Diverse Business participation submittal, in response to RFQ **Part II, Section II-10;** and
- C. Cost Submittal, in response to RFQ **Part II, Section II-11.**

The Issuing Office reserves the right to request additional information which, in the Issuing Office's opinion, is necessary to assure that the Contractor's competence, number of qualified employees, business organization, and financial resources are adequate to perform according to the RFQ.

The Issuing Office may make investigations as deemed necessary to determine the ability of the Contractor to perform the Project, and the Contractor shall furnish to the Issuing Office all requested information and data. The Issuing Office reserves the right to reject any proposal if the evidence submitted by, or investigation of, such Contractor fails to satisfy the Issuing Office that such Contractor is properly qualified to carry out the obligations of the RFQ and to complete the Project as specified.

II-2. Statement of the Problem

State in succinct terms your understanding of the problem presented or the service required by this RFQ.

II-3. Management Summary

Include a narrative description of the proposed effort and a list of the items to be delivered or services to be provided.

II-4. Work Plan

Describe in narrative form your technical plan for accomplishing the work. Use the task descriptions in **Part IV** of this RFQ as your reference point. Modifications of the task descriptions are permitted; however, reasons for changes should be fully explained. Indicate the number of person hours allocated to each task. Include a Program Evaluation and Review Technique (PERT) or similar type display, time related, showing each event. If more than one approach is apparent, comment on why you chose this approach.

II-5. Prior Experience

Include experience in migrating applications as part of data center consolidations without any interruption of business operations.

At least three (3) references must be provided for work completed within the past five (5) years. Experience shown should be work done by individuals who will be assigned to this project as well as that of your company. Studies or projects referred to must be identified and the name of the customer shown, including the name, address, and telephone number of the responsible official of the customer, company, or agency who may be contacted.

II-6. Personnel

An organizational chart shall be included in the technical submittal which includes the project role for each proposed individual who will be involved in this project.

Include the number of executive and professional personnel, analysts, researchers, programmers, and consultants who will be engaged in the work.

For key personnel, including but not limited to, the Project Manager, Unix/Linux Architect, Windows Architect, Technical Leads, and Oracle Product Architect include the employee's name and, through a resume or similar document, the Project personnel's education and experience in carrying out the Tasks and associated Deliverables as identified in **Part IV (Work Statement)**. Indicate the responsibilities each individual will have in this Project and how long each has been with your company. Identify by name any subcontractors you intend to use and the services they will perform.

The selected Contractor's Project Manager will be certified by a recognized project management organization (e.g.: Project Management Institute; University) and shall have a minimum of five (5) years of experience managing large scale system integration implementations.

Resumes are not to include personal information that will, or will be likely to, require redaction prior to release of the proposal under the Right to Know Law. This includes home addresses and phone numbers, Social Security Numbers, Drivers' License numbers or numbers from state ID cards issued in lieu of a Drivers' License, financial account numbers, etc. If the Commonwealth requires any of this information for security verification or other purposes, the information will be requested separately and as necessary.

II-7. Training

If appropriate, indicate recommended training of agency personnel. Include the agency personnel to be trained, the number to be trained, duration of the program, place of training, curricula, training materials to be used, number and frequency of sessions, and number and level of instructors.

II-8. Financial Capability

Describe your company's financial stability and economic capability to perform the Project requirements. Provide your company's financial statements for the past three (3) fiscal years. If your company is a publicly traded company, please provide a link to your financial records on your company website; otherwise, provide three (3) years of your company's financial documents such as audited financial statements. Financial statements must include the company's Balance Sheet and Income Statement or Profit/Loss Statements. Also include a Dun & Bradstreet comprehensive report if available. The Commonwealth reserves the right to request additional information it deems necessary to evaluate a Contractor's financial capability.

II-9. Emergency Preparedness.

To support continuity of operations during an emergency, including but not limited to a pandemic, the Commonwealth needs a strategy for maintaining operations for an extended period of time. One part of this strategy is to ensure that essential contracts that provide critical business services to the

Commonwealth have planned for such an emergency and put contingencies in place to provide needed goods and services.

- A. Describe how Contractor anticipates such a crisis will impact its operations.
- B. Describe Contractor's emergency response continuity of operations plan. Attach a copy of the plan, or at a minimum, summarize how the plan addresses the following aspects of preparedness:
 1. Identify employee training (describe Contractor's training plan, and how frequently it will be shared with employees).
 2. Identify essential business functions and key employees (within Contractor's organization) necessary to carry them out.
 3. Identify contingency plans for:
 - a) Temporary interruption of normal business operations (e.g., electrical power outages)
 - b) Temporary interruption of information technology operations
 - c) Staffing issues when a portion of key employees are incapacitated due to illness
 - d) Several months disruption of normal business operations due to a catastrophic event (e.g., fire, tornado)
 - e) How employees in your organization will carry out the essential functions if contagion control measures or other environmental issues prevent them from coming to the primary workplace
 4. Identify how you will communicate with staff and suppliers when primary communications systems are overloaded or otherwise fail, including key contacts, chain of communications (including suppliers).
 5. Identify how and when your organization's emergency plan will be tested, and if the plan will be tested by a third-party.

II-10. Small Diverse Business Participation Submittal

- A. To receive credit for being a Small Diverse Business or for subcontracting with a Small Diverse Business (including purchasing supplies and/or services through a purchase agreement), a Contractor must include proof of Small Diverse Business qualification in the Small Diverse Business participation submittal of the proposal, as indicated below:
 1. A Small Diverse Business verified by BSBO as a Small Diverse Business must provide a photocopy of their verification letter.
- B. In addition to the above verification letter, the Contractor must include in the Small Diverse Business participation submittal of the proposal the following information:
 1. **All** Contractors must include a numerical percentage which represents the total percentage of the work (as a percentage of the total cost in the Cost Submittal) to be performed by the Contractor and not by subcontractors and suppliers.
 2. **All** Contractors must include a numerical percentage which represents the total percentage of the total cost in the Cost Submittal that the Contractor commits to paying to Small Diverse

Businesses (SDBs) as subcontractors. To support its total percentage SDB subcontractor commitment, Contractor must also include:

- a. The percentage and dollar amount of each subcontract commitment to a Small Diverse Business;
 - b. The name of each Small Diverse Business. The Contractor will not receive credit for stating that after the purchase order is awarded it will find a Small Diverse Business.
 - c. The services or supplies each Small Diverse Business will provide, including the timeframe for providing the services or supplies.
 - d. The location where each Small Diverse Business will perform services.
 - e. The timeframe for each Small Diverse Business to provide or deliver the goods or services.
 - f. A subcontract or letter of intent signed by the Offeror and the Small Diverse Business (SDB) for each SDB identified in the SDB Submittal. The subcontract or letter of intent must identify the specific work, goods or services the SDB will perform, how the work, goods or services relates to the project, and the specific timeframe during the term of the contract and any option/renewal periods when the work, goods or services will be performed or provided. In addition, the subcontract or letter of intent must identify the fixed percentage commitment and associated estimated dollar value that each SDB will receive based on the total value of the initial term of the contract as provided in the Offeror's Cost Submittal. Attached is a letter of intent template which may be used to satisfy these requirements: **Appendix D Small Diverse Business Letter of Intent**
 - g. The name, address and telephone number of the primary contact person for each Small Diverse Business.
3. The total percentages and each SDB subcontractor commitment will become contractual obligations once the purchase order is issued.
 4. The name and telephone number of the Contractor's project (contact) person for the Small Diverse Business information.
- C. The Contractor is required to submit **two (2)** copies of its Small Diverse Business participation submittal. The submittal shall be clearly identified as Small Diverse Business information and sealed in its own envelope, separate from the remainder of the proposal.
- D. A Small Diverse Business can be included as a subcontractor with as many prime contractors as it chooses in separate proposals.

A Contractor that qualifies as a Small Diverse Business and submits a proposal as a prime Contractor is not prohibited from being included as a subcontractor in separate proposals submitted by other Contractors.

II-11. Cost Submittal

The information requested in this **Part II-11** and **Appendix F (Cost Submittal)** shall constitute the Cost Submittal. The Cost Submittal shall be placed in a separate sealed envelope within the sealed proposal and kept separate from the technical submittal. The total proposed cost must be broken down into the components listed on **Appendix F**.

Invoices must be sent to the "Bill To" address listed on the purchase order. Invoices must be a mirror image of the approved PLCB Purchase Order. No additional charges will be paid.

Contractors should **not** include any assumptions in their cost submittals. If the Contractor includes assumptions in its cost submittal, the Issuing Office may reject the proposal. Contractors should direct in writing to the Issuing Office pursuant to **Part I, Section I-6** of this RFQ, any questions about whether a cost or other component is included or applies. All Contractors will then have the benefit of the Issuing Office's written answer so that all proposals are submitted on the same basis.

The Commonwealth will reimburse the selected Contractor for work satisfactorily performed after issuance of a purchase order and the start of the purchase order term, in accordance with purchase order requirements.

II-12. Domestic Workforce Utilization

Contractors must complete and sign the Domestic Workforce Utilization Certification attached to this RFQ as **Appendix C**. Contractors who seek consideration for the Domestic Workforce Utilization Certification criterion must complete, sign, and submit the Domestic Workforce Utilization Certification Form in the same sealed envelope with the Technical Submittal.

PART III

CRITERIA FOR SELECTION

III-1. Mandatory Responsiveness Requirements

To be eligible for evaluation, a proposal must be timely received from a Contractor.

To be eligible for consideration all Contractors submitting proposals must be a qualified under the Master Information Technology (IT) Services Invitation to Quality (ITQ) contract service category: IT Consulting – General at the time of their submittal.

III-2. Technical Nonconforming Proposals

The Mandatory Responsiveness Requirements set forth in Part III-1 above are the only RFQ requirements that the PLCB will consider to be *non-waivable*. The Issuing Office reserves the right, in its sole discretion, to (1) waive any other technical or immaterial nonconformities in a Contractor's proposal, (2) allow the Contractor to cure the nonconformity, or (3) consider the nonconformity in the scoring of the Contractor's proposal.

III-3. Evaluation

The Issuing Office has selected a committee of qualified personnel to review and evaluate timely submitted proposals. Independent of the committee, BSBO will evaluate the Small Diverse Business participation submittal and provide the Issuing Office with a rating for this component of each proposal. The Issuing Office will notify in writing of its selection for negotiation the responsible Contractor whose proposal is determined to be the most advantageous to the Commonwealth as determined by the Issuing Office after taking into consideration all of the evaluation factors.

III-4. Evaluation Criteria

The following criteria will be used in evaluating each proposal:

A. Technical

The Issuing Office has established the weight for the Technical criterion for this RFQ as **fifty percent (50%)** of the total points. Evaluation will be based upon the following in order of importance:

1. **Soundness of Approach** refers to, but is not limited to, the Contractor's methodology to meet the requirements of this RFQ, e.g.: How does the Contractor propose to efficiently manage and perform the requested services for each critical element detailed in the Work Statement, Part IV?
2. **Contractor Qualifications** refers to, but is not limited to, a measurement of the Contractor's experience in migrating applications as part of data center consolidations without any interruption of business operations. Also, the Contractor's financial responsibility is evaluated.
3. **Personnel Qualifications** refers to, but is not limited to the proposed personnel's experience in the Tasks identified in **Part IV**.

The final Technical scores are determined by giving the maximum number of technical points available to the proposal with the highest raw technical score. The remaining proposals are rated by applying the Technical Scoring Formula set forth at the following webpage:

http://www.portal.state.pa.us/portal/server.pt/community/RFQ_scoring_formulas_overview/20124.

B. Cost

The Issuing Office has established the weight for the Cost criterion for this RFQ as **thirty percent (30%)** of the total points. The cost criterion is rated by giving the proposal with the lowest total cost the maximum number of Cost points available. The remaining proposals are rated by applying the Cost Formula set forth at the following webpage:

http://www.portal.state.pa.us/portal/server.pt/community/RFQ_scoring_formulas_overview/20124

C. Small Diverse Business Participation

BSBO has established the weight for the Small Diverse Business (SDB) participation criterion for this RFQ as **twenty percent (20%)** of the total points. Each SDB participation submittal will be rated for its approach to enhancing the utilization of SDBs in accordance with the below-listed priority ranking and subject to the following requirements:

1. A business submitting a proposal as a prime Contractor must perform sixty percent (60%) of the total purchase order value to receive points for this criterion under any priority ranking.
2. To receive credit for an SDB subcontracting commitment, the SDB subcontractor must perform at least fifty percent (50%) of the work subcontracted to it.
3. A significant subcontracting commitment is a minimum of five percent (5%) of the total purchase order value.
4. A subcontracting commitment less than five percent (5%) of the total purchase order value is considered nominal and will receive reduced or no additional SDB points depending on the priority ranking.

Priority Rank 1: Proposals submitted by SDBs as prime contractors will receive 150 points. In addition, SDB prime contractors that have significant subcontracting commitments to additional SDBs may receive up to an additional 50 points (200 points total available).

Subcontracting commitments to additional SDBs are evaluated based on the proposal offering the highest total percentage SDB subcontracting commitment. All other Contractors will be scored in proportion to the highest total percentage SDB subcontracting commitment within this ranking. See formula below.

Priority Rank 2: Proposals submitted by SDBs as prime Contractors, with no or nominal subcontracting commitments to additional SDBs, will receive 150 points.

Priority Rank 3: Proposals submitted by non-small diverse businesses as prime Contractors, with significant subcontracting commitments to SDBs, will receive up to 100 points. Proposals submitted with nominal subcontracting commitments to SDBs will receive points equal to the percentage level of their total SDB subcontracting commitment.

SDB subcontracting commitments are evaluated based on the proposal offering the highest total percentage SDB subcontracting commitment. All other Contractors will be scored in proportion to the highest total percentage SDB subcontracting commitment within this ranking. See formula below.

Priority Rank 4: Proposals by non-small diverse businesses as prime Contractors with no SDB subcontracting commitments shall receive no points under this criterion.

To the extent that there are multiple SDB Participation submittals in Priority Rank 1 and/or Priority Rank 3 that offer significant subcontracting commitments to SDBs, the proposal offering the highest total percentage SDB subcontracting commitment shall receive the highest score (or additional points) available in that Priority Rank category and the other proposal(s) in that category shall be scored in proportion to the highest total percentage SDB subcontracting commitment. Proportional scoring is determined by applying the following formula:

$$\frac{\text{SDB \% Being Scored}}{\text{Highest \% SDB Commitment}} \times \frac{\text{Points/Additional}}{\text{Points Available}^*} = \frac{\text{Awarded/Additional}}{\text{SDB Points}}$$

Priority Rank 1 = 50 Additional Points Available

Priority Rank 3 = 100 Total Points Available

Please refer to the following webpage for an illustrative chart which shows SDB scoring based on a hypothetical situation in which the Commonwealth receives proposals for each Priority Rank:

http://www.portal.state.pa.us/portal/server.pt/community/rfp_scoring_formulas_overview/20124

D. Domestic Workforce Utilization

Any points received for the Domestic Workforce Utilization criterion are bonus points in addition to the total points for this RFQ. The maximum amount of bonus points available for this criterion is three percent (3%) of the total points for this RFQ.

To the extent permitted by the laws and treaties of the United States, each proposal will be scored for its commitment to use domestic workforce in the fulfillment of the purchase order. Maximum consideration will be given to those Contractors who will perform the contracted direct labor exclusively within the geographical boundaries of the United States or within the geographical boundaries of a country that is a party to the World Trade Organization Government Procurement Agreement. Those who propose to perform a portion of the direct labor outside of the United States and not within the geographical boundaries of a party to the World Trade Organization Government Procurement Agreement will receive a correspondingly smaller score for this criterion. See the following webpage for the Domestic Workforce Utilization Formula: http://www.portal.state.pa.us/portal/server.pt/community/RFQ_scoring_formulas_overview/20124.

Contractors who seek consideration for this criterion must submit in hardcopy the signed Domestic Workforce Utilization Certification Form in the same sealed envelope with the Technical Submittal. The certification will be included as a contractual obligation when the purchase order is issued.

III-5. Contractor Responsibility

To be responsible, a Contractor must submit a responsive proposal and possess the capability to fully perform the purchase order requirements in all respects and the integrity and reliability to assure good faith performance of the purchase order.

In order for a Contractor to be considered responsible for this RFQ and therefore eligible for selection for best and final offers or selection for purchase order negotiations:

- A. The total score for the technical submittal of the Contractor's proposal must be greater than or equal to **seventy percent (70%)** of the **available technical points**; and
- B. The Contractor's financial information must demonstrate that the Contractor possesses the financial capability to assure good faith performance of the contract. The Issuing Office will review the Contractor's previous three (3) audited annual financial statements, any additional information received from the Contractor, and any other publicly-available financial information concerning the Contractor, and assess each Contractor's financial capacity based on calculating and analyzing various financial ratios, and comparison with industry standards and trends.

A Contractor which fails to demonstrate sufficient financial capability to assure good faith performance of the purchase order as specified herein may be considered by the Issuing Office, in its sole discretion, for Best and Final Offers or purchase order negotiations contingent upon such Contractor providing purchase order performance security, in a form acceptable to the Issuing Office, for twenty percent (20%) of the proposed value of the base term of the purchase order. Based on the financial condition of the Contractor, the Issuing Office may require a certified or bank (cashier's) check, letter of credit, or a performance bond conditioned upon the faithful performance of the purchase order by the Contractor. The required performance security must be issued or executed by a bank or surety company authorized to do business in the Commonwealth. The cost of the required performance security will be the sole responsibility of the Contractor and cannot increase the Contractor's cost proposal or the purchase order cost to the Commonwealth.

Further, the Issuing Office will award a purchase order only to a Contractor determined to be responsible in accordance with the most current version of Commonwealth Management Directive 215.9, Contractor Responsibility Program.

III-6. Final Ranking and Award

- A. After any best and final offer process conducted, the Issuing Office will combine the evaluation committee's final technical scores, BSBO's final small diverse business participation scores, the final cost scores, and (when applicable) the domestic workforce utilization scores, in accordance with the relative weights assigned to these areas as set forth in this Part.
- B. The Issuing Office will rank responsible Contractors according to the total overall score assigned to each, in descending order.
- C. The Issuing Office must select for purchase order negotiations the Contractor with the highest overall score; **PROVIDED, HOWEVER, THAT AN AWARD WILL NOT BE MADE TO A CONTRACTOR WHOSE PROPOSAL RECEIVED THE LOWEST TECHNICAL SCORE AND HAD THE LOWEST COST SCORE OF THE RESPONSIVE PROPOSALS RECEIVED FROM RESPONSIBLE CONTRACTORS. IN THE EVENT SUCH A PROPOSAL ACHIEVES THE HIGHEST OVERALL SCORE, IT SHALL BE ELIMINATED FROM CONSIDERATION AND AWARD SHALL BE MADE TO THE CONTRACTOR WITH THE NEXT HIGHEST OVERALL SCORE.**
- D. The Issuing Office has the discretion to reject all proposals or cancel the request for quotations, at any time prior to the time a purchase order is issued, when it is in the best interests of the Commonwealth. The reasons for the rejection or cancellation shall be made part of the purchase order file.

PART IV

WORK STATEMENT

IV-1. Objectives

- A. General.** The Pennsylvania Liquor Control Board (PLCB) is responsible for the sale and control of beverage alcohol throughout the Commonwealth of Pennsylvania and is one of the largest purchasers of wine and spirits in the United States. The PLCB also manages approximately 25,595 beverage alcohol licenses and permits.

The Commonwealth of Pennsylvania's Office of Administration (OA) is implementing a new datacenter service model that will transition the Commonwealth from what is currently a number of individually managed datacenters with different levels of service to enterprise level datacenter architecture.

The enterprise level datacenter will offer a common set of basic services combined with specialized services dependent upon specific customer requirements.

The PLCB must comply with the Commonwealth Office of Administration's Data Center Computing Services modernization initiative by migrating PLCB applications to the OA's chosen Contractor. The purpose of this RFQ is to select a Contractor to provide a solution to enable the PLCB to meet the required timelines of the OA's initiative. It appears likely that the migration to the OA's Data Center Computing Services Contractor will involve re-installing PLCB applications on new virtual servers before data is migrated. The PLCB views the modernization initiative as an opportunity to find cost savings and service improvements.

- B. Specific.** The OA's Data Center Computing Services initiative is defined in RFP 6100022698, "Data Center Computing Services" issued on November 30, 2012. The Commonwealth initiative is outlined in Schedule F, COPA Datacenter Statement of Work. Section 2.1 Program Objectives, states that: "The Commonwealth is seeking to implement a new datacenter service model that will provide various infrastructures/computing platforms to service the needs of the Commonwealth in a secure and flexible manner."

The Commonwealth currently has six (6) datacenters located within Commonwealth-controlled (owned or leased) buildings. These datacenters provide computing services for the Commonwealth as a whole or for a specific agency. A primary objective of the Commonwealth's Data Center Computing Services initiative is the consolidation of all current datacenters to a minimum of two (2) geographically-separate datacenters located in the continental United States.

1. The PLCB currently has equipment or services located in:
 - a. Enterprise Data Center (EDC), CoLocation – This PLCB facility within the OA's EDC currently consists of PLCB-owned Intel and IBM p-Series servers supporting internet-based applications.
 - b. Enterprise Data Center, Managed Services Lite – This facility within the EDC currently consists of virtual servers owned and managed by the OA and the PLCB Office of Information Technology Services (OITS). The servers support Internet based applications.

- c. Data PowerHouse – This datacenter contains VMware (Intel) based operating systems (VMW), which are virtual based servers and IBM p-Series logical partitions (LPARs) that support the PLCB’s retail and financial operations including production, and two (2) copies of production used for testing. The PLCB owns a subset of the equipment at this facility, but it is nearing its end-of-life.
 - d. 1400-A Cameron St – This PennDOT and OA/OIT managed datacenter contains the PLCB’s disaster recovery sites and retail training environment. It also functions as a second hub for the PLCB’s network and includes automatic fail-over.
 - e. Room 209, Northwest Office Building (NWOB) – The computer room houses many of the PLCB’s retail and financial development and test systems as well as several production systems used to support operations within the NWOB.
2. Please note that per the OA’s Data Center Computing Services initiative:
- a. All Commonwealth agencies are responsible for the migration of their system(s) and all remaining data centers and computer rooms to what will be a minimum of two (2) new geographically separated datacenters.
 - b. The PLCB, as a Commonwealth agency, is required to participate in the Computing Services initiative.
 - c. The datacenter at 1400-A Cameron St is not mentioned in the Office of Administration’s Computing Services RFP. It is also not listed in the RFP’s Schedule D, Transition Milestones (6100022698 - Schedule D - Transition Milestones (4.16.13).docx). For the purposes of this RFQ, assume that 1400-A Cameron St. will be transitioned at the same time as the five (5) other datacenters listed as M-16 through M-20 in the above mentioned Schedule D.
3. The PLCB’s computing landscape affected by the Computing Services initiative involves approximately:
- a. Twenty Four (24) x Seven (7) operations with a six (6) hour maintenance window on Sunday mornings. This schedule is driven by the hours of the retail stores. The PLCB’s current business schedule is available in **Appendix S Holiday Calendar 2014**.
 - b. 250 IBM AIX, RedHat and SuSE Enterprise Linux and Windows 2003/2008 servers (virtual and physical)
 - c. 109 TB of storage
 - d. 45 TB of Oracle and Microsoft SQL/Server database storage
 - e. Firewalls at 600+ wine and spirits retail stores.
 - f. 600+ Oracle Back Office servers and approximately 1,500 total store registers
 - g. Three (3) distribution centers

- h. The existing secondary network hub and automated failover at 1400-A Cameron Street
 - i. The existing database replication from the Data PowerHouse and from the NWOB to Cameron Street
 - j. The existing SAN level replication from the current three (3) distribution centers to 1400-A Cameron St.
 - k. Business partner connections with banks, other agencies and external service providers, i.e.: Every time the PLCB moves a system, it must coordinate with any and all affected business partners. Conversely, when another agency moves a system, the PLCB must make corresponding changes.
4. The PLCB's application portfolio consists of three (3) major areas:
- a. Retail Operations – Retail Operations constitutes the largest portion of the portfolio and consists of applications mostly from Oracle such as:
 - i. eBusiness Suite (EBS)
 - ii. Retail Merchandizing System (RMS), Retail Sales Audit (ReSA), Retail Pricing Module (RPM), Retail Invoice Matching (ReIM), Allocations
 - iii. Store Inventory Management (SIM)
 - iv. Retail Integration Bus (RIB)
 - v. BPEL (Service Oriented Architecture suite)
 - vi. Retail Data Warehouse
 - vii. Hyperion
 - viii. Retail Demand Forecasting (RDF)
 - ix. Automic's (formerly known as UC4) Appworx (job scheduling)

The applications above are generally referred to as the Integrated Business Management System (IBMS).

- x. Oracle Retail Central Office (ORCO)
- b. Regulatory and Administrative applications: These applications are usually custom built using Microsoft ASP/ASP.NET and Microsoft SQL/Server databases.
- c. IT applications: This is a diverse group of applications. Examples include Sharepoint, Load Runner, and Oracle Enterprise Manager.

IV-2. Nature and Scope of the Project

In order to accomplish this project, the PLCB expects the selected Contractor to:

- A. Develop baseline capacity and performance characteristics for each existing server.
- B. Determine which service offerings from the OA Computing Services initiative best meet the capacity and performance characteristics for each existing server.
- C. Provide both a full time project manager and sufficient project staff to migrate all included PLCB applications to the Computing Services initiative.
- D. Manage the project to migrate PLCB applications to the OA Computing Services initiative.
- E. Increase self-service options where offered. This will improve cycle times and reduce the effort to manage the environment, e.g.: Do-it-yourself instead of submitting written change requests that may take from four (4) hours to several days to be completed.
- F. Eliminate obsolete, or soon-to-be-obsolete, platforms involved in this project such as Windows 2003 whenever possible.
- G. Maintain the same or a better level of performance for on-line applications and batch jobs within the scope of facilities available from the Computing Services initiative.
- H. Develop an automated unattended “cloning” process, programs, scripts, etc., for creating copies of the IBMS and ORCO production environment. Because production includes up to twenty (20) servers, nine (9) databases and seven (7) TB of storage, this is a major process. It currently requires three (3) people, five (5) days to complete. The new process must require only minimal manual intervention at the beginning and/or end and complete within a seventy-two (72) hour window (from Friday at noon to Monday at noon) and be able to be modified when changes are needed.
- I. Simplify disaster recovery. The PLCB uses VMWare and SAN-based replication facilities for servers that it hosts. The PLCB also employs network technologies such as Cisco XConnects to allow an IP address to appear in more than one physical location. Both technologies greatly simplify disaster recovery and the PLCB would like to take advantage of similar facilities if they are available.

To assist prospective Contractors in evaluating effort and resources required for this project the PLCB has prepared several Appendices as exhibits for consideration in planning your response to this RFQ. These Appendices are referenced and listed in relevant sections of RFQ as **Appendices: A through LL**

Information in these Appendices is currently in use by the PLCB. The PLCB does not warrant its freedom from errors or omissions. If material changes are made during the period prior to proposal submittal, information will be provided via an addendum to the RFQ.

This project includes all of the tasks and deliverables as detailed in Section IV-4 of this RFQ.

IV-3. Requirements

A. With Submission of the Technical Proposal

As part of the RFQ technical proposal submission package, prospective Contractors will submit:

1. A high level project strategy which will include a high level support strategy for maintaining user effectiveness during the Go-Live and warranty support periods and which will demonstrate the approach prospective Contractors will take to this project and how they expect to accomplish each task. The tasks listed and described in IV-4, 1-9 comprise the anticipated high level tasks and expected deliverables to be completed by the selected Contractor.
2. A high level project plan that shows a proposed schedule for the migrations identified under IV-4, Tasks 4, 5, 6 and 7. The PLCB is seeking a schedule that will meet the requirements of the OA Computing Services initiative while providing a transition that considers the needs of the PLCB's business operations.
(See OA RFP 6100022698, "[Data Center Computing Services](#)" issued on November 30, 2012 Section IV-3 for Requirements and Section IV-2 for the termination date of the current datacenter management agreement.)

Note that the PLCB's peak selling period is November 1 through December 31 of every year, during which access to operations and resource availability is limited.

3. Resumes of the project manager, Unix/Linux architect, Windows architect and any other key personnel.
4. A high level Responsibility Assignment Matrix (RAM), also known as a RACI matrix, that will ensure clear project roles and responsibilities during this project. The Responsibility Assignment Matrix will define, for each task detailed in this RFQ, which roles at the organizational level have the responsible, accountable, consulted and informed roles, i.e.: between the selected Contractor and PLCB. The four key responsibility components of the Responsibility Assignment Matrix used in PLCB matrices are defined as follows:
 - a. **Responsible** - Those individuals who perform work to complete a task and associated deliverables. For purposes of this RFQ, the selected Contractor will be the Responsible party.
 - b. **Accountable** - Those individual(s) who approve the completion of the task and associated deliverables and the one to whom the Responsible parties are accountable. For purposes of this Project, Accountable will be the PLCB role, and must sign off / approve the work that Responsible (the selected Contractor) provides. There must be only one Accountable specified for each task or deliverable.
 - c. **Consulted** - Those individuals whose opinions are sought and with whom there is two-way communication. For purposes of this Project, the Consulted Role(s) will be designated PLCB agent(s) who will be determined during the Planning/Initiation phase of the project (Task 1: Planning/Initiation).
 - d. **Informed** - Those who are kept up-to-date on progress, often only on completion of the task or deliverable, and with whom there is primarily one-way communication. For purposes of this Project, the Informed Role(s) may include the PLCB Infrastructure team, PLCB Functional Team, PLCB Testing Team, and the Chief Information Officer (CIO).

B. For the Project

1. The selected Contractor will be responsible for making changes to/maintaining the PLCB's library of technical, configuration, migration, security set-up documents, test scripts and training material, as needed, and creating new documents when necessary, to reflect all changes made to existing processes as part of this Project. These changes require formal PLCB approval.
2. Successful completion of each task will be defined by the completion of each project task and associated deliverables on or before specific, agreed dates or milestones and by obtaining sign-off approval from the PLCB for each deliverable.
3. The selected Contractor will be responsible for ensuring that all information, e.g.: test scripts and system documentation models, reside on PLCB's SharePoint system.
4. The selected Contractor will follow all PLCB standards and policies located in **Appendices A through LL** to this RFQ.
5. The selected Contractor will be required to work and/or interface with other PLCB contractors.

C. Contractor Personnel

1. The PLCB must approve or disapprove all planned bid/proposed staffing substitutions and changes. Once the personnel are assigned to this Project, the selected Contractor must not re-assign personnel to another project without written consent from the PLCB.
2. The selected Contractor shall maintain and provide to the PLCB an up-to-date organization chart and contact list (including sub-contractors) providing name, title, phone, pager/cell phone, role on project, project areas of expertise, job responsibility statements and email information to the PLCB Project Manager for all Contractor personnel assigned to the project whenever Contractor personnel assignments change.

Any planned key or lead staffing substitutions must be submitted to the PLCB's Project Managers **forty-five (45) business days prior to the substituted or replaced staff starting work**. Substitutions for all other selected Contractor personnel must be submitted to the PLCB's Project Managers at least **twenty (20) business days prior to the substituted or replaced staff starting work**. The PLCB must not incur any Project delays due to knowledge transfer to new contractor or subcontractor personnel resulting from staffing substitutions or replacement.

3. Although use of subcontractors is allowable, the prime selected Contractor is wholly responsible for the performance of any subcontractor. Any use of subcontractors by a selected Contractor must be identified in the proposal. During the Project period, the PLCB must pre-approve in writing the substitution of any subcontractors not previously identified in the selected Contractor's proposal. The selected Contractor must not transfer or sublet any portion of the work covered by these specifications without prior written consent of the PLCB Project Manager(s).

All matters dealing with the health, welfare, and working conditions of the selected Contractor's employees are the responsibility of the selected Contractor. The selected Contractor agrees to

comply with all local, state, and federal regulations governing health, welfare, and occupational safety standards.

D. Key Technical Features

Although the details of the services that will be provided by the OA Computing Services initiative are not yet available, the PLCB views this as an opportunity to find cost savings and service improvements.

The PLCB’s application landscape consists of multiple “environments.” These environments are called development, integration test, user acceptance test, training, production and disaster recovery. Not all applications have all environments; however, the IBMS and ORCO applications do contain all of them. A description of these environments and their purpose can be found in **Appendix G, IBMS and ORCO infrastructure, B-1.1. Environments.**

E. Defect Service Level Objectives

The following table lists the PLCB’s Service Level Objectives. These Service Levels should serve as a guideline for the level of response and resources the PLCB is seeking for the Warranty Support period described in Task 9.

Defect Severity	Maximum Response Time	Resources Applied	Hours and Days of Coverage
Critical	2 hours	Selected Contractor will provide resources to fix until completed.	24 hrs./day; 7 days/wk.
High	4 hours	Selected Contractor will provide resources to fix until completed.	8:00 a.m. to 8:00 p.m. ET weekdays
Medium	2 business days	Selected Contractor and PLCB will agree to resources applied.	8:00 a.m. to 5:00 p.m. ET weekdays
Low	5 business days	Selected Contractor and PLCB will agree to resources applied.	8:00 a.m. to 5:00 p.m. ET weekdays

1. A Critical Defect is a problem in which its nature and/or severity prevents the PLCB from continuing its business. A Critical Defect may have one or more of the following characteristics: (a) a critical function of the Application/Device is not available; (b) the Application/Device hangs indefinitely and/or causes other PLCB applications to hang; (c) the Application/Device crashes and/or causes other PLCB applications to crash; and/or (d) a security incident has

occurred or is suspected to have occurred; (e) interfaces malfunction (f) incomplete sales transactions (not all tasks completing during sale, e.g. Printing, Oracle Retail Sales Audit (ReSA))

2. A High Defect may have one or more of the following characteristics: (a) the performance, functionality or usability of one or more of the Application/Device's parts is severely degraded; (b) multiple users are impacted; and/or (c) one or more business functions are unavailable or unusable by the end users.
3. A Medium Defect is a failure of a system or part thereof which has a minor impact on a PLCB business process and can be handled on a non-immediate basis. Examples may include user requests (e.g., a report is not formatted correctly) and peripheral problems (e.g., output fails to print properly to office printer).
4. A Low Defect is a failure of a system or part thereof which has a nominal impact on a PLCB business process and can be handled on a non-immediate basis.

The selected Contractor will not close a Defect. Only PLCB Staff will close the defect when the fix has demonstrated it has either: (a) repaired the functionality, performance and usability of the Application/Device to its pre-Defect level, or (b) improved the functionality, performance and usability of the Application/Device from its pre-Defect level.

Unless, for a particular defect, the PLCB has provided prior written approval for different response times, the selected Contractor shall, for each calendar month and for each Severity Level, respond to one hundred percent (100%) of reported Defects within the Maximum Response Time during Hours and Days of Coverage agreed upon for each level of defect.

IV-4. Tasks

The tasks listed and described in the sections below comprise the anticipated high level tasks and expected deliverables to be completed by the selected Contractor.

All project deliverables must be approved by the PLCB and considered complete before an invoice may be submitted for payment.

The PLCB foresees this Project consisting of the following tasks:

1. Planning/Initiation
2. Design
3. Develop, Build and Test Automated IBMS/ORCO Cloning Facility
4. Migrate the Initial Subset of the Non-production Environments
5. Migrate IBMS/ORCO Production Environments
6. Migrate non-IBMS/ORCO Production Environments
7. Migrate the Remaining Non-production Environments
8. Implementation
9. Warranty Support for 90 days
10. End of Purchase Order Transition

Deliverables identified within this section represent the minimum requirements that must be met.

The PLCB's User Acceptance Criteria for all Deliverables identified under Section IV-4 of this RFQ is that there will be no "Critical" or "High" importance issues outstanding, as determined by the PLCB, for PLCB to accept a Deliverable.

PLCB's User Acceptance is based on the following Criteria:

Status	
Critical	Production system down, legal requirement or policy compliance, or severely impacted database or end user performance
High	Severe revenue impact, employee productivity is affected, customer satisfaction is adversely affected
Medium	Moderate business impact
Low	All other issues

The selected Contractor will be responsible for performance of the Tasks. A high degree of cooperation and a willingness to work with and involve the PLCB Project Manager and team members throughout the execution of the Project is required.

The selected Contractor will identify all information, materials, and decisions needed prior to the start of each task.

The selected Contractor will submit requests for specific information, materials, and decisions to the PLCB Project Manager in writing prior to the start of each Task.

Task 1–Planning/Initiation

Activities and Deliverables for Task 1:

The selected Contractor will:

	Activities for Task 1	Deliverables for Task 1
1.1	Validate the overall strategic approach to the project.	Strategic assessment document which identifies issues, opportunities, concerns, and risks.
1.2	Refine their proposed, initial, high level project plan (see IV-3, A-2) into a project document consistent with the resulting contract with the level of detail noted here. The project plan must be in Microsoft Office Project 2010 and include a detailed: <ul style="list-style-type: none"> a. Work Breakdown Structure (WBS) showing all major tasks, subtasks, and deliverables b. Resource Requirement Analysis that identifies all individual resources that will be assigned to each of the project activities c. Project Schedule/Timeline with appropriate PERT or GANTT chart displays that demonstrate project, task, and time relationships d. Major milestone chart e. Staffing Plan f. List of Technical assumptions See IV-5, B for PLCB Project Plan expectations	Updated detailed Project Plan.

	Activities for Task 1	Deliverables for Task 1
1.3	Integrate their high level Responsibility Assignment Matrix (see IV-3, A-2) with the baseline WBS with a level of detail to be able to identify specific Contractor and PLCB roles.	Detailed Responsibility Assignment Matrix.
1.4	<p>Work with the PLCB to refine and deliver an Acceptance Management Plan that will enable the PLCB to review and approve all project Deliverables; including both document-based and software-based Deliverables. As part of the Acceptance Management Plan the selected Contractor shall ensure that:</p> <ol style="list-style-type: none"> Each project deliverable is submitted to the PLCB for review and acceptance with an approved deliverable specification sheet (to be developed jointly between the selected Contractor and the PLCB after purchase order award). Each Deliverable shall address all components required by the RFQ, selected Contractor's Proposal, and any areas identified subsequently through meetings and planning sessions. The cover page for each Deliverable certifies that the selected Contractor's internal deliverable review process was utilized. For document-based Deliverables, the review and acceptance period reflects the time periods outlined. For Deliverables that contain hardware and/or software programs, the deliverable review process will incorporate acceptance testing as detailed in PLCB approved Acceptance Test Plan. Project Deliverables shall be subject to PLCB review and approval prior to acceptance. 	Acceptance Management Plan.
1.5	Define a plan for review and approval by the PLCB for how substitutions or changes in contractor personnel will be managed.	Plan for how any substitutions or changes in selected contractor personnel will be managed so that the PLCB will not incur any project delays or additional expenses.
1.6	<p>The selected Contractor shall refine and deliver a communications plan that describes how communications will be managed for the entire duration of the project, including:</p> <ol style="list-style-type: none"> Stakeholders and their Roles The methods by which information will be disseminated The distribution structure specifically detailing 	Communications Plan

	Activities for Task 1	Deliverables for Task 1
	what, when and how information will flow to stakeholders	
1.7	Produce a Risk Management Strategy/Plan that defines the best approach for identifying, assessing, prioritizing and managing Project Risk throughout the entire duration of the Project.	Risk Management Strategy Document detailing a Risk Management Plan and the initiation of Risk Tracker Reporting (Appendix JJ)
1.8	Utilize PLCB's Defect Management List (Defect Tracker) within SharePoint for the creation and maintenance of Project Issues/Defects lists.	Computing Services Migration Defect Tracker Reporting (Appendix KK)
1.9	Define and deliver a Quality Management Plan that documents all quality standards and service level requirements for the project (including an organizational responsibility matrix). The Quality Management Plan will document all quality assurance activities that will be implemented during the lifecycle of the project.	Quality Management Plan with Quality Assurance activities
1.10	Develop a plan to perform unit, integration, regression and load/performance testing with PLCB providing Subject Matter Expert (SME) assistance. The PLCB will conduct User Acceptance Testing (UAT) testing with selected Contractor's assistance.	Testing Plan.
1.11	Develop load testing work plan with the PLCB.	Load testing plan.
1.12	Develop a Technical Knowledge Transfer Plan. The selected Contractor shall create and deliver a plan to the PLCB that describes the overall knowledge transfer approach to Office of Information Technology Services personnel.	Technical Knowledge Transfer Plan.
1.13	Develop a high level Deployment Plan with options which take into consideration the Enterprise environment (e.g., bandwidth, personnel, existing equipment) for PLCB approval prior to deployment.	Deployment Plan.
1.14	Develop back-up, recovery, and business resumption strategies with the PLCB.	Backup and Recovery Plan.
1.15	Refine the Support Strategy Document that was submitted as part of the selected Contractor's initial high level Project Strategy to ensure the optimal level of support necessary to maintain user service effectiveness during the go-live period and warranty support for 90 (ninety) days following final deployment. The Support Strategy Document must include roles, number of resources by role, and hours by resource.	Support Strategy Document.
1.16	Develop a high level Transition Plan which will include an End of Warranty Transition Plan.	High level Transition Plan including an End of Warranty Transition Plan.
1.17	Develop with the PLCB an Application Development Security and Role Work Plan.	Application Development Security and Role Work Plan.

	Activities for Task 1	Deliverables for Task 1
1.18	Review the options and services available from the OA Computing Services initiative, review the existing services, and conduct a gap/fit analysis. Gaps must be solved within the context of services and facilities offered by the Computing Services initiative.	Gap/Fit Analysis document with options to close Gaps.

The following Appendices are included to facilitate completion of Task 1 and the Activities and Deliverables described above:

- APPENDIX O, TECHNICAL LANDSCAPE
- APPENDIX P, RETAIL OPERATIONS APPLICATIONS AT-A-GLANCE
- APPENDIX Q, APPLICATION INVENTORY
- APPENDIX R, IBMS AND POS SOFTWARE VERSIONS
- APPENDIX LL, NON-IBMS APPLICATION INVENTORY

Task 2–Design

Based on results of the Gap Analysis, the selected Contractor will determine required changes to the PLCB’s existing infrastructure, configurations and processes. In addition to the objectives under Section IV-3 D., Key Technical Features, the selected Contractor is encouraged to look for opportunities to improve business efficiencies, improve reliability, and reduce complexity.

The selected Contractor will also design an automated “cloning” process, programs, scripts, etc., for creating copies of the IBMS and ORCO production environment.

Activities and Deliverables for Task 2:

The selected Contractor will:

	Activities for Task 2	Deliverables for Task 2
2.1	Review the current PLCB environments (development, integration, UAT, training, production, and disaster recovery) with PLCB staff to ensure that the selected Contractor has a full understanding of the scope and usage of the environments.	Current PLCB environments reviewed with PLCB Project Manager accepting that selected Contractor has achieved a full understanding of scope and usage.
2.2	Determine and document change impacts – using Project Decision Change Tracker Report template (see Appendix K)	Change impacts reviewed and documented in PLCB Project Decision/Change Tracker Report template.
2.3	Develop an overall architecture and framework for the PLCB’s computing services under the OA Computing Services initiative.	New architecture specifications and drawings finalized.
2.4	Develop/change technical specifications for the PLCB’s computing services under the OA Computing Services initiative.	New or updated technical landscape specifications and/or Computing Services initiative build sheets developed as required by the OA Computing Services

	Activities for Task 2	Deliverables for Task 2
		initiative.
2.5	Develop an acceptable “downtime” schedule for the migration of the production instance of each type or group of application (ex: IBMS, the Intranet) and submit it for the PLCB’s approval. (Example: During the recent IBMS upgrade project, the downtime was determined to be a three (3) day weekend with a Monday holiday on which the stores were closed.)	Downtime list for each type or group of applications.
2.6	Develop and validate detailed work plans for moving each type of application to the Computing Services initiative.	Detailed work plans for moving each type of application to the Computing Services initiative.
2.7	Work with the PLCB to develop and validate detailed test plans for Task 3 (Develop, Build and Test Automated IBMS/ORCO Cloning Facility) and a load testing work plan.	Detailed test plans and load test work plans.
2.8	Develop a server requirements spreadsheet. This spreadsheet will drive the requirements for servers ordered from the Computing Services initiative. The requirements should include such key capacity metrics such as quantity and type of CPUs, speed of CPUs, amount of memory, peak or average network bandwidth, results disk benchmarks such as Orion, etc. The goal for this Task is to provide sufficient information so that the orders placed with the Computing Services initiative are likely to result in the same or better capacity than what the PLCB has with existing servers.	Server requirements spreadsheet providing sufficient information so that orders placed with the Computing Services initiative are likely to result in the same or better capacity than what the PLCB has with existing servers.
2.9	Work with the PLCB to identify the key applications and batch jobs whose performance (response time, batch job elapsed time) must meet or be better than the current platform within the scope of services available from the Computing Services initiative.	List of key applications and batch jobs and their current performance.

All of the Appendices listed at the end of Task 1 will facilitate the completion of Task 2 and the Activities and Deliverables described above. Additionally, a review of APPENDIX K, PROJECT DECISION CHANGE TRACKER and APPENDIX T, 6.0 BATCH INTERFACE CODING STANDARDS will help to facilitate the completion of this task.

Task 3–Develop, Build and Test Automated IBMS/ORCO Cloning Facility

The selected Contractor will build (code) and unit test the new IBMS/ORCO cloning facility designed in Task 2.

In order to test the facility, a new, empty, IBMS/ORCO environment must be built to receive the clone.

Activities and Deliverables for Task 3:

The selected Contractor will

	Activities for Task 3	Deliverables for Task 3
3.1	Configure/update a new, empty development environment.	New/Updated development environment configured.
3.2	Write new code, scripts, etc. to implement automated cloning.	Code, scripts, etc. written.
3.3	Conduct unit testing.	Unit testing completed.
3.4	Document unit tests.	Unit Test Results documented.

The following Appendices are included to facilitate completion of Task 3 and the Activities and Deliverables described above:

- APPENDIX I, CHANGE MANAGEMENT POLICY
- APPENDIX J, SERVICE MANAGEMENT PROCESS FLOWS
- APPENDIX O, TECHNICAL LANDSCAPE
- APPENDIX P, RETAIL OPERATIONS APPLICATIONS AT-A-GLANCE
- APPENDIX Q, APPLICATION INVENTORY
- APPENDIX R, IBMS AND POS SOFTWARE VERSIONS
- APPENDIX T, 6.0 BATCH INTERFACE CODING STANDARDS
- APPENDIX U, APP SERVER INSTALL WITH SOA
- APPENDIX V, APPWORX AGENT INSTALL DOC
- APPENDIX W, APPWORX RETEK CONFIGURATION
- APPENDIX X, BPEL POST INSTALLATION STEPS
- APPENDIX Y, EBS CLONING FOR PLCB – QUICK GUIDE
- APPENDIX Z, EBS CLONING FOR PLCB
- APPENDIX AA, NEW INSTALLATION RMS AND SIM CLONE
- APPENDIX BB, NEW SERVER EBS CLONING FOR PLCB
- APPENDIX CC, APPWORKS MASTER INSTALL DOCUMENT
- APPENDIX DD, RDW INSTALLATION
- APPENDIX EE, RMS AND SIM CLONE
- APPENDIX FF, RMS REFRESH
- APPENDIX GG, RPAS CLONE DOCUMENT
- APPENDIX HH, SIM APPLICATION CLONE
- APPENDIX II, SIM REFRESH
- APPENDIX LL, NON-IBMS APPLICATION INVENTORY

Task 4–Migrate Initial Subset of the Non-production Environments

For IBMS/ORCO environments, the selected Contractor will utilize the IBMS/ORCO automated cloning facility to migrate a subset of non-production environments to the Computing Services initiative so that the PLCB and selected Contractor can:

- a. Verify that the process works.
- b. Verify that performance (response time, batch job elapsed time) meets or is better than the current platform within the scope of services available from the Computing Services initiative.
- c. Validate that the time required for the final production migration meets the requirements in Task 3.

Not all non-production IBMS/ORCO environments need be migrated in this step; only a sufficient sampling of non-production environments to meet the objectives above.

For non-IBMS/ORCO environments, the selected Contractor will utilize the migration designs and architecture from the previous task to migrate the enough non-production environments to the Computing Services Initiative in order to:

- a. Verify that the process works.
- b. Verify that performance (response time, batch job elapsed time) meets or is better than the current platform within the scope of services available from the Computing Services initiative.
- c. Validate that the time required for the final production migration meets the requirements in Task 3.

Not all non-production non-IBMS/ORCO environments need be migrated in this step; only sufficient non-production environments to meet the objectives above. In previous projects, the PLCB has used the following environments for this Task: Development (25), Integration Test (45) and User Acceptance Testing (95).

The PLCB will lead the user acceptance testing with assistance from the selected Contractor to according to the user acceptance test plans developed in Task 2.

Activities and Deliverables for Task 4:

The selected Contractor will:

	Activities for Task 4	Deliverables for Task 4
4.1	Utilize the IBMS/ORCO automated cloning facility to migrate non-production environments to the OA Computing Services Initiative.	Non-production environments migrated to the OA Computing Services Data Centers using the IBMS/ORCO automated cloning facility within agreed upon timeframes.
4.2	Develop the cutover and cutover contingency plans. The plans should be substantially similar to those that will be used for the cutover of the production environments in order to verify the cutover process.	Cutover and cutover contingency plans completed and accepted by PLCB.
4.3	Migrate non-IBMS/ORCO non-production environments to the OA Computing Services Initiative.	Non-IBMS/ORCO non-production environments migrated to OA Computing Services Data Centers.
4.4	Verify that capacity and performance meets or is better than the current platform within the scope of services available from the Computing Services initiative.	Capacity analysis and performance reports for key applications and batch jobs completed.
4.5	Develop the production cutover and cutover contingency plans.	Cutover and cutover contingency plans developed and tested.
4.6	Define go/no-go criteria.	Go/no-go criteria defined, documented and accepted by

	Activities for Task 4	Deliverables for Task 4
		the PLCB
4.7	Conduct load testing on IBMS/ORCO environments to verify that the performance of the Computing Services initiative meets or exceeds that of the existing environment within the scope of services available from the Computing Services initiative.	Load test results completed with performance meeting or exceeding that of the existing environment.
4.8	Deliver the “Go Live Readiness Assessment” document for PLCB Executive Group Approval. (see Appendix L)	“Go Live Readiness Assessment” document completed and approved by PLCB Executive Group.

All of the Appendices listed at the end of Task 3 other than APPENDIX T will facilitate the completion of Task 4 and the Activities and Deliverables described above. Additionally, a review of APPENDIX H, RELEASE MANAGEMENT POLICY and APPENDIX L, GO LIVE READINESS ASSESSMENT will help to facilitate the completion of this task.

Task 5–Migrate IBMS/ORCO Production Environments

The selected Contractor will migrate the production environment to the OA Computing Services Data Centers.

The PLCB will lead the user acceptance testing with assistance from the selected Contractor in accordance with the user acceptance test plans developed in Task 2.

Activities and Deliverables for Task 5:

The selected Contractor will:

	Activities for Task 5	Deliverables for Task 5
5.1	Verify that capacity meets or is better than the current platform within the scope of services available from the Computing Services initiative.	Capacity analysis against server requirements verifies that capacity meets or is better than the current platform.
5.2	Migrate the IBMS/ORCO production environment.	IBMS/ORCO production environment migrated.
5.3	Verify that performance meets or is better than the current platform within the scope of services available from the Computing Services initiative.	Performance reports for key applications and batch jobs verify that performance meets or is better than the current platform.
5.4	Migrate/configure the IBMS/ORCO disaster recovery environment.	IBMS/ORCO functional disaster recovery environment built and made operational.

All of the Appendices listed at the end of Task 3 other than APPENDIX T will also facilitate the completion of Task 5 and the Activities and Deliverables described above. Additionally, a review of APPENDIX H, RELEASE MANAGEMENT POLICY will help to facilitate the completion of this task.

Task 6–Migrate non-IBMS/ORCO Production Environments

The selected Contractor will migrate the production environment to the OA Computing Services Data Centers.

The PLCB will lead the user acceptance testing with assistance from the selected Contractor in accordance with the user acceptance test plans developed in Task 2.

Activities and Deliverables for Task 6:

The selected Contractor will:

	Activities for Task 6	Deliverables for Task 6
6.1	Verify that capacity meets or is better than the current platform within the scope of services available from the Computing Services initiative.	Capacity analysis against server requirements verifies that capacity meets or is better than the current platform.
6.2	Migrate the non-IBMS/ORCO production environment. (This may require multiple migrations over multiple time periods depending on the migration plans.)	Non-IBMS/ORCO production environment migrated.
6.3	Verify that performance meets or is better than the current platform within the scope of services available from the Computing Services initiative.	Performance reports for key applications and batch jobs verify that performance meets or is better than the current platform.
6.4	Migrate/configure the non-IBMS/ORCO disaster recovery environment(s). (Note that not all applications have disaster recovery environments.)	Non-IBMS/ORCO functional disaster recovery environment built and made operational.

The following Appendices are included to facilitate completion of Task 6 and the Activities and Deliverables described above:

- APPENDIX H, RELEASE MANAGEMENT POLICY
- APPENDIX I, CHANGE MANAGEMENT POLICY
- APPENDIX J, SERVICE MANAGEMENT PROCESS FLOWS
- APPENDIX O, TECHNICAL LANDSCAPE
- APPENDIX P, RETAIL OPERATIONS APPLICATIONS AT-A-GLANCE
- APPENDIX Q, APPLICATION INVENTORY
- APPENDIX U, APP SERVER INSTALL WITH SOA
- APPENDIX LL, NON-IBMS APPLICATION INVENTORY

Task 7–Migrate the Remaining Non-production Environments

The selected Contractor will migrate the non-production environments that were not migrated to the OA Computing Services Data Centers during Task 4; Assuming that the selected Contractor uses the following environments in Task 4, Development Environment #25, Integration Test Environment #45 and User Acceptance Testing Environment #95, the remaining non-production environments would be Development Environment #35, User Acceptance Testing Environment #85 and Training Environment #65.

The PLCB will lead the user acceptance testing with assistance from the selected Contractor in accordance with the user acceptance test plans developed in Task 2.

Activities and Deliverables for Task 7:

The selected Contractor will:

	Activity for Task 7	Deliverable for Task 7
7.1	Prepare and migrate the remaining non-production non-IBMS/ORCO environments. (This may require multiple migrations over multiple time periods depending on the migration plans.)	Remaining non-production non-IBMS/ORCO production environments migrated.

All of the Appendices listed at the end of Task 6 will also facilitate the completion of Task 7 and the Activity and Deliverable described above.

Task 8–Implementation

Prior to beginning Task 8 all Deliverables for Tasks 1-7 must be accepted by the PLCB.

Prior to implementation, the selected Contractor will prepare the “Go Live Readiness Assessment” (**Appendix L**), review readiness of the PLCB to go-live with the PLCB Project team and Executive Group, and obtain approval to execute the final cutover plan. The cutover must be designed to minimize business impact to the Agency’s operations.

Activities and Deliverables for Task 8:

The selected Contractor will:

	Activities for Task 8	Deliverables for Task 8
8.1	Prepare the Go Live Readiness Assessment, review readiness to go-live with the PLCB Project team and Executive Group, and obtain approval to execute the final cutover plan.	Go-Live Readiness Assessment and final cutover plan reviewed and approved by PLCB
8.2	Execute final cutover plan.	Cutover Executed

All of the Appendices listed at the end of Task 3 other than APPENDIX T will facilitate the completion of Task 8 and the Activities and Deliverables described above. Additionally, a review of APPENDIX H, RELEASE MANAGEMENT POLICY and APPENDIX L, GO LIVE READINESS ASSESSMENT will also help to facilitate the completion of this task.

Task 9–Warranty Support

Warranty Support for Ninety (90) days: In accordance with DGS ITQ Contract **4400004480**, after the completion of all deliverables associated with Tasks 4 – 8 of Section IV the selected Contractor will provide a ninety (90) day period of post go-live warranty support at no cost to the PLCB.

The warranty support shall include resolution for errors discovered during the 90-day period as well as any resulting breakage from those error resolution efforts.

All critical and high defects must be resolved before the 90-day warranty support period expires. All correspondence and documentation will be transitioned to the PLCB during the 90-day warranty support period. Documentation regarding the completion of the transition will be given to the PLCB Project Manager for approval at the conclusion of the 90-day warranty support.

Activities Expected from Selected Contractor for Task 9:

1. The selected Contractor will update the End of Warranty Transition Plan, present it to PLCB to gain agreement to all aspects of the plan, and secure final approval from the PLCB.
2. Warranty Support initiated.
3. Ongoing Warranty Support for 90 days for Tasks 4, 5, 6, 7 and 8 as described above during which the selected Contractor will remediate any errors caused by the migration including any performance problems with any on-line applications or batch jobs. (The selected Contractor is not responsible for errors not caused by the migration.)
4. All “Critical” and “High” importance defects will be resolved before the 90-day warranty support period expires.
5. All correspondence and documentation regarding the completion of the end of warranty transition will be approved by the PLCB Project Manager and transitioned to the PLCB.

Task 10–End of Purchase Order Transition

An End of Purchase Order Transition Plan is due ninety (90) days prior to the end of the purchase order and shall be performed by the selected Contractor at no additional cost to the PLCB. Transition Tasks include, but are not limited to:

Activities Expected from Selected Contractor for Task 10:

1. A detailed transition plan that will be reviewed and accepted by PLCB.
2. The completed transfer of all identified information and documentation inventory, complete with storage locations, including documentation relating to software and interfaces; functional business

process flows; all operations-related information, and all software, tools, and developed works created during the duration of the purchase order.

3. The development and implementation of a quality assurance process to monitor transition activities.
4. Post-Transition services including:
 - a. The development of a Transition Results Report
 - b. A Quality Assurance Process Document, and
 - c. A plan for access to the selected Contractor's staff with technical and operational expertise.
5. The selected Contractor will work with the PLCB Information Security Office to plan for how to ensure secure transition of PLCB data and confidential documents.
6. A Transition Results Report reviewed and accepted by PLCB.

IV-5. Reports and Project Control

The selected Contractor may propose additional reports and controls as deemed necessary. The selected Contractor will be responsible for the delegation of this work and the timeliness and clarity of delivered documents, reports, and controls. The following documents, reports and actions are required to exercise the proper control and ensure the communication that will be needed about the progression and ultimate success of this project.

The following describes the minimum level of required documents, reports, and controls:

- A. Project Management Reporting Responsibilities.** The selected Contractor shall provide regular and frequent communication with the PLCB Project Manager.
- B. Project Plan.** The selected Contractor shall create and maintain a master Microsoft Office Project 2010 format ("Project Master") work plan that details each task outlined in this RFP, plus those additional tasks the selected Contractor deems as necessary for successful completion of the Project as outlined. In addition, the selected Contractor shall create and maintain detailed individual Microsoft Project work plans for each major task, or incorporate the details into the Project Master, that identify the work elements of each task, dependencies for each task, the resources assigned to the task, time allotted to each element, the milestone(s) associated with the task, and the deliverable(s) to be produced.
- C. Status Meetings and Reports.** During the project the selected Contractor shall facilitate a weekly project team meeting and present a status report including, but not limited to: Completed activities and milestones; Activities and milestones that are behind schedule; Activities and milestones that are upcoming for the next week; Risks and issues or concerns; A schedule performance index (SPI); Problems and recommendations, and; Decisions to be made.

The status report will be tied to the work plan the selected Contractor developed in their proposal, as amended or approved by the PLCB. Overall status and individual milestones will be indicated as green, yellow, or red, defined as follows:

1. *Green Status* – Project is progressing according to plan. No corrective measures necessary.

2. *Yellow Status* – Project schedule is at risk. Corrective action must be planned and monitored by PLCB’s Project Manager.
3. *Red Status* – Project has been negatively impacted. Immediate corrective action(s) are necessary, as well as notification to the Executive Team during weekly meetings on an as needed basis

D. Project Issues Log. During the project the selected Contractor will utilize the PLCB Issues Log starting on Day 1 (one) of the Project. The Project Issues Log will include a record of every issue, question, and concern raised that has the potential to negatively impact the Project. The Project Issues Log will describe the problem and its (potential) impact on the overall Project and on each affected task and will list possible courses of action, the advantages and disadvantages of each, and include the selected Contractor’s recommendations with supporting rationale. The selected Contractor will use the PLCB Project Issue Tracking System within SharePoint.

E. Project Risk Log. During every project update the selected Contractor will make use of the PLCB Project Risk Log. The Project Risk Log will contain a record of every Project risk that has been identified which has the potential to negatively impact the Project. The selected Contractor’s Project Manager must notify the PLCB Project Manager of any newly identified project risks when they are identified. The selected Contractor shall utilize the PLCB’s Risk Management Tracking List within SharePoint for risk management assessment and reporting for the entire duration of the project. (see **Appendix JJ**)

F. Project Management Office (PMO) Meetings. Throughout the course of the Project, the selected Contractor’s Project Manager and appropriate PLCB project team leaders will hold weekly meetings at mutually agreed times. These meetings will take place in Harrisburg, Pennsylvania. The PLCB Project Manager will schedule all meetings. The purpose of these meetings may include, but will not be limited to: Project status updates; Issue resolution; Risk mitigation; Recommendations; Project strategies.

G. Reports. Reports that will be required throughout the course of this project will include, but will not be limited to:

1. **Task Plans.** A work plan for each task that identifies the work elements of the task, the resources assigned to the task, and the time allotted to each element and the deliverables to be produced. Where appropriate, a PERT or Gantt chart display should be used to show project, task, and time relationship.
2. **Status Reports.** A periodic or weekly progress report covering activities, problems and recommendations. This report should be keyed to the work plan the selected Contractor developed in its proposal, as amended or approved by the Commonwealth.
3. **Problem Identification Reports.** An “as required” report, identifying problem areas. The report should describe the problem and its impact on the overall project and on each affected task. The report should list possible courses of action with advantages and disadvantages of each, and include selected Contractor recommendations with supporting rationale.
4. **Final Report.** The selected Contractor will perform an After Action Review (AAR) with Project participants.
 - i. The AAR will be documented using the PLCB AAR Template (see **Appendix M**).

- ii. The AAR will be submitted by both the selected Contractor Project Manager and the PLCB Project Manager

IV-6. Purchase order Requirements - Small Diverse Business Participation

All purchase orders containing Small Diverse Business participation and must also include a provision requiring the selected Contractor to meet and maintain those commitments made to Small Diverse Businesses at the time of proposal submittal or purchase order negotiation, unless a change in the commitment is approved by the BSBO. All purchase orders containing Small Diverse Business participation must include a provision requiring Small Diverse Business subcontractors to perform at least **fifty percent (50%)** of the subcontracted work.

The selected Contractor's commitments to Small Diverse Businesses made at the time of proposal submittal or purchase order negotiation shall, to the extent so provided in the commitment, be maintained throughout the term of the purchase order and through any renewal or extension of the purchase order. Any proposed change must be submitted to BSBO, which will make a recommendation to the Issuing Officer regarding a course of action.

If a purchase order is assigned to another Contractor, the new Contractor must maintain the Small Diverse Business participation of the original purchase order.

The selected Contractor shall complete the Prime Contractor's Quarterly Utilization Report (or similar type document containing the same information) and submit it to the Contracting Officer of the Issuing Office and BSBO within ten (10) workdays at the end of each quarter the purchase order is in force. This information will be used to determine the actual dollar amount paid to Small Diverse Business subcontractors and suppliers. Also, this information will serve as a record of fulfillment of the commitment the selected Contractor made and for which it received Small Diverse Business participation points. If there was no activity during the quarter then the form must be completed by stating "No activity in this quarter."

NOTE: EQUAL EMPLOYMENT OPPORTUNITY AND CONTRACT COMPLIANCE STATEMENTS REFERRING TO COMPANY EQUAL EMPLOYMENT OPPORTUNITY POLICIES OR PAST CONTRACT COMPLIANCE PRACTICES DO NOT CONSTITUTE PROOF OF SMALL DIVERSE BUSINESS STATUS OR ENTITLE A CONTRACTOR TO RECEIVE CREDIT FOR SMALL DIVERSE BUSINESS UTILIZATION.

APPENDIX A

PROPOSAL COVER SHEET

**PROPOSAL COVER SHEET
COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA LIQUOR CONTROL BOARD
RFQ# 20131104**

Enclosed in three separately sealed submittals is the proposal of the Contractor identified below for the above-referenced RFQ: #20131104 - Migrate PLCB Applications to OA Computing Services Data Centers

Contractor Information:	
Contractor Name	
Contractor Mailing Address	
Contractor Website	
Contractor Contact Person	
Contact Person's Phone Number	
Contact Person's Facsimile Number	
Contact Person's E-Mail Address	
Contractor's Federal ID Number	

Submittals Enclosed and Separately Sealed:	
<input type="checkbox"/>	Technical Submittal
<input type="checkbox"/>	Small Diverse Business Submittal
<input type="checkbox"/>	Cost Submittal

<i>Signature</i>	
Signature of an official authorized to bind the Contractor to the provisions contained in the Contractor's proposal:	
	Printed Name
	Title

FAILURE TO COMPLETE, SIGN AND RETURN THIS FORM WITH THE CONTRACTOR'S PROPOSAL MAY RESULT IN THE REJECTION OF THE CONTRACTOR'S PROPOSAL

APPENDIX B

CORPORATE SIGNATORY DELEGATION AUTHORIZATION

CORPORATE SIGNATORY DELEGATION AUTHORIZATION

I, _____, of _____, City of _____,
(Name) (Address)

County of _____, State of _____, certify that I am the
_____ of _____, a corporation organized
(Title/Capacity) (Name of Corporation)

under the laws of the State of _____, having its principal office at
_____, City of _____, County of _____,
(Address)

State of _____; and that the following is a true and complete copy of a
resolution duly adopted by the Board of Directors of _____
(Name of Corporation)

at a meeting held by them on _____ day of _____, _____, at which a quorum
was present; and that this resolution has not been altered, amended, repealed,
rescinded or otherwise modified and that it is still in full force and effect.

RESOLVED THAT _____ of _____, City of
(Name) (Address)
_____, County of _____, State of _____

is hereby authorized to execute contracts on behalf of the corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of
the corporation this _____ day of _____, 20_____.

(Signature of Certifying Official)

(SEAL)

(Typed or Printed Name)

(Title)

APPENDIX C

DOMESTIC WORKFORCE UTILIZATION CERTIFICATION

DOMESTIC WORKFORCE UTILIZATION CERTIFICATION

To the extent permitted by the laws and treaties of the United States, each proposal will be scored for its commitment to use the domestic workforce in the fulfillment of the contract. Maximum consideration will be given to those offerors who will perform the contracted direct labor exclusively within the geographical boundaries of the United States or within the geographical boundaries of a country that is a party to the World Trade Organization Government Procurement Agreement. Those who propose to perform a portion of the direct labor outside of the United States and not within the geographical boundaries of a party to the World Trade Organization Government Procurement Agreement will receive a correspondingly smaller score for this criterion. In order to be eligible for any consideration for this criterion, offerors must complete and sign the following certification. This certification will be included as a contractual obligation when the contract is executed. Failure to complete and sign this certification will result in no consideration being given to the offeror for this criterion.

I, _____ [title] of _____ [name of Contractor] a _____ [place of incorporation] corporation or other legal entity, ("Contractor") located at _____ [address], having a Social Security or Federal Identification Number of _____, do hereby certify and represent to the Commonwealth of Pennsylvania ("Commonwealth") (Check **one** of the boxes below):

All of the direct labor performed within the scope of services under the contract will be performed exclusively within the geographical boundaries of the United States or one of the following countries that is a party to the World Trade Organization Government Procurement Agreement: Aruba, Austria, Belgium, Bulgaria, Canada, Chinese Taipei, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Liechtenstein, Lithuania, Luxemburg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom

OR

_____ percent (____ %) [Contractor must specify the percentage] of the direct labor performed within the scope of services under the contract will be performed within the geographical boundaries of the United States or within the geographical boundaries of one of the countries listed above that is a party to the World Trade Organization Government Procurement Agreement. Please identify the direct labor performed under the contract that will be performed outside the United States and not within the geographical boundaries of a party to the World Trade Organization Government Procurement Agreement and identify the country where the direct labor will be performed: _____

[Use additional sheets if necessary]

The Pennsylvania Liquor Control Board shall treat any misstatement as fraudulent concealment of the true facts punishable under Section 4904 of the *Pennsylvania Crimes Code*, Title 18, of Pa. Consolidated Statutes.

Attest or Witness:

Corporate or Legal Entity's Name

Signature/Date

Signature/Date

Printed Name/Title

Printed Name/Title

APPENDIX D

SMALL DIVERSE BUSINESS LETTER OF INTENT

[DATE]

[SDB Contact Name]

Title

SDB Company Name

Address

City, State, Zip]

Dear [SDB Contact Name]:

This letter serves as confirmation of the intent of [potential Contractor] to utilize [Small Diverse Business (SDB)] on RFQ 20131104, *Migrate PLCB Servers and Applications to OA Computing Services Data Centers* issued by the Pennsylvania Liquor Control Board.

If [potential Contractor] is the successful vendor, [SDB] shall provide [identify the specific work, goods or services the SDB will perform, and the specific timeframe during the term of the contract and any option/renewal periods when the work, goods or services will be performed or provided].

These services represent [identify fixed numerical percentage commitment] of the total cost in the [potential Contractor's] cost submittal for the initial term of the contract. Dependent on final negotiated contract pricing and actual contract usage or volume, it is expected that [SDB] will receive an estimated [identify associated estimated dollar value that the fixed percentage commitment represents] during the initial contract term.

[SDB] represents that it meets the small diverse business requirements set forth in the RFP and all required documentation has been provided to [potential Contractor] for its SDB submission.

We look forward to the opportunity to serve the Pennsylvania Liquor Control Board on this project. If you have any questions concerning our small diverse business commitment, please feel free to contact me at the number below.

Sincerely,

Acknowledged,

Potential Contractor Name

SDB Name

Title

Title

Company

Company

Phone number

Phone number

APPENDIX E

TRADE SECRET/CONFIDENTIAL PROPRIETARY INFORMATION NOTICE

Master Information Technology (IT) Services Invitation to Qualify (ITQ) Contract Trade Secret/Confidential Proprietary Information Notice

Instructions:

The Commonwealth may not assert on behalf of a third party an exception to the public release of materials that contain trade secrets or confidential proprietary information unless the materials are accompanied, at the time they are submitted, by this form or a document containing similar information.

It is the responsibility of the party submitting this form to ensure that all statements and assertions made below are legally defensible and accurate. The Commonwealth will not provide a submitting party any advice with regard to trade secret law.

Name of submitting party:

Contact information for submitting party:

Please provide a brief overview of the materials that you are submitting (e.g. bid, grant application, technical schematics):

Please provide a brief explanation of why the materials are being submitted to the Commonwealth (e.g. response to bid #12345, application for grant XYZ being offered by the PLCB, documents required to be submitted under law ABC)

Acknowledgment

The undersigned party hereby agrees that it has read and completed this form, and has marked the material being submitted in accordance with the instructions above. The undersigned party acknowledges that the Commonwealth is not liable for the use or disclosure of trade secret data or confidential proprietary information that has not been clearly marked as such, and which was not accompanied by a specific explanation included with this form.

The undersigned agrees to defend any action seeking release of the materials it believes to be trade secret or confidential, and indemnify and hold harmless the Commonwealth, its agents and employees, from any judgments awarded against the Commonwealth in favor of the party requesting the materials, and any and all costs connected with that defense. This indemnification survives so long as the Commonwealth has possession of the submitted material, and will apply to all costs unless and until the undersigned provides a written statement or similar notice to the Commonwealth stating that it no longer wishes to exempt the submitted material from public disclosure.

The undersigned acknowledges that the Commonwealth is required to keep all records for at least as long as specified in its published records retention schedule.

The undersigned acknowledges that the Commonwealth reserves the right to reject the undersigned's claim of trade secret/confidential proprietary information if the Commonwealth determines that the undersigned has not met the burden of establishing that the information constitutes a trade secret or is confidential. The undersigned also acknowledges that if only a certain part of the submitted material is found to constitute a trade secret or is confidential, the remainder of the submitted material will become public; only the protected information will be removed and remain nonpublic.

If being submitted electronically, the undersigned agrees that the mark below is a valid electronic signature.

Signature

Title

Date

APPENDIX F

COST SUBMITTAL TEMPLATE

**MIGRATE PLCB APPLICATIONS TO OA COMPUTING SERVICES
DATA CENTERS**

PLCB RFQ #20131104

INSTRUCTIONS

- 1.) All sheets must be filled out completely.
- 3.) Deliverables Worksheet Task Costs: Fill in the resources field as well as the hourly rate and total number of hours for each position. Information is linked and will calculate to the Summary sheet automatically. Contractors must verify that all calculations and grand total costs are accurate.
- 4.) Payment for services under this contract are deliverable-based. The hours listed are for any task or deliverable are for informational purposes only and will not be binding on the Commonwealth.

Cost Summary

	Deliverables	Total Hours	Total Cost
	Task 1, Deliverables 1.1 - 1.18	0	\$ -
	Task 2, Deliverables 2.1 - 2.9	0	\$ -
	Task 3, Deliverables 3.1 - 3.4	0	\$ -
	Task 4, Deilverables 4.1 - 4.8	0	\$ -
	Task 5, Deliverables 5.1 - 5.4	0	\$ -
	Task 6, Deliverables 6.1 - 6.4	0	\$ -
	Task 7, Deliverable 7.1	0	\$ -
	Task 8, Deliverables 8.1 - 8.2	0	\$ -
Total Deliverable Cost			\$ -
Total Deliverable Hours			0

APPENDIX G

IBMS AND ORCO INFRASTRUCTURE

IBMS and ORCO Infrastructure

B-1. Background

The PLCB currently runs its Oracle financial, retail and point-of-service applications on the following combinations of hardware and software:

- IBM p-series physical servers split into multiple logical partitions (LPARs)¹ and running AIX 7.1, 6.1 or 5.3.
- VMware based virtual machines running SuSE Linux Enterprise Server 11, RedHat Enterprise Linux 5, Windows Server Standard, Enterprise or Datacenter editions 2003/2008
- A small number of physical servers running any of the above operating systems.
- Multiple Storage Area Network (SAN) disk storage, including IBM DS8300/6800/4000/5000 series SANs. The DS3000/4000/5000 series SANs perform some wide area network, disk to disk replication.

The production and test servers are located at the Data PowerHouse, run by the Commonwealth's outsourced systems management vendor, Unisys.

The DS4300's are located at the PLCB's distribution centers but are noted here because the target of their data replication is a DS5100 at 1400A Cameron St. This needs to be taken into consideration during the Planning/Initiation and Design phases as well a replacement implemented as part of this project.

The PLCB also owns two IBM p-series servers at the Commonwealth's Internet DMZ located at the EDC, in an area known as CoLocation. These servers run the production and one of the test copies of the Oracle eBusiness application used for some externally facing application. The e-Commerce servers are located at the Commonwealth's EDC, but in an area known as Managed Services Lite (MSL) and are not owned by the PLCB.

With the exception of the servers located at the EDC, the servers are not directly accessible from the Internet.

In addition to the systems at the Data PowerHouse, the PLCB has a disaster recovery (D/R) installation at 1400A Cameron St. Oracle Data Guard is used to replicate the production databases to IBM p-series servers at the D/R site. AIX/Linux rsync is used to replicate other filesystems to the IBM p-series servers at the D/R site.

The training copy of the Oracle applications is also housed at 1400A Cameron St. Development copies are housed at 1400A Cameron St and the NWOB.

B-1.1. Environments

The PLCB maintains the following environments that must be migrated for this project:

¹ For the purposes of this appendix, *server* refers to an *LPAR* on a *physical server*.

- Development – 2 copies. This is the technical environment for development of objects such as reports, interfaces, conversions, extensions/customizations and workflow. Initial configurations are also performed here. This environment is used for unit testing and is located at the PLCB and at 1400A Cameron St.
- Integration Test – 1 copy. This is the environment used to refine design and configuration. Components are placed into this environment when they are ready for “string” testing, i.e. inter-component testing. This environment is located at the PLCB and at 1400A Cameron St.
- User Acceptance Test – 2 copies. This environment is used for final testing and sign-off of components as well as load testing. This environment is located at the DPH. One of the two environments duplicates the full production configuration and is suitable for load testing.
- Training – 1 copy. This is the environment used for training of store and central office staff. In the event of a disaster, this copy would be shut down and its capacity added to the disaster recovery copy. This environment is located at the 1400A Cameron St.
- Production – 1 copy. Final production environment. Periodically “cloned” to all other environments for development and testing purposes. This environment is located at the DPH.
- Disaster recovery – 1 copy. This copy of production is kept up to date using Oracle DataGuard and AIX/Linux rsync. This copy is located at 1400A Cameron St.

The cloning strategy, instance strategy and “path to production” are described in “Appendix C Instance Strategy.pptx”

B-1.2. Oracle environment naming conventions

Oracle environments are typically named as follows:

<Application><Environment><ServerSet><Series> where:

- <Application> is a single letter code for the application.
 - E – eBusiness Suite
 - H – Hyperion
 - R – RMS (RMS, REIM, ReSA, RPM, ARI, Allocations)
 - S – SIM
 - D – RDW
 - R – RIB
 - P – RPAS
 - B – BPEL
 - C – Oracle Retail Central Office
- <Environment> is a single letter code for the environment.
 - D – Development
 - W – Integration Test
 - A – UAT
 - P – Production
- <ServerSet> is a number that defines on which set of servers it exists. (See server naming conventions)

- <Series> is a number that indicates if there is more than one. For example, if there are two eBusiness applications on the same server set, the first one will be 1 (one) and the second will be 2 (two).

B-1.3. Oracle Tiers

Oracle applications, by their design, are two tier applications.

- The first tier is a combination web server and application server. By convention, these are called application servers.
- The second tier is a database server. However, unlike typical database servers, Oracle's ERP database servers also run significant portions of the applications including workflow, interfaces, some business logic and almost all batch processing.

Some of Oracle's applications were built by Oracle. Some, especially the retail applications, were recently purchased from a variety of vendors. Because of this, there are exceptions to almost every rule, especially within the retail applications.

B-1.4. Server naming conventions

Servers are typically named as follows:

lb<Application><Environment><Type><ServerSet><Series> where:

- "lb" is a constant required by the Office of Administration for PLCB servers.
- <Application> is a short letter code for the application:
 - EBS – eBusiness Suite
 - HYP – Hyperion
 - RMS – RMS (RMS, REIM, ReSA, RPM, ARI, Allocations)
 - SIM – SIM
 - RDW – RDW
 - INT – RIB (for instances of RIB where they do not reside on a server with an application)
 - PLN – RPAS
 - BPEL – BPEL
 - APP – Appworx
 - SSO – Single Oracle application logon service
 - ORCO – Oracle Retail Central Office
 - NFS – Network File System (Common mount point for shared data within an environment)
- <Environment> is a short letter code for the environment:
 - DEV – Development
 - DEV – Integration Test
 - UAT – UAT
 - PRD – Production
- <Type> is either:

- APP – for an application server
- DB – for a database server. Some servers have both the application and database on them and so are named as database servers. Examples include:
 - BPEL
 - APPWORX
 - RPAS
- <ServerSet> is a number that defines on which set of servers it exists. For example, all of the servers that provide one of the UAT environments have a “9” in this position. This number makes it easy to link an Oracle environment to the servers on which it resides.
- <Series> is a number that indicates if there is more than one. For example, if there are two (2) eBusiness application servers, on the same server set, the first one will be 1 (one) and the second will be 2 (two).

Other servers and environments typically follow these conventions although there are exceptions.

B-2. Migration Order

It is the responsibility of the selected Contractor to determine the strategy and best migration order for the IBMS and ORCO environments. However, there are a number of key points that should be considered:

1. IBMS and ORCO must be migrated from the DPH by 12/31/2014 as per the Compute Services RFP. The DPH houses only production and user acceptance test IBMS and ORCO servers.
2. The Compute Services RFP does not document when systems must be migrated from 1400A Cameron St. For the purposes of this RFP, the Offeror should assume that it will be 30 months from the date of execution of the Compute Services contract.
3. Systems must be migrated from the Northwest Office Building by 30 months from the date of execution of the Compute Services contract as per the Compute Services RFP.
4. The PLCB’s production IBMS systems are used whenever the stores are open. They cannot be unavailable for extended periods of time. Migration strategies need to minimize downtime and may need to consider such things as database and file synchronization, parallel updates, replication, and holiday weekends where stores are closed such as Martin Luther King day, Presidents’ Day, Memorial Day and Labor Day.
5. Production is located at the DPH but must be migrated after enough non-production environments are migrated to develop and test the migration methodology.
6. Not all non-production environments need to be migrated before production. Only sufficient environments to fully test the process and establish timelines.
7. The PLCB periodically “refreshes” copies of production with the production system itself. Due to the nature of the IBMS and ORCO applications, this involves copying the applications and databases from production in their entirety. Copies of the PLCB’s documentation are available in [TBD].
8. It may be easier to create the remaining non-production environments, including the training environment, from production once production has been migrated to the Compute Services initiative.
9. Non-IBMS applications, databases or services on servers that connect to IBMS services may need to have configuration changes such as database connection strings or hostnames when their “partner” IBMS application is moved to the Compute Services initiative.

B-3. Network Load Balancing

The PLCB uses a load balancer from Cisco on its EBS and SIM application servers, as well as for CUPS and FTP. No other application servers are load balanced.

The Oracle SIM application servers are load balanced through a Cisco ACE Module using least connections as its load balancing algorithm. When a client connection is load balanced to one of the application servers, it remains “stuck” to that server by source IP address until the client has been idle for 120 minutes.

The internal Oracle EBS application servers are load balanced through a Cisco ACE Module using round robin as its load balancing algorithm. Client connections are SSL encrypted, the SSL encryption terminates at the ACE Module. When a client connection is load balanced to one of the application servers, it remains “stuck” to that server by both source and destination IP address until the client has been Idle for 480 minutes.

The external, Internet facing Oracle EBS application servers are load balanced through equipment at the Commonwealth Technology Center. This equipment is managed by the Office of Administration. It is set up to use round robin as its load balancing algorithm. Client connections are SSL encrypted, the SSL encryption terminates at the load balancer. When a client connection is load balanced to one of the application servers, it remains “stuck” to that server by both source and destination IP address until the client has been idle for 480 minutes.

The Common Unix Printing System, CUPS, is load balanced through a Cisco ACE Module using an active/passive load balancing method. Printouts go to a common URL in each environment. All traffic for a particular environment will go to the active server, unless it is unavailable, in which it would be switched to the passive server by the load balancer.

The external FTP servers are load balanced through equipment at the Commonwealth Technology Center. This equipment is managed by the Office of Administration. It is set up using a manual primary/secondary load balancing method. All traffic will get routed to the primary server. If this server becomes unavailable, the load balancer traffic must be manually switched to the secondary server.

B-4. High Availability

The PLCB’s applications require high availability of the underlying hardware and operating system software. The PLCB has rarely experienced failures of either one.

To provide high availability at low cost, the PLCB has employed a number of facilities:

- IBM Live Partition Mobility and all prerequisites to allow the PLCB to manually load balance and manually move running IBM LPARs between frames.

- VMWare clusters (vMotion, Distributed Resource Scheduling, and Storage vMotion) which allow the PLCB to automatically load balance and automatically move running virtual machines between hosts.

This architecture has allowed the PLCB to enjoy high availability without complexity or impact on its applications.

In addition, the PLCB uses:

- IBM FlashCopy of all disks to mitigate the effects of user error on operations. FlashCopies are performed every morning at 6:00am, including during the Sunday maintenance window. FlashCopies allow the PLCB to restore its disks quickly.
- VMWare Snapshots when upgrading or making major application changes. Snapshots allow changes to be rolled back quickly. Snapshots have an impact on performance and so are only used when necessary.

The PLCB does not use Oracle Real Application Clusters (RAC), IBM HA (formerly IBM High Availability Cluster Multiprocessing) or Microsoft Windows clusters.

B-5. Other Information

B-5.1. Non-production Stores for Testing

The PLCB maintains at least one and sometimes more non-production stores within the Northwest Office Building for testing point-of-service interfaces and connectivity to IBMS environments.

These non-production stores contain, at minimum:

- One (1) or more cash registers
- One (1) store controller
- One (1) or more business PCs. The business PC is currently a Microsoft Windows/XP system with, at minimum, the software listed in the table below.:
- One (1) or more Motorola (formerly Symbol) handheld scanners used for receiving and inventory.
- One (1) or more printers.

B-6. Printing

Most of the IBMS servers use the Common Unix Printing System (CUPS) to communicate with the printers, especially the printers in the 600+ stores. (However, there are a small number of printers within EBS that still use Line Printer Remote protocol/ Line Printer Daemon protocol (LPR/LPD).) Each environment contains a pair of CUPS logical servers with the DNS hostname:

LBCUPS<ServerSet><Series>.

Where

- <ServerSet> is a number that defines on which set of servers it exists. For example, all of the servers that provide one of the UAT environments have a “9” in this position. This number makes it easy to link an Oracle environment to the servers on which it resides.
- <Series> is a number that indicates if there is more than one. For example, if there are two (2) eBusiness application servers, on the same server set, the first one will be 1 (one) and the second will be 2 (two).

The logical CUPS servers are co-located on other application servers.

B-7. Authentication

All of the IBMS servers use the Commonwealth’s Active Directory for authentication. Authorization is done via the normal operating system files. The PLCB has developed Kerberos configurations to provide Active Directory authentication.

B-8. Cloning

All non-production systems are periodically copied or “cloned” from production using various mechanisms. The copies include:

- The application code
- The databases.

Note that due to limitations of the Oracle applications, all development , integration and UAT environments contain a 100% copy of production data.

While the PLCB will provide the documentation in its possession on the cloning process after the contract is awarded, the vendor is encouraged to use its own cloning tools or processes if they are more efficient, faster or require less staff to execute.

B-9. Crystal Reports and SQL/Server

While most IBMS reports are written using Oracle’s BI Publisher application, some are written using Crystal Reports. In addition, some IBMS data is extracted into Microsoft SQL/Server databases where it then used by other applicatons.

There is a set of one SQL/Server database instance, one Crystal Reports server and one ASP.NET front end server per IBMS environment. When an IBMS environment moves to the Compute Services initiative, the database connection strings used by Crystal Reports, SQL/Server and any other applications must be changed.

APPENDIX H
RELEASE MANAGEMENT POLICY

Release Management Policy	
<h2 style="margin: 0;">Information Technology Policy</h2> <p style="margin: 0;">Office of Information Technology Services Chief Information Office</p>	
<p>Subject: Release and Deployment Management</p>	<p>Number: RM 3.0.0</p>
<p>Date: February , 2012</p>	<p>By Direction Of: Mary Benner, Chief Information Officer</p> <p>Approval:</p>

This Release and Deployment Management policy provides guidance and information on how the Office of Information Technology Services (OITS) will deploy software releases to the production environment.

1. **Scope.** This policy applies to all individuals within OITS (e.g. employees, contractors, etc.) working or doing business with the Liquor Control Board (LCB)
2. **Purpose.** This policy will improve quality by maintaining the integrity of the organization’s production environment during the implementation of scheduled releases.

An effective release and deployment process allows OITS to:

- Improve the quality of the services delivered to the agency, its vendors and licensees and the public.
- Reduce the number of issues/bugs/defects in new or modified applications.
- Facilitate life cycle management and operational consistency to reduce the time required of the business owners as well as others to perform user acceptance testing.

3. Definitions:

- **Release.** A stable, executable version of a product intended for deployment to testing and production. A collection of new and changed code, data, parameters, etc... from one or more requests for change (RFCs) that implement new or changed functionality.
- **Release Package.** All of the code, data, parameters, installation instructions, etc... needed to install a release.
- **Release Type.**
 - i. **Major.** A release of a piece of software which contains substantial new functionality or changes the application. **(Scheduled When Necessary)**

- ii. **Minor.** A release of a product that does not add new features or content. Instead minor releases normally contain such things as security fixes, cosmetic changes, new reports on existing data, format changes to reports, or other changes that are very limited in scope and impact.
 - iii. **Emergency.** Fixes to production where there are no known work-around and that impact to the business is so substantial and so widespread that a correction to the code cannot wait until the next major or minor release. Correcting data either through the application itself or directly through the database is considered routine operations and not an emergency release. A legislative change or change due to a decision by the courts may also constitute an emergency change.
- **Release Calendar.** A set of published dates that detail when releases are planned to transition through the different environments (development, test and production). These dates will be published for the calendar year, and do not necessarily follow the agency's business calendar. In general, the release schedule is:
 - i. Emergency releases are done as deemed appropriate. However, by definition, there should be very few of these.
 - ii. Minor releases are done in the middle of each month, timed so as not to interfere with month end closing.
 - iii. Major releases 6 to 7 weeks after the end of a quarter, timed so as not to interfere with year, quarter or month end closing.

4. **Classification and Submittal Policy.** Classification of the release type will be determined during the change / enhancement request phase. **(Ref. Change Management Policy). Exceptions must be submitted to the Chief Information Officer (CIO) or the Assistant CIO.**

5. **Procedures.** The following explains how code will move through testing to production dependent upon classification type:

- **Emergency Break / Fix.** Code classified as this type can be moved during the week prior to the CAB as long as at least one CAB member approves it. This code be tagged as an Emergency Break/Fix and presented at the weekly change control meeting potentially after the fact. Documentation from integration and UAT testing must be submitted for review at the weekly change control meeting.
- **Minor Release.** This code will be tagged as such and will be presented at the weekly change control meeting for final release approval. This code will also need to show testing results from the Integration and the UAT environments.
- **Major Release.** All code associated with this release will be tagged as such. This will be presented at the weekly change control meeting for final release approval. During the

migration process the developer must show testing results in each environment Integration and UAT prior to final release approval.

6. Testing.

Note: All testing must be completed and documented properly prior to any approval for release. This is outlined in the change management policy.

- Prior to a minor release all associated code must be loaded into the UAT environment prior to UAT testing. Once code has been moved, UAT testing can be completed. If code is not ready and tested with the minor release it was scheduled for, it will be moved to the next minor release.
- Prior to a major release, UAT testing must be performed with all final code in place and loaded in the UAT environment. Dates for UAT testing will be established for each release period. All code associated with the major release will be migrated at the same time to the UAT environment. If there are other reasonable accommodations needed for UAT testing they must be addressed during the submittal process. If code does not meet that window for completion it will be moved to the next release window.
- All testing will follow these guidelines, if code is not complete or must be rolled back to correct bugs it will be bumped to the next release cycle.

7. Members and Roles for Release Management.

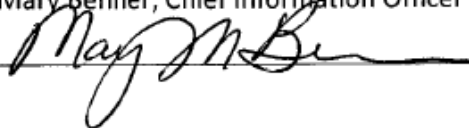
- **Release Manager.**
 - i. Schedules and coordinates all releases in the organization.
 - ii. Approves changes to be released pending CAB approval.
 - iii. Enforces release policy.
- **Change Manager.**
 - i. Coordinates the changes.
 - ii. Chairs the CAB
- **Business Analysts / Developers**
 - i. Responsible for defining the processes and ensuring compliance and effective operation.
 - ii. Supply timely and accurate documentation.
 - iii. Ensure project plans and level of effort requests refer to the release windows for scheduling.
- **Business Owners.**
 - i. Responsible for working with the business analysts to define their business requirements.
 - ii. Responsible for providing staff for user acceptance testing when required.
 - iii. Review user acceptance testing results with release manager and change manager.

APPENDIX I

CHANGE MANAGEMENT POLICY

Information Technology Policy

Office of Information Technology Services
Chief Information Office

Subject: Change Management	Number: 2.0.0
Date: July 3, 2012	By Direction Of: Mary Benner, Chief Information Officer 

This change management policy provides guidance and information on how the Office of Information Technology Services will process change requests. The policy also outlines the steps required prior to submitting a change request for approval to the Change Advisory Board (CAB).

1. **Scope.** This policy applies to all individuals (e.g., employees, contractors, etc.) working or doing business with the Liquor Control Board (LCB)
2. **Definitions:**
 - a. **Change Management (CM).** Change Management is an IT service management discipline that encompasses application, infrastructure, and process changes. The objective of CM is to ensure that standardized methods and procedures are used for efficient and prompt handling of all changes. Standardized methods and procedures minimize the number and impact of all related incidents upon service. CM will ensure standardized methods, processes, and procedures are used for all changes which will facilitate efficient and prompt handling of these changes, while maintaining the proper balance between the need for change and the potential detrimental impact of changes.
 - b. **Request for Change (RFC).** Formerly known as Activity Logs (AL). RFCs must be submitted by PLCB OITS staff for changes to the User Acceptance Testing (UAT) environment and PLCB production systems. All RFC's will be reviewed by the Change Manager and those targeting Production systems, approved by the Change Advisory Board (CAB).
 - c. **Infrastructure.** This is inclusive of all physical equipment and appliance configurations. Examples include server, handheld scanners, routers, firewall rules, network settings etc.
 - d. **Application.** Computer software designed to help the user to perform specific tasks.

- e. **Process Changes.** This type of change request covers modifications to the business process, information technology policies and procedures.

3. Classification and Submittal Policy.

a. Classification.

- i. **Emergency.** Any type of change to the production environment that requires immediate attention having “**no known work-around**”. Emergency Approvals will follow the procedure as outlined in Appendix One at the end of this document. To eliminate any conflicts of interest and in keeping with the segregation of duties policy, *only* the three following individuals have the authority to authorize emergency requests:

1. The CIO
2. The Chief of Enterprise Integration and Quality Assurance
3. The Database Manager (only if all attempts to reach the others have failed. Please see [Emergency Change Request Procedure](#) in Appendix One below)

Special Note: Only PLCB employees can make emergency requests, no exceptions.

- ii. **Normal.** The addition, modification or removal of anything that could have an effect on IT services. This applies to enhancements, projects, or non-routine changes. These will go through the normal change control process. **Special Note: Only PLCB employees can make normal requests, no exceptions.**
- iii. **Standard.** A change request that is low risk, relatively common and follows a predefined Procedure or Work Instruction. Standard requests will be submitted to the Change Manager for approval and follow the procedure as outlined in [Appendix Two](#). Standard requests do not need to go through the Change Control Board but must be accounted for. **Special Note: Only PLCB employees can make standard requests, no exceptions.**

- b. **Submittal.** All change requests must be submitted by a PLCB staff member. For RFC’s proposed for production, the following issues must be addressed in the RFC prior to CAB review. The presenter should be prepared for the following questions or documentation delivery.

- i. Are new objects involved in the change?
- ii. When can the migration be started and completed?
- iii. Does the migration require a server bounce for it to function?
- iv. Are there any jobs or processes that need to be put on hold for migration?
- v. If this is a data script, can it be executed during normal working hours?

- vi. Does backup of current data need to be completed in order to prepare for a back out, or is the process reversible without back up?
- vii. Specify the tables that need to be backed up if any.
- viii. The name of the contact, and their contact information should be on the RFC for possible contact during the scheduled migration window.
- ix. Any deployment documentation and its location must be specified.
- x. If PLCB owned code, or data is being changed, then a peer reviewer must be in the deployment documentation.
- xi. All deployment documentation needs a management reviewer entered.
- xii. Back out instructions are needed for all changes either in the deployment documentation or the RFC.
- xiii. Developers should include a sanity check for the deployment to determine whether or not the change was successful.
- xiv. Some statement should be made as to the risk level, urgency of the request, and the impact that it may have on other systems.

- c. **Closing a Request for Change:** If a back out is required during migration, the RFC must be re-submitted to the CAB for scheduling or seek an emergency approval. For process improvement a Post Implementation Review will be briefly held to determine the nature of the shortcoming.

4. Procedures.

- a. **Timeline.** All requests for changes to IT environment, except emergency fixes, will adhere to the following timelines for approval. Failure to meet these deadlines will result in the change request being delayed. The detailed process flow is written into the **Change Management Procedure CM 2.0.0**
 - i. **Wednesday by 5:00pm (EST).** This is the deadline for all non-emergency change requests to be submitted to the Change Manager (CM). At this point the CM and Quality Assurance Manager (QAM) will review the change requests and the associated documentation including the deployment and test documentation.
 - ii. **Thursday at 10:30am (EST).** There will be a standing weekly technical review meeting of all change requests that were submitted for approval. If a change request has been submitted, the PLCB employee that submitted the request must be present to discuss the proposed change and answer any questions. Note that the PLCB employee may bring along any technical resources to assist as needed.
 - iii. **Friday at 10:30am (EST).** The Change Advisory Board (CAB) will meet to review and approve / disapprove the weekly Standard change requests.

5. Members and Roles.

- a. **Change Advisory Board (CAB) Roles:** The Change Advisory Board will decide what changes will move to production. **Members:** CIO, Assistant CIO, OITS Division Chiefs, OITS Application Architect.
- b. **Change Manager Role:** Is ultimately responsible for the entire change management process from request to approval and will manage the process documenting and mitigating the risk of moving, adding, removing, deleting, modifying, or supplementing infrastructure or software changes within the LCB effectively classifying all change requests. The Change Manager will also make recommendations to the CAB on the approval/disapproval of each Request for Change based on information collected from the requestors.
- c. **Quality Assurance Manager Role:** Will review documentation related to testing and implementation of proposed changes prior to submittal to the CAB for approval.
- d. **PLCB OITS Staff Role:** Will submit change requests, and participate in the weekly technical review meeting of submitted requests providing assistance and feedback.
- e. **Implementers:** Any member(s) of a functionary team responsible for performing the type of work to properly service the request. Simply, the appropriate team or team member who completes the work of the request.

Appendix One

Emergency Change Request Procedure

1. Submit a request for change via email.
 - a. In the **To:** must be the **CIO** and the **Chief of Enterprise Integration and Quality Assurance**.
 - b. In the **CC:** enter **LB-OITS EMG Change Request** distribution list.
 - c. The body of the message must contain the following:
 - i. A brief description of the issue
 - ii. What is the emergency request it for?
 - iii. What will the requested emergency change do?
 - iv. You may include other information helpful to the understanding of the emergency request but please keep it brief and to the point.
 - d. If there is no response to the request in 30 minutes, an attempt should be made to reach the **CIO** and or the **Chief of Enterprise Integration and Quality Assurance** by phone for confirmation/ authorization. If a response is not received after one hour, the request can be approved by the Database Manager.
 - e. Once the emergency request has been approved, the requester must contact the implementation team(s) preferably by phone, in order to schedule the request. Keep in mind, that it is the responsibility of the Requester to effectively coordinate all communications regarding the requirements of the request. That is to say, it is the requester's job to see that all parties involved know about the request. The telephone numbers for the following groups are found in the Help Desk Procedures for the following groups:

- i. **Database Administration**
- ii. **Server Support**
- iii. **Network Administration**
- iv. **Computer Operations**



- f. All completed testing documentation and paperwork must be delivered within 48 hours of the requested emergency change request.
- g. When an emergency request has been completed successfully, the Implementer must email the requester and copy the Chief of Enterprise Integration and Quality Assurance, as well as the LB-OITS EMG Change Request distribution list, letting each know the work has been completed.

Appendix Two

Standard Change Request Procedure

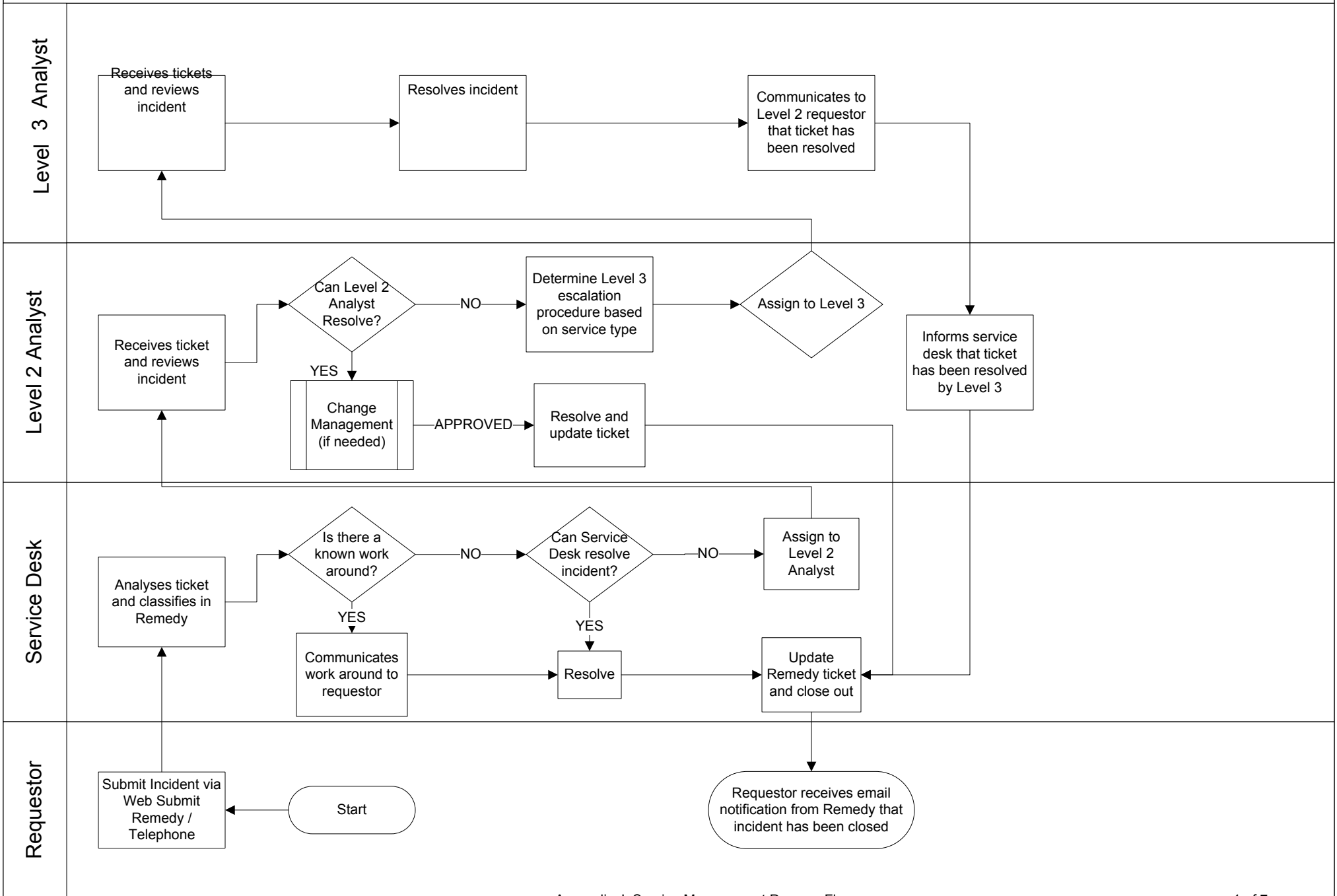
1. Submit a request for change via email.
 - a. In the **To:** field address the request to **LB-OITS Quality Assurance** and include the following:
 - i. A brief description of the change
 - ii. What impact will the change have
 - iii. If it is a script to fix data, indicate if the problem is caused by a system issue or by an end user not following procedure
 - b. Once approval has been received from the change manager,(or a member of the LB-OITS Quality Assurance group) the approved change request is forwarded to the Implementers along with the necessary instructions and attachments.
 - c. When the change has been completed, the Implementers who made the change will forward the message back to the requester, and the LB-OITS Quality Assurance resource account, indicating that it is complete.

APPENDIX J

SERVICE MANAGEMENT PROCESS FLOWS

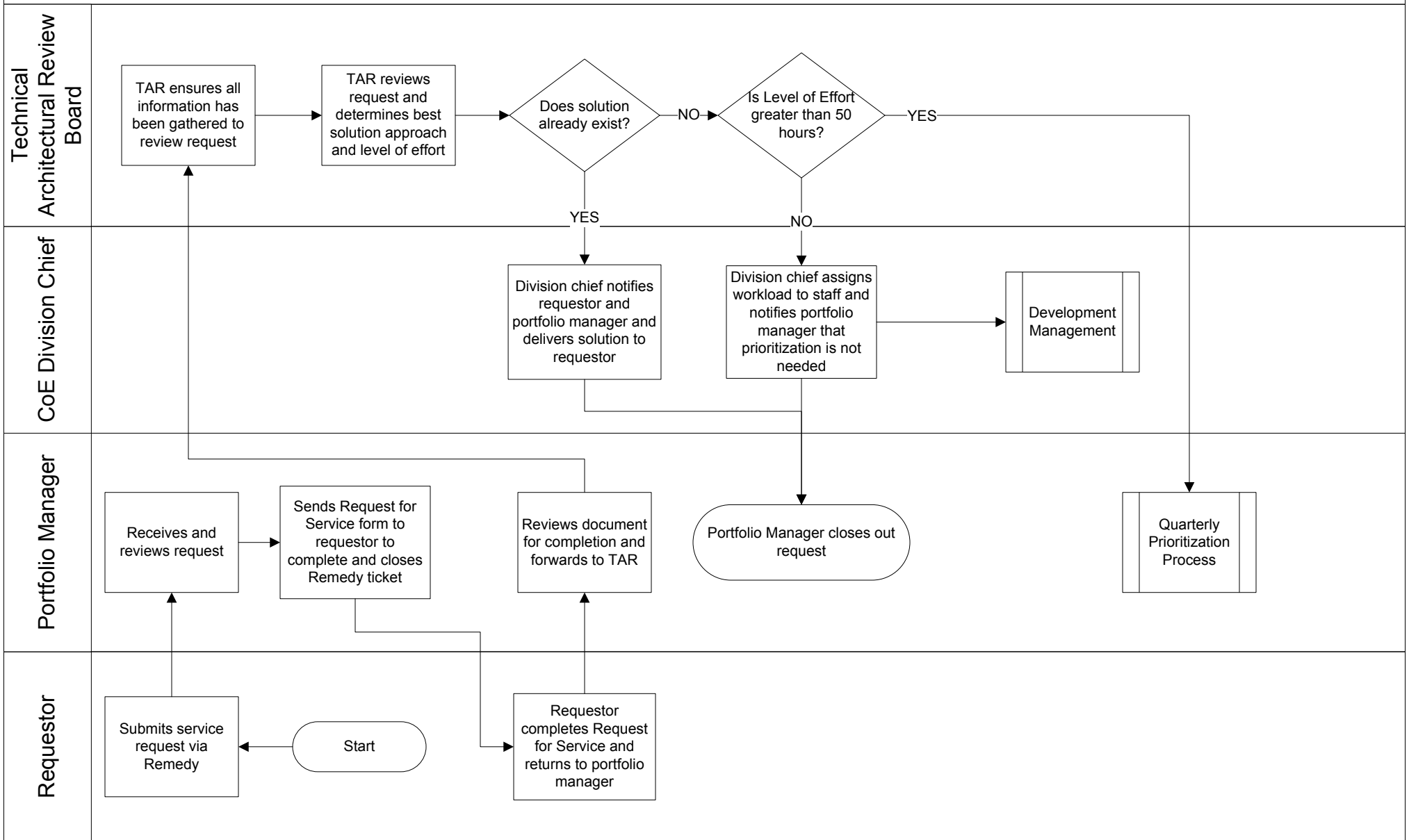
Service Management Process Flows

Incident Management



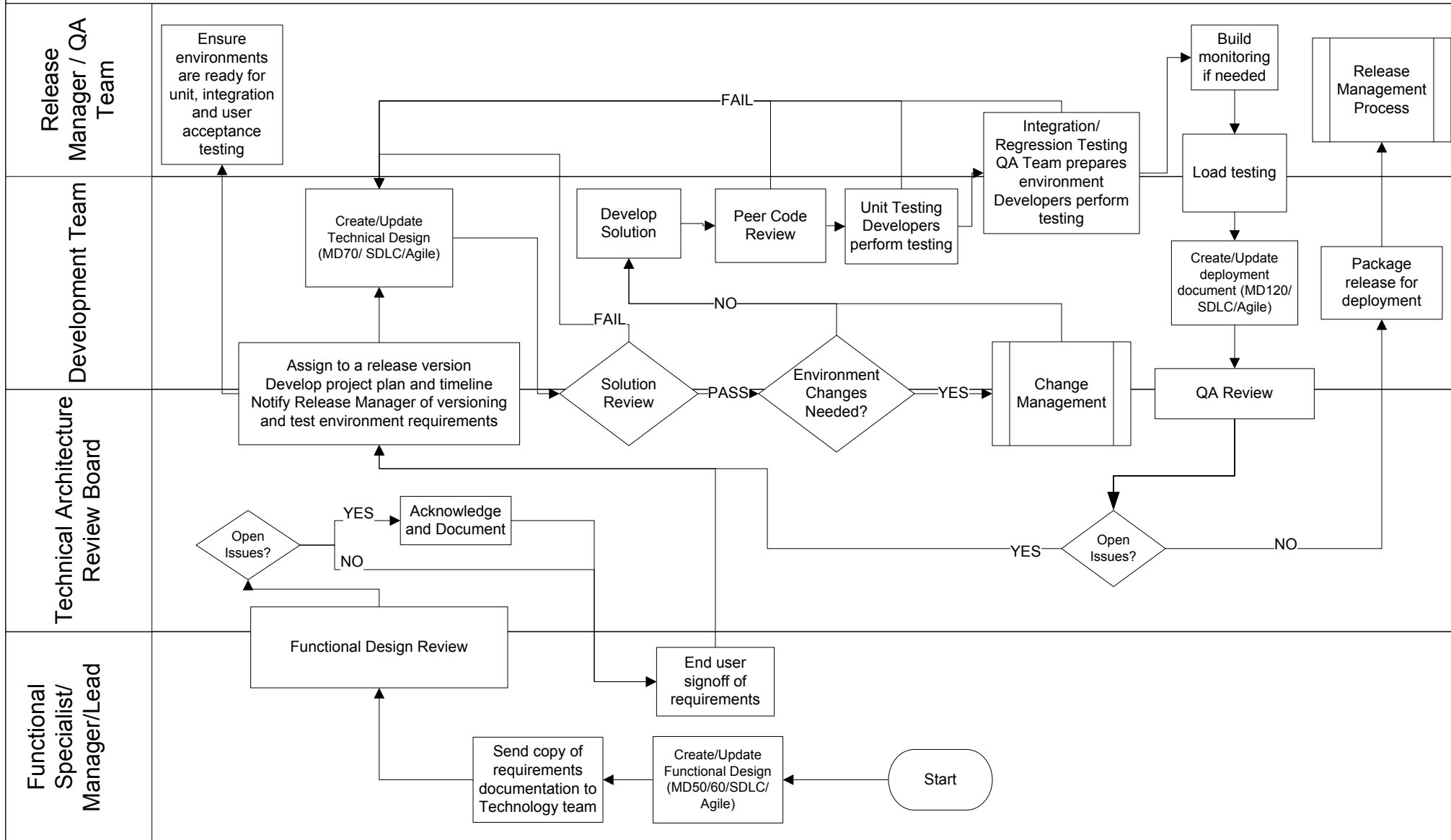
Service Management Process Flows

Service Request Management



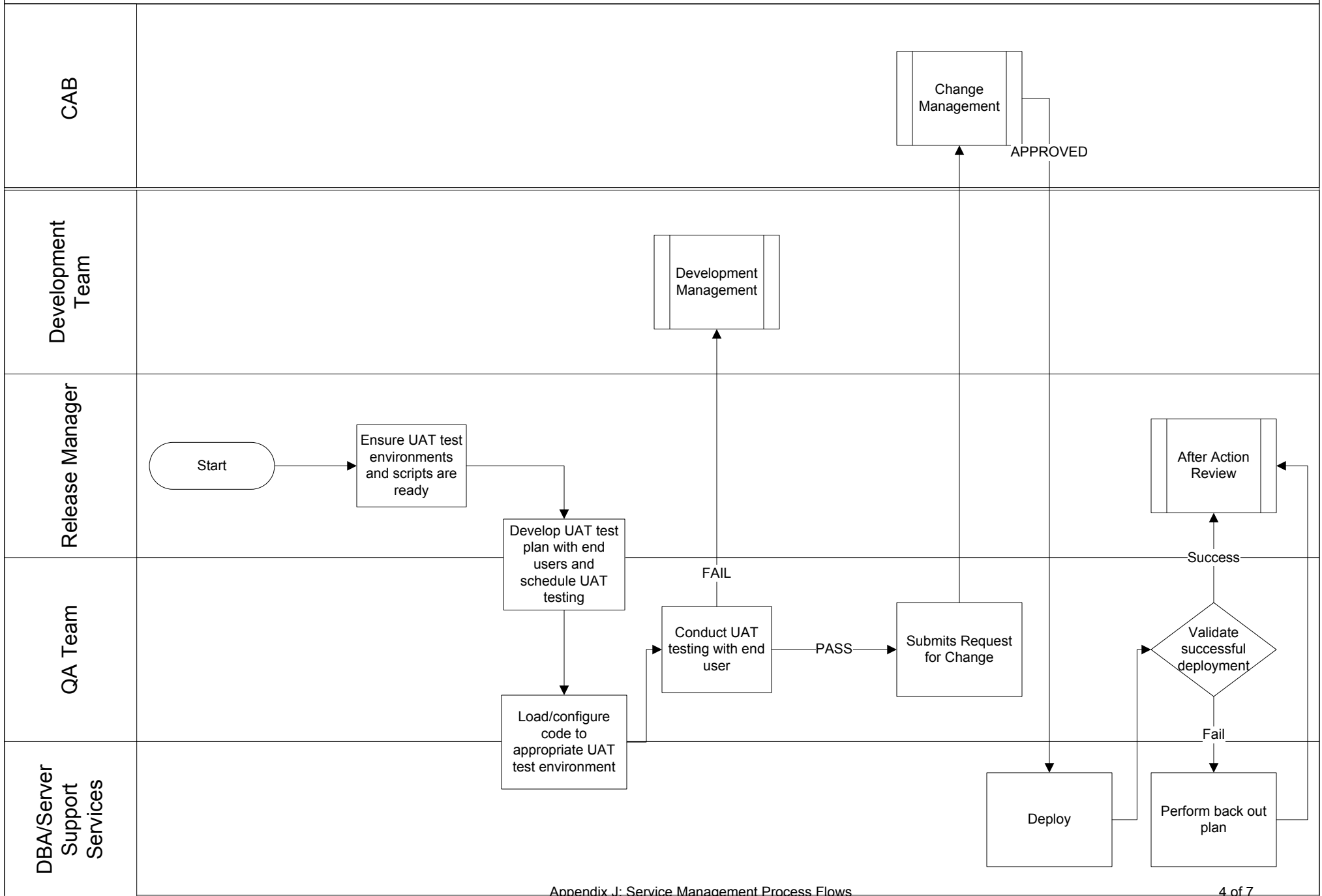
Service Management Process Flows

Development Management



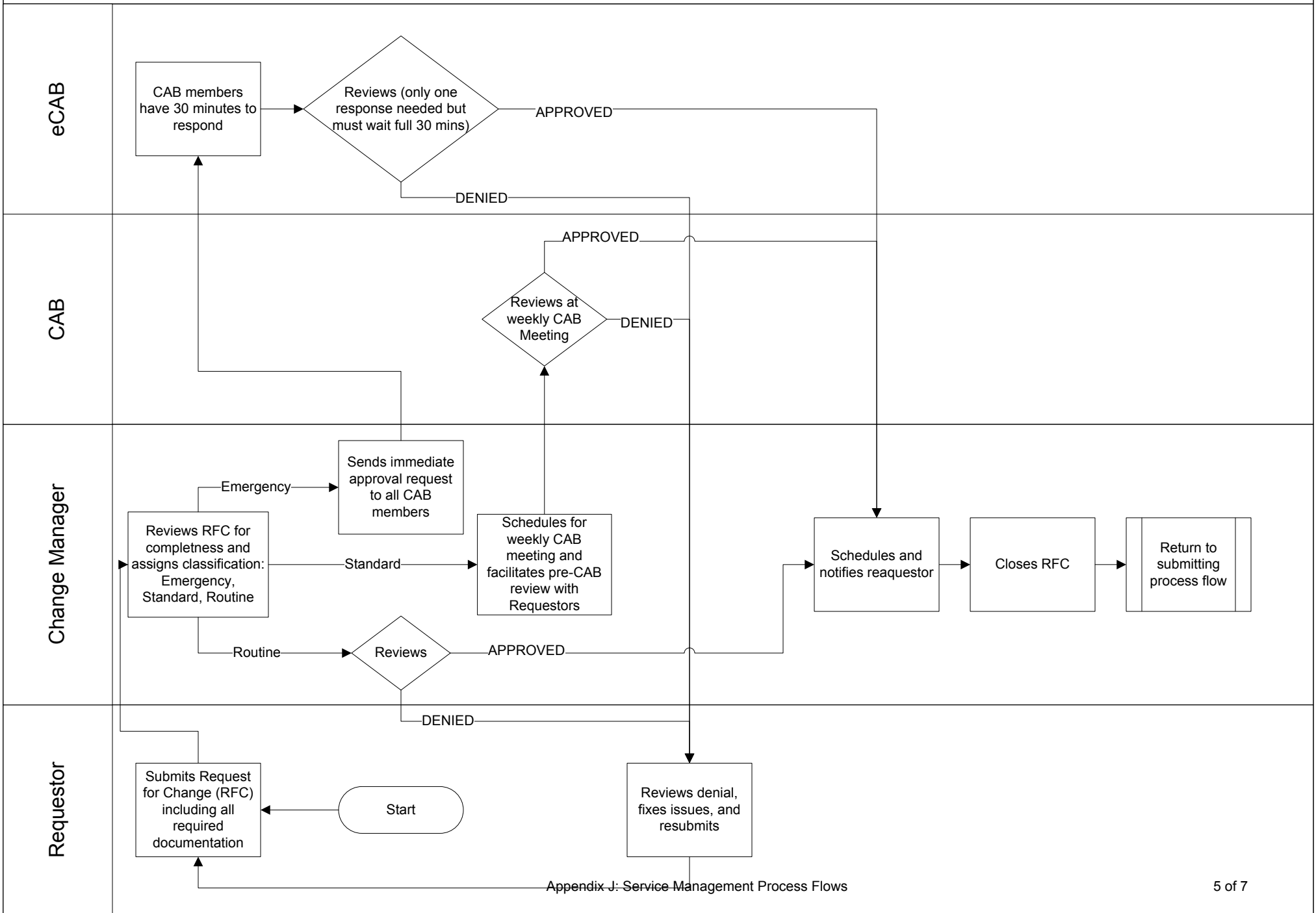
Service Management Process Flows

Release Management



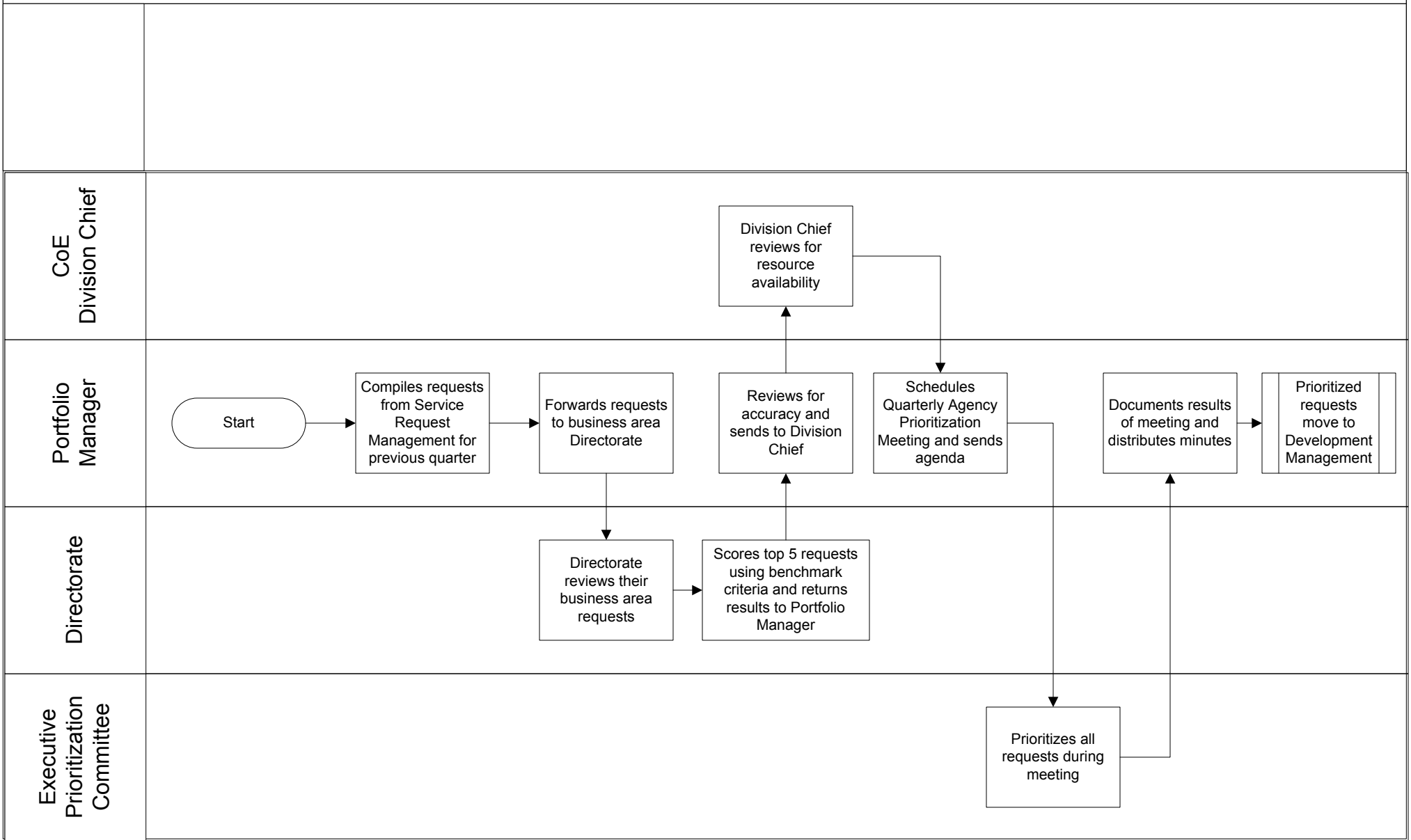
Service Management Process Flows

Change Management



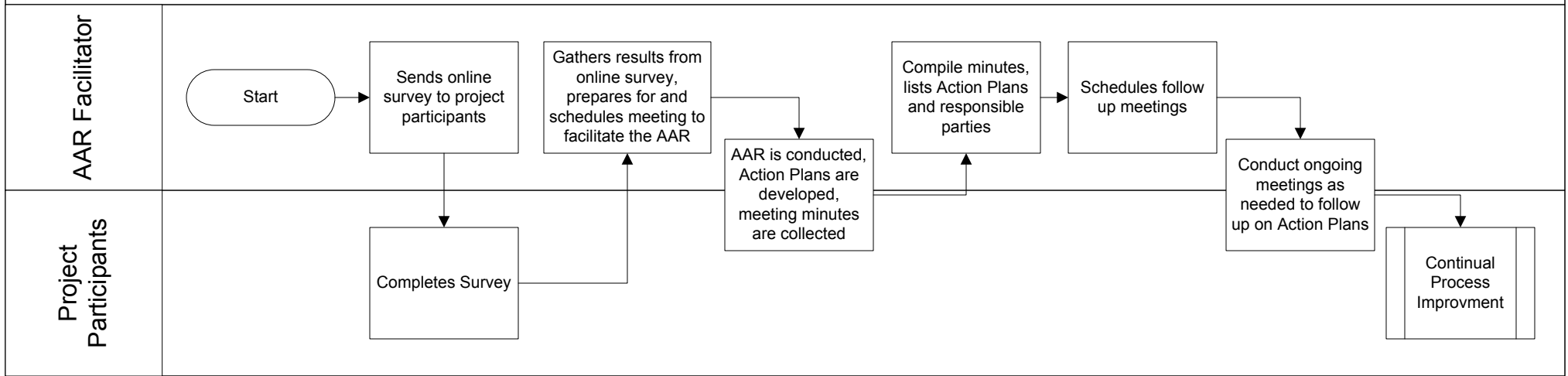
Service Management Process Flows

Quarterly Prioritization



Service Management Process Flows

After Action Review



APPENDIX K
PROJECT DECISION CHANGE TRACKER

Project Decision Change Tracker

Impact #	Business Process	Current State	What's Changing	Go Live Action Plan
<i>Number each change</i>	<i>Name of impacted process</i>	<i>Describe the current process that will change as a result of the project</i>	<i>Describe the change that will occur, whether to people, processes or both</i>	<i>Describe what needs to occur as a result of the change, i.e. new role, training, communication, change management activities, etc.</i>
1				
2				
3				

APPENDIX L
GO LIVE READINESS ASSESSMENT

GO LIVE READINESS ASSESSMENT

Pennsylvania Liquor Control Board Upgrade

Author:

Creation Date:

Last Updated:

Document Ref:

Version:

Approvals (document scope and content approval only):

(PLCB Project Manager)

(Consulting Project Manager)

Chief Information Officer

COE Business Operations Lead

COE Infrastructure Lead

(PLCB Change Management,
Training, and Reporting Lead)

Document Control

Change Record

Date	Author	Version	Change Reference
		0.1	
		1.0	
		1.1	
		1.2	
		1.3	

Reviewers

Name	Position

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Deliverable Purpose	4
Project Management Assessment.....	6
Process and Package Assessment.....	8
Development Assessment (Including Data Conversion).....	10
Information Technology (Including Security) Assessment	12
People, Change and Learning Assessment (CMT).....	Error! Bookmark not defined.
Open and Closed Issues for this Deliverable	15
Open Issues	15
Closed Issues.....	15

Deliverable Purpose

Completion of a Go Live Readiness Assessment is a key decision point prior to implementing the final cutover steps that will place the new business processes and technical systems of XXX into production use. Go Live Readiness Assessment ensures that a thorough and thoughtful process is followed before making the decision to go live.

If the results of the Go Live Readiness Assessment are favorable, then PLCB will take the decision to go live with the new processes and systems. If there are significant issues identified through the readiness assessment that might impact the success of the implementation then go live will be postponed until those issues have been resolved.

Go Live Readiness is assessed across the major project activity threads, as follows:

- Project Management
- Business Operations
- Development (including Data Conversion)
- Information Technology (including Security)
- Change Management and Training

Go Live Readiness Assessment will be reviewed several times in the weeks leading to go live. Final readiness assessment and sign off by PLCB will be completed prior to the initiation of final cutover activities on the Go Live weekend.

Steering Committee (Business Process Owner) Approval for Go Live

In my role as a Business Process Owner for Project Spirit I have reviewed the go live readiness criteria contained in this document. I understand the status of all go live readiness criteria as well as any issues or exceptions to the readiness criteria identified by the PLCB project team leads. Based upon this understanding I provide my approval for the project team to proceed with Go Live and enable the new systems and business processes for production use in PLCB's business operations.

Chief Executive Officer

Director of Marketing and Merchandising

Director of Administration

PLCB Comptroller

Chief Information Officer

Director of Store Operations

Director of Supply Chain

Project Management Assessment

Readiness Criteria	Date Assessed	Status	Status Comment
			Issues or Exceptions Noted
Project Workplan has been reviewed and all tasks up to assessment date are complete or on schedule			
Cutover Strategy has been prepared and reviewed by project leadership			
Cutover Plan has been prepared and reviewed by project leadership			
Project Issue Log has been reviewed and all issues that are critical to go live have been closed			
Cutover Plan steps have been completed up to assessment date, no critical steps are behind schedule			
Immediate Post Go-Live support procedures are established, required support resources are in place (including Help Desk, contact lists, resource schedules) and are ready to assume production support responsibilities			
Change Control Log has been reviewed and all changes applied to User Acceptance Test environments have also been confirmed applied to Production environments			
Production Change Control procedures are in place and team is familiar with the procedures			
Business Process Owners have reviewed Go Live Readiness Assessment with project team leads, are aware of any issues or exceptions, and are prepared to proceed with go live.			
Key go live risks have been identified and a contingency plan or fallback strategy has been documented and reviewed.			

✓	On Track for Go Live
◆	Emerging Issue/Behind Schedule
✘	Critical Issue – Requires Correction
...	Too Early to Assess

Project Management Approval for Go Live (with Issues and Exceptions noted above):

PLCB Project Manager _____

PLCB Business Operations
Division) _____

PLCB Applications Development
Division _____

PLCB Infrastructure and Network
Support Division _____

Process and Package Assessment

Readiness Criteria	Date Assessed	Status	Status Comment
			Issues or Exceptions Noted
Design Documents are revised up to date, signed off, and stored in a central location for reference (Process Narratives, MD50 / MD60, MD70, RICEW Inventory, etc.)			
All Integration Test scripts are completed and signed off by team members. QA review of completed scripts has been conducted by PLCB and contractor testing leads and scripts are signed off.			
All User Acceptance Test scripts are completed and signed off by team members. QA review of completed scripts has been conducted by PLCB and consultant testing leads and scripts are signed off.			
Defect Log: Critical Defects from Integration Testing and User Acceptance Testing are closed. High Defects have a written short-term solution.			
Configuration: BR100 configuration documents are up to date in project reference location. All production configuration settings have been entered and double-checked against BR100 documents.			
All custom Report programs required for go live have been completed and output generated and reviewed in UAT environment by client personnel.			
Month End closing procedures have been documented and tested			

✓	On Track for Go Live
◆	Emerging Issue/Behind Schedule
✘	Critical Issue – Requires Correction
...	Too Early to Assess

Process and Package Approval for Go Live (with Issues and Exceptions noted above):

PLCB Project Manager _____

PLCB Business Operations
Division) _____

PLCB Applications Development
Division _____

PLCB Infrastructure and Network
Support Division _____

Development Assessment (Including Data Conversion)

Readiness Criteria	Date Assessed	Status	Status Comment
			Issues or Exceptions Noted
Technical Specification Documents are revised up to date and stored in a central location for reference (MD70 Technical Specifications, MD120 Migration Documents)			
All final RICEW objects have been migrated to the production environment. Correct program versions have been double-checked and verified for all objects.			
All Data Conversion programs have been run successfully in UAT.			
Data Conversion test scripts for all data conversion programs have been executed by PLCB team members in UAT and signed off.			
Data Conversion validation documents for all conversions completed in UAT have been reviewed by PLCB team members and signed off.			
All legacy data extracts required for go live are reviewed and validated prior to execution of data conversion programs. Evaluate currency of data, completeness, and that data meets design specifications.			
Data Conversion programs scheduled up to the assessment date have been run successfully in Production.			
Data Conversion test scripts (inspection steps only) for all completed data conversions have been executed by client team members in Production and signed off.			
Data Conversion validation documents for all conversions completed in Production have been reviewed by client team members and signed off.			
Physical inventory counts have been completed for warehouses and stores and the updated inventory counts will be reflected in data used for go live. Inventory counts are accurate.			

✓	On Track for Go Live
◆	Emerging Issue/Behind Schedule
✖	Critical Issue – Requires Correction
...	Too Early to Assess

Approval for Go Live (with Issues and Exceptions noted above):

PLCB Project Manager

PLCB Business Operations
Division)

PLCB Applications Development
Division

PLCB Infrastructure and Network
Support Division

Information Technology (Including Security) Assessment

Readiness Criteria	Date Assessed	Status	Status Comment
			Issues or Exceptions Noted
Production server hardware build is complete.			
Performance testing to simulate production transaction loads has been completed with acceptable results.			
Local and Wide Area Networks have been assessed for performance capacity and reliability and will meet the service level requirements of the new systems and processes.			
User workstations are updated as required to support use of the new software.			
Build of Production software instances is complete including application of all patches and upgrades from patch log.			
Connectivity among Production systems and with external systems (including external agencies) has been established and verified (middleware, firewalls, FTP servers, VPN).			
Security roles/responsibilities matrix is updated in and has been reviewed and approved by the CISO.			
Roles and responsibilities have been established in Production instances and verified against the roles/responsibilities matrix.			
User IDs have been set up in Production instance with appropriate role/responsibility assignments. Role/responsibility assignments are verified against master list. Confirm that users have completed training before providing authorization to use system.			
Backup systems are prepared and in use for Production, backups have been verified for usability.			
Production disaster recovery systems are prepared and ready for use and have been tested for proper operation.			
Batch program schedules are complete and tested, ready to run in production			

Readiness Criteria	Date Assessed	Status	Status Comment
			Issues or Exceptions Noted
mode (Appworx, EBS concurrent manager, Crystal reports, etc.).			
Batch program "runbook" is prepared and available for use as backup to automated batch processing.			

✓	On Track for Go Live
◆	Emerging Issue/Behind Schedule
✘	Critical Issue – Requires Correction
...	Too Early to Assess

Approval for Go Live (with Issues and Exceptions noted above):

PLCB Application Development
Lead

PLCB Infrastructure Manager

PLCB Chief Information Security
Officer

Change Management and Training

Readiness Criteria	Date Assessed	Status	Status Comment
			Issues or Exceptions Noted
Training materials have been developed and signed off by personnel.			
Communication Plan activities have been completed up to assessment date or are on schedule to complete as planned.			
Training Plan activities have been completed up to assessment date or are on schedule to complete on time. This includes instructor-led training, on-line training, and formal knowledge transfer planned as end user training.			•
Training evaluation and feedback indicates that training is effective and meets expectations.			
New user documentation has been distributed to support use of the new business processes and systems.			
Policy and procedure documents are updated to reflect any changes required as a result of the new systems and processes.			
Project Team Knowledge Transfer Plans have been updated and are complete as planned			•

✓	On Track for Go Live
◆	Emerging Issue/Behind Schedule
✘	Critical Issue – Requires Correction
...	Too Early to Assess

Approval for Go Live (with Issues and Exceptions noted above):

PLCB Change Management and
Training Lead

Open and Closed Issues for this Deliverable

Open Issues

ID	Issue	Resolution	Responsibility	Target Date	Impact Date

Closed Issues

ID	Issue	Resolution	Responsibility	Target Date	Impact Date

APPENDIX M

PLCB AAR TEMPLATE

PLCB AAR Template

Insert Project Activity Name

Project Lessons Learned

Lessons learned purpose and objectives

Throughout each project life cycle, lessons are learned and opportunities for improvement are discovered. As part of a continuous improvement process, documenting lessons learned helps the project team discover the root causes of problems that occurred and avoid those problems in later project stages (or future projects) by adopting the lessons learned.

The objective of this after action report is gathering all relevant information for better planning of later project stages and future projects, improving implementation of new projects, and preventing or minimizing risks for future projects.

Lessons learned – Inputs

- What happened? How did it happen? Please note the detailed steps, in sequence, with a time line. Please add references or items (like emails) to this document that will further explain these steps or provide the reviewer with material information to understand the process being described. This is the primary input into the lessons learned process.

Step #	Step	Date/Time (approx.)	Comments

Lessons learned – Analysis

- What worked well—or didn't work well—either for this project or for the project team?
- What needs to be done over or differently?
- What surprises did the team have to deal with?
- What project circumstances were not anticipated?
- Were the project goals attained? If not, what changes need to be made to meet goals in the future?

Use the list generated as input to the analysis and highlight steps that exceeded expectations or did not meet expectations.

Step #	Step	Date/Time (approx.)	Comments

Lessons learned – Successes

Identify which steps went well and exceeded expectations e.g. The turnaround time expected for business analysis review was two business days. The analyst turned the specifications around in half a day.

Steps	Factors That Supported Success	Comments

Lessons learned – Areas of improvement

Identify which areas can be further improved upon e.g. A third party provider was given detailed instructions on which data file to upload and uploaded the wrong file instead. **NOTE: PLCB will assign responsibility for each area of improvement.**

Assignee	Steps	Factors That Need to be Improved Upon	Comments

Lessons learned – Action Items

Note the action items from both successes and areas of improvement in the table below. These are the tangible result of the lessons learned process and should be further tracked elsewhere to ensure completion and successful incorporation into everyday practices.

Action Item #	Item Description	Due Date

Lessons learned – Change Log

Version	Date	Author	Change Description

Lessons learned – Review Log

Version	Date	Reviewer	Notes

APPENDIX N

PLCB STAFFING

PLCB Staffing

This appendix provides a list of the PLCB's staff and the percentage of their time that can be dedicated to this project. For this purposes of this appendix, staff consists of employees, staff augmentation contractors, support contractors and any other contractor or consultant working under the supervision of the PLCB.

Role	Quantity	% Per Person
Business Process		
Business Process Division Chief	1	10%
Business Systems Analysts	12	10%
Technical Business Analysts (interface monitoring and correction, SQL queries, database tables and structures, etc.)	1	10%
Application Development		
Application Developers Div Chief	1	10%
Application Developers (RICEW)	1 + 1	1@50% + 1@25%
Application Administrator (eComm)	1	20%
Application Developers (Mobile & Java Apps)	1	25%
Application Developers (Reg & Admin)	3	25%
Web Specialist	1	50%
BI Administrator	2	20%
SP Administrator	1	10%
TFS, CRM Administrator	1	10%
Quality Assurance and POS Support		
Enterprise Integration and Quality Assurance Division Chief	1	10%
POS Manager	1	10%
QA Manager	1	10%
Change Manager	1	10%
Quality Assurance Analyst	2	20%
Quality Assurance Analyst	1	10%
POS Personnel (ORCO, ORBO, and ORPOS)	2	10%
Security		
IT Security Personnel	1	10%
Enterprise Infrastructure		
Enterprise Infrastructure Division Chief	1	10%
Manager of Server Support	1	10%
AIX Server Support	1	10%
Linux (RedHat/SuSE) Server Support	1	10%
Windows (2003/2008) Server Support	1	10%

Role	Quantity	% Per Person
DataPowerHouse Outsourcing Coordinator	1	10%
Manager of Database Administration	1	10%
Oracle EBS & ORCO Database Administrator	1	10%
Oracle RMS, REIM, ReSA, Allocations, SIM Database Administrator	1	10%
Oracle SIM, RIB, BPEL Database Administrator	1	10%
Microsoft SQL/Server Database Administrator	1	10%
Manager of Network Administration	1	10%
Network Designer	1	10%
Network Engineer	1	10%
Other		
Project Manager (partner of the selected contractor Project Manager)	1	10%
Technical Support for the Existing POS System	1	10%
Technical Developers for the Existing POS System	1	10%

APPENDIX O

TECHNICAL LANDSCAPE

Technical Landscape - Servers

Environment Name (production or (copy of production))						prd 05		dev 25		dev 35		dev 45		uat 85		uat 95		trn 65		dr 01		non-prd		
Physical Location (unless otherwise noted)						DPH		PLCB		PLCB		PLCB		DPH		DPH		PLCB		PLCB		Varies		
Application	Application or database server	Operating System	Physical or Virtual	Total # of Servers	Total Storage (GB)	Virtual CPUs or Cores	Memory (GB)	Virtual CPUs or Cores	Memory (GB)	Virtual CPUs or Cores	Memory (GB)	Virtual CPUs or Cores	Memory (GB)	Virtual CPUs or Cores	Memory (GB)	Virtual CPUs or Cores	Memory (GB)	Virtual CPUs or Cores	Memory (GB)	Virtual CPUs or Cores	Memory (GB)	Virtual CPUs	Memory (GB)	Disk Space (GB)
BPEL	app+db	AIX	Virtual	8	3,640	3	16	2	12	2	12	2	12	2	12	3	16	2	12	2	8			455
EBS - 1 (int)	app	AIX	Virtual	8	992	8	11	3	9	3	9	3	9	3	9	4	11	3	9	2	6			124
EBS - 2 (int)	app	AIX	Virtual	2	248	4	11									4	11							124
EBS - 1 (ext)	app	AIX	Virtual	2	248	4	11									4	11							124
EBS -2 (ext)	app	AIX	Virtual	2	248	4	11									4	11							124
EBS	db	AIX	Virtual	8	10,400	8	65	6	43	6	43	6	43	6	43	8	58	6	43	4	29			1,300
RIB	app+db	AIX	Virtual	8	3,528	3	17	3	12	3	12	3	12	3	12	3	17	3	12	2	9			441
RMS	app	AIX	Virtual	8	936	2	20	2	12	2	12	2	12	2	12	2	15	2	12	1	6			117
RMS	db	AIX	Virtual	8	16,776	10	27	7	20	7	20	7	20	7	20	10	27	7	20	5	14			2,097
S (long term archi	db	AIX	Virtual	1	908	2	4																	908
SIM - 1	app	AIX	Virtual	8	648	2	11	2	5	2	5	2	5	2	5	2	7	2	5	1	4			81
SIM - 2	app	AIX	Virtual	2	166	2	11									2	7							83
SIM	db	AIX	Virtual	8	4,536	5	24	4	18	4	18	4	18	4	18	5	24	4	18	3	12			567
cross envir.	nfs	AIX	Virtual	3	6,000	2	2													1	3	1	1	2,000
OEM	app+db	AIX	Virtual	2	256	2	16															1	16	128
Appworx	app+db	RedHat Linux	Virtual	8	4,000	3	6	2	4	2	4	2	4	2	4	3	6	2	4	2	3			500
Hyperion	app+db	RedHat Linux	Virtual	2	488	7	22									7	22							244
RDF	app	RedHat Linux	Virtual	8	3,520	4	10	3	8	3	8	3	8	3	8	4	10	3	8	2	6			440
RDW	app+db	RedHat Linux	Virtual	7	6,448	8	25	2	5	2	5	2	5	2	5	8	25	2	5					524
SSO	app+db	RedHat Linux	Virtual	8	24,000	2	4	2	3	2	3	2	3	2	3	2	4	2	3	1	2			3,000
Within envir	nfs	RedHat Linux	Virtual	8	2,800	2	4	2	3	2	3	2	3	2	3	2	4	2	3	1	2			350
ORCO	app	SuSE Linux	Virtual	8	960	4	14	3	10	3	10	3	10	3	10	4	14	3	10	4	14			120
ORCO	db	SuSE Linux	Virtual	8	10,800	4	25	3	18	3	18	3	18	3	18	4	25	3	18	4	25			1,350
Physical Location (unless otherwise noted)						EDC		PLCB		PLCB		PLCB		PLCB		EDC		PLCB		PLCB		Varies		
e-Comn - web 1	app	SuSE Linux	Virtual	3	120	2	6	2	6							2	6							40
e-Comn - web 2	app	SuSE Linux	Virtual	3	120	2	6	2	6							2	6							40
e-Comn - app 1	app	SuSE Linux	Virtual	3	105	3	10	3	10							3	10							35
e-Comn - app 2	app	SuSE Linux	Virtual	3	105	3	10	3	10							3	10							35
e-Comn - Srch 1	app	SuSE Linux	Virtual	3	66	2	12	2	12							2	12							22
e-Comn - Srch 2	app	SuSE Linux	Virtual	3	66	2	12	2	12							2	12							22
e-Comn - DB 1	app	SuSE Linux	Virtual	3	414	2	8	2	8							2	8							138
e-Comn - Mgmt	app	SuSE Linux	Virtual	1	28	1	2																	28
Physical Location (unless otherwise noted)						PLCB		PLCB		PLCB		PLCB		PLCB		PLCB		PLCB		PLCB		Varies		
Payment switch	app+db	SuSE Linux	Virtual	3	678	2	8	2	6							2	6							226
SLEPOS Admin	app	SuSE Linux	Virtual	8	256	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4			32
HP Insight Mgr	app	SuSE Linux	Virtual	2	190	2	4																	95
Manugistics	app+db	Windows	Virtual	4	1,600	4	8	4	8							4	8					4	8	400
SQL/Server	db	Windows	Virtual	4	1,600	4	8	4	8							4	8					4	8	400
Crystal Reports	app	Windows	Virtual	5	420	2	4	2	4	2	4	2	4			2	4							84
ASP.Net	app	Windows	Virtual	5	270	2	4	2	4	2	4	2	4			2	4							54
Sharepoint	web	Windows	Virtual	2	128	2	16	2	8															64
Sharepoint	app	Windows	Virtual	2	128	2	8	2	8															64
am Foundation Ser	app	Windows	Physical	1	40	4	4																	40
DNA	app	Windows	Virtual	1	40	1	4																	
AVA	app	Windows	Virtual	2	40	1	2																	

Technical Landscape - Servers

Environment Name (production or (copy of production))						prd 05		dev 25		dev 35		dev 45		uat 85		uat 95		trn 65		dr 01		non-prd		
Physical Location (unless otherwise noted)						DPH		PLCB		PLCB		PLCB		DPH		DPH		PLCB		PLCB		Varies		
Application	Application or database server	Operating System	Physical or Virtual	Total # of Servers	Total Storage (GB)	Virtual CPUs or Cores	Memory (GB)	Virtual CPUs or Cores	Memory (GB)	Virtual CPUs or Cores	Memory (GB)	Virtual CPUs or Cores	Memory (GB)	Virtual CPUs or Cores	Memory (GB)	Virtual CPUs or Cores	Memory (GB)	Virtual CPUs or Cores	Memory (GB)	Virtual CPUs or Cores	Memory (GB)	Virtual CPUs	Memory (GB)	Disk Space (GB)
BAC	app	Windows	Virtual	1	36	4	4																	
COEV	app	Windows	Virtual	1	40																	2	4	
Crystal Reports	web	Windows	Virtual	1	38	2	3																	
Cisco Mgr	app	Windows	Virtual	1	40	2	2																	
BM Director (POS)	app	Windows	Virtual	2	47	2	2																	
IBM Director	app	Windows	Physical	1	300	4	4																	
DR Backup	app	Windows	Physical	1																				
Dynamics CRM	app	Windows	Virtual	3	120	4	8	4	4							2	8							
Dynamics CRM	web	Windows	Virtual	4	210	2	8									4	16							
ePO	app	Windows	Virtual	2	50	2	1																	
FileNet Web	web	Windows	Virtual	1	20											2	4							
FTP	web	Windows	Virtual	2	120	2	2									1	1							
Firewall Mgr	app	Windows	Virtual	2	300	2	4																	
Colocation	web	Windows	Physical	4	1,946	4	4																	
Fax	app	Windows	Physical	1	40	1	1																	
Load Test	app	Windows	Physical	4	1,100	2	8																	
MQ	app	Windows	Physical	1	130	4	4																	
NBOPSC	app	Windows	Virtual	1	20	2	2																	
Warehouse	app	Windows	Physical	3	1,392	4	4																	
Print Srv	app	Windows	Virtual	1	40	2	4																	
QA Test	app	Windows	Virtual	1	20											2	4							
Remote Desktop	app	Windows	Virtual	2	60	8	20																	
Terminal Service	app	Windows	Virtual	3	122	10	10																	
SCCM	app	Windows	Physical	1	900	8	14																	
SECTW	app	Windows	Virtual	1	60	2	4																	
IME	app	Windows	Virtual	1	25	2	2																	
SSO	app	Windows	Virtual	1	20	2	4																	
SP TFS	app	Windows	Virtual	1	60	4	8																	
File Server	file	Windows	Physical	1	6,160	8	36																	
UCM	db	Windows	Virtual	1	25	2	2																	
UPK	app	Windows	Physical	1	68	8	16																	
VMWare	app	Windows	Physical	1	464	4	4																	
VM Backup	app	Windows	Physical	2	2,000	8	4																	
WAN	app	Windows	Virtual	3	50	2	2																	
What's Up Gold	app	Windows	Virtual	1	25	4	8																	
WMS (RIMS)	wms	AIX	Physical	1	80	2	4																	80
Crystal Reports	app	Windows	Physical	1	75	2	4																	75
WMS (RIMS)	wms	AIX	Physical	1	80	2	4																	80
Crystal Reports	app	Windows	Physical	1	75	2	4																	75
WMS (RIMS)	wms	AIX	Physical	1	80	2	2																	80
Crystal Reports	app	Windows	Physical	1	75	2	4																	75
WMS (RIMS)	wms	AIX	Virtual	1	80															2	4			80
Crystal Reports	app	Windows	Physical	1	75														2	4				75
Total				262	125,628																			

Technical Landscape Databases

Major database	Database Management System	Total size of all databases (GB)	Database Size in GB (each)
BPEL	Oracle 11g	1,659	207
EBS	Oracle 11g	7,174	897
RIB	Oracle 11g	112	14
RMS	Oracle 11g	11,392	1,424
SIM	Oracle 11g	1,869	234
Appworx	Oracle 11g	768	96
Hyperion	Oracle 11g (not inc. ESSBase)	13	6
RDW	Oracle 11g	12,556	1,794
SSO	Oracle 11g	80	10
ORCO	Oracle 11g	7,310	914
Payment switch	Oracle 10g R2	198	66
SQL/Server	SQL/Server 2008	468	117
e-Commerce	DB/2	160	80
Total		43,758	5,858

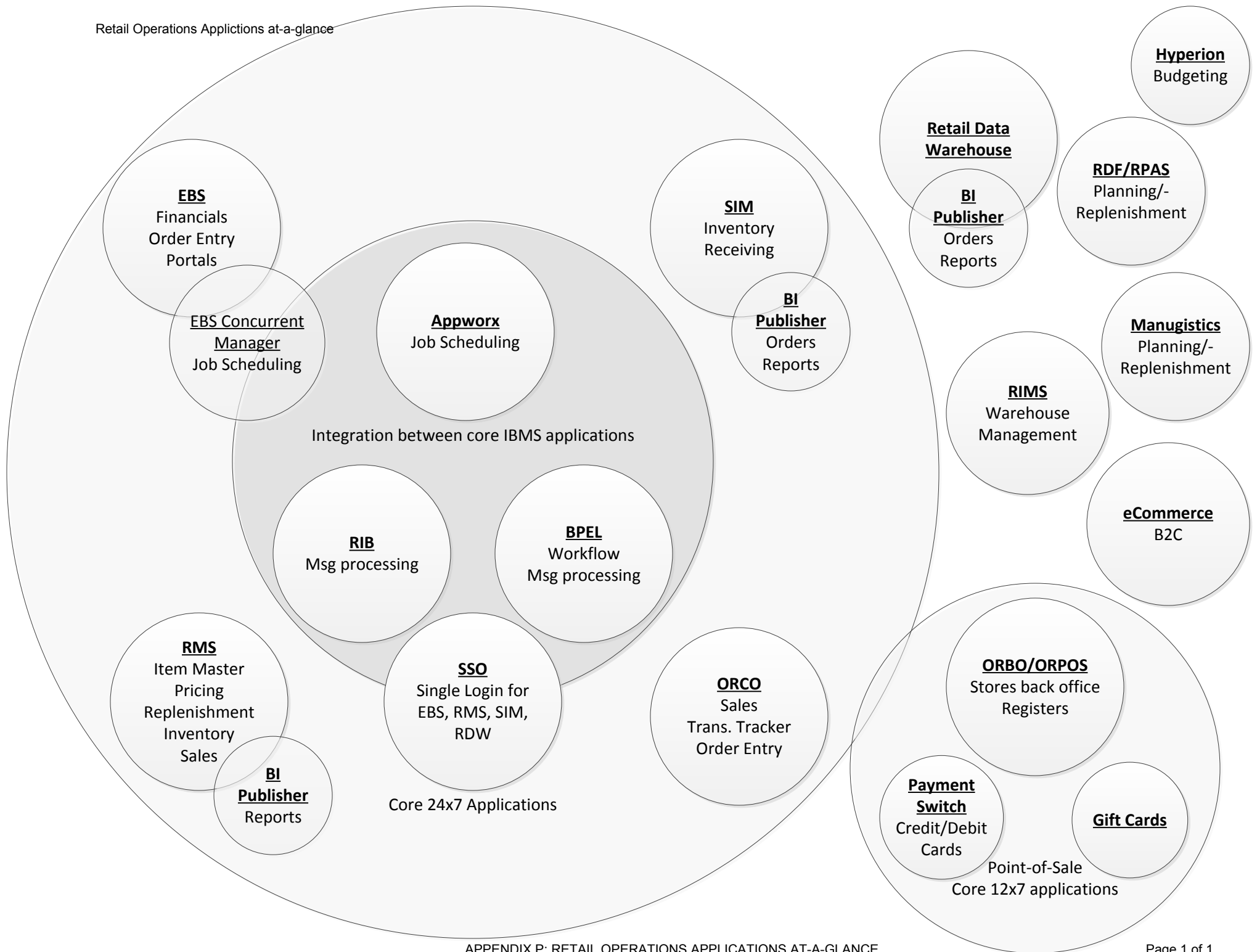
Technical Landscape - Networks

Location	Count	Data Circuits	Routers	Switches	Wireless Access Points
Stores	612	612	612	618	813
Warehouses	3	6	6	28	37
Regional Offices	12	12	12	28	5
Central Office	2	10	13	61	21
Total	629	640	643	735	876

Network Management Servers & Appliances					
	Count	Type	CPUs	Memory (GB)	Disk (GB)
WhatsUp Gold	1	Virt. Windows Server	4	8	25
CatTools (Network Management)	1	Virt. Windows Server	2	2	40
Cisco Prime (Network Management)	1	Virt. Linux	4	8	200
Cisco Wireless LAN Controler	4	Appliance			
Cisco Mobility Svcs Engine	1	Appliance			
Checkpoint Firewall Management Stations	2	Virt. Windows Server	2	4	160
Checkpoint Firewalls	4	Linux	4	4	55
Total	14		16	26	480

APPENDIX P

RETAIL OPERATIONS APPLICATIONS AT-A-GLANCE



APPENDIX Q

APPLICATION INVENTORY

APPLICATION INVENTORY

Application Name or Acronym	Business Unit(s)	Annual Transaction Volumes	Number of Users	Application Age	Application Category
Advisory Opinion Maintenance	Legal	500 to 1,000	< 16	4 to 8 years	Custom Built
Android Mobile App	Retail Sales, Citizens	500,001 to 1,000,000	> 5000 users	< 4 years	Custom Built
Bulk Purchase Order System - Intranet	Product Selection	500 to 1,000	< 16	< 4 years	Custom Built
Case Information Access, Search & Hearing Schedule System	Licensing; ALJ, Legal, HR, LCE	10,001 to 50,000	501 to 1500 users	< 4 years	Custom Built
Cost Center Information Access & Search System - CCIAS	Licensing; HR	3,001 to 5,000	101 to 250 users	< 4 years	Custom Built
Designated Healthcare Providers	HR	N/A	501 to 1500 users	4 to 8 years	Custom Built
eCommerce	Marketing	50,001 to 100,000	> 5000 users	9 to 15 years	Commercial off-the-shelf
Ecommerce Maintenance (online catalog)	Marketing	10,001 to 50,000	< 16	9 to 15 years	Custom Built
EDU 08 Update	Alcohol Education	10,001 to 50,000	1501 to 5000 users	4 to 8 years	Custom Built
EDU County Resources	Alcohol Education	10,001 to 50,000	1501 to 5000 users	4 to 8 years	Custom Built
EDU Event Registration- (Internet)	Alcohol Education/RAMP, Public	10,001 to 50,000	1501 to 5000 users	4 to 8 years	Custom Built

EDU Event Tracking	Alcohol Education/RAMP, Public	3,001 to 5,000	< 16	4 to 8 years	Custom Built
EDU Materials - (Internet)	Alcohol Education/RAMP, Public	3,001 to 5,000	1501 to 5000 users	4 to 8 years	Custom Built
EDU Materials Maintenance	Alcohol Education	3,001 to 5,000	< 16	4 to 8 years	Custom Built
Electronic Store Journal	Store Operations, Financials	500 to 1,000	< 16	4 to 8 years	Commercial off-the-shelf
E-Licensing System - Internet	Licensing	10,001 to 50,000	> 5000 users	4 to 8 years	Custom Built
Employee Information Access & Search Systems - EIAS	Licensing; HR	10,001 to 50,000	101 to 250 users	< 4 years	Custom Built
ERP Reporting	All	N/A	101 to 250 users	4 to 8 years	Commercial off-the-shelf
FileNet Imaging System (Licensing/Chief Counsel/ALJ)	Licensing, ALJ, Legal, LCE	10,001 to 50,000	501 to 1500 users	< 4 years	Custom Built
Fraud and Abuse Management System - Intranet	EEO	3,001 to 5,000	< 16	< 4 years	Custom Built
Gift Card Balance Lookup - (Internet)	Product Mgmt/Store Operations, Citizens, Retail Sales	50,001 to 100,000	> 5000 users	< 4 years	Custom Built
Higher Education - (Internet)	Alcohol Education, Citizens	3,001 to 5,000	< 16	< 4 years	Custom Built
IBMS	Agency wide	> 5,000,000	1501 to 5000 users	4 to 8 years	Commercial off-the-shelf

Investigations Report/Query Request/Daily Assignment Systems	Licensing	5,001 to 10,000	101 to 250 users	< 4 years	Custom Built
iPhone Mobile App	Retail Sales, Citizens	500,001 to 1,000,000	> 5000 users	< 4 years	Custom Built
Legal Search	Legal	N/A	> 5000 users	4 to 8 years	Custom Built
Licensee Information Access, Search and Remittance System - LIAS	Licensing, ALJ, Legal, LCE	10,001 to 50,000	501 to 1500 users	< 4 years	Custom Built
Licensing Case Management	Licensing; ALJ, Legal, HR, LCE	10,001 to 50,000	501 to 1500 users	< 4 years	Custom Built
Mailing Labels	All	N/A	< 16	4 to 8 years	Custom Built
Manugistics	Planning & Procurement	50,001 to 100,000	16 to 50 users	9 to 15 years	Commercial off-the-shelf
Mobile App Barcode Resolver Web Service	Retail Sales, Citizens	500,001 to 1,000,000	> 5000 users	< 4 years	Custom Built
NABCA Interfaces	N/A	N/A	< 16	< 4 years	Custom Built
Online Reports/Reports Dictionary	All	N/A	51 to 100 users	< 4 years	Custom Built
Oracle Point of Sale	Retail Operations	> 5,000,000	> 5000 users	< 4 years	Commercial off-the-shelf
Oracle UCM	External Affairs, Citizens	1,000,001 to 5,000,000	> 5000 users	< 4 years	Commercial off-the-shelf
PA License Search System - Internet	Licensing; ALJ, Legal, LCE	100,001 to 500,000	> 5000 users	< 4 years	Custom Built
PLCB Parking	Records Management Division	3,001 to 5,000	16 to 50 users	4 to 8 years	Custom Built

Product Lookup - Intranet	Product Management	10,001 to 50,000	501 to 1500 users	4 to 8 years	Custom Built
RAMP (Internal)	Alcohol Education/RAMP, Licensees	3,001 to 5,000	< 16	4 to 8 years	Custom Built
RAMP Login/Registration	Alcohol Education/RAMP, Licensees	5,001 to 10,000	101 to 250 users	4 to 8 years	Custom Built
RAMP Owner Manager Mandate Tracking	Alcohol Education/RAMP, Licensees	10,001 to 50,000	> 5000 users	< 4 years	Custom Built
RAMP Seller Server Vendor Web Service	Alcohol Education/RAMP, Licensees	1,001 to 3,000	< 16	< 4 years	Custom Built
Registered Malt or Brewed Beverage Brands - (Internet)	Licensing, Licensees, Citizens	5,001 to 10,000	> 5000 users	4 to 8 years	Custom Built
Search Adjudications - (Internet)	ALJ/Legal, Licensees, Citizens	1,001 to 3,000	251 to 500 users	4 to 8 years	Custom Built
Store Hours Maintenance	Store Operations	101 to 500	< 16	4 to 8 years	Custom Built
Store Locator - (Internet)	Product Mgmt/Store Operations, Citizens, Retail Sales	50,001 to 100,000	> 5000 users	4 to 8 years	Custom Built
Store Portal - Barcode/Shelf Label	Store Operations & Retail Sales	50,001 to 100,000	> 5000 users	< 4 years	Custom Built
Store Time and Attendance	Store Operations; HR	1,000,001 to 5,000,000	501 to 1500 users	< 4 years	Custom Built
Tip Line - (Internet)	Equal Opportunities, Citizens	500 to 1,000	251 to 500 users	< 4 years	Custom Built
Vehicle Information Access and Search System	Support Services	3,001 to 5,000	< 16	< 4 years	Custom Built

Vendor SCC and Item Information - (Intranet)	Supply Chain	3,001 to 5,000	101 to 250 users	4 to 8 years	Custom Built
Wine Tasting Calendar - (Internet)	Product Mgmt, Citizens, Retail Sales	1,001 to 3,000	101 to 250 users	< 4 years	Custom Built
Wine Tasting Calendar - (Intranet)	Product Management	500 to 1,000	< 16	4 to 8 years	Custom Built

Application Location	Database Technology	Software Technologies	Recovery Time Objective	Disaster Recovery Plan Exists
PLCB	MS SQL Server	Classic ASP	1-day to 1-week	Yes
PLCB	SQL 2008	Java	1-day	No
PLCB	SQL 2008 R2	ASP.net	1-day to 1-week	Yes
PLCB	SQL 2008 R2	Classic ASP	1-day to 1-week	Yes
PLCB	SQL 2008 R2	Classic ASP	1-day to 1-week	Yes
PLCB	N/A	HTML	1-day to 1-week	Yes
Enterprise Data Center (EDC)	DB2	JAVA; J2EE ; JSP;	1-day	Yes
PLCB	MS SQL Server	Classic ASP	1-day to 1-week	Yes
Enterprise Data Center (EDC)	SQL 2008	ASP/ASP.NET	Greater than 3 weeks	No
Enterprise Data Center (EDC)	SQL 2008	ASP/ASP.NET	Greater than 3 weeks	No
Enterprise Data Center (EDC)	SQL 2008	ASP/ASP.NET	Greater than 3 weeks	No

PLCB	SQL 2008	ASP/ASP.NET	Greater than 3 weeks	No
Enterprise Data Center (EDC)	SQL 2008	ASP/ASP.NET	Greater than 3 weeks	No
PLCB	SQL 2008	ASP/ASP.NET	Greater than 3 weeks	No
PLCB	MS SQL Server	COTS	1-day to 1-week	Yes
PLCB	SQL 2008 R2	Classic ASP	1-day to 1-week	Yes
PLCB	SQL 2008 R2	Classic ASP	1-day to 1-week	Yes
Data Power House (DPH)	Oracle 11g	BI - Publisher, Crystal Reports, PL/SQL	N/A	N/A
PLCB	SQL 2008 R2	Classic ASP, Visual Basic, FileNet Image Services	1-day to 1-week	Yes
PLCB	SQL 2008	ASP/ASP.NET	Greater than 3 weeks	No
PLCB	SQL 2008	Java/GWT	Greater than 3 weeks	No
Enterprise Data Center (EDC)	SQL 2008	HTML	Greater than 3 weeks	No
Data Power House (DPH)	Oracle 11g	Multiple	1-day	Yes

PLCB	SQL 2008 R2	Classic ASP	1-day to 1-week	Yes
PLCB	SQL 2008	C	1-day	No
Enterprise Data Center (EDC)	MS SQL Server	Classic .ASP	N/A	No
PLCB	SQL 2008 R2	Classic ASP	1-day to 1-week	Yes
PLCB	SQL 2008 R2	Classic ASP, Visual Basic, Filenet Image Services, ASP.net	1-day to 1-week	Yes
Data Power House (DPH)	SQL Server, Oracle	.Net, .ASP	N/A	N/A
PLCB	Oracle 9i	JAVA; J2EE; JSP	1-day	Yes
PLCB	SQL 2008	Java	1-day	No
Data Power House (DPH)	DB2	PL/SQL, SQL	1-day	No
Data Power House (DPH)	SQL Server	.Net, Crystal Reports	1-day	N/A
Data Power House (DPH)	Oracle 11g	Multiple	1-day	Yes
Enterprise Data Center (EDC)	SQL 2008	COTS	1-day	No
PLCB	SQL 2008 R2	Classic ASP	1-day to 1-week	Yes
Data Power House (DPH)	DB2	VB, .ASP	1-day	Yes

PLCB	SQL 2008	ASP/ASP.NET	1-day	No
PLCB	SQL 2008	ASP/ASP.NET	Greater than 3 weeks	No
Enterprise Data Center (EDC)	SQL 2008	ASP/ASP.NET	Greater than 3 weeks	No
PLCB	SQL 2008	Java/GWT	1-day to 1-week	No
PLCB	SQL 2008	PHP	1-day	No
Enterprise Data Center (EDC)	SQL 2008	ASP/ASP.NET	Greater than 3 weeks	No
Enterprise Data Center (EDC)	SQL 2008	ASP/ASP.NET	Greater than 3 weeks	No
PLCB	SQL 2008	ASP/ASP.NET	1-day to 1-week	No
Enterprise Data Center (EDC)	SQL 2008	ASP/ASP.NET	Greater than 3 weeks	No
PLCB	SQL 2008	Java/GWT	1-day	No
PLCB	SQL 2008 R2	ASP.net	1-day to 1-week	Yes
Enterprise Data Center (EDC)	SQL 2008	ASP/ASP.NET	Greater than 3 weeks	No
PLCB	SQL 2008 R2	Classic ASP	1-day to 1-week	Yes

PLCB	SQL 2008	ASP/ASP.NET	1-day to 1-week	No
Enterprise Data Center (EDC)	SQL 2008	ASP/ASP.NET	Greater than 3 weeks	No
PLCB	SQL 2008	ASP/ASP.NET	Greater than 3 weeks	No

APPENDIX R

IBMS AND POS SOFTWARE VERSIONS

IBMS and POS Software Versions

Summary information

Product	Acronym	Version
E-Business	EBS	12.1.3
SOA	SOA	11.1.1.6
Single Sign-On		10.1.4.3
Retail Merchandising System	RMS	13.2.4
Retail Price Management	RPM	13.2.4
Allocation		13.2.4
Retail Invoice Matching	REIM	13.2.4
Store Inventory Management	SIM	13.2.4
Retail Integration Bus	RIB	13.2.4
Retail Predictive Application Server	RPAS	13.2
UC4 (Appworx) Applications Manager ¹	Appworx	V8
Retail Data Warehouse / OBIEE	RDW	
Hyperion EPM		11.1.2.2
Manugistics	Manugistics	7.1
POS Oracle Central Office Server	ORCO	13.1.1
POS Oracle Back Office Server	ORBO	13.1.1
POS Oracle Point of Service	ORPOS	13.1.1
POS Gift Cards	ISD gift card	V2/AIX
POS Payment Switch	ISD payment switch	Ver. 6.5
Oracle Application Server ²	OAS	10.1.3
Oracle Weblogic Server ²	Weblogic	11g
Oracle Database Enterprise Edition		11g R1
Oracle Database Enterprise Edition		11g R2
Oracle Data Guard (log shipping)		11g
Oracle Advanced Queues		11g
Oracle Enterprise Service Bus		11g
Oracle Advanced Security (Tablespace Encryption)		11g
Oracle Database Enterprise Edition		9i ³

¹ Job scheduler (1 of 3). The others are EBS Concurrent Manager and Quartz

² A J2EE server used by some products

³ Required by Manugistics

Product	Acronym	Version
Oracle Enterprise Manager	OEM	12c
Microsoft SQL/Server		2008
Crystal Reports / Business Objects	Crystal Reports	Crystal Report 2011/Business Intelligence 4.0
DB/2 ⁴		9
Websphere Commerce Professional Edition		7
Websphere Application Server		7
HP Business Availability Center	BAC	8
HP LoadRunner		
AAMVA EDI		
HP Systems Insight Manager		6.3
IP Switch's WhatsUpGold	WhatsUpGold	16
Novell SLEPOS Admin Server ⁵		11
SuSE Linux Enterprise Point-of-Sale Branch Server		11
SuSE Linux Enterprise Point-of-Sale Device		11
Microsoft Sharepoint ⁶		2010
Microsoft Team Foundation Server ⁷	TFS	2010
BlackStrata LogStorm ⁸		4.2
Tripwire Enterprise File Integrity Manager ⁸		

:

⁴ Used by Websphere Commerce Professional Edition

⁵ Register and Branch server management

⁶ Document and change control repository

⁷ Code repository

⁸ Payment Card Industry Data Security Specification compliance

Detailed information for some products

Oracle E-Business 12.1.3

- ✓ Oracle Application Server J2EE to 10.1.3.5
- ✓ Oracle Application Server Forms and Reports to 10.1.2.3
- ✓ Java Developer Kit (JDK) 6.0
- ✓ JRE 6.0
- ✓ OA Framework
- ✓ Oracle Applications Manager
- ✓ AD utilities
- ✓ Database 11.2.0.3
 - ✓ 11.2.0.3 Oracle Home
 - ✓ Database upgrade from 10.2.0.3 to 11.2.0.3
 - ✓ July 2012 CPU applied
 - ✓ Column level compression
 - ✓ Oracle Net listener
 - ✓ New Context file for Oracle 11.2.0.3 Oracle Home

Oracle SOA 11g (11.1.1.6)

- ✓ Oracle Fusion Middleware 11.1.1.6
- ✓ Oracle WebLogic Server (64-bit) 10.3.6 (generic)
- ✓ Java Developer Kit (JDK) 6.0
- ✓ JRE 6.0
- ✓ RCU 11.1.1.6
- ✓ Oracle SOA Suite 11.1.1.6 (generic)
- ✓ JDeveloper 11.1.1.6 (generic)
- ✓ Oracle Service Bus 11.1.1.6 (generic)
- ✓ Database 11.2.0.3
 - ✓ Fresh installation of 11.2.0.3 Oracle Home
 - ✓ Fresh installation of 11.2.0.3 database
 - ✓ July 2012 CPU applied
 - ✓ Oracle Net listener

Oracle Single Sign-On (10.1.4.3)

- ✓ Oracle Application Server infrastructure Server 10.1.4.0.1
- ✓ Oracle Application Server Patchset 10.1.4.3
- ✓ Oracle Application Server Patchset 10.1.2.3
- ✓ Oracle Metadata Repository Creation Assistant 10.1.4.0.1
- ✓ Oracle Database 10.2.0.4
 - ✓ Fresh installation of 10.2.0.1 Oracle Home
 - ✓ Fresh installation of 10.2.0.1 database
 - ✓ Upgrade Oracle Home to 10.2.0.4
 - ✓ Upgrade database to 10.2.0.4
 - ✓ Oracle Net listener

Retail Merchandising System (13.2.4)

- ✓ Oracle WebLogic Server 11g Release 1 (10.3.4)
- ✓ Java Developer Kit (JDK - 1.6.0+ 64 bit)
- ✓ Oracle BI Publisher 10g (10.1.3.4)

- ✓ Oracle SSO Server 10.1.4.3
- ✓ Oracle Internet Directory 10.1.4.3
- ✓ Oracle Web Tier (11.1.1.4)
- ✓ Oracle Forms Services 11g Release 1 (11.1.1.4)
- ✓ OEM Agent 12c
- ✓ Oracle Database (11.2.0.2)
 - Database Patchset Update 11.2.0.2.7 (Includes CPU July 2012)
 - RMAN 11.2.0.2

Retail Price Management (13.2.4)

- ✓ Oracle WebLogic Server 11g Release 1 (10.3.4)
- ✓ Java Developer Kit (JDK - 1.6.0+ 64 bit)
- ✓ Oracle SSO Server 10.1.4.3
- ✓ Oracle Internet Directory 10.1.4.3
- ✓ Oracle Web Tier (11.1.1.4)
- ✓ OEM Agent 12c

Allocation (13.2.4)

- ✓ Oracle WebLogic Server 11g Release 1 (10.3.4)
- ✓ Java Developer Kit (JDK - 1.6.0+ 32 bit)
- ✓ Oracle SSO Server 10.1.4.3
- ✓ Oracle Internet Directory 10.1.4.3
- ✓ Oracle Web Tier (11.1.1.4)
- ✓ OEM Agent 12c

Retail Invoice Matching (13.2.4)

- ✓ Oracle WebLogic Server 11g Release 1 (10.3.4)
- ✓ Java Developer Kit (JDK - 1.6.0+ 64 bit)
- ✓ Oracle SSO Server 10.1.4.3
- ✓ Oracle Internet Directory 10.1.4.3
- ✓ Oracle Web Tier (11.1.1.4)
- ✓ OEM Agent 12c

Store Inventory Management (13.2.4)

- ✓ Oracle WebLogic Server 11g Release 1 (10.3.4)
- ✓ Java Developer Kit (JDK - 1.6.0+ 64 bit)
- ✓ Oracle BI Publisher 10g (10.1.3.4)
- ✓ Oracle SSO Server 10.1.4.3
- ✓ Oracle Internet Directory 10.1.4.3
- ✓ Oracle Web Tier (11.1.1.6)
- ✓ OEM Agent 12c
- ✓ Oracle Database (11.2.0.3)
 - 14038787 (Includes CPU July 2012)
 - RMAN 11.2.0.3

Retail Integration Bus (13.2.4)

- ✓ Oracle WebLogic Server 11g Release 1 (10.3.4)
- ✓ Java Developer Kit (JDK - 1.6.0+ 64 bit)
- ✓ OEM Agent 12c
- ✓ Oracle Database (11.2.0.2)
 - Database Patchset Update 11.2.0.2.7 (Includes CPU July 2012)
 - RMAN 11.2.0.2

Retail Predictive Application Server (13.2)

- ✓ Java Developer Kit (JDK - 1.6.0+ 64 bit)
- ✓ Oracle Retail Predictive Server 13.2

- ✓ Oracle Retail Demand Forecasting (13.2)
- ✓ Oracle Retail Configuration Management (13.2)

UC4 (Appworx) Applications Manager V8

- ✓ Application manager
- ✓ RMI Server
- ✓ Java Developer Kit (JDK) 6.0
- ✓ JRE 6.0
- ✓ Apache
- ✓ Applications Manager Agents
- ✓ Database 11.2.0.3
 - ✓ 11.2.0.3 Oracle Home
 - ✓ July 2012 CPU applied
 - ✓ Column level compression
 - ✓ Oracle Net listener
 - ✓ New Context file for Oracle 11.2.0.3 Oracle Home

Oracle Retail Data Warehouse (13.1.5)

- ✓ Oracle Business Intelligence Enterprise Edition 11.1.1.5
- ✓ Oracle Weblogic Server (64-bit) 10.3.5 (generic)
- ✓ Java Developer Kit (JDK) 6.0
- ✓ JRE 6.0
- ✓ RCU 11.1.1.5
- ✓ Oracle Business Intelligence Publisher 11.1.1.5
- ✓ Database 11.2.0.3
 - ✓ Fresh installation of 11.2.0.3 Oracle Home
 - ✓ Fresh installation of 11.2.0.3 database
 - ✓ July 2012 CPU applied
 - ✓ Oracle Net listener


Oracle Hyperion EPM 11.1.2.2

APPENDIX S
2014 HOLIDAY CALENDAR

Administrative Circular

Commonwealth of Pennsylvania

2014 HOLIDAY CALENDAR

Subject: Holidays - 2014	Date: September 6, 2013
By Direction of:  Kelly Powell Logan, Secretary of Administration	Expiration Date: September 6, 2014
Contact Agency: Office of Administration, Office for Human Resources Management, Bureau of Employee Benefits and Services, Absence and Safety Division, Telephone 717.787.9872	

Pursuant to Sections 221 and 709(e.1) of *The Administrative Code of 1929*, the Executive Board has determined that the administrative offices of State Government shall be closed on the following holidays for 2014 for the purpose of transacting public business.

2014

New Year's Day	January 1
Dr. Martin Luther King, Jr. Day	January 20
Presidents' Day	February 17
Memorial Day	May 26
Independence Day	July 4
Labor Day	September 1
Columbus Day	October 13
Veterans Day	November 11
Thanksgiving Day	November 27
Day After Thanksgiving	November 28
Christmas Day	December 25

APPENDIX T

BATCH INTERFACE CODING STANDARDS

Batch Interface Coding Standards

Information Technology Standard

Office of Information Technology Services

Subject: Batch Interface Coding Standards	Number: 6.0
Date: July 9, 2012	By Direction Of: Mary Benner, Chief Information Officer

Importance of Coding Standards

To develop reliable, maintainable applications and reduce development cost as well as time, you must follow coding standards.

In short, advantages of coding standards are:

- Improve the readability of the code.
- Easy to understand and maintain by others.
- Maintainable applications.
- Remove complexity.

Common Development Standards

- Avoid hard coding values that may need to be changed. Instead, use mechanisms that allow for changes at run-time. This may include configuration files, command line arguments, or database tables for values.
- Code must be readable to be maintained
- Platform and environment –specific code should be avoided except where absolutely necessary
- Structured code - Aim to improve the clarity, quality and development time by making use of subroutines, block structures and “for and while” loops, and limiting the “goto” statement which can lead to “spaghetti code” (for those languages that allow “goto” statements)
- Build generic or components packages for functionality that is used across the system
- Always use a global debug flag to enable informational logging, as and when required. Default informational logging in itself is an extremely costly activity that slows the entire processing down.
- Always use “wrappers” to enhance code before customizing COTS products.
- All code should always be tuned for the best possible performance, on both server and client side. Appropriate indexes and caching techniques must be utilized during coding and special attention given to writing code that performs efficiently.
- Basic tuning and testing for performance should be done when coding and unit testing, therefore mitigating potential issues prior to full performance testing.

- Any output should allow for sorting and filtering.
- Whenever changes are made to code, comments must be added to the code to clarify the changes made.
- Unless specified and requested by the user/requestor, all displays or printouts of item information should be done in code order (ascending). Any deviation of this standard by the user must be documented. This would be for any new development or anytime existing code is opened to fix or change it.
- Any file/data that is deemed confidential must be transferred in a secure manner. OA ITB SEC031 (Encryption Standards for Data In Motion) states the methods that are permitted and the minimum encryption level. PLCB policy requires credit card information, social security numbers and HR information are deemed confidential and must be encrypted. OA ITB SEC019 also states where confidential information can be transmitted to. OA ITB standards are available at the following location.
 - ITB SEC031 – Encryption Standards for Data In Transit
http://www.portal.state.pa.us/portal/server.pt?open=512&objID=416&PageID=200500&mode=2&contentid=http://pubcontent.state.pa.us/publishedcontent/publish/cop_general_government_operations/oa/oa_portal/omd/p_and_p/itbs/domains/security/itbs/itb_sec031.html
 - ITB SEC019 – Policies and Procedures for Protecting Commonwealth Electronic Data
http://www.portal.state.pa.us/portal/server.pt?open=512&objID=416&PageID=200500&mode=2&contentid=http://pubcontent.state.pa.us/publishedcontent/publish/cop_general_government_operations/oa/oa_portal/omd/p_and_p/itbs/domains/security/itbs/itb_sec019.html

Specific Development Standards

- Additional coding standards are further detailed for the respective language/tool/framework in specific documents as noted below:
 - 1.0 .Net Coding Standards
 - 2.0 Java Coding Standards and Guidelines
 - 3.0 BI Publisher Standards and Guidelines
 - 4.0 File Transfer Standards and Guidelines
 - 5.0 SQL Standards and Guidelines
 - 6.0 Batch Interface Coding Standards
 - 7.0 Reporting Standards
- Error handling – All errors must be handled and planned for. Optimal error handling ensures that the program continues and does not crash in case an error is encountered. Errors must be logged appropriately. In case of fatal errors, the program stops processing, reports the error, and exits gracefully.

Example for PL/SQL:

Begin

```
Select emp_id, employee_name into p_emp_id, p_employee_name from employees
where department_id=p_dept_id;
```

End;

This block of code, without the corresponding "exception" block, will not handle "no rows found" or "too many rows found" errors. For a select statement, both these clauses are expected and must be handled, as an appropriate error handling mechanism. The "when others" clause can be used to catch the unexpected error, clean up after the unexpected error, and exit or propagate the error outside the program.

Scope of this document

The scope of this document is to provide guidelines and standards for developing file oriented interfaces (sometimes known as "batch interfaces") between applications.

Overview

Standards are needed to ensure that data requests are processed

- Accurately
- Efficiently
- Reliably

The PLCB recognizes that sometimes exceptions to the standards will be needed because of requirements outside of the PLCB's control.

Extract, Transform, Load (ETL) is a process of importing and exporting to/from data from a database and/or file. ETL extracts data from an outside source, transforms the data to fit operational needs, and loads the data to the end target, which is; in most cases is a database.

Many different tools and technologies are available to extract, transform and load data. Those technologies are outside the scope of this document.

Accuracy

Accuracy includes, but is not limited to:

- Verifying that all of the data is transferred
- Transferring only valid data
- Handling invalid data

Verification is the process of ensuring that all of the data sent, was received and loaded into the destination application. There are multiple ways to this, all of which involve control totals:

- Record, item or similar counts
- Hash totals of key fields
- Total dollars transferred or even credits vs. debits

For any of these to work, a control total is calculated when the data is extracted and then the control total is re-calculated when the data is loaded. If the totals match, all of the data was loaded. Control totals do not cover every possible problem, but they do cover the most common problems.

Another form of control total is a reconciliation of the source and destination applications that occurs immediately after the interface runs.

Validation is the process of ensuring that the data is valid. Valid data is data that is syntactically correct or passes referential integrity. It is not necessary data that is correct. The distinction is important. An interface can validate that a cost center exists. It cannot validate that an item should have been charged to that cost center as opposed to some other valid cost center.

Examples of validations include:

- Verifying that the date exists on the Gregorian calendar
- Verifying that dates are in sequence (start date comes before the end date)
- Validating that data exists in its respective "master table". Ex: the cost center exists in the cost center table or the item exists in the item table.

Handling invalid data is the process of ensuring that data that cannot be processed is not lost and/or is easily recoverable. An interface that encounters invalid data must either log the problem and/or save the data for later processing. Examples include:

- Creating suspense file or tables to "hold" the data temporarily
- Generating error logs or reports detailing the problems encountered
- Crafting joins or using other methods to ensure that invalid data does not cause transactions to be "lost". For example, if RIMS reports inventory for an item whose item number does not exist in the RMS item table; the interface must ensure that the transaction does not "disappear" just because the SELECT statement's join would fail. Allowances or consideration must be made to either handle or detect this condition. The possibly invalid inventory cannot disappear.

Efficiency

Even though file oriented interfaces tend to be run as a batch job, they still need to carefully manage their use of system resources such as disk I/O and CPU time; and to complete in a reasonable timeframe.

Interfaces should be designed to manage time and disk space.

Managing time well includes such things as:

- Minimizing the number of steps (queries) or passes needed to retrieve the data.
- Providing sufficient selection criteria (on the where clause(s)) to quickly reduce the amount of data under consideration. This requires considering both technical and business requirements and is often unsuccessful without both.
- Extract only the data necessary from the tables necessary unless by extracting extra data, the number of passes through the database can be reduced. (In this case, intermediate files or tables may be needed.)
- Minimize record or table locks where possible

Managing disk space wisely includes such things as:

- Purging old data. Archiving without purging just moves the problem around. It does not solve it.
- Designing a directory strategy that uses deeper rather than wider directories. Directories with extremely large numbers of files perform very badly with GUI tools like Windows Explorer or WinSCP. A practical guideline would be 1,000 files in a single directory.

Reliability

File oriented interfaces must be reliable. Interfaces that frequently fail tend to cause large quantities of manpower to be expended to find and fix problems after the fact.

Reliable interfaces are visible to the centralized job scheduler. Appworx is the PLCB's centralized, cross system, job scheduler. Using a single scheduler can help the PLCB minimize scheduling conflicts and makes schedule changes more straightforward. Appworx supports many built-in commands such as those for running SQL statements or stored procedures. In addition, almost any command or executable that can be run at a command line can be scheduled via Appworx.

Reliable interfaces signal errors. The steps of the interface must also set an exit status that can be read by Appworx, the operating system shell, etc... If a step fails, it should not allow the job to continue on as if no error has occurred. That often compounds the problem and makes clean-up even more difficult.

Reliable interfaces handle "no data". An example would be an interface that pulls data from stores. The interface must make allowances the fact that there may be no data from a store on holidays. The job schedule should not have to change just to prevent problems with "no data". The opposite is also true. For some interfaces, 'no data' is a fatal error and should be handled as such.

APPENDIX U

APP SERVER INSTALL WITH SOA

App Server Install With SOA

Run the Integration Repository Creation Assistant on the Database

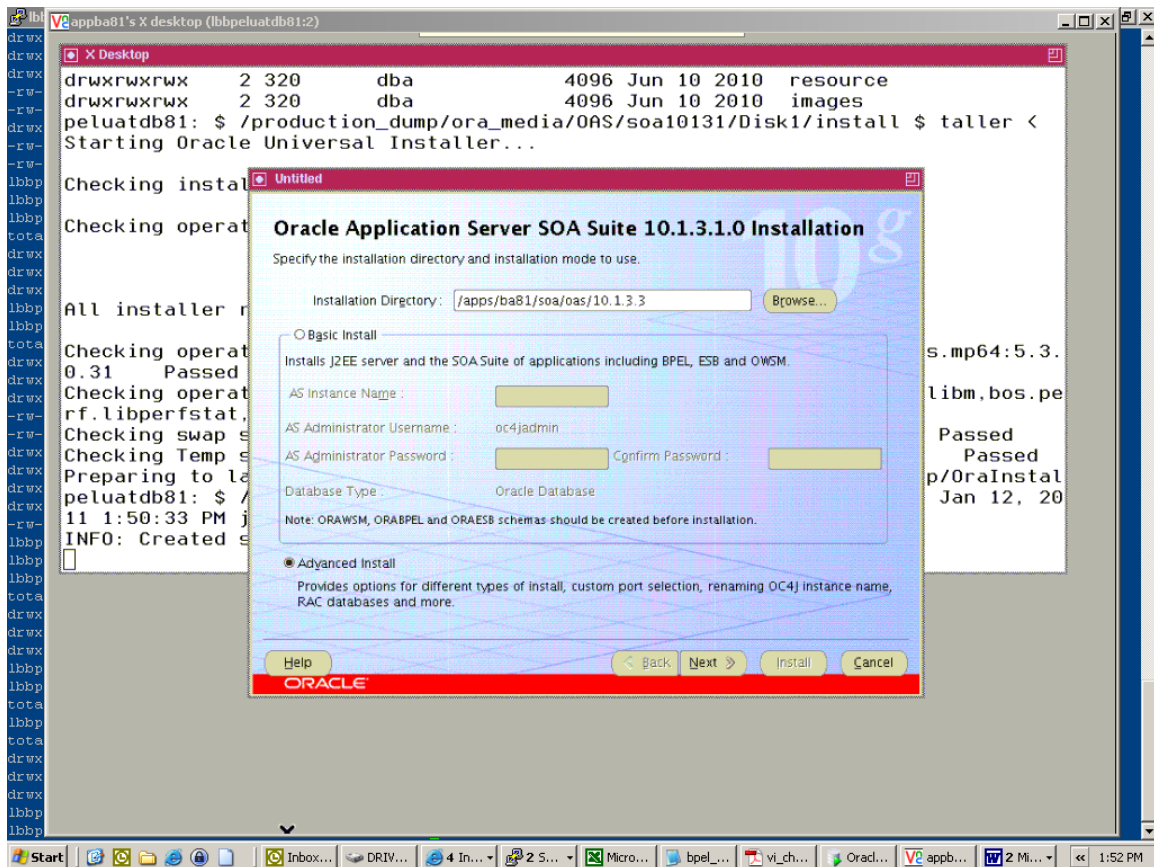
Run the Integration Repository Creation Assistant (IRCA) to create the database user and schema. IRCA creates the default user `orabpel`, the default password `orabpel`, and the tablespace `orabpel` in the Oracle Database.

There is a script `irca.sh` at

`/dphdump/production_dump/ora_media/OAS/soa10131/Disk1/install/soa_schemas/irca`

Log into VNC viewer as app user and run install file from following location:

`/production_dump/ora_media/OAS/soa10131/Disk1/install`



Must have these folders in place:

```
lbbpeluatdb81: $ /apps/ba81/soa/oas/oraInventory $ cd ..
```

```
lbbpeluatdb81: $ /apps/ba81/soa/oas $ ls -ltr
```

```
total 8
```

```
drwxrwx--- 3 appba81 dba          256 Jan 12 11:30 product
```

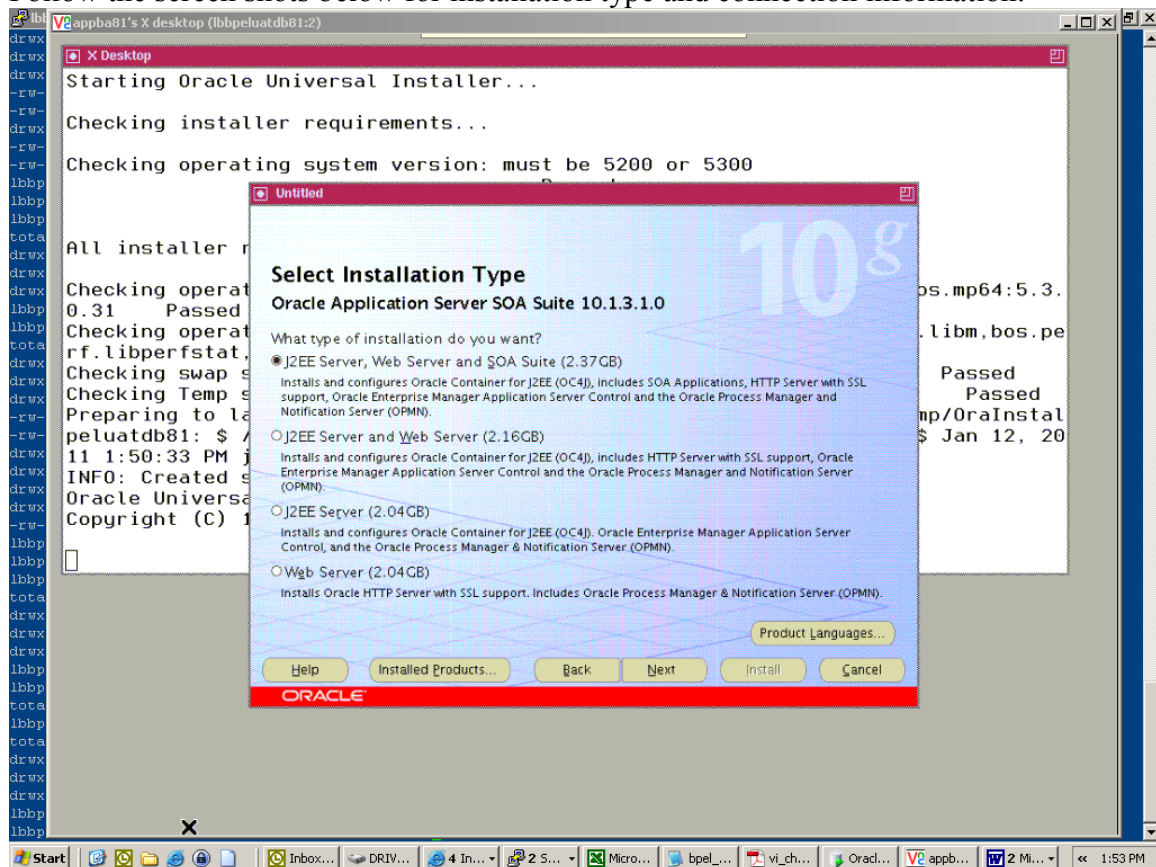


```

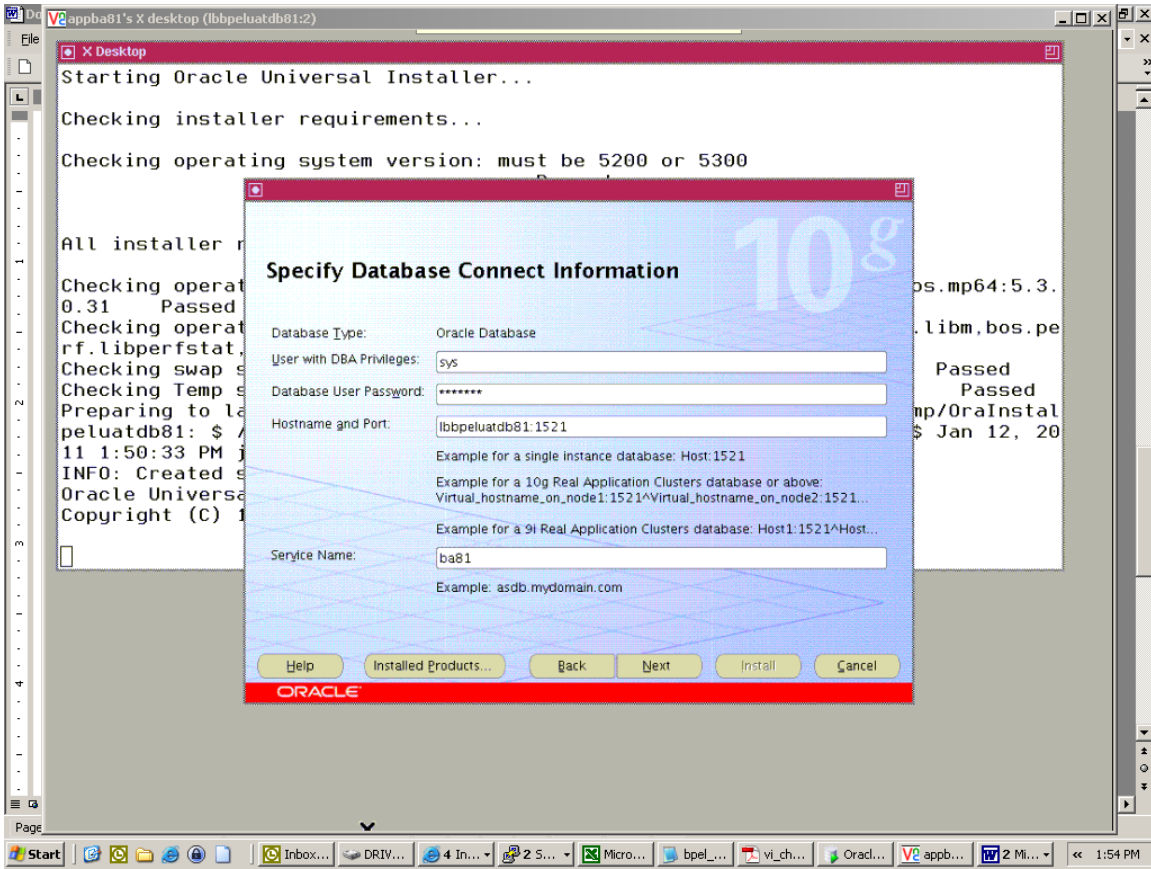
drwx----- 3 appba81 dba      4096 Jan 12 13:48 10.1.3.3
drwxrwxrwx  2 appba81 dba      256 Jan 12 13:49 oraInventory
lbbpeluatdb81: $ /apps/ba81/soa/oas $ cd 10.1.3.3
lbbpeluatdb81: $ /apps/ba81/soa/oas/10.1.3.3 $ ls -ltr
total 0
lbbpeluatdb81: $ /apps/ba81/soa/oas/10.1.3.3 $ ls -lart
total 8
drwxrwxrwx  5 oraba81 dba      256 Jan 12 11:44 ..
drwxr-x---  4 appba81 dba      256 Jan 12 13:17 .patch_storage
drwx----- 3 appba81 dba      4096 Jan 12 13:48 .
lbbpeluatdb81: $ /apps/ba81/soa/oas/10.1.3.3 $ rm -Rf .patch_storage
lbbpeluatdb81: $ /apps/ba81/soa/oas/10.1.3.3 $

```

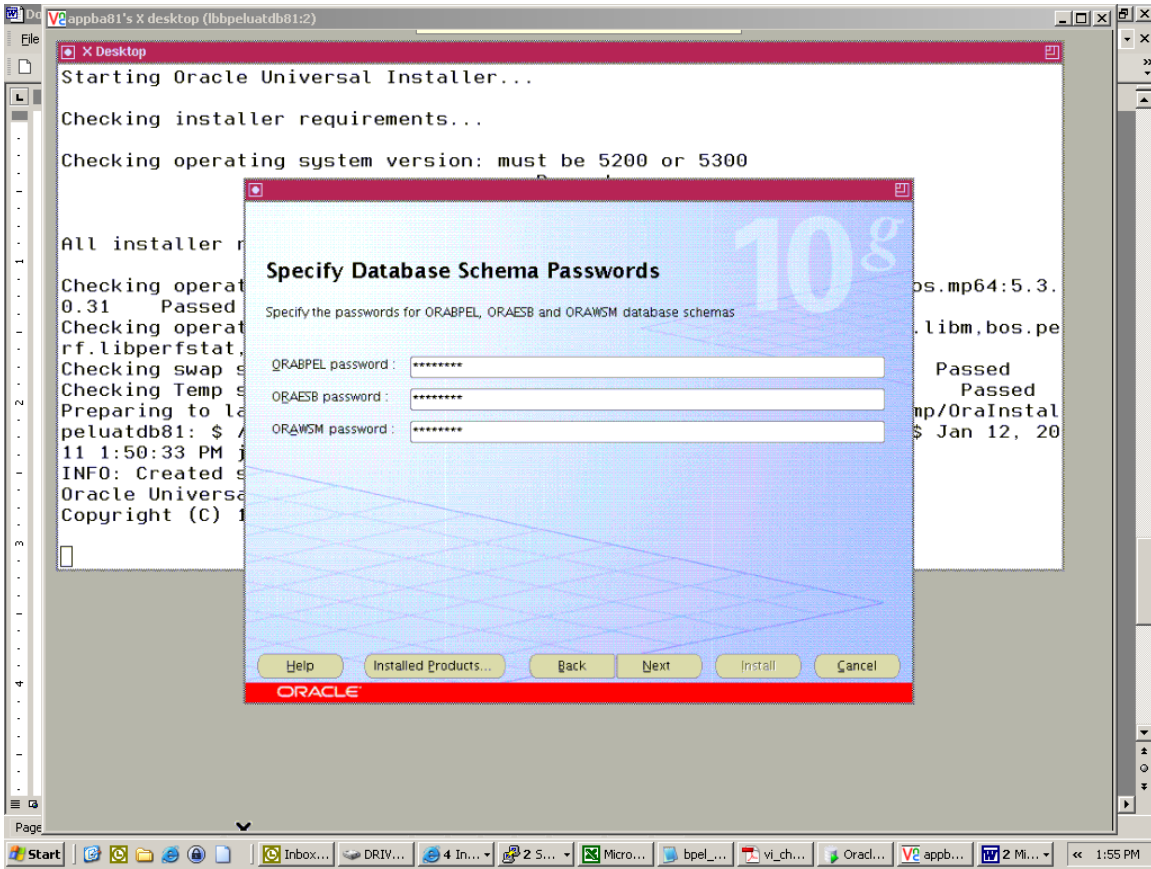
Follow the screen shots below for installation type and connection information:



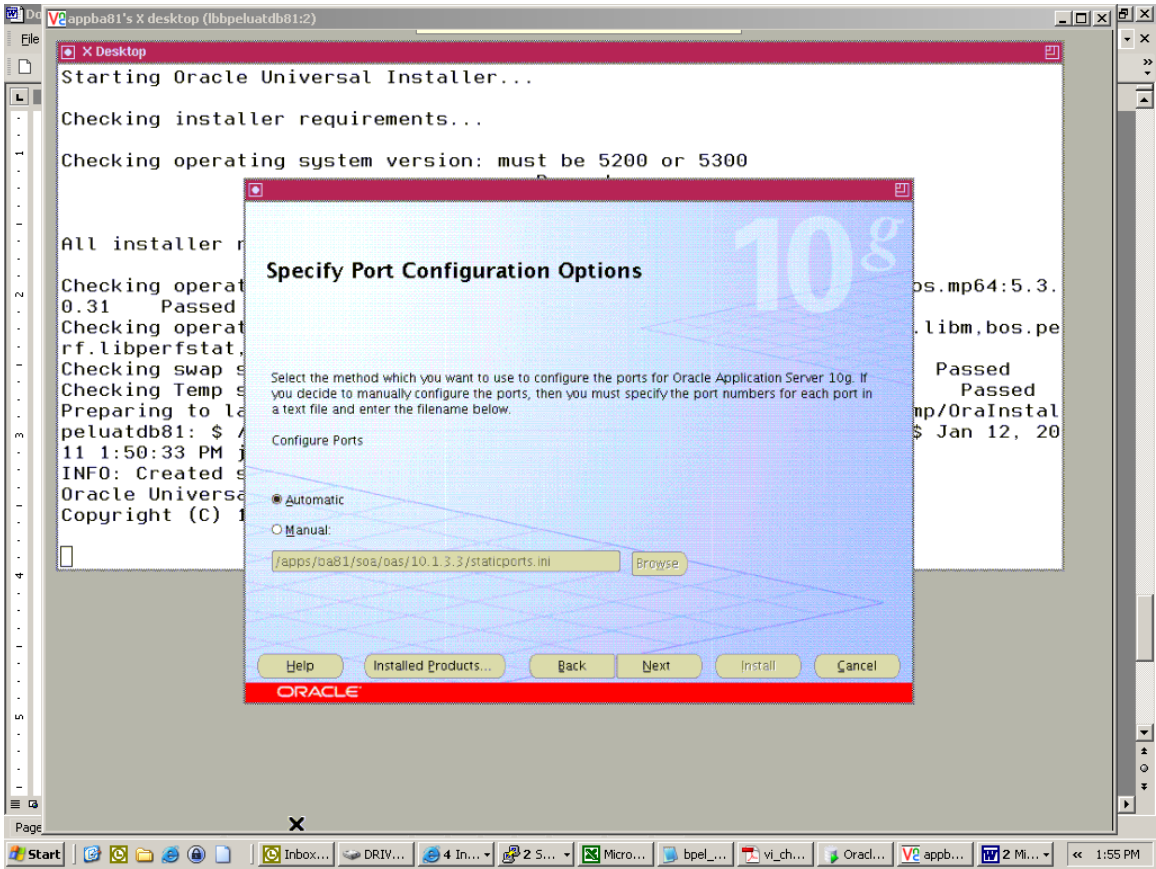
Select first option to install J2ee Server, Web Server and SOA Suite.



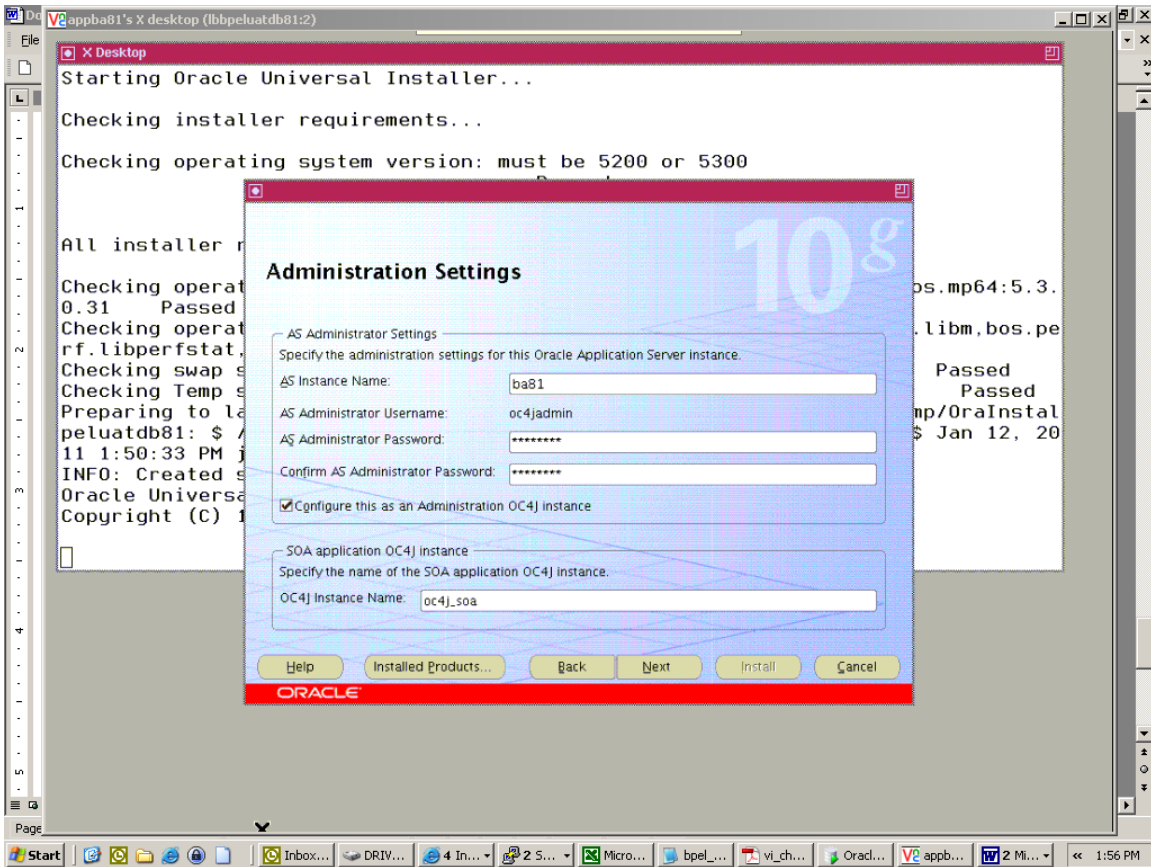
Enter required information for sys user and Hostname/Port Details.



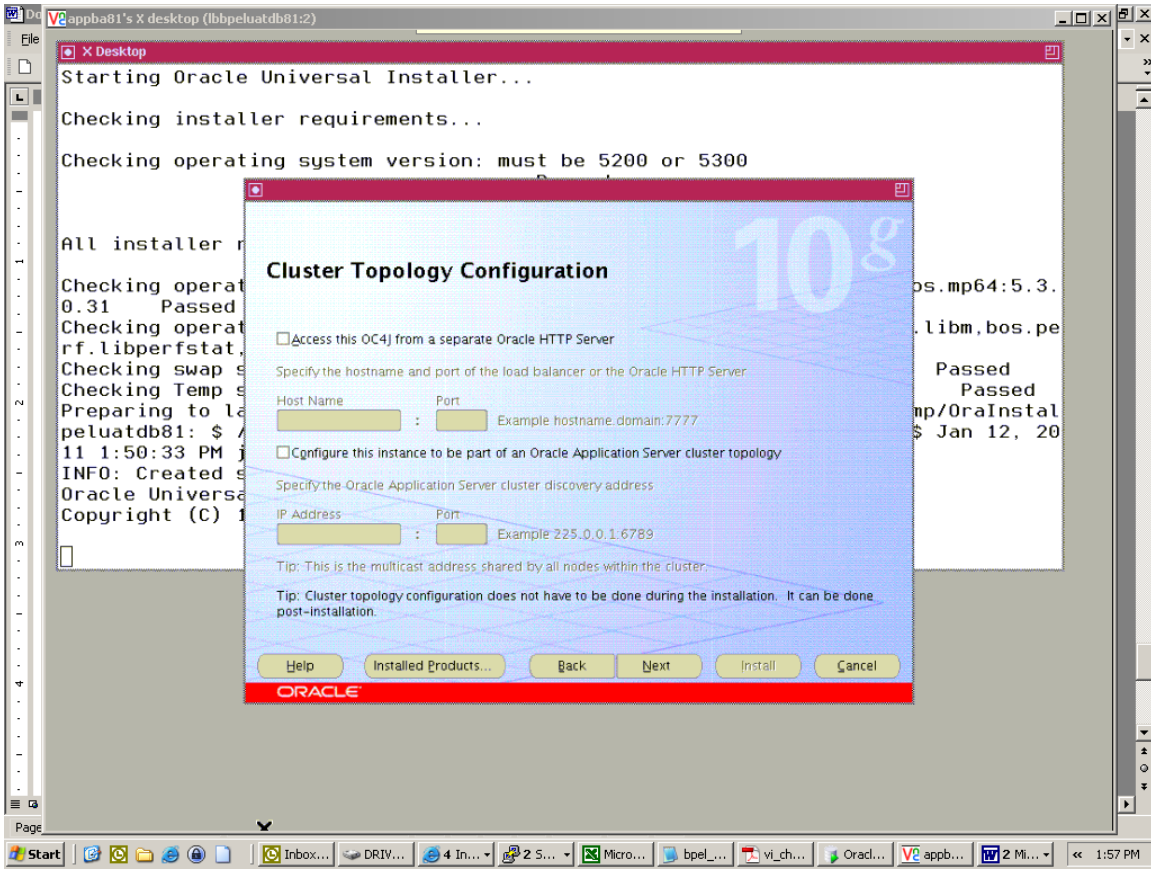
Each password is the same. We made it the same as oc4jadmin password. The above schema's will be created during install.



Choose Automatic.

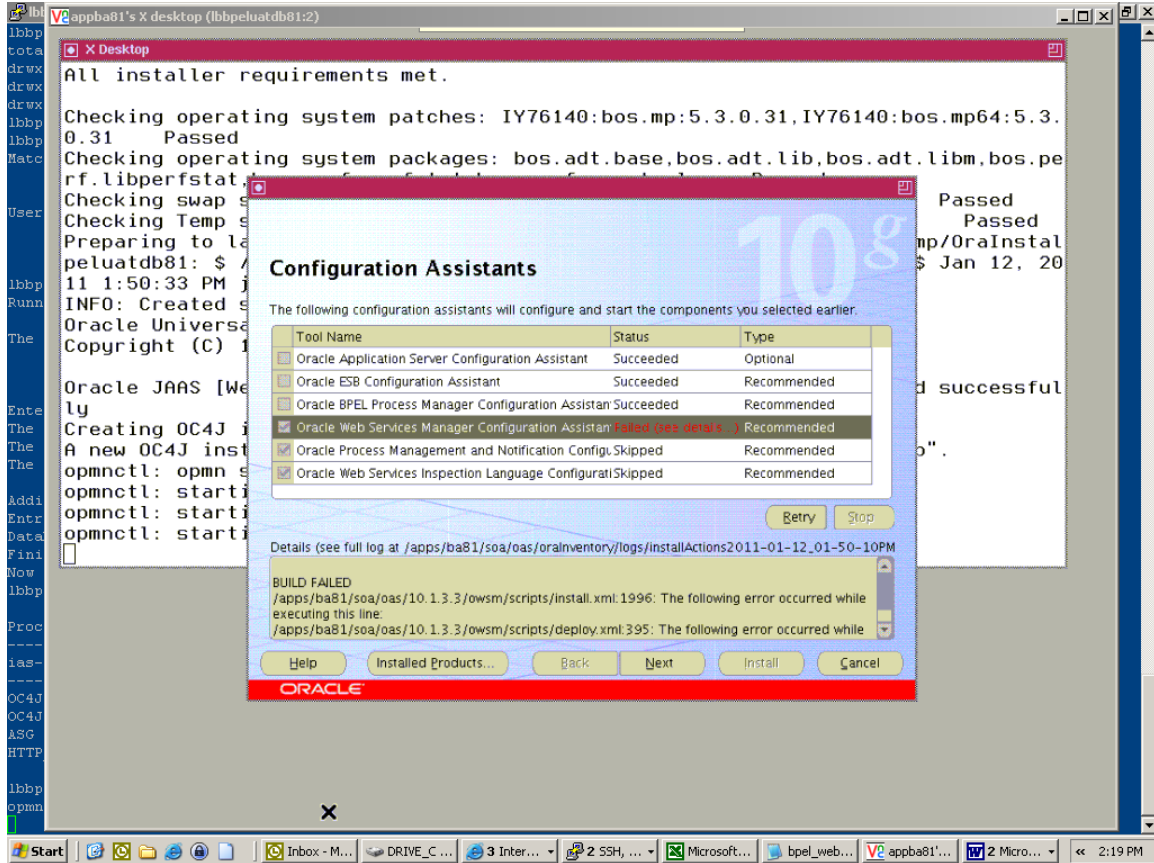


Enter instance name and oc4jadmin details.



Do not check either box above. If all looks good click install:

If getting fail for install component:



Verify that all processes are Alive. (see below) If not then bring up before proceeding.

```
lbbpeluatdb81: $ /apps/ba81/soa/oas/10.1.3.3 $ opmnctl status
```

Processes in Instance: ba81.lbbpeluatdb81

ias-component	process-type	pid	status
OC4JGroup:default_group	OC4J:oc4j_soa	N/A	Down
OC4JGroup:default_group	OC4J:home	975026	Alive
ASG	ASG	N/A	Down
HTTP_Server	HTTP_Server	397446	Alive

```
lbbpeluatdb81: $ /apps/ba81/soa/oas/10.1.3.3 $ opmnctl startproc process-type=oc4j_soa
opmnctl: starting opmn managed processes...
```

```
lbbpeluatdb81: $ /apps/ba81/soa/oas/10.1.3.3 $ opmnctl status
```

Processes in Instance: ba81.lbbpeluatdb81

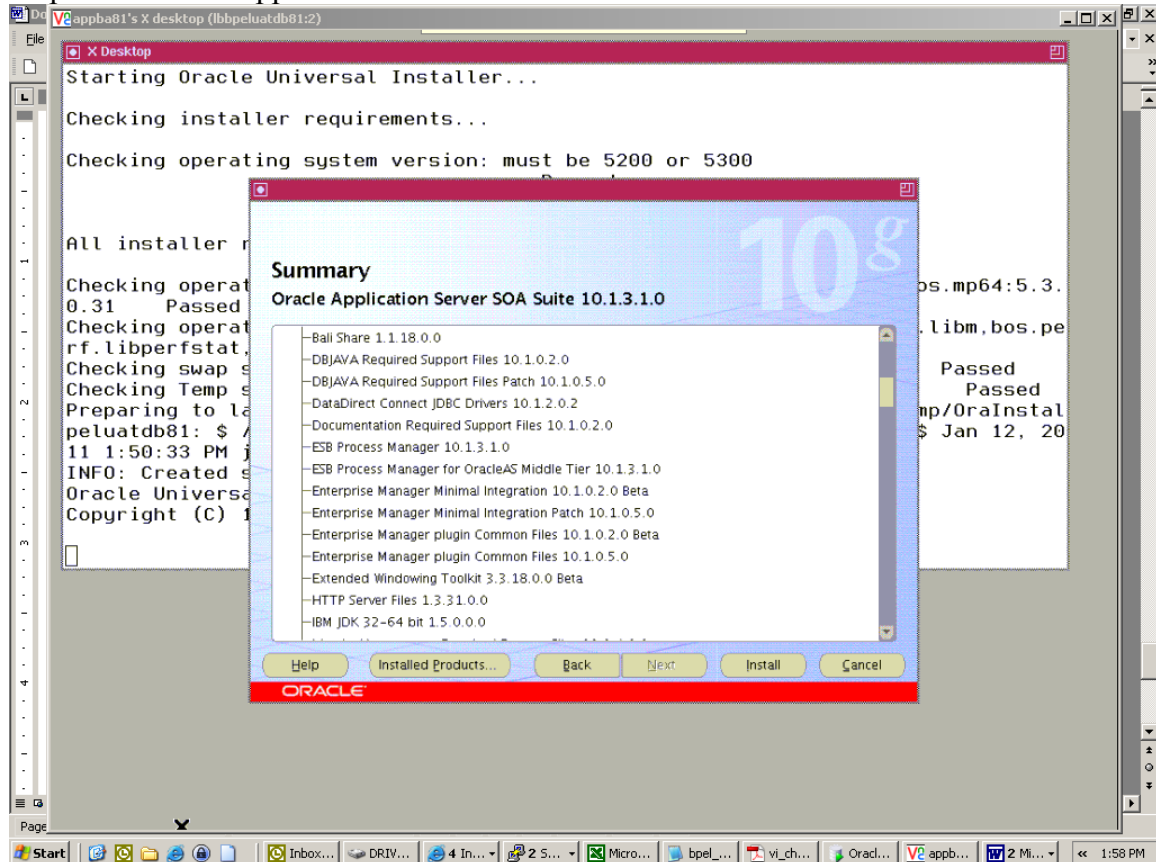
ias-component	process-type	pid	status
OC4JGroup:default_group	OC4J:oc4j_soa	N/A	Down
OC4JGroup:default_group	OC4J:home	975026	Alive
ASG	ASG	N/A	Down
HTTP_Server	HTTP_Server	397446	Alive

```

-----+-----+-----
OC4JGroup:default_group | OC4J:oc4j_soa | 1773808 | Alive
OC4JGroup:default_group | OC4J:home | 975026 | Alive
ASG | ASG | N/A | Down
HTTP_Server | HTTP_Server | 397446 | Alive

```

lbbpeluatdb81: \$ /apps/ba81/soa/oas/10.1.3.3 \$



After successful installation follow 10133_patch_install.doc to apply 10133 patch.
(see link below)



10133_patch_install.doc

MLR16 patch:

Patch Application steps for 7375080 (MLR16)

1. Stop application – *opmnctl stopall*
2. Take backup of Oracle home
3. Set path variable – *export PATH=\$PATH:\$ORACLE_HOME/OPatch*

4. Check whether Patch inventory is setup correctly – *opatch lsinventory* – we should get some output of this command
5. Navigate to patch directory – *cd /dump/ora_media/patches/7375080*, And apply a patch by running *opatch apply*
6. Once Patch is applied – Run Post-Patch installation steps
For orabpel schema –
sqlplus orapel_user/orabpel_password
@\$ORACLE_HOME/bpel/system/database/scripts/upgrade_101330_101331_oracle.sql
May need to move the .sql files to a folder accessible to appbxx1 before executing in *sqlplus*

For oraesb schema
sqlplus <oraesb_user>/<oraesb_password>
@\$ORACLE_HOME/integration/esb/sql/oracle/upgrade_101330_101331_esb_oracle.sql
7. Startup the application and do basic sanity by launching BPEL Console

APPENDIX V

APPWORX AGENT INSTALL

Appworx agent install .doc

- 1) A UNIX user id must be created to install the Appworx software into first. You can use one already created. DBA should be the UNIX group when selecting
- 2) Create the Appworx user id. This password and user id must match the user id and password already created in UNIX. Assign the role as DBA.
 - Reason is normal AIX password security is still in place when communicating with servers

The screenshot displays the Appworx software interface. The top window is titled 'Users: RFXDA91' and shows configuration fields for a user. Below this is a table of jobs with columns for Job ID, Job Name, Status, and other details. The bottom window shows a list of jobs with columns for Job ID, Job Name, Status, and other details.

Job ID	Job Name	Status	Start Time	End Time	Duration	Priority	Requestor	Parent
71759	SAPREPOST_SAEPR...	FINISHED	01-12-11 14:02	00:00:03	00:00:03	1		
71756	RETEK_READY_FOR...	FINISHED	01-12-11 14:02	00:00:00	00:00:00	1		
71745	EXTDXX_POSU_FOR...	FINISHED	01-12-11 14:02	00:00:01	00:00:01	1		
71751	SAEXPRMS	FINISHED	01-12-11 14:02	00:00:06	00:00:06	1		
71755	RETEK_READY_FOR...	FINISHED	01-12-11 14:02	00:00:00	00:00:00	1		
71743	XXLCBEXT049BINV...	FINISHED	01-12-11 14:02	00:00:06	00:00:06	1		
71749	INT045_ORDERS_RES...	FINISHED	01-12-11 14:01	00:00:04	00:00:04	1		
71750	SAIMPTLOGFIN	FINISHED	01-12-11 14:01	00:00:02	00:00:02	1		
71744	XXLCB_INT_FILE_PU...	FINISHED	01-12-11 14:01	00:00:10	00:00:10	1		
71754	RETEK_READY_FOR...	FINISHED	01-12-11 14:01	00:00:00	00:00:00	1		
71746	BATCH_SAIMPTLOG_15	FINISHED	01-12-11 14:01	00:00:00	00:00:00	1		
71753	RETEK_READY_FOR...	FINISHED	01-12-11 14:01	00:00:00	00:00:00	1		
71748	INT067_TRICKLE_SAL...	FINISHED	01-12-11 14:01	00:00:06	00:00:06	1		
71758	PLCB_GATHER_TAB...	FINISHED	01-12-11 14:01	00:01:13	00:01:13	1		
830	LBPELUA0DB91-wat...	FINISHED	01-12-11 13:48	00:00:00	00:00:00	1		
71721	PLCB_PHASE_RESA...	FINISHED	01-12-11 13:47	00:02:27	00:02:27	1	SOLOPER	
71741	LATESALESINVAJU...	FINISHED	01-12-11 13:47	00:00:04	00:00:04	1		PLCB_PHASE_RESA_DAY_15
71731	BATCH_POSUPLD_15	FINISHED	01-12-11 13:47	00:00:06	00:00:06	1		PLCB_PHASE_RESA_DAY_15
71740	RESAOPENSTKCNT	FINISHED	01-12-11 13:47	00:00:04	00:00:04	1		PLCB_PHASE_RESA_DAY_15
71736	RETEK_READY_FOR...	FINISHED	01-12-11 13:47	00:00:00	00:00:00	1		PLCB_PHASE_RESA_DAY_15
71739	RESAFILEPARSER_MU...	FINISHED	01-12-11 13:47	00:00:13	00:00:13	1		PLCB_PHASE_RESA_DAY_15
71726	POSU_TO_SIM_TRANS...	FINISHED	01-12-11 13:46	00:00:03	00:00:03	1		PLCB_PHASE_RESA_DAY_15
71738	SAPREPOST_SAEPR...	FINISHED	01-12-11 13:46	00:00:07	00:00:07	1		PLCB_PHASE_RESA_DAY_15
71735	RETEK_READY_FOR...	FINISHED	01-12-11 13:46	00:00:00	00:00:00	1		PLCB_PHASE_RESA_DAY_15

- 3) Then define the agent in Appworx. Otherwise, the install will fail on the UNIX side.
 - Click on the icon that looks like a single book. This icon is the sixth one from the left.
 - Then select **New**.
 - Select **Appworx** as the agent type.
 - Click OK.

AppWorx Master: LBAPPUATDB91 User: TSNYDER2 PA LIQUOR CONTROL BOARD

File Operations Object Admin Options View Help

Agents

Name	Description
LBAPPUATDB91	Master's Agent
LBBPELUATDB91	lbbpeluatdb91
LBRDWUATDB91	Lbrdwuatdb91
LBRMSUATAPP91	
LBRMSUATDB91	
LBSIMUATAPP91	

Select agent type

APPWORX
 OAE
 SAP
 PSE

OK Cancel

Summary

Cpu	Max Jobs	Bklog	Run	Hold	Abtd	Chain
10	99	1	0	1	0	0
10	99	0	0	0	0	0
35	99	0	0	0	0	0
0	99	0	0	0	0	0
30	99	0	0	0	0	0
5	99	1	0	1	0	0
0	99	0	0	0	0	0
		0	0	0	0	0

Apply Filter Apply Query

Elapsed	Status	Agent	Requestor	Parent
00:00:09	FINISHED	APPWORX...	APPRA91	
00:00:01	ABORTED	LBRMSUAT...	APPRA91	PLCB_BATCH_POSUPLD_FIX...
00:03:24	FINISHED	APPWORX...		
00:00:01	FINISHED	LBRMSUAT...	APPRA91	PLCB_BATCH_POSUPLD_FIX...
00:00:05	FINISHED	LBSIMUAT...		PLCB_PHASE_RESA_DAY_15
00:00:01	FINISHED	LBRMSUAT...	APPRA91	PLCB_BATCH_POSUPLD_FIX...
00:00:06	ABORTED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:00:05	FINISHED	LBSIMUAT...		PLCB_PHASE_RESA_DAY_15
00:00:00	FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:00:12	FINISHED	LBSIMUAT...		PLCB_PHASE_RESA_DAY_15
00:00:03	FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:00:06	FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:00:00	FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:00:00	FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:00:00	FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:00:06	FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:00:00	FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:00:06	FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:00:04	FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:00:02	FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:00:10	FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:00:00	FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:00:01	FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:00:00	FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:00:05	FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:01:31	FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:02:34	FINISHED	APPWORX...		
00:00:05	FINISHED	LBSIMUAT...		PLCB_PHASE_RESA_DAY_15
00:00:06	FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:00:04	FINISHED	LBSIMUAT...		PLCB_PHASE_RESA_DAY_15
00:00:00	FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
00:00:13	FINISHED	LBSIMUAT...		PLCB_PHASE_RESA_DAY_15

00:00:00 EDT Refreshed 01-12-2011 13:11:52 EST 01-12-2011 13:12:00 EST

start Explorer

4 Microsoft Outlook AppWorx Mas... 4 SSH, Telnet an... 5 Windows Explo... 5 Microsoft Word rfxda91 - rfxda91... /home/rfxda91/pr...

1:12 PM Wednesday 1/12/2011



- 4) Fill in the Agent Name, Description, IP address (use a host name).
 The Sleep time determines how often conditions and waiting modules are evaluated to run
 – Do not set too high –It affects over head
 The CPU limits can be altered. The default CPU limit is 80%
 Set the output directory to \$AW_HOME/out
 Select the user id. This is the same user on the UNIX side. Make sure password matches.

The screenshot shows the AppWorx application window. The top menu bar includes File, Operations, Object Admin, Options, View, and Help. The main window is titled 'Agents: LBRDWUATDB91'. On the left, there is a configuration panel with the following fields:

- Name: LBRDWUATDB91
- Description: Lbrdwuatdb91
- IP Address: lbrdwuatdb91.pa.lcl
- Sleep Time: 15
- Cpu Limit: 99
- Type: APPWORX
- Thread Schedule: MONITOR
- Environment Variables: No Selection

On the right side of the configuration panel, the OS Type is set to UNIX, Output Directory is \$AW_HOME/out, and User Name is RFXDA91. There are checkboxes for 'Use Job Count Load Balancing vs. CPU%', 'Agent Debug', and 'Active' (checked).

Below the configuration panel is a table with columns: Agent, Requestor, Parent, and a status column. The table contains a list of jobs, many of which are marked as 'FINISHED'. The status column also shows times like '00:00:06' and '00:00:00'.

At the bottom of the window, there is a taskbar with the Windows Start button and several open applications: Microsoft Outlook, AppWorx, Mas..., SSH, Telnet an..., Windows Explo..., Microsoft Word, and rfxda91 - rfxda91... The system tray shows the time as 11:32 AM on Wednesday, 1/12/2011.

The screenshot shows the Microsoft Outlook interface. The top menu bar includes File, Edit, View, Favorites, Tools, Actions, and Help. The main window is titled 'Inbox - Microsoft Outlook'. The left pane shows a folder list with 'Deleted Items (52)', 'Drafts (10)', and 'Inbox (2)'. The right pane shows an email from 'Fischer, David' with the subject 'Testing interfaces for RIMS patch'. The email body contains the following text:

Balaji
 I verified that all the outbound bailment interface files will download to RIMS ba
 HRRC.OL
 HRPO.PL
 the others like the customer file and vendor file had no changes...

 If we can verify that the RIMS inbound files that are not bailment files will wo
 look at migrating the 1 RIMS patch at a time.

We can discuss tomorrow when you are in the office ...

The email is dated 'Wed 1/12/2011 11:31 AM' and the sender is 'plcb_batch@lbapppro'.

5) Log into the UNIX user that you will install the Appworx software into. Below is an example.

```
lbrdwuatdb91: $ /apps/da91/rdw/ $ whoami  
rfxda91
```

6) Create the Appworx directory

```
$ pwd  
/apps/da91/rdw  
$ mkdir appworx  
$ ls -alt  
total 40  
drwxr-xr-x 19 rfxda91 dba      4096 Jan 12 10:32 appworx  
drwxrwxrwx  9 appda91 dba      256 Jan 11 14:12 .  
drwxrwxrwx 13 rfxda91 dba      4096 Jan 11 13:26 rfxda91  
drwxr-x--- 19 appda91 dba      4096 Dec 14 14:28 OracleBI  
drwxr-x---  9 appda91 dba      256 Dec 14 14:22 OracleBIData  
drwxrwxrwx  9 appda91 dba      4096 Dec 14 11:38 oralnventory  
drwx----- 63 appda91 dba      4096 Dec 14 11:38 10133  
drwxrwxrwx  2 appda91 dba      256 Dec 13 13:58 tmp  
drwxr-xr-x  8 root  system     256 Oct 20 11:44 ..  
$
```

7) Edit the .profile
vi .profile

8) Add these two parts to the .profile of the UNIX user so the installation directory is in the \$PATH. The installation directory can be taken out of the PATH after the install.

- (The bold print on the two lines below shows what paths to add to the .profile)

```
PATH=/usr/bin:/etc:/usr/sbin:/usr/ucb:$HOME/bin:/usr/bin/X11:/sbin:/dump/ossoftware/AppWorx_v7.0.1/V7:/usr/java14/jre/bin:.  
export PATH
```

```
export AW_HOME=/apps/da91/rdw/appworx
```

9) Logoff and log back in again to activate the .profile.

10) Log into the Appworx directory to begin the install
cd /apps/da91/rdw/appworx

11) Before running the install script you need four pieces of information.

- The agent name (Use the host name of the agent) – example: lbrdwuatdb91

- The master name (Use the host name of the master) – example: lbappuatdb91
- The IP address of the master. Use the full host name – example: lbrdwuatdb91.pa.lcl
- Get the awcomm port number – The port is defined on the master

- * To get the awcomm information login into the master, example: lbappuatdb91
- * cd /apps/aa91/appworx/site
- * more awenv.ini
- * In the awenv.ini get this info AWCOMM_PORT=2136

12) Run the install script.

```
/dump/ossoftware/AppWorx_v7.0.1/V7/CDINST.SH
```

13) The actual install questions and responses are shown below...

The prompts and responses are in bold type.

```
lrdwuatdb91: $ /apps/da91/rdw/appworx $ whoami
rfxda91
lbrdwuatdb91: $ /apps/da91/rdw/appworx $ /dump/ossoftware/AppWorx □_v7.0.1/V7/CDINST.SH
cdinstall:
*****
*****
** AppWorx CD Install Utility for UNIX V1.0 **
** Copyright 2001 **
** AppWorx Corporation, Bellevue WA USA **
*****
*****
/dump/ossoftware/AppWorx_v7.0.1/V7/CDINST.SH[52]: bootinfo: 0403-006 Execute permission denied.
Cannot determine if system is 32-bit or 64-bit.
Defaulting to 32-bit.
List of Platforms:
 1 Sun Solaris 2.6, 2.7 32-bit
 2 Sun Solaris 2.8, 2.9, 2.10 32-bit
 3 Sun Solaris 2.8, 2.9, 2.10 64-bit
 4 HP-UX 11 RISC
 5 HP-UX 11 Itanium
 6 AIX 5.X 32-bit
 7 AIX 5.X 64-bit
 8 TRU64 5.1, 5.1A, 5.1B
 9 Linux AS/ES 2.1/3.0
10 Sun Solaris 10 x86
 Q Quit
```

Select the Operating System and Machine: [6]: **7**

AppWorx Unix User [rfxda91].
AppWorx Installaton directory [/apps/da91/rdw/appworx].
CDROM mount point [/dump/ossoftware/AppWorx_v7.0.1/V7].
Machine uname [AIX lbrdwuatdb91 3 5 00C14E404C00]
Binaries selected [AIX 5.X 64-bit]

Is this correct ? [Y]: y

AWFILES=AWFILES.ZIP

-rwxrwxrwx 1 root system 3819685 Jan 30 2009 AWFILES.ZIP

copying needed files:

linking needed files:

build.jar...done.

jre.tar...done.

apache.tar...done.

AWWS.ZIP...done.

AXUNZIP.JAR...done.

TOMCATT.ZIP...done.

VIDEOS.ZIP...done.

LB_aix51.Z...done.

LB_rs62.Z...done.

AWUFILES.zip...done.

AWFILES.zip...done.

linking Java files:

AWjars.zip...done.

AWutil.zip...done.

UWHelp.zip...done.

linking Java Client files:

Extracting install scripts

cat LB_aix51.Z|uncompress|tar xvf - c/gethost c/myzone c/change_awenv c/awnetex c/perl

x c/gethost, 246639 bytes, 482 media blocks.

x c/myzone, 241618 bytes, 472 media blocks.

x c/change_awenv, 258933 bytes, 506 media blocks.

x c/awnetex, 736993 bytes, 1440 media blocks.

x c/perl, 824860 bytes, 1612 media blocks.

java -jar AxUnzip.jar -v AWFILES.zip data/awinstall.pl data/raininstall.pl data/inst.pl data/timezone_list.dat data/eng.msg

193295 Tue Feb 06 09:43:56 EST 2007 data/inst.pl

40313 Wed Dec 22 14:02:48 EST 2004 data/eng.msg

19894 Fri Feb 02 08:51:26 EST 2007 data/awinstall.pl

13524 Sat Dec 20 11:27:42 EST 2003 data/timezone_list.dat

12167 Wed Jan 17 14:50:16 EST 2007 data/raininstall.pl

java -jar AxUnzip.jar -v AWUFILES.zip bin/agentinstall bin/raininstall bin/awinstall bin/jinstall.sh bin/apache_i.sh

14558 Mon Aug 21 09:31:56 EDT 2006 bin/agentinstall

506 Tue Nov 15 08:51:16 EST 2005 bin/raininstall

11947 Tue Feb 06 09:05:52 EST 2007 bin/jinstall.sh

24153 Mon Dec 11 14:58:44 EST 2006 bin/apache_i.sh

=====
CHOOSE INSTALL
=====

- M - Install AppWorx Master
- A - Install AppWorx Agent Only**

Q - Exit

=====
CHOICE: A
[H][2J

AppWorx v7.0.1 Install

Enter AppWorx Install Directory

[/apps/da91/rdw/appworx]

?

Checking for distribution files

decompress extract files from LB_rs62.Z

decompress extract files from AWFILES.zip

decompress extract files from AWUFILES.zip

Ok to extract files (Stack will be stopped) [Y]?y

stopso (/apps/da91/rdw/appworx/bin/stopso) does not exist

extract files from /apps/da91/rdw/appworx/LB_rs62.Z

tar compressed

Extraction complete - Files Extracted 20

Resetting RW attributes

extract files from /apps/da91/rdw/appworx/AWFILES.zip

Extraction complete - Files Extracted 9

Resetting RW attributes

extract files from /apps/da91/rdw/appworx/AWUFILES.zip

Extraction complete - Files Extracted 100

Host name = LBRDWUATDB91

Official hostname = lbrdwuatdb91

ip_address = 172.22.86.196

Agent Name [?]lbrdwuatdb91

Installing java in /apps/da91/rdw/appworx/jre directory

setting java path to /apps/da91/rdw/appworx/jre/bin

```

Java version=1.4.2 located in /apps/da91/rdw/appworx/jre
Master name           [] ?lbappuatdb91
Master's IP address or DNS name [172.22.86.196] ?lbappuatdb91.pa.lcl
AwComm Port Number    [2136] ?2136
Firewall installed     [No] ?
Remove installation links [N] ?
Is the above correct [Yes]?yes
Writing awenv.ini values
  Setting value AWCOMM_PORT=2136 {NuLI}
  Setting value Master=LBAPPUATDB91 {NuLI}
  Setting value Master_Ip_Address=lbappuatdb91.pa.lcl {NuLI}
  Setting value Agent=LBRDWUATDB91 {NuLI}
  Setting value FireWall=No {NuLI}
  Setting value AWWEB_HOME=/apps/da91/rdw/appworx {NuLI}
  decompress extract files from AWjars.zip
  decompress extract files from AWutil.zip
Ok to extract files (Stack will be stopped) [Y]?y
=====
Requested processes "all" not running
stopso done
extract files from /apps/da91/rdw/appworx/AWutil.zip
  Extraction complete - Files Extracted 105
extract files from /apps/da91/rdw/appworx/AWjars.zip
  Extraction complete - Files Extracted 16
=====
Requested processes "all" not running
stopso done
Creating/Rewriting Sosite file
  Setting value remove_links=No {NuLI}
  Setting value old_agent=LBRDWUATDB91 {NuLI}
Log file /apps/da91/rdw/appworx/install/aw_install.log
=====
Requested processes "all" not running
stopso done
Restart WatchWorx [Y]?y
  starting watchworx with : /apps/da91/rdw/appworx/bin/awspawnux -p /dev/null "/apps/da91/rdw/appworx/c/watchworx LBRDWUATDB91"
1>/apps/da91/rdw/appworx/log/watchworx.log 2>&1
.
  startso done
Installation Complete
*****
*****
done.

```

* The install is complete on the server side.

* To start the agent on the master side

Sign into Appworx.
Right click on the agent to start
Select start.



Explorer

- Backlog
- Ad Hoc
- Agents
 - LBAPPUATDB91
 - LBAPPUATDB91
 - LBBPELUATDB91
 - LBRDWUATDB91
 - LBRMSUATAPP91
 - LBRMSUATDB91
 - LBSIMUATAPP91
 - LBRDWUATDB91
 - LBSIMUATAPP91
 - APPWORX_AGE...
- Queues
- Applications
- Chains
- Status

Agent Summary

Agent	Status	Type	Elapsed	Cpu	Max Jobs	Bklg	Run	Hold	Abtd	Chain
LBAPPUATDB91	Running	Master	00:00:44	10	99	1	0	1	0	0
LBAPPUATDB91	Running	APPWORX	00:00:49	10	99	0	0	0	0	0
LBBPELUATDB91	Running	APPWORX	00:00:03	20	99	0	0	0	0	0
LBRMSUATAPP91	Running	APPWORX	00:00:02	10	99	0	0	0	0	0
LBRMSUATDB91	Running	APPWORX	00:00:04	5	99	1	0	1	0	0
LBSIMUATAPP91	Running	APPWORX	00:00:08	5	99	0	0	0	0	0
LBRDWUATDB91	Running	APPWORX	00:00:02	5	99	0	0	0	0	0
APPWORX_AGENTS	Group					0	0	0	0	0

Start
Stop
Resume
Idle
Reset
Threads...
View Log...
Agent Log Rollover

History

Queue	Job ID	L	D	Started	Finished	Elapsed	Status	Agent	Requestor	Parent
MONITOR	71847			01-12-11 15:05	00:00:35		STOPPED	LBRDWUA...		
MONITOR	71439			01-12-11 15:04	04:33:10		STOPPED	LBRDWUA...		
RETAIL	71826	Y		01-12-11 15:03	00:03:29		FINISHED	APPWORX...		
BATCH	71846	Y		01-12-11 15:03	00:00:05		FINISHED	LBSIMUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71836	Y		01-12-11 15:03	00:00:05		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
BATCH	71845	Y		01-12-11 15:03	00:00:05		FINISHED	LBSIMUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71841	Y		01-12-11 15:03	00:00:00		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
BATCH	71844	Y		01-12-11 15:03	00:00:12		FINISHED	LBSIMUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71831	Y		01-12-11 15:02	00:00:03		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71843	Y		01-12-11 15:02	00:00:02		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71840	Y		01-12-11 15:02	00:00:00		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71829	Y		01-12-11 15:02	00:00:01		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71835	Y		01-12-11 15:02	00:00:06		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71839	Y		01-12-11 15:02	00:00:00		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
RETEK	71827	Y		01-12-11 15:02	00:00:04		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71833	Y		01-12-11 15:02	00:00:02		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71834	Y		01-12-11 15:02	00:00:02		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
BATCH	71828	Y		01-12-11 15:02	00:00:10		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71838	Y		01-12-11 15:02	00:00:00		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71830	Y		01-12-11 15:02	00:00:01		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71837	Y		01-12-11 15:02	00:00:00		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71832	Y		01-12-11 15:01	00:00:05		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71842	Y		01-12-11 15:01	00:01:47		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71805	Y		01-12-11 14:47	00:02:56		FINISHED	APPWORX...		
BATCH	71825	Y		01-12-11 14:47	00:00:05		FINISHED	LBSIMUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71815	Y		01-12-11 14:47	00:00:05		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
BATCH	71824	Y		01-12-11 14:47	00:00:04		FINISHED	LBSIMUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71820	Y		01-12-11 14:47	00:00:00		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
BATCH	71823	Y		01-12-11 14:47	00:00:13		FINISHED	LBSIMUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71810	Y		01-12-11 14:47	00:00:03		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15
RETAIL	71822	Y		01-12-11 14:47	00:00:02		FINISHED	LBRMSUAT...		PLCB_PHASE_RESA_DAY_15

Explorer

* Test the install by requesting an Appworx module.

Select the icon that looks like a check mark. This is the second one from left.

Type in test in the module search box – This will display one of the test modules

- The test modules issue a sleep command & are only used to test the system

Select one of the test_modules to submit by high lighting it & left clicking the module

Run the test module on the new agent.

- On the submit panel left click on the agent box –
- Select by highlighting & clicking on the appropriate agent

Click submit

APPENDIX W
APPWORX RETEK CONFIGURATION

Appworx Retek Configuration

- 1) On the RMS DB server copy the following tar files to the AppWorx Master home directory (\$AW_HOME) from /dump/ora_media/APPWORX
 - a) retek_master_12.0.4.tar
 - b) retek_agent_12.0.4.tar
- 2) Untar the file using the command 'tar -xvf retek_master_12.0.4.tar', tar -xvf retek_agent_12.0.4.tar'
- 3) Stop and start the AppWorx processes to load the \$AW_HOME/data/awserver_sqlusr.dat to enable API functio
- 4) Copy only the retek_agent_12.0.4.tar to the \$AW_HOME directory on the RMS application server
- 5) 2. Untar the file using the command 'tar -xvf retek_agent_12.0.4.tar'
- 6) Stop and start the appworx services on the RMS application and DB servers
- 7) Change file permissions on the following directories on both RMS app/db servers

```
chmod 755 $AW_HOME/exec/*
chmod 755 $AW_HOME/RETEK/exec/*
```
- 8) On the appworx master server create a TNS entry for the RMS database in the tnsnames.ora file under \$ORACLE_HOME/network/admin
issue tnsping <rms_oracle_sid> and check whether its able to communicate with the RMS database
- 9) On the appworx master database login to the appworx database as the appworx repository owner
create database link retek_link_rms connect to <rmsuser> identified by <rmspassword> using <rms sid>;
select * from dual@rettek_link_rms;
- 10) Add the tns entry for Appworx database in the tnsnames.ora file under \$ORACLE_HOME/network/admin folder on RMS database server
Verify that you can communicate to the Appworx database from the RMS database server using the command tnsping <appworx_oracle_sid>
On the RMS DB server scp all the sql files under \$AW_HOME/RETEK/sql from any other RMS DB server which has an Appworx setup on it
- 11) From the rms database server login to the appworx database and execute the following scripts against the database
Navigate to \$AW_HOME/RETEK/sql
sqlplus appworx/<password>@appworx_db_name
@rettek_dblink_proc.sql
create database link appworx connect to <appworx_user> identified by <appworx_password> using <appworx sid>;
select * from dual@appworx;
- 13) Edit the \$AW_HOME/site/sosite on the RMS db server to include environment variables namely :
On RMS DB server
ORACLE_SID
ORACLE_HOME
RETL_BASE
example is as follows ...
export ORACLE_SID=RD41
export ORACLE_HOME=/apps/rd41/oracle/product/10201
export RETL_BASE=/apps/rd41/rms/install_dir/rms

14) Edit the \$AW_HOME/site/sosite on the RMS app server to include environment variables namely :

ORACLE_SID
ORACLE_HOME
RPM_HOME
REIM_HOME

example is as follows ...

```
export ORACLE_HOME=/apps/rd41/rms/oracle/10133
export ORACLE_SID=RD41
```

```
#####
```

```
RPM_HOME=/apps/rd41/rms/oracle/10133/j2ee/rpm-rd41/rpm-batch/lib;export RPM_HOME
REIM_HOME=/apps/rd41/rms/oracle/10133/j2ee/reim-rd41/reim-batch;export REIM_HOME
```

15) On the RMS db server ensure that that you have the following directories in \$INSTALL_DIR/rms/rms

- a) in
- b) out

16) On the RMS db server navigate to the \$AW_HOME/RETEK/exec and edit the RETEK_ENVAR file

The file has sections for each of the Oracle retail modules (RMS,DWI,RDW)

Under the RMS section , copy the contents from any other working Appworx environment i.e. from the RMS db server for a different instance that you may have

You may choose to copy the contents or copy the entire file RETEK_ENVAR from source env to target env

Ensure that you update the values respective to the target instance

17) On the RMS app server navigate to the \$AW_HOME/RETEK/exec and edit the RETEK_ENVAR file

The file has sections for each of the Oracle retail modules (ReIM,RPM)

Under the ReIMRPM section , copy the contents from any other working Appworx environment i.e. from the RMS app server for a different instance that you may have

You may choose to copy the contents or copy the entire file RETEK_ENVAR from source env to target env

Ensure that you update the values respective to the target instance

18) On the RMS application server ensure that the following directories are writable for app<sid> user

```
/apps/<sid>/rms/oracle/10133/j2ee/reim-<sid>
```

```
/apps/<sid>/rms/oracle/10133/j2ee/rpm-<sid>
```

19) From the appworx front end create the following logins

- a) rms database user : rms12dev
- b) ReIM database login
- c) RPM application login

20) Copy the Oracle_Retail_Batch_12.0.4.exp file from the /dump/ora_media/APPWORX location to the

\$AW_HOME/import dir on the Appworx master server

Using the Appworx import function, import the Oracle_Retail_Batch_12.0.4.exp

21) On the Appworx master server, copy the following files from the Appworx master for any other working instance

a) awserver_sqlusr.dat

22) On the appworx master server login to the appworx database as the appworx repository owner and execute the below update script

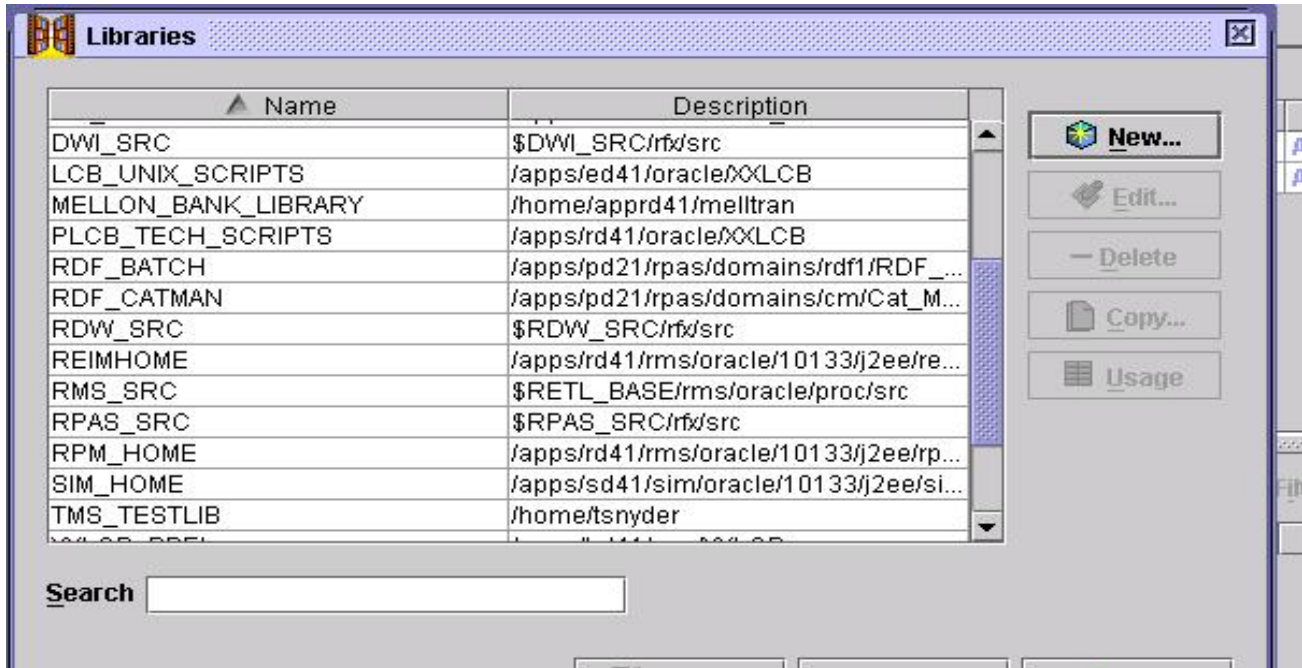
```
SQL> update so_job_prompts set SO_PROMPT_DFLT ='{#rms_threadnum}' where SO_PROMPT_DESCR
```

23) Bounce all appworx services including the master and remote agents

respective to the instance

The following library variables need to be updated

- 1) RMS_SRC
- 2) REIMHOME
- 3) RPM_HOME



ns.used.for.Oracle.Retail.RMS.

SIM

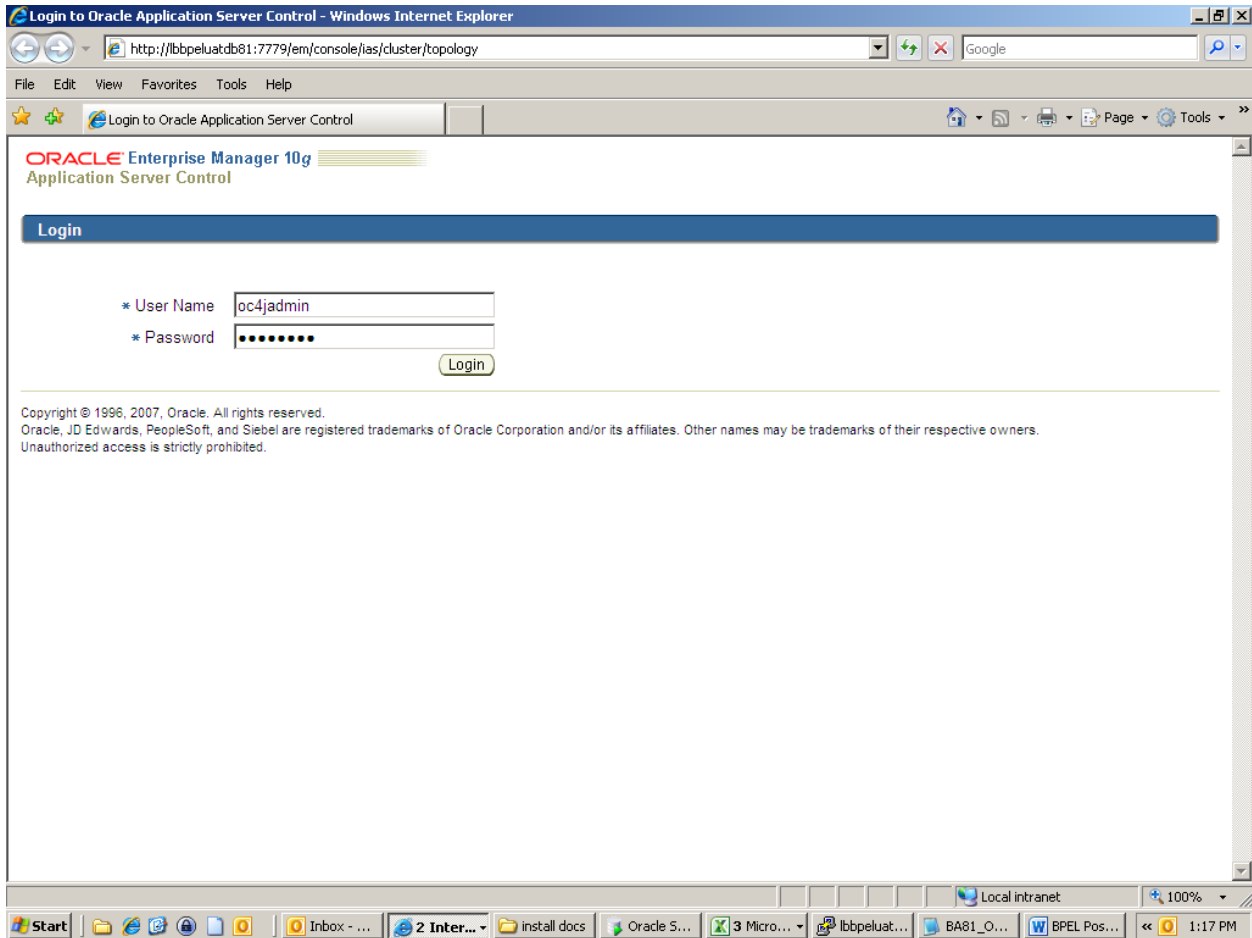
- 1) Copy only the retek_agent_12.0.4.tar from /dump/ora_media/APPWORX dir to the \$AW_HOME directory on the SIM application server
- 2) Untar the file using the command 'tar -xvf retek_agent_12.0.4.tar'
- 6) Stop and start the appworx services on the SIM application server (Note if you have mutiple nodes of app server, you can copy on node 1)
- 7) Change file permissions on the following directories on both RMS app/db servers
chmod 755 \$AW_HOME/exec/*
chmod 755 \$AW_HOME/RETEK/exec/*
- 5) Copy the Oracle_retail_SIM_12.0.7_apwx70.exp from the /dump/ora_media dir to the \$AW_HOME/import dir on Appworx master server
- 6) Import this Oracle_retail_SIM_12.0.7_apwx70.exp from the Appworx front end using the Import function
- 7) Copy the the following files from a source SIM instance \$AW_HOME/exec (any other working appworx SIM agent) to the dir \$AW_HOME/exec on target instance
 - a) SIM_SHELLS.SH
 - b) SIM_SHELLS
 - c) PREFIX.SIM

APPENDIX X
BPEL POST INSTALLATION STEPS

BPEL Post Installation Steps

After completing the installation of Oracle Application Server with the SOA suite, BPEL will need to have some fundamental connections configured and processes installed. This is done by following the BR100 settings and instructions beginning with [Wave1](#) and going forward to [Wave2](#) and [Wave3](#). The navigation of OAS to perform these setups is described using screen shots below. The parameter settings are listed in the embedded files. All settings can and probably should be crossed checked with the same in a known working environment if there are any questions. This helps verify that the settings are correct. You will see some connections that are not mentioned in the BR100s that are POS related connections and are mentioned in the pre-installation steps of the md120 documents for specific POS related BPEL processes. I included these settings in the embedded [connection pools document](#). No harm can be done by installing them before POS process migrations. To do the setups you must log in to the Application server control as oc4jadmin.

Connection Pool creation:



To set up JNDI connections click on oc4j_soa

Cluster Topology

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Overview

Hosts 1 Application Servers 1
 OC4J Instances 2 HTTP Server Instances 1

Members

View By Application Servers

Start Stop Restart

[Select All](#) | [Select None](#) | [Expand All](#) | [Collapse All](#)

Select	Name	Status	Type	Category	Host	CPU (%)	Memory (MB)
<input type="checkbox"/>	▼ All Application Servers						
<input type="checkbox"/>	▼ ba81.lbbpeluatdb81			Application Server	lbbpeluatdb81		
<input type="checkbox"/>	▶ home (JVMs: 1)	↑	OC4J			0.02	103.19
<input type="checkbox"/>	HTTP_Server	↑	Oracle HTTP Server			0.002	34.90
<input type="checkbox"/>	▶ oc4j_soa (JVMs: 1)	↑	OC4J			0.68	240.70

◆ Indicates the active ASControl instance.
 ✓ TIP If a parent topology member is selected all contained members are implicitly selected.

Groups

A group is a collection of OC4J instances. Certain common management tasks can be performed simultaneously on all OC4J instances in a group. For more information, see [About Groups](#)

Start Stop Delete | Create

Select	Name	OC4J Instance	Status	Application Server
<input checked="" type="radio"/>	default_group	oc4j_soa	↑	ba81.lbbpeluatdb81
		home	↑	ba81.lbbpeluatdb81

Administration

Then select Administration

ORACLE Enterprise Manager 10g
 Application Server Control [Setup](#) [Logs](#) [Help](#) [Logout](#)


[Cluster Topology](#) > [Application Server: ba81.lbbpeluatdb81](#) >

OC4J: oc4j_soa

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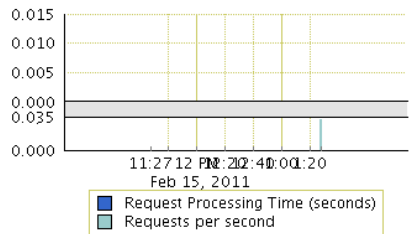
[Home](#) | [Applications](#) | [Web Services](#) | [Performance](#) | [Administration](#)

General



Status **Up** Stop Restart
 Start Time **Feb 3, 2011 11:50:19 AM EST**
 Version **10.1.3.3.0**
 Oracle Home **/apps/ba81/soa/oas/10.1.3.3**
 Host **lbbpeluatdb81**
 Virtual Machines **1**
 Notifications **0**

Response and Load



11:27:12 PM: 20:40:00:20
 Feb 15, 2011

■ Request Processing Time (seconds)
 ■ Requests per second
















[Home](#) | [Applications](#) | [Web Services](#) | [Performance](#) | [Administration](#)

Select JDBC resources to Create/delete/view data sources and connection pools.

(go to task)

OC4J: oc4j_soa

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Home Applications Web Services Performance Administration		
Expand All Collapse All		
Task Name	Go to Task	Description
▼ Administration Tasks		
▼ Properties		
EJB Compiler Settings		Configure the EJB Compiler.
J2EE Websites		Manage the J2EE websites in this OC4J instance.
JSP Properties		Set JSP container properties.
Logger Configuration		Set log levels for all Loggers.
Thread Pool Configuration		Configure the thread pools of this OC4J instance.
Shared Libraries		Manage the shared libraries of this OC4J instance.
Server Properties		Configure server properties for this OC4J instance.
▼ Services		
JDBC Resources		Create/delete/view data sources and connection pools.
▼ Enterprise Messaging Service		
JMS Destinations		Create/delete/edit JMS destinations.
JMS Connection Factories		Configure JMS connection factories.
In-Memory and File Based Persistence		Configure settings for in-memory and file based persistence.
Database Persistence		Configure settings for database persistence.
OracleAS JMS Router		Configure the JMS Router.
JNDI Browser		Browse the JNDI bindings of this OC4J instance.
Transaction Manager (JTA)		Configure and monitor transaction management capabilities.

Click Create (connection pools)

Connection Pools

Name	Application	Connection Factory Class	Monitor Performance	Test Connection	Refresh Connection Pool	Delete
"BPELPM_CONNECTION_POOL"	default	oracle.jdbc.OracleDriver				
"ESBAQJMSPool"	default	oracle.jdbc.pool.OracleDataSource				
"ESBPool"	default	oracle.jdbc.pool.OracleDataSource				
"Example Connection Pool"	default	oracle.jdbc.pool.OracleDataSource				
"Oracle BPEL Connection Pool"	default	oracle.jdbc.pool.OracleDataSource				
"Oracle EBS Connection Pool"	default	oracle.jdbc.pool.OracleDataSource				
"OraclePOSInboundConnectionPool"	default	oracle.jdbc.pool.OracleDataSource				
"OraclePOSOutboundConnectionPool"	default	oracle.jdbc.pool.OracleDataSource				
"Oracle Retail Connection Pool"	default	oracle.jdbc.pool.OracleDataSource				
"OracleSIMConnectionPool"	default	oracle.jdbc.pool.OracleDataSource				

New Connection Pool → click continue

ORACLE Enterprise manager 10g
Application Server Control Setup Logs Help Logout

Cluster Topology > Application Server: ba81.lbbpeluatdb81 > OC4J: oc4j_soa > JDBC Resources >

Create Connection Pool - Application

Application
Select the application to which this new connection pool is to be added.

Application

Connection Pool Type

New Connection Pool

New Connection Pool from Existing Connection Pool

Create a new connection pool that is configured like an existing connection pool.

Existing Connection Pool

Enter details specific to connection, i.e port, user name, password, connection name. The Connection Pool details are located in this [document](#). You also can verify by checking an existing BPEL server. When complete click Finish. If connection is viable it will be created.

Create Connection Pool

avorites Center (Alt+C)
iew favorites, feeds, and history

Cancel Back Finish

Page Refreshed Feb 15, 2011 1:55:18 PM EST

Home Attributes Proxy Interfaces

* Name

* Connection Factory Class
Class must be available to the application's class loader.

URL

You can either specify a URL directly or have it generated from connection information. When you test a connection, the connection factory class and credentials specified on this page will be used to perform the test.

JDBC URL

Generate URL from Connection Information

Driver Type
DB Host Name
DB Listener Port
DB Identifier Type
SID/Service Name
TNS Alias

Credentials

TIP For OracleDataSources, credentials must be entered if not already specified in the URL.

Username

Use Cleartext Password
Password

Use Indirect Password [?]
Indirect Password

Data Source creation: (Data Sources utilize the connection pools)

These are located just above the connection pools on the JDBC Resources page as described via screen prints above.

Application

Data Sources

Data Sources						
Create						
Previous 1-10 of 13 Next 3						
Name	Application	JNDI Location	Attributes		Test Connection	Delete
			Connection Pool	Managed by OC4J		
"BPELSamplesDataSource"	default	jdbc/BPELSamplesDataSource	"BPELPM_CONNECTION_POOL"	✓		
"BPELServerDataSource"	default	jdbc/BPELServerDataSource	"BPELPM_CONNECTION_POOL"	✓		
"BPELServerDataSourceWorkflow"	default	jdbc/BPELServerDataSourceWorkflow	"BPELPM_CONNECTION_POOL"	✓		
"ESBAQJMSDataSource"	default	jdbc/esbaqdatasource	"ESBAQJMSPool"	✓		
"ESBDataSource"	default	jdbc/esb	"ESBPool"	✓		
"jdbc/SimDataSource"	default	jdbc/SimDataSource	"OracleSIMConnectionPool"	✓		
"Oracle BPEL Data Source"	default	loc/BPELDatabase	"Oracle BPEL Connection Pool"	✓		
"OracleDS"	default	jdbc/OracleDS	"Example Connection Pool"	✓		
"Oracle EBS Data Source"	default	loc/EBSDatabase	"Oracle EBS Connection Pool"	✓		
"OraclePOSinboundDataSource"	default	jdbc/OraclePOSinboundDBDS	"OraclePOSinboundConnectionPool"	✓		
Create						
Previous 1-10 of 13 Next 3						

Connection Pools

Connection Pools						
Create						
Refresh						

Click Create and then Continue on screen below, accepting defaults.

Application Server Control

Cluster Topology > Application Server: ba81.lbbpeluatdb81 > OC4J: oc4j_soa > JDBC Resources >

Create Data Source - Application & Type

Cancel Continue

Application
 Select the application to which this new data source is to be added.
 Application

Data Source Type

Managed Data Source
 A managed data source is one where OC4J provides critical system infrastructure such as global transaction management, connection pooling, statement caching and error handling.

Native Data Source
 A native data source is one that implements the java.sql.DataSource interface and does not make use of OC4J's connection pooling or statement caching capabilities. A native data source can only participate in local transactions.

New Data Source from Existing Data Source
 Create a new data source that is configured like an existing data source.
 Existing Data Source

Cancel Continue

Next, enter all details required for the data source. Use drop downs for Transaction Data Source Level and Connection Pool selections. Then click Finish to complete the data source creation. The [data source spreadsheet](#) below contains details for these connections.

ORACLE Enterprise Manager 10g
Application Server Control

Setup Logs Help Logout

Cluster Topology > Application Server: ba81.lbbpeluatdb81 > OC4J: oc4j_soa > JDBC Resources >

Create Data Source - Managed Data Source

Cancel Back Finish

Application default

* Name

* JNDI Location

Transaction Level Global & Local Transactions

Connection Pool ESBPool

* Login Timeout (seconds) 0
Maximum time to wait while attempting to connect to a database.

► Credentials

Cancel Back Finish

After setting up all data sources and using test option to verify they all work, navigate back to OC4J:oc4j_soa using the breadcrumbs and select Administration.

Task Name	Go to Task	Description
▼ Administration Tasks		
▼ Properties		
EJB Compiler Settings		Configure the EJB Compiler.
J2EE Websites		Manage the J2EE websites in this OC4J instance.
JSP Properties		Set JSP container properties.
Logger Configuration		Set log levels for all Loggers.
Thread Pool Configuration		Configure the thread pools of this OC4J instance.
Shared Libraries		Manage the shared libraries of this OC4J instance.
Server Properties		Configure server properties for this OC4J instance.
▼ Services		
JDBC Resources		Create/delete/view data sources and connection pools.
▼ Enterprise Messaging Service		
JMS Destinations		Create/delete/edit JMS destinations.
JMS Connection Factories		Configure JMS connection factories.

Select Create/delete/edit JMS destinations.

The following page will open which allows viewing of JMS destinations and creation of JMS destinations.

JMS Destinations

This table lists the JMS destinations available to all applications deployed to this OC4J instance. Destinations can use different persistence levels - in-memory, a file or a Database.

Create New Previous 1-25 of 31 Next 6

Name ▲	Type	JNDI Location	Persistence			Monitor Performance	Delete
			Type	Store	Resource Provider Name		
BPELInvokerQueue	Queue	jms/collaxa/BPELInvokerQueue	In-Memory				
BPELTestQueue	Queue	jms/collaxa/BPELTestQueue	In-Memory				
BPELWorkerQueue	Queue	jms/collaxa/BPELWorkerQueue	In-Memory				
BuyerQueue	Queue	jms/orabpel_samples_BuyerQueue	In-Memory				
BuyerTopic	Topic	jms/orabpel_samples_BuyerTopic	In-Memory				
Demo Queue	Queue	jms/demoQueue	In-Memory				
Demo Topic	Topic	jms/demoTopic	In-Memory				
ESB Control Topic	Topic	jms/topic/WF_CONTROL	In-Memory				
ESB Deferred Topic	Topic	jms/topic/WF_JAVA_DEFERRED	In-Memory				
ESB Error Resubmission Topic	Topic	jms/topic/ESB_ERROR_RETRY	In-Memory				
ESB Error Topic	Topic	jms/topic/ESB_ERROR	In-Memory				

If adding a new JMS destination click create and enter the details required such as Destination Type, Destination Name, JNDI Location and type. A list of JMS Destinations is contained in the following [Excel document](#). Keep in mind the file store locations are environment specific. Add any destinations that are not already listed.

The JMS adapters need to be configured next. Navigate to oc4j_soa screen (there is more than one way to get to this screen).

Oracle Enterprise Manager
OC4J: oc4j_soa

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Home Applications Web Services Performance Administration

This page shows the J2EE applications and application components (EJB Modules, WAR Modules, Resource Adapter Modules) deployed to this OC4J instance.

View Applications

Start Stop Restart Undeploy Redeploy Deploy

Select All | Select None | Expand All | Collapse All

Select	Name	Status	Start Time	Active Requests	Request Processing Time (seconds)	Active EJB Methods	Application Defined MBeans
<input type="checkbox"/>	▼ All Applications						
<input type="checkbox"/>	ascontrol	↓					
<input type="checkbox"/>	▼ default	↑	Feb 16, 2011 2:27:15 PM EST	0	0.00	0	
<input type="checkbox"/>	▶ Middleware Services						

TIP If you stop a parent application (such as the default application), then Enterprise Manager automatically stops any child applications that depend upon the parent application. Similarly, if you start a child application, Enterprise Manager automatically starts the required parent application.

Click on default to access the adapter/module page.

Application Server Control Setup Lo

Cluster Topology > Application Server: ba81.lbbpeluatdb81 > OC4J: oc4j_soa >

Application: default

Page Refreshed Feb 17, 2011

Home Web Services Performance Administration

General

Status Up
 Start Time Feb 16, 2011 2:27:15 PM EST
 Path /apps/ba81/soa/oas/10.1.3.3/j2ee/oc4j_soa/config/application.xml

Modules

Name	Module Type
"jmsrouter_ejb"	EJB Module
AppsAdapter	Resource Adapter Module
AqAdapter	Resource Adapter Module
DbAdapter	Resource Adapter Module
defaultWebApp	Web Module
FileAdapter	Resource Adapter Module
FtpAdapter	Resource Adapter Module
JmsAdapter	Resource Adapter Module
jmsrouter_web	Web Module
MQSeriesAdapter	Resource Adapter Module
OracleASjms	Resource Adapter Module

Home Web Services Performance Administration


Click on JmsAdapter and then connection factories to see current configured JNDI Locations. Many will already be configured. Compare to the list below and create a new JNDI by clicking create on the screen below. Click next to see entire list of JNDI's.

Resource Adapter: JMS Adapter

[Home](#) [Connection Factories](#) [Administered Objects](#) [Administration](#)

Connection factories exposed by the resource adapter are used by application components to obtain connections to the EIS. TI currently configured for this resource adapter.

[Create](#)

JNDI Location 	Connection Factory Interface	Connection Pool Used
eis/aqjms/Queue	oracle.tip.adapter.jms.IJmsConnectionFactory	None
eis/aqjms/ReceiveOrderUpdate	oracle.tip.adapter.jms.IJmsConnectionFactory	None
eis/aqjms/SendOrderDetail	oracle.tip.adapter.jms.IJmsConnectionFactory	None
eis/aqjms/Topic	oracle.tip.adapter.jms.IJmsConnectionFactory	None
eis/fioranomq/Topic	oracle.tip.adapter.jms.IJmsConnectionFactory	None
eis/jbossmq/Queue	oracle.tip.adapter.jms.IJmsConnectionFactory	None
eis/Jms/JmsAdapterDemo	oracle.tip.adapter.jms.IJmsConnectionFactory	None
eis/Jms/QueueConnectionFactory	oracle.tip.adapter.jms.IJmsConnectionFactory	None
eis/Jms/SendCodeCombinations	oracle.tip.adapter.jms.IJmsConnectionFactory	None
eis/Jms/SendFreightTerms	oracle.tip.adapter.jms.IJmsConnectionFactory	None

[Create](#)

After clicking create you will get the following screen.

Create Connection Factory: Select Interface

[Cancel](#) [Continue](#)

To configure an instance of a connection factory, you must select the connection factory interface to be used. The connection factory interfaces supported by this resource adapter are shown below. Select the interface you wish to have this connection factory instance use, and then click on Continue.

Connection Factory Interface

[Cancel](#) [Continue](#)

Click continue...

Enter the details for the JNDI you are creating and then click finish.

Create Connection Factory

Back Cancel Finish

Page Refreshed Feb 17, 2011 10:49:13 AM EST

Connection Factory Interface **oracle.tip.adapter.jms.IJmsConnectionFactory**
* JNDI Location

Connection Pooling

Connection pooling allows a set of connections to the EIS to be reused within an application. An application can choose to either create its own exclusive connection pool or use one of the shared connection pools available for this resource adapter.

- No Connection Pool
 Use Private Connection Pool
 Use Shared Connection Pool

Configuration Properties

Configurable properties for this connection factory are listed below. You can specify or override the values for these properties.

Name ^	Type	Value
acknowledgeMode	java.lang.String	AUTO_ACKNOWLEDGE
connectionFactoryLocation	java.lang.String	jms/QueueConnectionFactory
factoryProperties	java.lang.String	
isTopic	java.lang.Boolean	false
isTransacted	java.lang.Boolean	false
password	java.lang.String	welcome1
username	java.lang.String	oc4jadmin

Back Cancel Finish

Setup | Links | Help | Logout

The AqAdapter, DbAdapter, FTPAdapter, MQSeriesAdapter are all configured following the above steps. The adapter parameters for these can be found in this [spreadsheet](#) below. Keep in mind that all URLs are environment specific and will need to be tweaked for whatever environment you are creating in.

The Fault policies need to be migrated to the server. Below is a table describing the files and where they need to be placed, which was taken from the [Wave3 BR100](#). You will need to create the folder structure if it does not already there. The only environmentally specific file is Config.properties. That file will need some minor editing for server name.

File to be moved	CVS Location	Path on server
DefaultPolicy.xml	Wave2/DB_SCRIPTS/ Ant_Master_Build	<ORACLE_HOME>\bpel\domains\retailoutbound\config\fault-policies\
		<ORACLE_HOME>\bpel\domains\ebs\config\fault-policies\
		<ORACLE_HOME>\bpel\domains\retailinbound\config\fault-policies\
fault-bindings.xml	Wave2/DB_SCRIPTS/ Ant_Master_Build	<ORACLE_HOME>\bpel\domains\retailoutbound\config\
		<ORACLE_HOME>\bpel\domains\ebs\config\
		<ORACLE_HOME>\bpel\domains\retailinbound\config\
Config.properties	Wave2/DB_Scripts/ java\class\com\xxlcb\bpel\exceptionhandler	<ORACLE_HOME>\bpel\system\classes\com\xxlcb\bpel\exceptionhandler
FulfillmentFaultPolicy.xml	Wave3/DB_SCRIPTS/Ant_Master_Build	<ORACLE_HOME>\bpel\domains\ebs\config\fault-policies\

After completing the above steps migrating the BPEL processing starting with [Wave1](#), Then [Wave2](#), next [Wave3](#), and lastly the [POS related migrations](#). There are also some BPEL migrations spreadsheets on the share drive under database that contain most of the migrations detailed in the spreadsheets below. The md120 documents for all migrations should be available in the e-room .

Note: The BR100 files below contain BPEL checklist information and embedded word documents as well as WaveX specific BPEL process information. The BPEL process specific information is mainly informational in purpose. The processes for Wave 1 should be deployed as per the embedded Deployment for [Master Build guide](#). The Wave 2 and Wave 3 objects are deployed individually. There are separate worksheets containing md120 information for those. Before deploying the Master build for Wave 1 verify that the OracleConnection has been created in the Connection Factory as per this [JNDI location](#) document. Follow the same steps (as illustrated above) to create the other DbAdapter connections such as OracleBPELConnection, OracleRetailConnection, OracleSIMConnection, and OracleXXLCBConnection. Use the BR100's below and another existing BPEL environment to verify parameters to be entered for these connections. Along with the steps mentioned above the Creating JNDI locations and JMS Destinations is a helpful document. The worklist and ns_email documents are optional in the non-prod environments. There may be some redundant information across the documents. For the sake of caution and completeness no information has been removed from the BR100 documents.

APPENDIX Y

EBS CLONING FOR PLCB - QUICK GUIDE

EBS cloning for PLCB – quick guide

As of 04/24/2012

See **EBS cloning for PLCB.doc** for complete instructions

Script location: /production_dump/lcb/scripts/dba/EBS_clone

Note: step numbers refer to complete instruction guide

Pre clone steps

Schedule backups of Oracle Home and Apps (admin and mid tiers) directories

On source database/admin tier server

As ora<source SID> OS user

- 1a. Modify crontab entry for ora_home_backup.sh to execute the morning of the requested clone date
#??use below to backup the OH for cloning DDW 092810
#??00 3 * * 3 /home/oraep01/ora_home_backup.sh ep01 >> /dev/null 2>&1

As apps<source SID> OS user

- b. Modify crontab entry for app_filesystem_backup.sh to execute the morning of the requested clone date
#??Use below entry for backup of apps admin tier for cloning DDW 092810
#??0 3 * * 3 /home/appep01/app_filesystem_backup.sh ep01 >> /dev/null 2>&1

On source app(mid) tier server

As apps<source SID> OS user

- c. Modify crontab entry for app_filesystem_backup.sh to execute the morning of the requested clone date
#??Use below entry for backup of apps mid tier for cloning DDW 092810
#??0 3 * * 3 /home/appep01/app_filesystem_backup.sh ep01 >> /dev/null 2>&1
- d. When the backups of the directories are completed that were started in 1a-c, log onto servers and comment out the entries.

On target database/admin tier server

As ora<clone SID> OS user

Use script ora_cp_files_1.ksh for completing steps 2a-b

Parameters: SID

Usage: ora_cp_files_1.ksh <clone SID>

- 2c. comment out entries in crontab

On target app(mid) tier server
As OEM agent OS user

Use script OEM_black_out.ksh for completing step 3a
Parameters: (START|STOP) SID
Usage: OEM_black_out.ksh <START|STOP> <clone SID>

As apps<clone SID> OS user

Use script app_shutdown.ksh for completing steps 4a-b
Parameters: SID tier source_apps_password
Usage: app_shutdown.ksh <clone SID> <ADMIN|MID> <source apps password>

- 4c. comment out entries in crontab
- d. Confirm all OS app and OEM agent OS processes on server are stopped

On target database/admin tier server
As OEM agent OS user

Use script OEM_black_out.ksh for completing step 5a
Parameters: (START|STOP) SID
Usage: OEM_black_out.ksh <START|STOP> <clone SID>

As apps<clone SID> OS user

Use script app_shutdown.ksh for completing steps 6a-b
Parameters: SID tier source_apps_password
Usage: app_shutdown.ksh <clone SID> <ADMIN|MID> <source apps password>

- 6c. comment out entries in crontab

As ora<clone SID> OS user

Use script ora_unreg_rman.ksh for completing step 7a
Parameters: SID
Usage: ora_unreg_rman.ksh <clone SID>

Use script ora_stop_strt_db.ksh for completing steps 7b-c
Parameters: CMD(start|stop|abort|bounce) SID [if needed CMD_listener(start|stop)]
Usage: ora_stop_strt_db.ksh <START|STOP|ABORT|BOUNCE> <clone SID> [<START|STOP>]

- 7d. Confirm all OS ora, app and OEM agent user processes are stopped

As ora<clone SID> OS user

Use script ora_pre_clone.ksh for completing steps 8a-b
Parameters: SID

Usage: ora_pre_clone.ksh <clone SID>

As apps<clone SID> OS user

Use script app_pre_clone.ksh for completing steps 9a-d

Parameters: SID tier

Usage: app_pre_clone.ksh <clone SID> <ADMIN|MID>

On target app(mid) tier server

As apps<clone SID> OS user

Use script app_pre_clone.ksh for completing steps 10a-d

Parameters: SID tier

Usage: app_pre_clone.ksh <clone SID> <ADMIN|MID>

Cloning target database

On target database/admin tier server

As ora<clone SID> OS user

Use script ora_OH_clone.ksh for completing steps 11a-c

Parameters: SID backup_date

Usage: ora_OH_clone.ksh <clone SID> <backup date>

Use script ora_OH_clone_2.ksh for completing steps 12a-e

Parameters: SID

Usage: ora_OH_clone_2.ksh <clone SID>

Complete steps below manually

- 12f. cleanup \$ORACLE_HOME/dbs directory
remove all unnecessary files and directories

- g. check network connection and names resolution to databases
tnsping ep01 (source database)
tnsping rmandph (rman repository database)

if either fails, correct issue and retest

Use script ora_db_dup.ksh for completing step 13a

Execute shell script as nohup

Parameters: SID(clone) SID(source) <restore until date/time>

Usage: nohup ora_db_dup.ksh <clone SID> <source SID> <restore until date/time> &
restore date/time: ("Jul 04 2010 06:00:00" <month> <day of month> <4 digit year> <24HR
hour:minute:seconds>) must be in double quotes

monitor log file - rman_<clone SID>_dup.log

cd \$HOME/clone

tail -f rman_<clone SID>_dup.log

Use script cfg_clone.ksh for completing step 14a

Parameters: SID user(apps|ora) source_apps_password

Usage: cfg_clone.ksh <clone SID> user(apps|ora) <source apps password>

NOTE: if error “FAILURE: Please apply the Patch "2896876"” see metalink note#412655.1

modify the adchkutl.sh as follows:

From:

```
printf "FAILURE: Please apply the Patch "2896876" \n";  
exit 1;
```

CHANGE TO:-

else

```
printf "FAILURE: Please apply the Patch "2896876" \n";  
exit 0;
```

The location of the file is:

Database oracle home:

```
$ORACLE_HOME/appsutil/clone/bin/adchkutl.sh
```

EBS applications:

```
$COMMON_TOP/clone/bin/adchkutl.sh
```

14b. check log file for errors

```
cd $ORACLE_HOME/appsutil/log/<clone SID>_<host name>  
LOGFILECFG=`ls -t ApplyDBTechStack* | head -1`  
if [[ -f $LOGFILECFG ]] then  
    if [[ `grep -c "ERRORCODE = 1" $LOGFILECFG` -gt 0 ]] then  
        echo "error in adcfgclone log file, need to fix"  
    fi  
else  
    echo "error in adcfgclone - no log file"  
fi
```

post clone steps - database

Use script ora_post_clone.ksh for completing steps 15a-j

Parameters: SID source_apps_password new_system_password

Usage: ora_post_clone.ksh <clone SID> <source apps password> <new system password>

15k. disable resubmitting CM requests (only if requested by developers)

```
XXLCB GL CASH SALES INTERFACE  
XXLCB GL WAREHOUSE SUPPLIES INTERFACE  
XXLC      B GL PAYROLL INTERFACE  
XXLCB GL OPERATING EXPENSES
```

l. add datafiles to TEMP tablespace (if RMAN duplicate does not)

m. update libraries (if RMAN duplicate does not)

Cloning EBS Admin tier

On target database/admin tier server

As apps<clone SID> OS user

Use script app_H_clone.ksh for completing step 16

Parameters: SID backup_date tier

Usage: app_H_clone.ksh <clone SID> <backup date> <ADMIN|MID>

Use script cfg_clone.ksh for completing step 17a

Parameters: SID user(apps|ora) source_apps_password

Usage: cfg_clone.ksh <clone SID> user(apps|ora) <source apps password>

17b. Check log file for errors

```
cd $INST_TOP/admin/log
```

```
LOGFILECFG=`ls -t ApplyAppsTier* | head -1`  
if [[ -f $LOGFILECFG ]] then  
  if [[ `grep -c "ERRORCODE = 1" $LOGFILECFG` -gt 0 ]] then  
    echo "error in adcfgclone log file, need to fix"  
  fi  
else  
  echo "error in adcfgclone - no log file"  
fi
```

post clone steps – EBS admin tier

On target database/admin tier server

As apps<clone SID> OS user

Use script app_admin_post.ksh for completing steps 18a-e

Parameters: SID system_password old_apps_password new_apps_password

Usage: app_admin_post.ksh <clone SID> <system password> <old apps password> <new apps password>

Cloning EBS app(mid) tier

On target app(mid) tier server
As apps<clone SID> OS user

Use script app_H_clone.ksh for completing steps 19

Parameters: SID backup_date tier

Usage: app_H_clone.ksh <clone SID> <backup date> <ADMIN|MID>

Use script cfg_clone.ksh for completing step 20a

Parameters: SID user(apps|ora) apps_password

Usage: cfg_clone.ksh <clone SID> user(apps|ora) <new apps password>

20b. check log file for errors

```
cd $INST_TOP/admin/log
```

```
LOGFILECFG=`ls -t ApplyAppsTier* | head -1`  
if [[ -f $LOGFILECFG ]] then  
  if [[ `grep -c "ERRORCODE = 1" $LOGFILECFG` -gt 0 ]] then  
    echo "error in adcfgclone log file, need to fix"  
  fi  
else  
  echo "error in adcfgclone - no log file"  
fi
```

post clone steps – EBS mid tier

Use script app_mid_post.ksh for completing step 21a-c

Parameters: SID apps_password

Usage: app_mid_post.ksh <clone SID> <new apps password>

repeat steps (19-21) for each mid tier server, if multiple mid tier servers

If problem with EBS login page (redirects from http to https), check the following:

edit \$CONTEXT_FILE

change https to http in context file

check the value of the tag sslterminator oa_var

it should be: <sslterminator oa_var="s_enable_sslterminator">#</sslterminator>

Post cloning tasks - final

On target database/admin tier server As ora<clone SID> OS user

Use script ora_final_post_clone.ksh for completing steps 22a-e

Parameters: SID new_apps_password new_RMS12DEV_password new_SIM12DEV_password
new_RMS_sid new_SIM_sid EBS_form_message

Usage: ora_final_post_clone.ksh <clone SID> <new apps password> <new rms12dev password>
<new sim12dev password> <new rms sid> <new sim sid> <clone as of date>

ie: ora_final_post_clone.ksh ed41 xxxx rrrrr ssss rd41 sd41 Nov-22-2011

Use script ora_reg_db_rman.ksh for completing step 23a

Parameters: SID

Usage: ora_reg_db_rman.ksh <clone SID>

On target database/admin tier server As apps<clone SID> OS user

24. if link /FILE to /apps/<clone SID>/applmgr not present
then root needs to create
cd /
ln -s /apps/<clone SID>/applmgr FILE

25. Below not needed unless requested

create database link.

sqlplus as apps

create public database link staging connect to teame identified by <password> using 'staging';

compile crosswalk form

export FORMS_PATH=\$AU_TOP/forms/US:\$AU_TOP/resources:\$FORMS_PATH

execute frmcm;_batch.sh

setup printers

On target app(mid) tier server As OEM agent OS user

Use script OEM_black_out.ksh for completing step 26c

Parameters: (START|STOP) SID agent_home_directory

Usage: OEM_black_out.ksh <START|STOP> <clone SID>

On target database/admin tier server As OEM agent OS user

Use script OEM_black_out.ksh for completing step 27c

Parameters: (START|STOP) SID agent_home_directory

Usage: OEM_black_out.ksh <START|STOP> <clone SID>

On target database/admin tier server
As apps<clone SID> OS user

28a. uncomment crontab entries

On target app(mid) tier server
As apps<clone SID> OS user

29a. uncomment crontab entries

On target database/admin tier server
As ora<clone SID> OS user

30a. backup database using RMAN
execute crontab script

b. uncomment crontab entries

Testing of cloned instance

Log into EBS

Go to Concurrent : Manager -> Administer

Confirm that actual and target process values are equal for each active CM

Submit “Active Users” request and confirm that it completes normal

If request fails check for vnc process on admin tier.

As apps user
vncserver :0

APPENDIX Z

EBS CLONING FOR PLCB

EBS cloning for PLCB

As of 04/24/2012

Script location: /production_dump/lcb/scripts/dba/EBS_clone

Pre clone steps

Schedule backups of Oracle Home and Apps (admin and mid tiers) directories

On source database/admin tier server

As ora<source SID> OS user

- 1a. Modify crontab entry for ora_home_backup.sh to execute the morning of the requested clone date
#??use below to backup the OH for cloning DDW 092810
#??00 3 * * 3 /home/oraep01/ora_home_backup.sh ep01 >> /dev/null 2>&1

As apps<source SID> OS user

- b. Modify crontab entry for app_filesystem_backup.sh to execute the morning of the requested clone date
#??Use below entry for backup of apps admin tier for cloning DDW 092810
#??0 3 * * 3 /home/appep01/app_filesystem_backup.sh ep01 >> /dev/null 2>&1

On source app(mid) tier server

As apps<source SID> OS user

- c. Modify crontab entry for app_filesystem_backup.sh to execute the morning of the requested clone date
#??Use below entry for backup of apps mid tier for cloning DDW 092810
#??0 3 * * 3 /home/appep01/app_filesystem_backup.sh ep01 >> /dev/null 2>&1
- d. When the backups of the directories are completed that were started in 1a-c, log onto servers and comment out the entries.

On target database/admin tier server

As ora<clone SID> OS user

Use script ora_cp_files_1.ksh for completing steps 2a-b

Parameters: SID

Usage: ora_cp_files_1.ksh <clone SID>

- 2a. backup spfile to pfile
sqlplus as sysdba
create pfile from spfile;
- b. backup files to OS home clone directory - \$HOME/clone
cp \$ORACLE_HOME/dbs/init<clone SID>.ora \$HOME/clone
cp \$ORACLE_HOME/dbs/orapw<clone SID> \$HOME/clone
cp \$ORACLE_HOME/network/admin/<clone SID>_<host name>/tnsnames.ora \$HOME/clone

```
cp $ORACLE_HOME/network/admin/<clone SID>_<host name>/listener.ora $HOME/clone
cp $ORACLE_HOME/appsutil/<clone SID>_<host name>.xml $HOME/clone
cp $ORACLE_HOME/<clone SID>_<host name>.env $HOME/clone
```

c. comment out entries in crontab

On target app(mid) tier server

As OEM agent OS user

Use script OEM_black_out.ksh for completing step 3a

Parameters: (START|STOP) SID

Usage: OEM_black_out.ksh <START|STOP> <clone SID>

3a. start OEM agent blackout
cd \$AGENT_HOME/bin
emctl start blackout cloning<clone SID>

b. to check status of blackout
cd \$AGENT_HOME/bin
emctl status blackout

As apps<clone SID> OS user

Use script app_shutdown.ksh for completing steps 4a-b

Parameters: SID tier source_apps_password

Usage: app_shutdown.ksh <clone SID> <ADMIN|MID> <source apps password>

4a. shutdown EBS
cd \$ADMIN_SCRIPTS_HOME
./adstpall.sh apps/<source apps password>

b. backup files to OS home clone directory - \$HOME/clone
CONTEXT_FILE = <full path>/<clone SID>_<host name>.xml
APPL_TOP=/apps/<clone SID>/applmgr/apps/apps_st/appl
cp \$CONTEXT_FILE \$HOME/clone
cp \$APPL_TOP/APPS<clone SID>_<hostname>.env \$HOME/clone
cp \$APPL_TOP/<clone SID>_<hostname>.env \$HOME/clone

c. comment out entries in crontab

d. Confirm all OS app and OEM agent OS processes on server are stopped

On target database/admin tier server

As OEM agent OS user

Use script OEM_black_out.ksh for completing step 5a

Parameters: (START|STOP) SID

Usage: OEM_black_out.ksh <START|STOP> <clone SID>

5a. start OEM agent blackout
cd \$AGENT_HOME/bin

```
emctl start blackout cloning<clone SID>
```

- b. to check status of blackout

```
cd $AGENT_HOME/bin
emctl status blackout
```

As apps<clone SID> OS user

Use script app_shutdown.ksh for completing steps 6a-b

Parameters: SID tier source_apps_password

Usage: app_shutdown.ksh <clone SID> <ADMIN|MID> <source apps password>

- 6a. shutdown EBS

```
cd $ADMIN_SCRIPTS_HOME
./adstpall.sh apps/<source apps password>
```
- b. backup files to OS home clone directory - \$HOME/clone

```
CONTEXT_FILE = <full path>/<clone SID>_<host name>.xml
APPL_TOP=/apps/<clone SID>/applmgr/apps/apps_st/appl
cp $CONTEXT_FILE $HOME/clone
cp $APPL_TOP/APPS<clone SID>_<hostname>.env $HOME/clone
cp $APPL_TOP/<clone SID>_<hostname>.env $HOME/clone
cp $APPL_TOP/admin/<clone SID>/recompile_apps_<clone SID>.txt $HOME/clone
if recompile_apps_<clone SID>.txt does not exist, see appendix D for instructions to
create adadmin defaultsfile
```
- c. comment out entries in crontab

As ora<clone SID> OS user

Use script ora_unreg_rman.ksh for completing step 7a

Parameters: SID

Usage: ora_unreg_rman.ksh <clone SID>

- 7a. unregister database from RMAN repository

```
cd $HOME/clone
rman trace=unreg_db.log << EOF
connect target=plchdba/dbaman@<clone db name>
connect catalog=rman<clone db name>/rman<clone db name>@rmandph

unregister database noprompt;

EOF
```

Use script ora_stop_strt_db.ksh for completing steps 7b-c

Parameters: CMD(start|stop|abort|bounce) SID [if needed CMD_listener(start|stop)]

Usage: ora_stop_strt_db.ksh <START|STOP|ABORT|BOUNCE> <clone SID> [<START|STOP>]

- b. shutdown database

```
sqlplus as sysdba
```


shutdown abort

- c. shutdown listener
lsnrctl stop <clone SID>
- d. Confirm all OS ora, app and OEM agent user processes are stopped
As ora<clone SID> OS user

Use script ora_pre_clone.ksh for completing steps 8a-b

Parameters: SID

Usage: ora_pre_clone.ksh <clone SID>

- 8a. delete all files in ORACLE HOME
cd /apps/<clone SID>/oracle
rm -rf 10.2.0
mkdir 10.2.0
chmod 10.2.0
- b. delete all files in arch and datafile directories
cd /apps/<clone SID>
rm -r farch
mkdir arch
chmod 755 arch

cd /apps/<clone SID>/oradata/data<XX>
rm -rf data<XX>
mkdir data<XX>
chmod 755 data<XX>
continue for all data<XX> directories

cd /apps/<clone SID>/oradata/redo<XX>
rm -rf redo<XX>
mkdir redo<XX>
chmod 755 redo<XX>
continue for all redo<XX> directories

As apps<clone SID> OS user

Use script app_pre_clone.ksh for completing steps 9a-d

Parameters: SID tier

Usage: app_pre_clone.ksh <clone SID> <ADMIN|MID>

- 9a. delete all files in inst directory
cd /apps/<clone SID>/applmgr
rm -rf inst
- b. delete all files in apps directory
already in /apps/<clone SID>/applmgr
rm -rf apps

- c. delete all files in tmp and FILE directories
already in /apps/<clone SID>/applmgr
rm -rf tmp
rm -rf FILE
mkdir tmp FILE
chmod 777 tmp FILE
- d. delete all files in CM out and log directories and archive, inbound, outbound and working directories
cd /apps/<clone SID>/applsfcf
rm -rf log
rm -rf out
rm -rf archive
rm -rf inbound
rm -rf outbound
rm -rf working
rm -rf rejected
mkdir log out archive inbound outbound working rejected
chmod 777 log out archive inbound outbound working rejected

On target app(mid) tier server

As apps<clone SID> OS user

Use script app_pre_clone.ksh for completing steps 10a-d

Parameters: SID tier

Usage: app_pre_clone.ksh <clone SID> <ADMIN|MID>

- 10a. remove files owned by oradev, script executed as sudo
execute script app_pre_clone_oradev.ksh
Parameters: SID
Usage: app_pre_clone_oradev.ksh <clone SID>
- b. delete all files in inst directory
cd /apps/<clone SID>/applmgr
rm -rf inst
- c. delete all files in apps directory
already in /apps/<clone SID>/applmgr
rm -rf apps
- d. if directory below exists then remove and recreate otherwise create
confirm permissions on directory is 755

cd /apps/<clone SID>/applmgr
rm -rf tmp
mkdir tmp
chmod 755 tmp

Cloning target database

On target database/admin tier server

As ora<clone SID> OS user

Use script ora_OH_clone.ksh for completing steps 11a-c

Parameters: SID backup_date

Usage: ora_OH_clone.ksh <clone SID> <backup date>

11a. copy source Oracle Home to target Oracle Home

```
cd /apps/<clone SID>
```

```
gunzip -c /production_dump/filesystem/EP01/10.2.0<backup date>_1020.gz | nohup tar xvf - > /apps/<clone SID>/oracle/ed21OH.log
```

b. rename TNS directory

```
cd $ORACLE_HOME/network/admin
```

```
mv ep01_lbebsprdep01 to <clone SID>_<host name>
```

c. if directories below exists then remove and recreate otherwise create
remove and create dump directories

confirm that permissions on directories are 755

```
cd /apps/<clone SID>/oracle/10.2.0/admin/<clone SID>_<hostname>
```

```
rm -rf udump
```

```
mkdir udump
```

```
rm -rf cdump
```

```
mkdir cdump
```

```
rm -rf bdump
```

```
mkdir bdump
```

```
chmod 755 udump cdump bdump
```

```
cd /apps/<clone SID>/oracle
```

```
rm -rf tmp
```

```
mkdir tmp
```

```
chmod 775 tmp
```

Use script ora_OH_clone_2.ksh for completing steps 12a-e

Parameters: SID

Usage: ora_OH_clone_2.ksh <clone SID>

12a. Source envirement variables

```
ORACLE_HOME
```

```
export ORACLE_HOME=/apps/<clone SID>/oracle/10.2.0
```

```
ORACLE_SID
```

```
export ORACLE_SID=<clone SID> (lower case)
```

```
LIBPATH
```

```
export LIBPATH==/apps/<clone SID>/oracle/10.2.0/lib:/usr/dt/lib:/usr/openwin/lib:/apps/
```

```
<clone SID>/oracle/10.2.0/ctx/lib:/apps/<clone SID>/oracle/10.2.0/lib32:/apps/
```

```
<clone SID>/oracle/10.2.0/ctx/lib
```

LD_LIBRARY_PATH

```
Export LD_LIBRARY_PATH=/apps/<clone SID>/oracle/10.2.0/lib:/usr/dt/lib:/usr/openwin/lib:/apps/  
<clone SID>/oracle/10.2.0/ctx/lib
```

TNS_ADMIN

```
Export TNS_ADMIN=/apps/<clone SID>/oracle/10.2.0/network/admin/<clone SID>_<host name>
```

- b. confirm link to OS libobk.a

```
cd $ORACLE_HOME/lib
```

```
ls -la libobk*
```

should have soft link from libobk.a to OS libobk.a64

ie. libobk.a -> /usr/opensv/netbackup/bin/libobk.a64

if not present, create the link

```
ln -s /usr/opensv/netbackup/bin/libobk.a64 libobk.a
```

- c. confirm link of ldflags

```
cd $ORACLE_HOME/lib32
```

link of ldflags should go to \$ORACLE_HOME/lib/ldflags

ie. ldflags -> /apps/<clone SID>/oracle/10.2.0/lib/ldflags

if not correct, drop link and recreate

```
rm -f ldflags
```

```
ln -s /apps/<clone SID>/oracle/10.2.0/lib/ldflags ldflags
```

- d. copy backed up copies in \$HOME/clone to cloned Oracle Home

```
cd $HOME/clone
```

```
cp init<clone SID>.ora $ORACLE_HOME/dbs/
```

```
cp orapw<clone SID> $ORACLE_HOME/dbs/
```

```
cp <clone SID>_<host name>.xml $ORACLE_HOME/apputil/
```

```
cp tnsnames.ora $ORACLE_HOME/network/admin/<clone SID>_<host name>/
```

```
cp listener.ora $ORACLE_HOME/network/admin/<clone SID>_<host name>/
```

- e. start target database with no mount option and using pfile

```
cd $ORACLE_HOME/dbs
```

```
startup nomount pfile=init<clone SID>.ora
```

Complete steps below manually

- f. cleanup \$ORACLE_HOME/dbs directory

remove all unnecessary files and directories

- g. check network connection and names resolution to databases

```
tnsping ep01 (source database)
```

```
tnsping rmandph (rman repository database)
```

if either fails, correct issue and retest

Use script ora_db_dup.ksh for completing step 13a

Execute shell script as nohup

Parameters: SID(clone) SID(source) <restore until date/time>

Usage: nohup ora_db_dup.ksh <clone SID> <source SID> <restore until date/time> &
restore date/time: ("Jul 04 2010 06:00:00" <month> <day of month> <4 digit year> <24HR
hour:minute:seconds>) must be in double quotes

```
monitor log file - rman_<clone SID>_dup.log
cd $HOME/clone
tail -f rman_<clone SID>_dup.log
```

13a. clone database from EP01 using RMAN duplicate

call shell script that contains commands similar to:

NOTE: this script is for sbt_tape, if disk remove command "SEND 'NB_...'"

```
#!/usr/bin/ksh
rman trace=rman_<clone SID>_dup.log << EOF
connect catalog rman<source db name>/rman<source db name>@rmandph;
connect target plcbdba/dbaman@<source db name>;
connect auxiliary plcbdba/dbaman;
run {
allocate auxiliary channel ch1 device type SBT_TAPE;
allocate auxiliary channel ch2 device type SBT_TAPE;
allocate auxiliary channel ch3 device type SBT_TAPE;
SEND ls =<source host name>;
set until time "to_date('<recover until date/time>', 'Mon DD YYYY HH24:MI:SS')";
DUPLICATE TARGET DATABASE TO <clone SID>
logfile '/apps/<clone SID>/oradata/redo01/redo01.log' size 1000M,'/apps/<clone
SID>/oradata/redo02/redo02.log' size 1000M,'/apps/<clone SID>/oradata/redo03/redo03.
log' size 1000M;
}
EOF
```

b. check RMAN duplicate log file for errors

```
cd $HOME/clone
```

```
grep -i error rman_<clone SID>_dup.log
```

Use script cfg_clone.ksh for completing step 14a

Parameters: SID user(apps|ora) source_apps_password

Usage: cfg_clone.ksh <clone SID> user(apps|ora) <source apps password>

NOTE: if error “FAILURE: Please apply the Patch "2896876"” see metalink note#412655.1

modify the adchkutl.sh as follows:

From:

```
printf "FAILURE: Please apply the Patch "2896876" \n";  
exit 1;
```

CHANGE TO:-

else

```
printf "FAILURE: Please apply the Patch "2896876" \n";  
exit 0;
```

The location of the file is:

Database oracle home:

```
$ORACLE_HOME/appsutil/clone/bin/adchkutl.sh
```

EBS applications:

```
$COMMON_TOP/clone/bin/adchkutl.sh
```

- 14a. run adcfgclone.pl on Oracle home using context file
- ```
cd $ORACLE_HOME/appsutil/clone/bin
perl adcfgclone.pl dbTechStack $CONTEXT_FILE << EOF
<source apps password>
EOF
```

**If no context file, see appendix A for answers for adcfgclone questions**

- b. check log file for errors
- ```
cd $ORACLE_HOME/appsutil/log/<clone SID>_<host name>  
LOGFILECFG=`ls -t ApplyDBTechStack* | head -1`  
if [[ -f $LOGFILECFG ]] then  
  if [[ `grep -c "ERRORCODE = 1" $LOGFILECFG` -gt 0 ]] then  
    echo "error in adcfgclone log file, need to fix"  
  fi  
else  
  echo "error in adcfgclone – no log file"  
fi
```

post clone steps - database

Use script ora_post_clone.ksh for completing steps 15a-j

Parameters: SID source_apps_password new_system_password

Usage: ora_post_clone.ksh <clone SID> <source apps password> <new system password>

15a. `chmod 777 $ORACLE_HOME/bin`

b. drop all database links

Use script ora_drop_all_dblinks.ksh for completing steps 15b

Parameters: YES

Usage: ora_drop_all_dblinks.ksh YES

to check for database links

`col owner format a10`

`col host format a15`

`col db_link format a30`

`set lines 100`

`set pages 100`

`select owner, db_link,username,host from dba_db_links`

c. copy backed up copies in \$HOME/clone to cloned Oracle Home

`cd $HOME/clone`

`cp init<clone SID>.ora $ORACLE_HOME/dbs/`

`cp tnsnames.ora $ORACLE_HOME/network/admin/<clone SID>_<host name>/`

d. change sys and system passwords

`alter user system identified by <new system password>;`

`alter user sys identified by <new system password>;`

e. purge DBA recycle bin

f. bounce database, restart using spfile

`sqlplus as sysdba`

`shutdown database`

`startup database using backed up pfile`

`create spfile from pfile`

`shutdown database`

`startup database using spfile`

g. execute script (adgentns.pl) to clean up old TNS entries in database

`cd $ORACLE_HOME/appsutil/bin`

`adgentns.pl contextfile=$CONTEXT_FILE appspass=<source apps password> -removesystem`

h. clean up old entries in FND_NODES table

```
execute fnd_conc_clone.setup_clean
sqlplus as apps
exec fnd_conc_clone.setup_clean
```

- i. execute adautocfg.sh to populate new TNS entries and FND_NODES table
cd \$ORACLE_HOME/appsutil/scripts/<clone SID>_<hostname>
adautocfg.sh appspass=<source apps password>
- j. copy backed up copies in \$HOME/clone to cloned Oracle Home after autocfg.sh
cd \$HOME/clone
cp init<clone SID>.ora \$ORACLE_HOME/dbs/
cp tnsnames.ora \$ORACLE_HOME/network/admin/<clone SID>_<host name>/
- k. disable resubmitting CM requests (only if requested by developers)
XXLCB GL CASH SALES INTERFACE
XXLCB GL WAREHOUSE SUPPLIES INTERFACE
XXLCB GL PAYROLL INTERFACE
XXLCB GL OPERATING EXPENSES
- l. add datafiles to TEMP tablespace (if RMAN duplicate does not)
- m. update libraries (if RMAN duplicate does not)

Cloning EBS Admin tier

On target database/admin tier server

As apps<clone SID> OS user

Use script app_H_clone.ksh for completing step 16

Parameters: SID backup_date tier

Usage: app_H_clone.ksh <clone SID> <backup date> <ADMIN|MID>

16. copy source Admin tier directories to target server

```
cd /apps/<clone SID>
```

```
gunzip -c /production_dump/filesystem/EP01/inst<backup date>_admintier.gz | nohup tar xvf - > /apps/<clone SID>/applmgr/<clone SID>inst.log
```

```
gunzip -c /production_dump/filesystem/EP01/apps<backup date>_admintier.gz | nohup tar xvf - > /apps/<clone SID>/applmgr/<clone SID>apps.log
```

```
gunzip -c /production_dump/filesystem/EP01/FILE<backup date>_admintier.gz | nohup tar xvf - > /apps/<clone SID>/applmgr/<clone SID>FILE.log
```

remove regular files from FILE directory structure

```
cd /apps/<clone SID>/applmgr/FILE
```

```
find . -type f -exec rm {} \;
```

Use script cfg_clone.ksh for completing step 17a

Parameters: SID user(apps|ora) source_apps_password

Usage: cfg_clone.ksh <clone SID> user(apps|ora) <source apps password>

17a. execute adcfgclone.pl on EBS Admin tier using context file

```
cd /apps/<clone SID>/applmgr/apps/apps_st/conn/clone/bin
```

```
perl adcfgclone.pl appsTier $CONTEXT_FILE << EOF
```

```
<source apps password>
```

```
EOF
```

If no context file, see appendix B for answers for adcfgclone questions

b. Check log file for errors

```
cd $INST_TOP/admin/log
```

```
LOGFILECFG=`ls -t ApplyAppsTier* | head -1`
```

```
if [[ -f $LOGFILECFG ]] then
```

```
  if [[ `grep -c "ERRORCODE = 1" $LOGFILECFG` -gt 0 ]] then
```

```
    echo "error in adcfgclone log file, need to fix"
```

```
  fi
```

```
else
```

```
  echo "error in adcfgclone - no log file"
```

```
fi
```

post clone steps – EBS admin tier

On target database/admin tier server

As apps<clone SID> OS user

Use script app_admin_post.ksh for completing steps 18a-f

Parameters: SID system_password old_apps_password new_apps_password

Usage: app_admin_post.ksh <clone SID> <system password> <old apps password> <new apps password>

18a. change permissions on key directories

```
chmod -R 777 $INST_TOP/appltmp
```

```
chmod -R 777 $APPL_TOP/xxlcb
```

```
chmod 777 $APPL_TOP/<clone SID>_<host name>.env
```

```
chmod -R 777 /apps/<clone SID>/applmgr/FILE
```

b. correct path of links in \$APPL_TOP/xxlcb/12.0.0/bin directory

```
XXLCBINTFMOV -> /apps/<clone SID>/applmgr/apps/apps_st/appl/fnd/12.0.0/bin/fndcpe
```

```
XXLCB_COMMON_EMAIL_NOTIFI -> /apps/<clone SID>/applmgr/apps/apps_st/appl/fnd/12.0.0/bin/fndcpe
```

```
xxlcb_pos_intep_files -> /apps/<clone SID>/applmgr/apps/apps_st/appl/fnd/12.0.0/bin/fndcpe
```

c. remove production directories and files

```
rm -rf /apps/<clone sid>/applmgr/apps/apps_st/appl/admin/ep01
```

```
rm -rf /apps/<clone sid>/applmgr/apps/apps_st/appl/admin/ep01_lbebsprddb01
```

```
rm -rf /apps/<clone sid>/applmgr/inst/apps/ep01_lbebsprddb01
```

```
rm /apps/<clone sid>/applmgr/apps/apps_st/appl/*ep01_lbebsprddb01.e*
```

```
rm /apps/<clone sid>/applmgr/apps/apps_st/comn/clone/context/apps/ep01_lbebsprddb01.x*
```

```
rm /apps/<clone sid>/applmgr/apps/tech_st/10.1.2/network/log/ep01.1*
```

d. change APPS password

```
execute FNDCPASS
```

```
FNDCPASS apps/<old apps password> O Y system/<system password> SYSTEM APPLSYS <new apps password>
```

e. execute adautocfg.sh

```
cd $ADMIN_SCRIPTS_HOME
```

```
adautocfg.sh appspass=<new apps password>
```

f. compile APPS schema with adadmin using defaultsfile

See Appendix C for instructions to create adadmin defaultsfile

determine number of invalid objects in the APPS schema

```
sqlplus as sysdba
```

```
select count(*) from dba_objects
```

```
where status = 'INVALID'
```

```
and owner = 'APPS';
```

recompile invalids

- enter adadmin on command line
- answer questions about APPS environment
- select option 3 (Compile/Reload Applications Database Entities menu)
- select option 1 (Compile APPS schema)
- press return when recompile completed
- select option 5 (Return to Main Menu)
- select option 6 (Exit AD Administration)

confirm that invalid count for APPS schema close to zero

```
sqlplus as sysdba
select count(*) from dba_objects
where status = 'INVALID'
and owner = 'APPS';
```

- g. only perform below if requested by developers
 - check for .netrc file in \$HOME directory

Cloning EBS app(mid) tier

On target app(mid) tier server

As apps<clone SID> OS user

Use script app_H_clone.ksh for completing steps 19

Parameters: SID backup_date tier

Usage: app_H_clone.ksh <clone SID> <backup date> <ADMIN|MID>

19. copy source app(mid) tier directories to target server

```
cd /apps/<clone SID>
```

```
gunzip -c /production_dump/filesystem/EP01/inst<backup date>_midtier.gz | nohup tar xvf - > /apps/<clone SID>/applmgr/<clone SID>inst.log
```

```
gunzip -c /production_dump/filesystem/EP01/apps<backup date>_midtier.gz | nohup tar xvf - > /apps/<clone SID>/applmgr/<clone SID>apps.log
```

Use script cfg_clone.ksh for completing step 20a

Parameters: SID user(apps|ora) apps_password

Usage: cfg_clone.ksh <clone SID> user(apps|ora) <new apps password>

20a. execute adcfgclone.pl on EBS Mid tier using context file

```
cd /apps/<clone SID>/applmgr/apps/apps_st/conn/clone/bin
```

```
perl adcfgclone.pl appsTier $CONTEXT_FILE << EOF
```

```
<new apps password>
```

```
EOF
```

If no context file, see appendix D for answers for adcfgclone questions

b. check log file for errors

```
cd $INST_TOP/admin/log
```

```
LOGFILECFG=`ls -t ApplyAppsTier* | head -1`
```

```
if [[ -f $LOGFILECFG ]] then
```

```
  if [[ `grep -c "ERRORCODE = 1" $LOGFILECFG` -gt 0 ]] then
```

```
    echo "error in adcfgclone log file, need to fix"
```

```
  fi
```

```
else
```

```
  echo "error in adcfgclone - no log file"
```

```
fi
```

post clone steps – EBS mid tier

Use script `app_mid_post.ksh` for completing step 21a-d

Parameters: SID apps_password

Usage: `app_mid_post.ksh <clone SID> <new apps password>`

21a. change permissions on key directories and files

```
chmod -R 777 $INST_TOP/appltmp
```

```
chmod -R 777 $APPL_TOP/xxlcb
```

```
chmod 777 $APPL_TOP/${LSID}_${HOSTNAME}.env
```

b. remove production directories and files

```
rm -rf /apps/<clone sid>/applmgr/apps/apps_st/appl/admin/ep01
```

```
rm -rf /apps/<clone sid>/applmgr/apps/apps_st/appl/admin/ep01_lbebsprddb01
```

```
rm -rf /apps/<clone sid>/applmgr/inst/apps/ep01_lbebsprddb01
```

```
rm /apps/<clone sid>/applmgr/apps/apps_st/appl/*ep01_lbebsprddb01.e*
```

```
rm /apps/<clone sid>/applmgr/apps/apps_st/comm/clone/context/apps/ep01_lbebsprddb01.x*
```

```
rm /apps/<clone sid>/applmgr/apps/tech_st/10.1.2/network/log/ep01.1*
```

```
rm -rf /apps/<clone sid>/applmgr/inst/apps/ep01_lbebsprddb01
```

c. recompile jsp files per Metalink Note: 433386.1

```
cd $FND_TOP/patch/115/bin/
```

```
perl ojspCompile.pl --compile --flush -p 2
```

d. execute `adautocfg.sh`

```
cd $ADMIN_SCRIPTS_HOME
```

```
adautocfg.sh appspass=<new apps password>
```

repeat steps (19-21) for each mid tier server, if multiple mid tier servers

If problem with EBS login page (redirects from http to https), check the following:

```
edit $CONTEXT_FILE
```

change https to http in context file

check the value of the tag `sslterminator oa_var`

it should be: `<sslterminator oa_var="s_enable_sslterminator">#</sslterminator>`

Post cloning tasks - final

On target database/admin tier server

As ora<clone SID> OS user

Use script ora_final_post_clone.ksh for completing steps 22a-e

Parameters: SID new_apps_password new_RMS12DEV_password new_SIM12DEV_password
new_RMS_sid new_SIM_sid EBS_form_message

Usage: ora_final_post_clone.ksh <clone SID> <new apps password> <new rms12dev password>
<new sim12dev password> <new rms sid> <new sim sid> <clone as of date>

ie: ora_final_post_clone.ksh ed41 xxxx rrrrr ssss rd41 sd41 Nov-22-2011

22a. create database links

```
sqlplus as apps
create database link ppi connect to lcb_appuser identified by PA4VXI4N using 'CMIC';
create database link apps_to_apps connect to apps identified by <password> using '<clone SID>';
create database link edw_apps_to_wh connect to apps identified by <password> using '<clone SID>';
create database link EBS_TO_SIM connect to sim12dev identified by <password> using '<sim database>';
create public database link EBS_TO_RMS connect to rms12dev identified by <password> using '<rms database>';
```

b. update form header information

```
sqlplus as apps
DECLARE
value boolean;
BEGIN
dbms_output.disable;
dbms_output.enable(100000);
value := fnd_profile.save('SITENAME','${USID} (Cloned as of ${RUN_DATE})','SITE');
IF value THEN
dbms_output.put_line( 'value = TRUE - profile updated' );
ELSE
dbms_output.put_line( 'value = FALSE - profile NOT updated' );
END IF;
commit;
END;
/
```

c. plcbdba user must have sysdba granted

```
to grant
sqlplus as sysdba
grant sysdba to plcbdba;
```

d. update WF_NOTIFICATIONS mail_status to SENT

```
sqlplus as apps
update wf_notifications
set status = 'CLOSED',mail_status = 'SENT',end_date = sysdate
where mail_status in ('FAILED','MAIL','ERROR') or mail_status is null;
```

- e. create or replace directories
 - create or replace directory DOCF_EBS as '/apps/ea81/applmgr/FILE/EBS_PDF';
 - create or replace directory XXL_CB_ORADEV as '/home/oraea81';
 - create or replace directory XXL_CB_INT300 as '/apps/ea81/applmgr/FILE/outbound/INT300';
 - create or replace directory XXL_CB_INT299 as '/apps/ea81/applmgr/FILE/outbound/INT299';

to find directories:

```
col directory_path format a65
col owner format a10
set lines 120
set pages 100
```

```
select * from dba_directories;
```

Use script ora_reg_db_rman.ksh for completing step 23a

Parameters: SID

Usage: ora_reg_db_rman.ksh <clone SID>

- 23a. register database with RMAN repository
 - cd \$HOME/clone

```
rman trace=reg_db.log << EOF
connect target=plcbdba/dbaman@<clone db name>
connect catalog=rman<clone db name>/rman<clone db name>@rmandph
run
{
register database;
configure retention policy to recovery window of 7 days;
configure controlfile autobackup on;
configure controlfile autobackup format for device type 'SBT_TAPE' to '%F';
configure device type disk parallelism 3 backup type to backupset;
configure datafile backup copies for device type 'SBT_TAPE' to 1;
configure device type 'SBT_TAPE' parallelism 1 backup type to backupset;
configure channel device type 'SBT_TAPE' parms
  'ENV=<host name>.pa.lcl,NB_ORA_SERV=lberpbkup01b.pa.lcl,
  NB_ORA_POLICY=oracle);
configure channel device type disk format '/dump/database/
  <upper case db name>/Backup%d_DB_%u_%s_%p_%T';
}
EOF
```

On target database/admin tier server

As apps<clone SID> OS user

- 24. if link /FILE to /apps/<clone SID>/applmgr not present
 - then root needs to create
 - cd /
 - ln -s /apps/<clone SID>/applmgr FILE

25. Below not needed unless requested

```
create database link
  sqlplus as apps
  create public database link staging connect to teame identified by <password> using 'staging';

compile crosswalk form
  export FORMS_PATH=$AU_TOP/forms/US:$AU_TOP/resources:$FORMS_PATH

execute frmcm;_batch.sh

setup printers
```

On target app(mid) tier server

As OEM agent OS user

Use script OEM_black_out.ksh for completing step 26c
Parameters: (START|STOP) SID agent_home_directory
Usage: OEM_black_out.ksh <START|STOP> <clone SID>

- 26a. End OEM agent blackout
cd \$AGENT_HOME/bin
- b. determine name used for blackout
emctl status blackout
- c. end blackout
emctl stop blackout <name of blackout found above>

On target database/admin tier server

As OEM agent OS user

Use script OEM_black_out.ksh for completing step 27c
Parameters: (START|STOP) SID agent_home_directory
Usage: OEM_black_out.ksh <START|STOP> <clone SID>

- 27a. End OEM agent blackout
cd \$AGENT_HOME/bin
- b. determine name used for blackout
emctl status blackout
- c. end blackout
emctl stop blackout <name of blackout found above>

On target database/admin tier server

As apps<clone SID> OS user

28a. uncomment crontab entries

On target app(mid) tier server

As apps<clone SID> OS user

29a. uncomment crontab entries

On target database/admin tier server

As ora<clone SID> OS user

30a. backup database using RMAN
execute crontab script

b. uncomment crontab entries

Testing of cloned instance

Log into EBS

Go to Concurrent : Manager -> Administer

Confirm that actual and target process values are equal for each active CM

Submit “Active Users” request and confirm that is completes normal

If request fails check for vnc process on admin tier.

As apps user

vncserver :0

Appendix A – Manual entries for adcfclone.pl dbTechStack

Note: SID and server name in lower case

Target System Hostname (virtual or normal) [<clone DB server name>]: <clone DB server name>.pa.lcl

NOTE: fully qualified hostname

Target Instance is RAC (y/n) [n]: n

Target System Database SID: <clone SID>

Target System Base Directory: /apps/<clone SID>/oracle

Target System utl_file_dir Directory List: /apps/<clone SID>/applmgr/inst/apps/ep01_lbebsprddb01/appltmp

Number of DATA_TOP's on the Target System [4]: 13

Target System DATA_TOP Directory 1: /apps/<clone SID>/oradata/data01

Target System DATA_TOP Directory 2: /apps/<clone SID>/oradata/data02

Target System DATA_TOP Directory 3: /apps/<clone SID>/oradata/data03

Target System DATA_TOP Directory 4: /apps/<clone SID>/oradata/data04

Target System DATA_TOP Directory 5: /apps/<clone SID>/oradata/data05

Target System DATA_TOP Directory 6: /apps/<clone SID>/oradata/data06

Target System DATA_TOP Directory 7: /apps/<clone SID>/oradata/data07

Target System DATA_TOP Directory 8: /apps/<clone SID>/oradata/data08

Target System DATA_TOP Directory 9: /apps/<clone SID>/oradata/data09

Target System DATA_TOP Directory 10: /apps/<clone SID>/oradata/data10

Target System DATA_TOP Directory 11: /apps/<clone SID>/oradata/redo01

Target System DATA_TOP Directory 12: /apps/<clone SID>/oradata/redo02

Target System DATA_TOP Directory 13: /apps/<clone SID>/oradata/redo03

Target System RDBMS ORACLE_HOME Directory [/apps/<clone SID>/oracle/db/tech_st/10.2.0]:
/apps/<clone SID>/oracle/10.2.0

Do you want to preserve the Display [<clone DB server name>:0.0] (y/n)?: n

Target System Display [<clone DB server name>:0.0]: <clone DB server name>:0.0

Do you want the the target system to have the same port values as the source system (y/n) [y]?: n

enter port pool: 2

Appendix B - Manual entries for adfgclone.pl appsTier (admin tier)

Note: SID and server name in lower case

Target System Hostname (virtual or normal) [<clone DB server name>]: <clone DB server name>.pa.lcl

NOTE: fully qualified hostname

Target System Database SID: <clone SID>

Target System Database Server Node [<clone DB server name>]: <clone DB server name>.pa.lcl

Target System Base Directory : /apps/<clone SID>/applmgr

Target System Forms ORACLE_HOME Directory [/apps/<clone SID>/applmgr/apps/tech_st/10.1.2]:
/apps/<clone SID>/applmgr/apps/tech_st/10.1.2

Target System Web ORACLE_HOME Directory [/apps/<clone SID>/applmgr/apps/tech_st/10.1.3]:
/apps/<clone SDI>/applmgr/apps/tech_st/10.1.3

Target System APPL_TOP Mountpoint [/apps/<clone SID>/applmgr/apps/apps_st/appl]:
/apps/<cloneSID>/applmgr/apps/apps_st/appl

Target System COMMON_TOP Directory [/apps/<clone SID>/applmgr/apps/apps_st/comm]: /apps/<clone
SID>/applmgr/apps/apps_st/comm

Target System Instance Home Directory [/apps/<clone SID>/applmgr/inst]: /apps/<clone SID>/applmgr/inst

Target System Root Service [disabled]: disabled

Target System Web Entry Point Services [disabled]: disabled

Target System Web Application Services [disabled]: disabled

Target System Batch Processing Services [enabled]: enabled

Target System Other Services [disabled]: disabled

Do you want to preserve the Display [<clone DB server name>:0.0] (y/n)?: n

Target System Display [<clone DB server name>:0.0]: <clone DB server name>:0.0

Select same port pool as used in the database cloning steps.

UTL_FILE_DIR on database tier consists of the following directories.

1. /apps/<clone SID>/applmgr/inst/apps/ep01_lbebsprddb01/appltmp
2. /FILE/inbound
3. /FILE/outbound
4. /FILE/archive
5. /FILE/working

6. /FILE/rejected
7. /FILE/POPDF
8. /FILE/INVPDF
9. /FILE/outbound/RIMS
10. /apps/ep01/oracle/10.2.0/apputil/outbound/ep01_lbebsprddb01
11. /usr/tmp

Choose a value which will be set as APPLPTMP value on the target node [1]: 1

Appendix C – Create adadmin defaults file for running in non-interactive mode

Note: SID in lower case

To create defaults file execute:

```
Adadmin defaultsfile=$APPL_TOP/admin/<clone SID>/ recompile_apps_<clone SID>.txt
```

answer questions about APPS environment
 select option 3 (Compile/Reload Applications Database Entities menu)
 select option 1 (Compile APPS schema)
 press return when recompile completed
 select option 5 (Return to Main Menu)
 select option 6 (Exit AD Administration)

screen print of recompile APPS schema using adadmin

```
lbebsdevdb41:apped41@ed41 >> adadmin
defaultsfile=/apps/ed41/applmgr/apps/apps_st/appl/admin/ed41/recompile_apps_ed41.t>
```

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Oracle Applications AD Administration

Version 12.0.0

NOTE: You may not use this utility for custom development
 unless you have written permission from Oracle Corporation.

Your default directory is '/apps/ed41/applmgr/apps/apps_st/appl'.
 Is this the correct APPL_TOP [Yes] ?

AD Administration records your AD Administration session in a text file
 you specify. Enter your AD Administration log file name or press [Return]
 to accept the default file name shown in brackets.

Filename [adadmin.log] :

***** Start of AD Administration session *****

AD Administration version: 12.0.0

AD Administration started at: Fri Oct 22 2010 08:38:23

APPL_TOP is set to /apps/ed41/applmgr/apps/apps_st/appl

Defaults Feature Enabled = YES.

You can be notified by email if a failure occurs.

Do you wish to activate this feature [No] ?

Please enter the batchsize [1000] :

Please enter the name of the Oracle Applications System that this APPL_TOP belongs to.

The Applications System name must be unique across all Oracle Applications Systems at your site, must be from 1 to 30 characters long, may only contain alphanumeric and underscore characters, and must start with a letter.

Sample Applications System names are: "prod", "test", "demo" and "Development_2".

Applications System Name [ed41] : ed41 *

NOTE: If you do not currently have certain types of files installed in this APPL_TOP, you may not be able to perform certain tasks.

Example 1: If you don't have files used for installing or upgrading the database installed in this area, you cannot install or upgrade the database from this APPL_TOP.

Example 2: If you don't have forms files installed in this area, you cannot generate them or run them from this APPL_TOP.

Example 3: If you don't have concurrent program files installed in this area, you cannot relink concurrent programs or generate reports from this APPL_TOP.

Do you currently have files used for installing or upgrading the database installed in this APPL_TOP [YES] ? YES *

Do you currently have Java and HTML files for HTML-based functionality installed in this APPL_TOP [YES] ? YES *

Do you currently have Oracle Applications forms files installed in this APPL_TOP [YES] ? YES *

Do you currently have concurrent program files installed in this APPL_TOP [YES] ? YES *

Please enter the name Oracle Applications will use to identify this APPL_TOP.

The APPL_TOP name you select must be unique within an Oracle Applications System, must be from 1 to 30 characters long, may only contain alphanumeric and underscore characters, and must start with a letter.

Sample APPL_TOP Names are: "prod_all", "demo3_forms2", and "forms1".

APPL_TOP Name [lbebsdevdb41] : lbebsdevdb41 *

You are about to use or modify Oracle Applications product tables

in your ORACLE database 'ed41'
using ORACLE executables in '/apps/ed41/applmgr/apps/tech_st/10.1.2'.

Is this the correct database [Yes] ?

AD Administration needs the password for your 'SYSTEM' ORACLE schema
in order to determine your installation configuration.

Enter the password for your 'SYSTEM' ORACLE schema:
The ORACLE username specified below for Application Object Library
uniquely identifies your existing product group: APPLSYS

Enter the ORACLE password of Application Object Library [APPS] :

AD Administration is verifying your username/password.
The status of various features in this run of AD Administration is:

Feature	<-Feature version in->			
-----	Active?	APPLTOP	Data model	Flags
CHECKFILE	Yes	1	1	Y N N Y N Y
PREREQ	Yes	6	6	Y N N Y N Y
CONCURRENT_SESSIONS	No	2	2	Y Y N Y Y N
PATCH_TIMING	Yes	2	2	Y N N Y N Y
PATCH_HIST_IN_DB	Yes	6	6	Y N N Y N Y
SCHEMA_SWAP	Yes	1	1	Y N N Y Y Y
JAVA_WORKER	Yes	1	1	Y N N Y N Y
CODELEVEL	Yes	1	1	Y N N Y N Y

Identifier for the current session is 37916

Reading product information from file...

Reading language and territory information from file...

Reading language information from applUS.txt ...

AD Administration warning:

Product Data File
/apps/ed41/applmgr/apps/apps_st/appl/admin/zfaprod.txt
does not exist for product "zfa".

This product is registered in the database but the
above file does not exist in APPL_TOP. The product
will be ignored without error.

AD Administration warning:

Product Data File
/apps/ed41/applmgr/apps/apps_st/appl/admin/zsaproduct.txt
does not exist for product "zsa".

This product is registered in the database but the
above file does not exist in APPL_TOP. The product
will be ignored without error.

AD Administration warning:

Product Data File

/apps/ed41/applmgr/apps/apps_st/appl/admin/jtsprod.txt

does not exist for product "jts".

This product is registered in the database but the above file does not exist in APPL_TOP. The product will be ignored without error.

Reading database to see what industry is currently installed.

Reading FND_LANGUAGES to see what is currently installed.

Currently, the following language is installed:

Code	Language	Status
US	American English	Base

Your base language will be AMERICAN.

Setting up module information.

Reading database for information about the modules.

Saving module information.

Reading database for information about the products.

Reading database for information about how products depend on each other.

Reading topfile.txt ...

Saving product information.

AD code level : [A.4]

AD Administration Main Menu

1. Generate Applications Files menu
2. Maintain Applications Files menu
3. Compile/Reload Applications Database Entities menu
4. Maintain Applications Database Entities menu
5. Change Maintenance Mode
6. Exit AD Administration

Enter your choice [6] : 3

Compile/Reload Applications Database Entities

1. Compile APPS schema
2. Compile menu information

3. Compile flexfields
4. Reload JAR files to database
5. Return to Main Menu

Enter your choice [5] : 1

```
sqlplus -s APPS/***** @/apps/ed41/applmgr/apps/apps_st/appl/ad/12.0.0/sql/adutlrcmp.sql APPLSYS ***** APPS  
***** ***** 0 0 NONE FALSE
```

Review the messages above, then press [Return] to continue.

Backing up restart files, if any.....Done.

Compile/Reload Applications Database Entities

1. Compile APPS schema
2. Compile menu information
3. Compile flexfields
4. Reload JAR files to database
5. Return to Main Menu

Enter your choice [5] : 5

AD Administration Main Menu

1. Generate Applications Files menu
2. Maintain Applications Files menu
3. Compile/Reload Applications Database Entities menu
4. Maintain Applications Database Entities menu
5. Change Maintenance Mode
6. Exit AD Administration

Enter your choice [6] : 6

Backing up restart files, if any.....Done.

There is no timing information available for the current session.

AD Administration is complete.

Errors and warnings are listed in the log file
/apps/ed41/applmgr/apps/apps_st/appl/admin/ed41/log/adadmin.log

and in other log files in the same directory.

Appendix D - Manual entries for adcfgclone.pl appsTier (mid tier)

Note: SID and server name in lower case

Target System Hostname (virtual or normal) [lbebsuatapp91]: <clone app server name>.pa.lcl

NOTE: fully qualified hostname

Target System Database SID: <clone SID>

Target System Database Server Node [lbebsuatapp91]: <clone DB server name>.pa.lcl

NOTE: fully qualified hostname

Target System Base Directory: /apps/<clone SID>/applmgr

Target System Forms ORACLE_HOME Directory [/apps/ea91/applmgr/apps/tech_st/10.1.2]:
/apps/<clone SID>/applmgr/apps/tech_st/10.1.2

Target System Web ORACLE_HOME Directory [/apps/ea91/applmgr/apps/tech_st/10.1.3]:
/apps/<clone SID>/applmgr/apps/tech_st/10.1.3

Target System APPL_TOP Mountpoint [/apps/ea91/applmgr/apps/apps_st/appl]:
/apps/<clone SID>/applmgr/apps/apps_st/appl

Target System COMMON_TOP Directory [/apps/ea91/applmgr/apps/apps_st/comm]:
/apps/<clone SID>/applmgr/apps/apps_st/comm

Target System Instance Home Directory [/apps/ea91/applmgr/inst]: /apps/<clone SID>/applmgr/inst

Target System Root Service [enabled]: enabled

Target System Web Entry Point Services [enabled]: enabled

Target System Web Application Services [enabled]: enabled

Target System Batch Processing Services [disabled]: disabled

Target System Other Services [enabled]: enabled

Do you want to preserve the Display [lbebsprdapp01:0.0] (y/n)?: n

Target System Display [lbebsuatapp91:0.0]: <clone app server name>:0.0

Do you want the the target system to have the same port values as the source system (y/n) [y] ?: n

Select same port pool as used in the database cloning steps.

UTL_FILE_DIR on database tier consists of the following directories.

1. /apps/<clone SID>/applmgr/inst/apps/<clone SID>_<clone app server name>/appltmp
2. /FILE/outbound
3. /FILE/outbound/RIMS
4. /FILE/inbound
5. /FILE/working
6. /FILE/rejected
7. /FILE/archive
8. /FILE/POPDF
9. /FILE/INVPDF
10. /apps/ea91/oracle/10.2.0/appstutil/outbound/ea91_lbebsuatdb91
11. /usr/tmp

Choose a value which will be set as APPLPTMP value on the target node [1]: 1

Appendix E – variable definitions

ORACLE_HOME=/apps/<clone SID>/oracle/10.2.0

AGENT_HOME

ADMIN_SCRIPTS_HOME=/apps/<clone SID>/applmgr/inst/apps/<clone SID>_<hostname>/admin/scripts

CONTEXT_FILE = <full path>/<clone SID>_<host name>.xml

APPL_TOP=/apps/<clone SID>/applmgr/apps/apps_st/appl

HOME=/home/<OS user name>

TNS_ADMIN=/apps/<clone SID>/oracle/10.2.0/network/admin/<clone SID>_<host name>

INST_TOP=/apps/<clone SID>/applmgr/inst/apps/<clone SID>_<hostname>

FND_TOP=/apps/<clone SID>/applmgr/apps/apps_st/appl/fnd/12.0.0

Appendix F – unregister old database with database removed

Log into rman database schema owner

sqlplus rman<clone SID>@rmandph

ie. sqlplus rmanea81@rmandph

query to find dbid of old database

```
select dbid, name, resetlogs_time from rc_database;
```

Use script ora_unreg_rman_dbid.ksh to unregister old database

Parameters: SID DBID

Usage: ora_reg_db_rman.ksh <clone SID> <dbid from query>

APPENDIX AA

NEW INSTALLATION RMS AND SIM CLONE

New_Installation_RMS and SIM_CLONE

DB CLONNING OF RMS and SIM

Registering database in RMAN for New Installalations.....	3
OPatch (Checking for any patches).....	4
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Drop Database Links	Error! Bookmark not defined.
New Oracle Home Installation	5
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Upgrade to 10.2.0.3	17
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DB Cloning steps from Production

1. Comment out existing backup crontab scripts.
2. Log into the database server and remove the data, redo and archive files.
3. Make sure the the tnsnames has the clone database entry.

Start in directory /apps/sa81/oracle/product/10.2.0.3/dbs so you can copy and paste the pfile.

- 2)Startup the database with nomount using Pfile
ex: sqlplus / as sysdba

startup nomount pfile=path of the init.ora file

Run the RMAN script

The RMAN script will be

/production_dump/lcb/scripts/dba/RMS_clone/ora_db_dup.ksh

If it is SIM it will be in /production_dump/lcb/scripts/dba/SIM_clone/
ora_db_dup.ksh

Do a more on ora_db_dup.ksh to see where the log files are going to be generated.

Make sure that you have that directory.

Make sure that the script conforms to your ORACLE_SID environment.

Connect to RMAN

```
connect catalog ${CAT_USER}/${CAT_USER}@${RMAN_SID};  
connect target ${TARGET_USER}/${TARGET_PASS}@${SOURCE_SID};  
connect auxiliary ${TARGET_USER}/${TARGET_PASS};
```

RMAN_SID=rmandph

TARGET_USER=plcdba

TARGET_PASS=dbaman

1. rman
2. connect catalog rmansp01/rmansp01@rmandph (this will connect to sp01).
3. connect target plcdba/dbaman@sp01
4. connect auxiliary/ (connected to auxiliary database: SA81 (not mounted))
5. exit out of rman (to check to see if rman is correct).
6. go to /production_dump/lcb/scripts/dba/SIM_clone.
7. create soft link for libobk.a in \$ORACLE_HOME/lib

8. libobk.a -> /usr/opensv/netbackup/bin/libobk.a64
9. Modify the script below to fit your environment

Run the RMS script below

```
nohup ora_db_dup.ksh sa81 sp01 "Dec 20 2010 14:00:00" &
      |cloneSID| sourceSID |restore time| & means running in the
background.
Example:
```

```
lbsimuatdb81: /production_dump/lcb/scripts/dba/SIM_clone$ nohup ora_db_dup.ksh
sa81 sp01 "Dec 20 2010 14:00:00" &
[1] 671982
lbsimuatdb81: /production_dump/lcb/scripts/dba/SIM_clone$ Sending nohup output
to nohup.out.
```

```
lbsimuatdb81: /production_dump/lcb/scripts/dba/SIM_clone$ cd
lbsimuatdb81: /home/orasa81$ cd clone
lbsimuatdb81: /home/orasa81/clone$ ls
initSA81.ora  initSA81.ora_bk  listener.ora  listener.ora_bk
rman_sa81_dup.log  tnsnames.ora  tnsnames.ora_bk
lbsimuatdb81: /home/orasa81/clone$ tail -f rman_sa81_dup.log
restoring datafile 00036 to /apps/sa81/oradata/data03/undo_ts03.dbf
restoring datafile 00037 to /apps/sa81/oradata/data02/users01.dbf
restoring datafile 00038 to /apps/sa81/oradata/data03/xxlcb_data01.dbf
restoring datafile 00039 to /apps/sa81/oradata/data03/lob_data01.dbf
restoring datafile 00040 to /apps/sa81/oradata/data02/undo_ts11.dbf
restoring datafile 00041 to /apps/sa81/oradata/data01/retek_index11.dbf
restoring datafile 00042 to /apps/sa81/oradata/data01/retek_data09.dbf
restoring datafile 00043 to /apps/sa81/oradata/data03/sepuser_data01.dbf
restoring datafile 00044 to /apps/sa81/oradata/data03/backup01.dbf
```

Registering database in RMAN for New Installations

1. Go to lbprodmonitor as orarman
2. lbprodmonitor: \$ /production_dump/lcb/scripts/dba/EBS_clone \$ ls -ltr NS*
3. lbprodmonitor: \$ /production_dump/lcb/scripts/dba/EBS_clone \$
NS_ora_mk_cat_user.ksh sd31
4. sqlplus / as sysdba
5. grant sysdba to plcbdba;

Registering database with RMAN Repository New install only

1. Location: / production_dump/lcb/scripts/dba/EBS_clone.
2. Run ora_reg_db_rman.ksh <cloneSID>. Ex. NS_ora_reg_db_rman.ksh sa81
3. Crontab -e
4. Set arch script to run and complete for first time:
5. Ex. 35 15 * * * /dump/scripts/DB/rman_tape_archive.sh SA81 >> /dev/null 2>&1
6. Save crontab changes.
7. When finished, comment out same: #35 15 * * *
/dump/scripts/DB/rman_tape_archive.sh SA81 >> /dev/null 2>&1
8. Crontab -e
9. Start full backup for first time: Ex. 45 15 * * *
/dump/scripts/DB/rman_tape_full.sh SA81 >> /dev/null 2>&1
10. Save crontab changes.
11. Comment out full back up when completed: #45 15 * * *
/dump/scripts/DB/rman_tape_full.sh SA81 >> /dev/null 2>&1
12. Save crontab changes.
13. Done □.

OPatch (Checking for any patches)

1. Log onto the production unix box.
2. Go to the Oracle Home of that box.
3. Go to the OPatch directory.
4. Use the following command, opatch lsinventory.

Recycle Database

1. Shut immediate. (Will take some time since it is a clone).
2. startup mount.

System Password Changes

1. Since this is a clone from production, passwords will be as production.
2. alter user username identified by password. This will need to be done for the sim12dev user.

Install Oracle SIM BI

1. /production_dump/ora_media/SIM/BI_SOFTWARE/AIX/Oracle_Business_Intelligence_Publisher_Standalone

New Oracle Home Installation

PLCB installs NEW application instances when doing a refresh

1. Go to the downloaded files and VNC into the server that you want to install Oracle.

Usually the files are located here on [/production_dump/ora_media/DB10g](#)

2. ./runInstaller
3. Install oracle home.

Welcome to the Oracle Database 10g Installation

Select the installation method that you want to use.

Basic Installation

Oracle Home Location:

Installation Type:

UNIX DBA Group:

Create Starter Database (additional 720MB)

Global Database Name:

Database Password: Confirm Password:

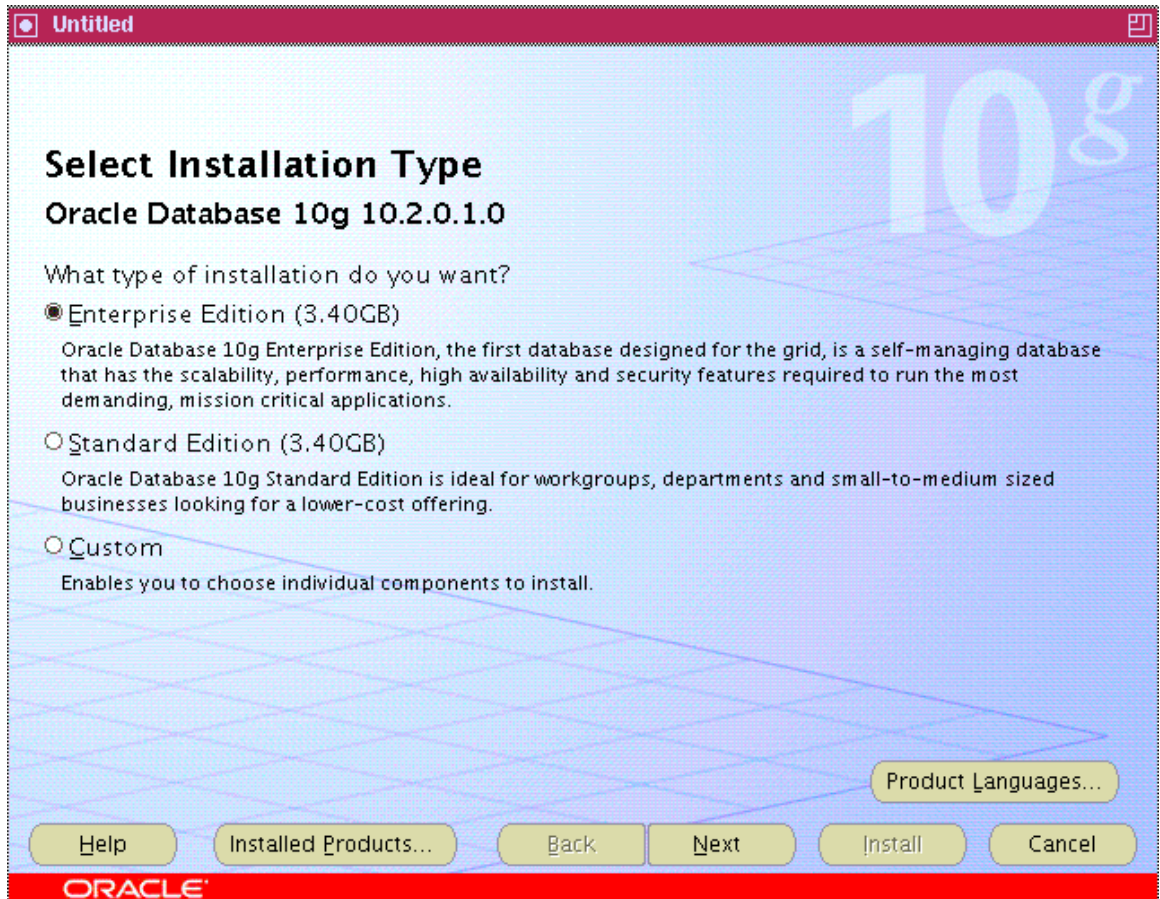
This password is used for the SYS, SYSTEM, SYSMAN, and DBSNMP accounts.

Advanced Installation

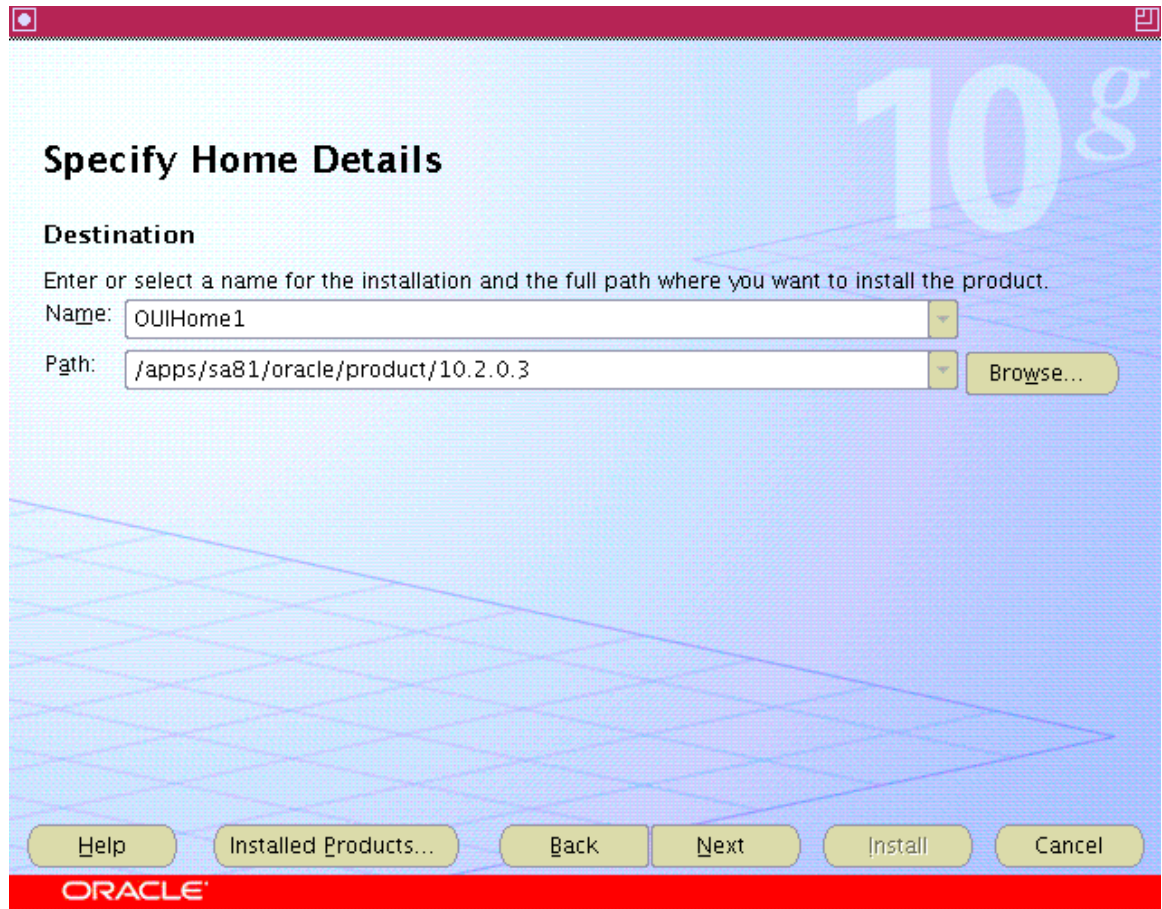
Allows advanced selections such as different passwords for the SYS, SYSTEM, SYSMAN, and DBSNMP accounts, database character set, product languages, automated backups, custom installation, and alternative storage options such as Automatic Storage Management.

ORACLE

4. Click the Advanced Installation Radio button.
5. Click the Next button.
6. Give the oraInventory location.
7. Click the Next button.
8. Check verification prereqs.



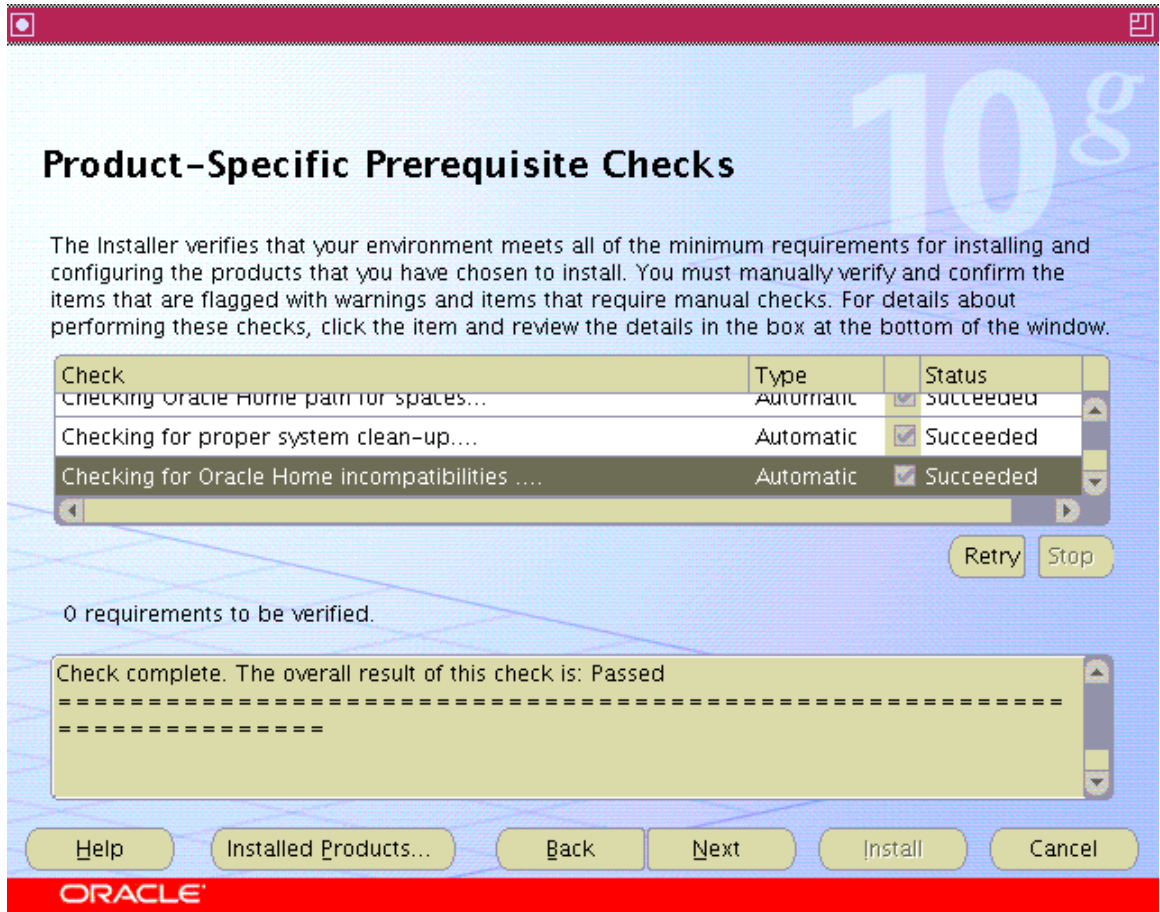
9. Select Enterprise Edition Radio Button.
10. Click the Next button.



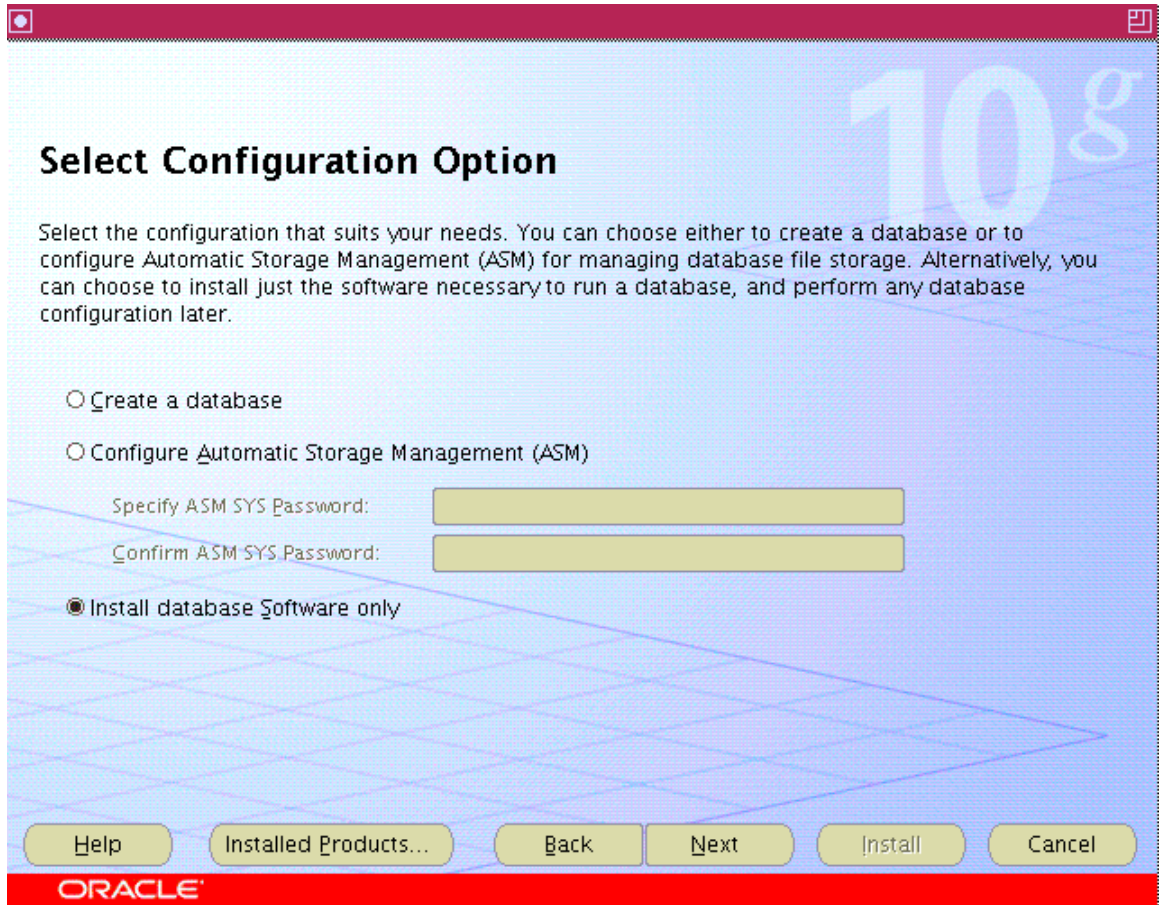
11. Click the Next button.
12. Click the Next button.
13. Click the Install button.
14. Run the required .sh scripts.

Installation of Companion

1. cd to Disk1/companion and run the installer.



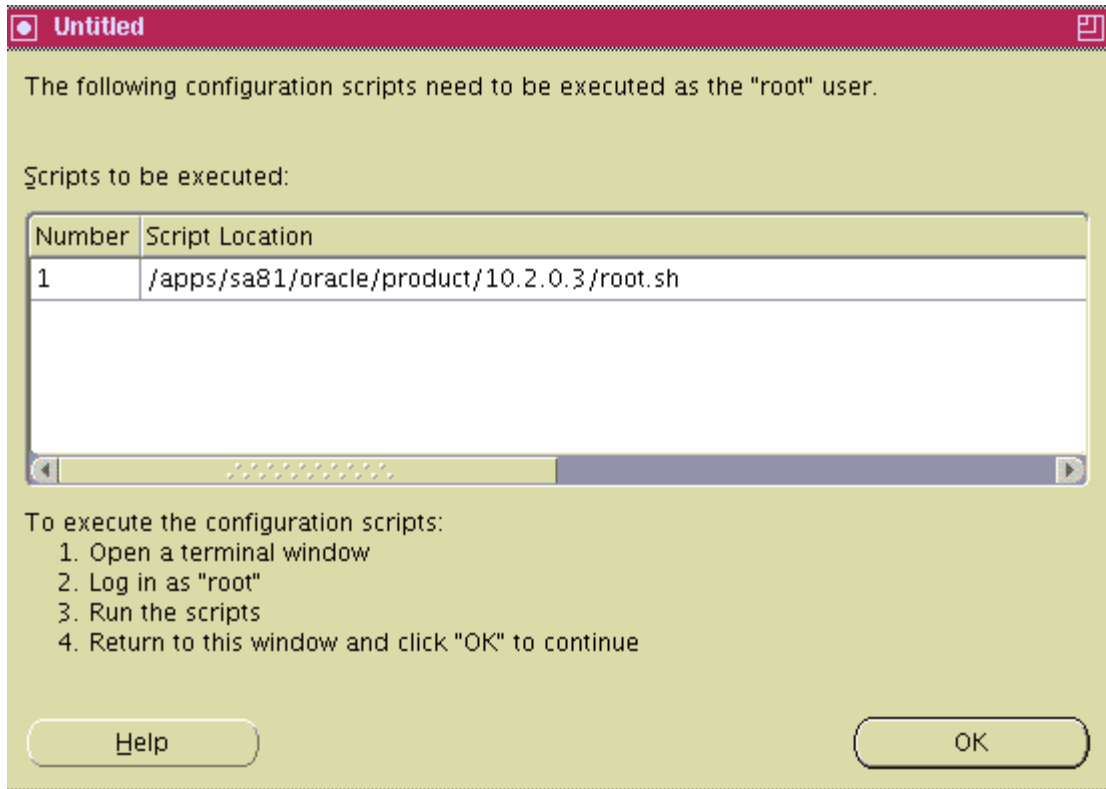
2. Click the Next button.



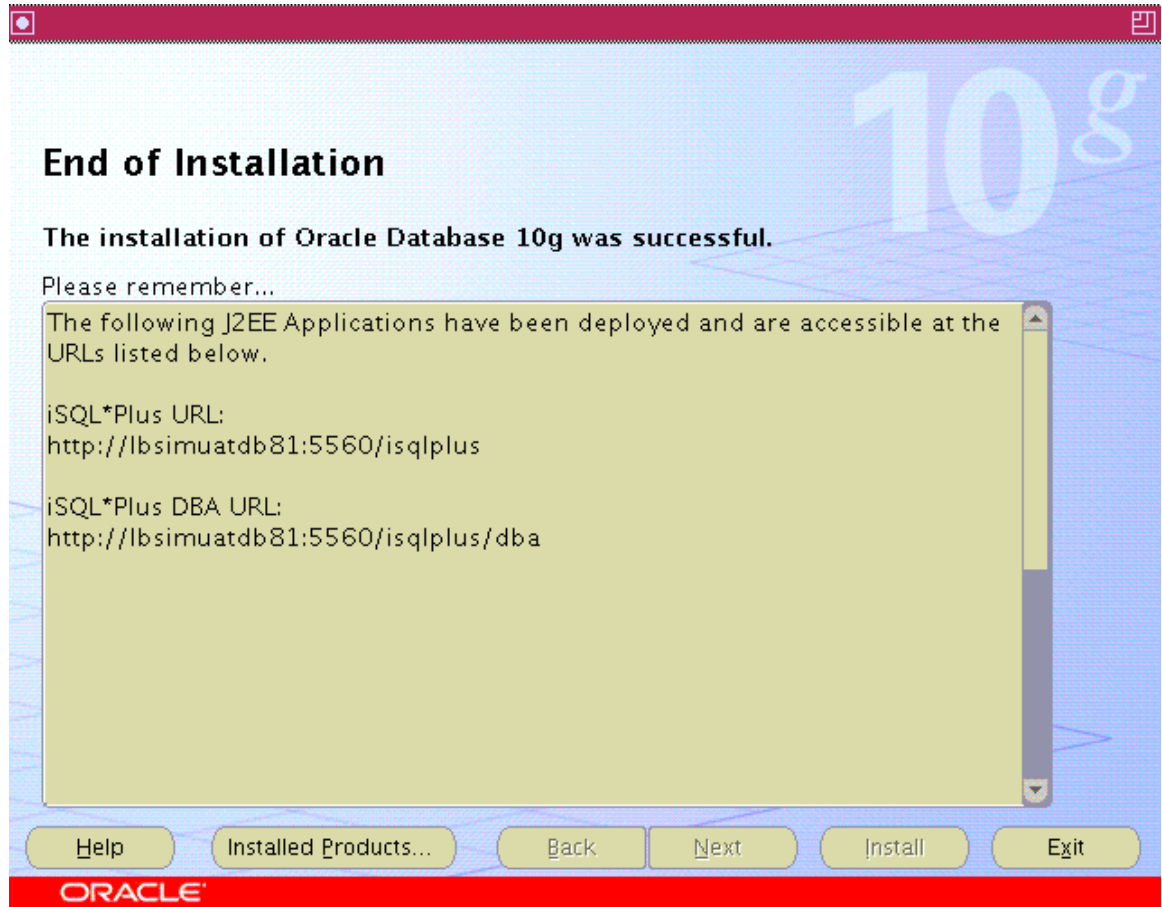
3. Click the Install database Software only Radio button.
4. Click the Next button.



5. Click the Install button.
6. Run `sudo /apps/sa81/oracle/product/10.2.0.3/root.sh` when prompted to do so.



7. Click the OK button after the root.sh script has completed.



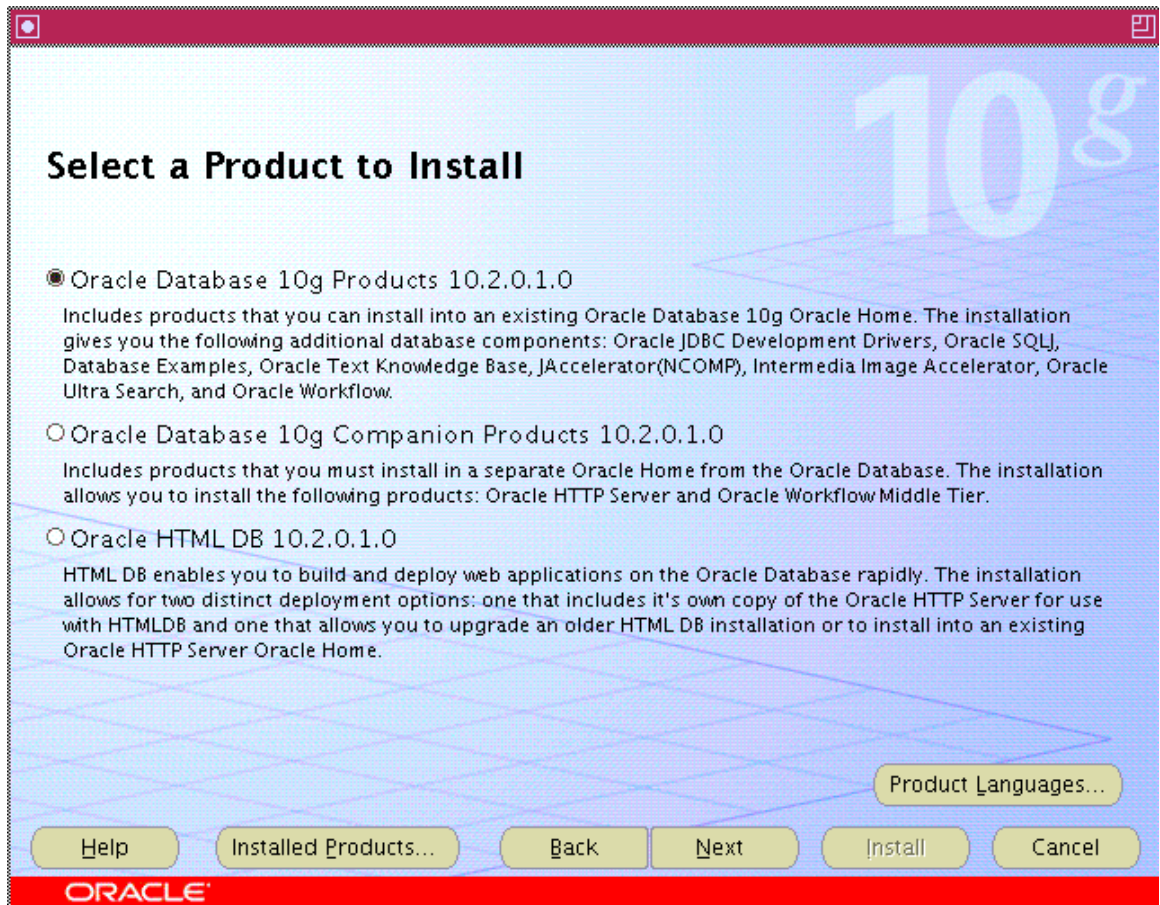
8. Click the Exit button.

10.2.0.1 Companion Installation

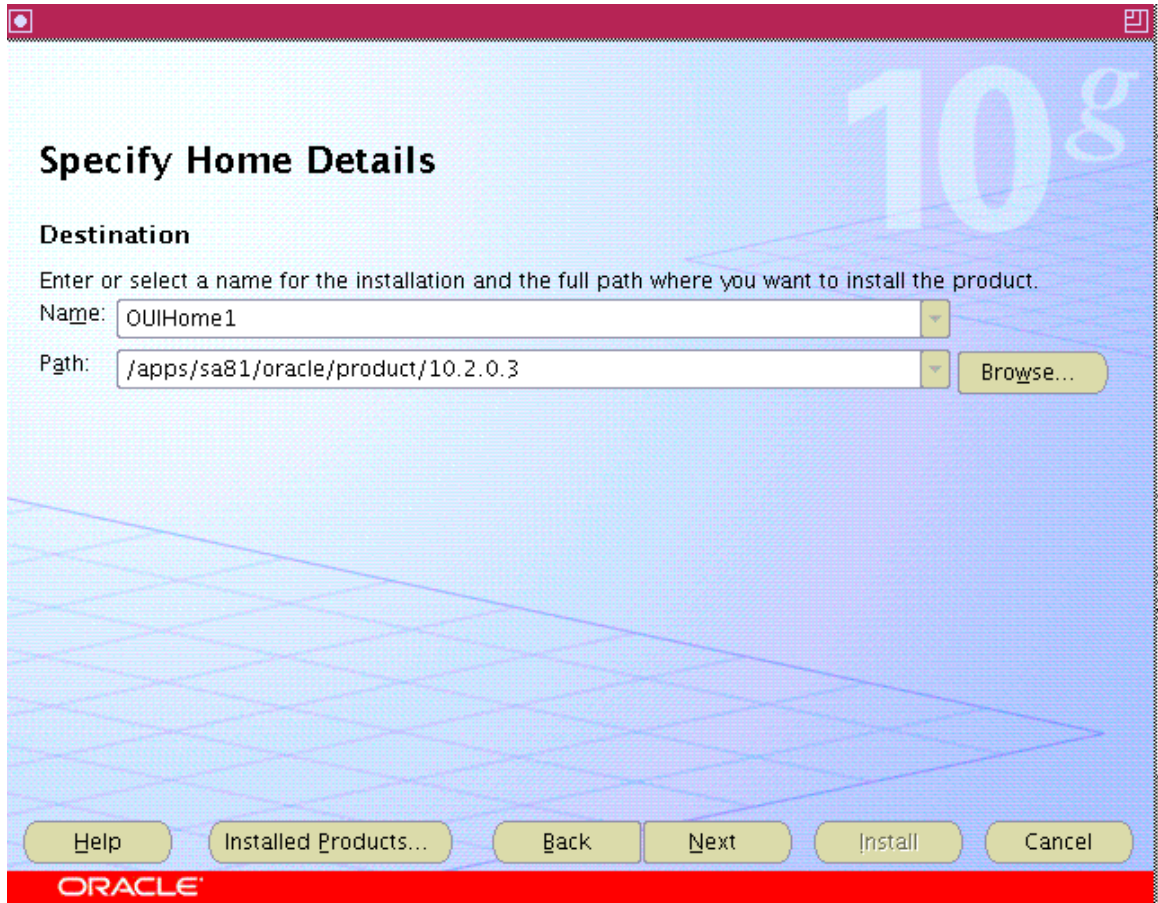
1. `cd /production_dump/ora_media/DB10g/102010/Disk1/companion`
2. Run the installer `./runInstaller`.



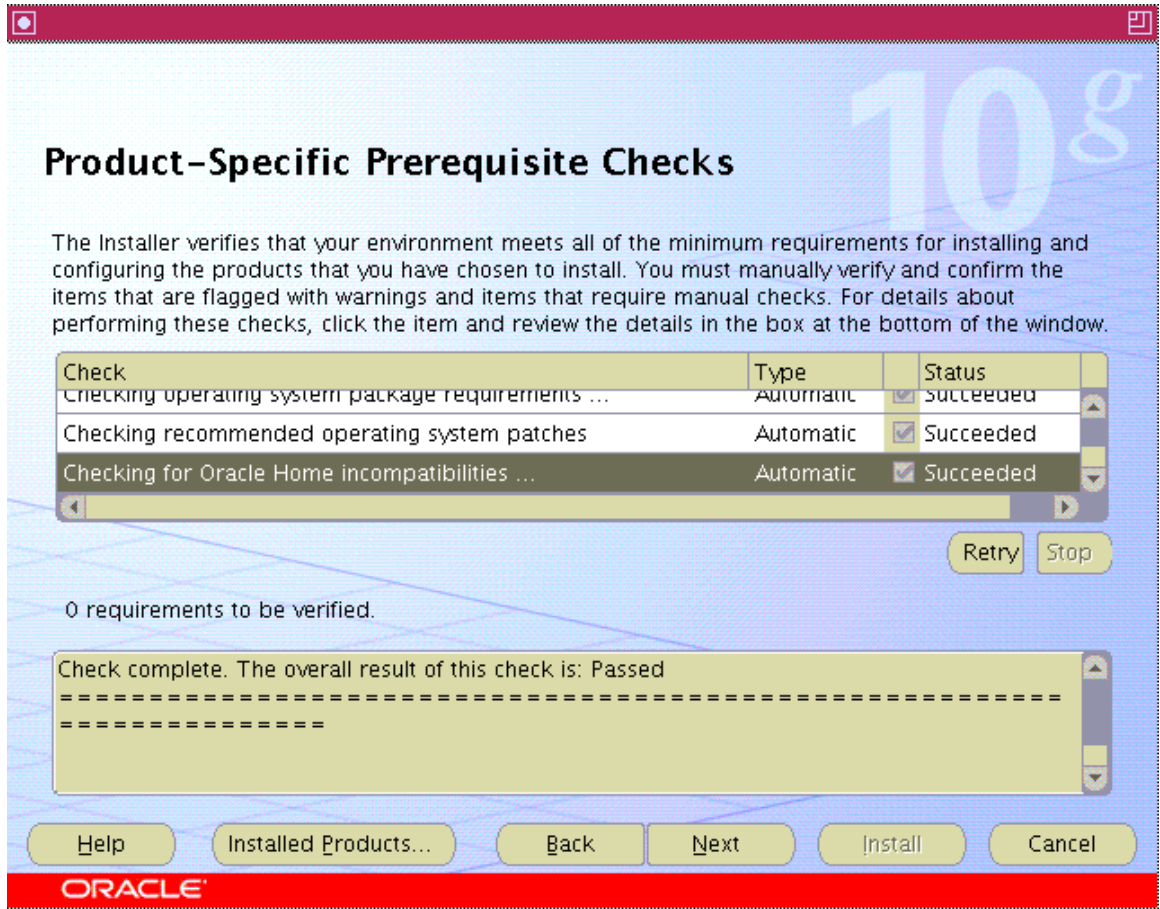
3. Click the Next button.
4. Choose Oracle 10g Productions option.



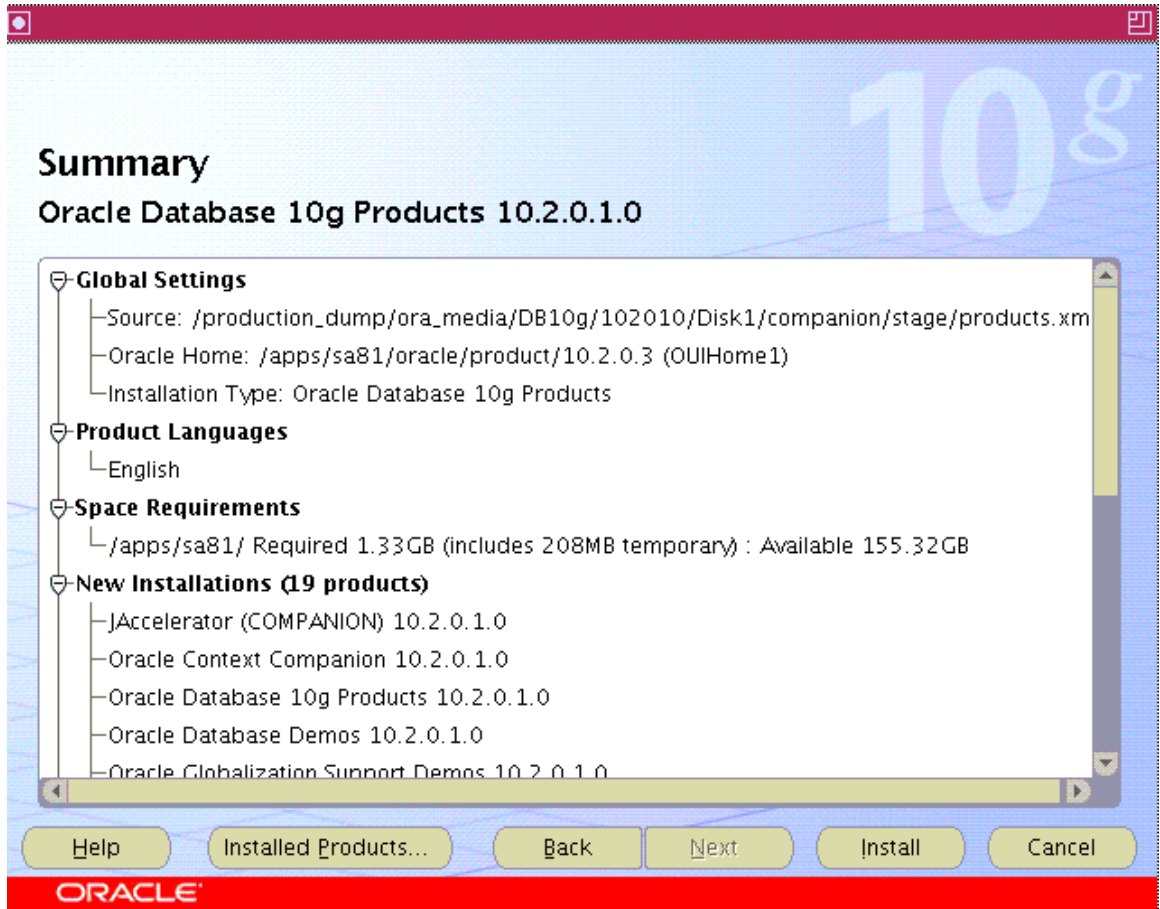
5. Click the Next button.



6. Choose the same Oracle home.
7. Choose the Next button.



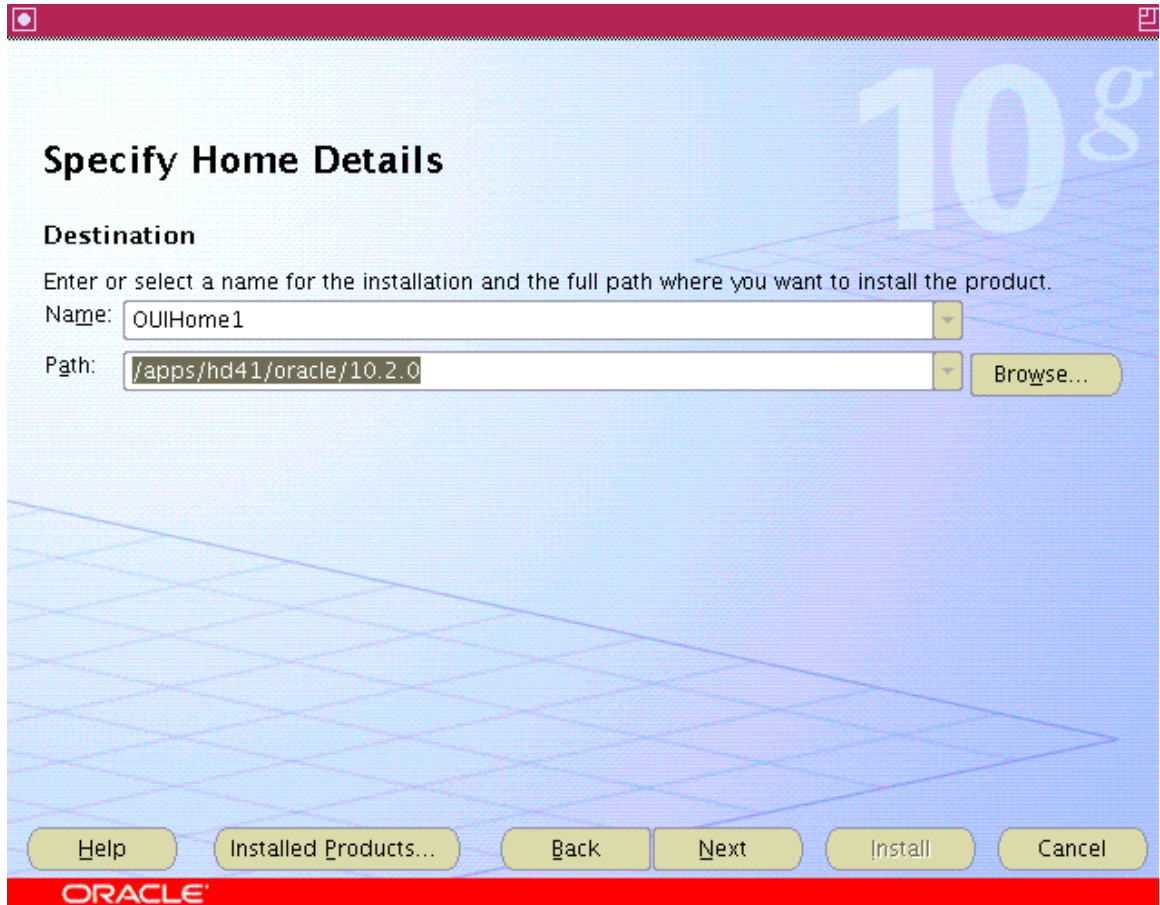
8. Choose the Next button.



9. Choose the Install button.

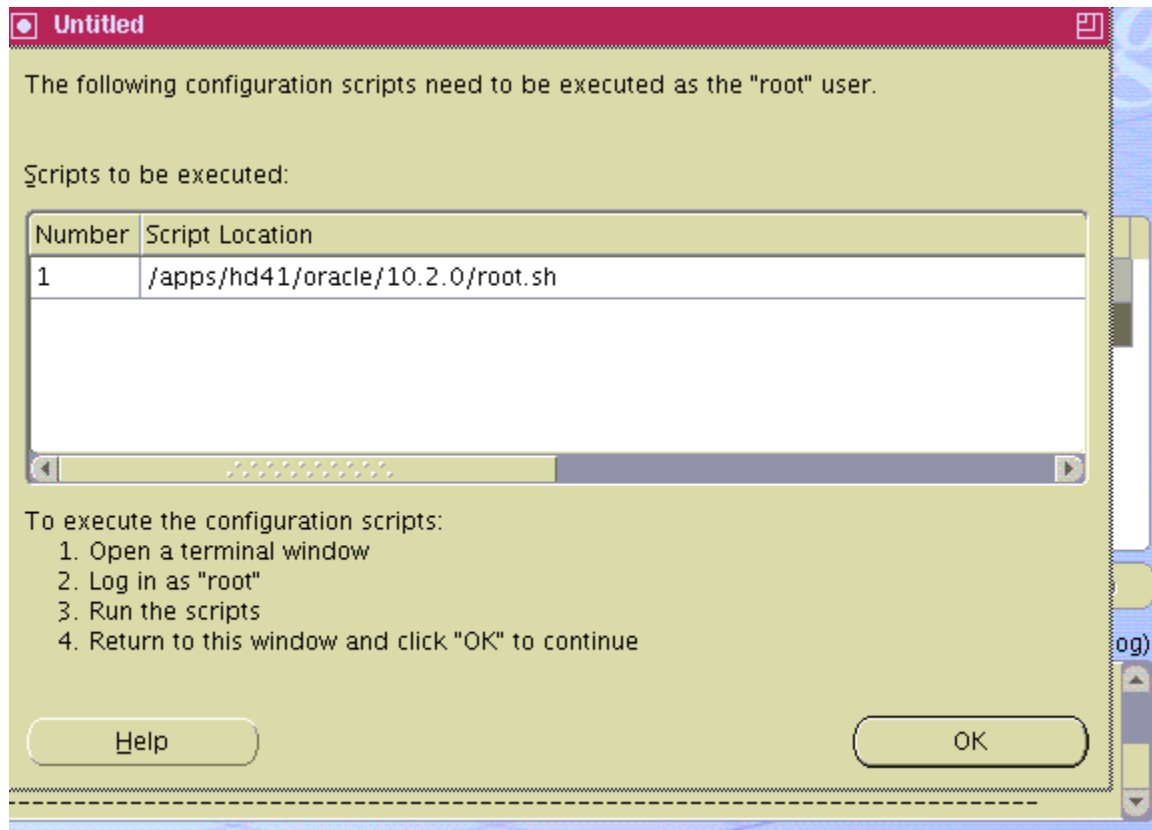
Upgrade to 10.2.0.3

1. In VNC go to
/production_dump/ora_media/DB10g/OracleDB10.2.0.3PatchSet/Disk1 (this path may change according to your installation).
2. Run the clean script prior to installation: /usr/sbin/slibclean.
3. Run the following installation script to by pass the prereqs if applicable:
./runInstaller -ignoreSysPrereq or ./runInstaller
4. Click the Next button.
5. Change the Oracle home location to the 10.2.0.1 installation.



6. Click the Next button.
7. Click the Install button.
8. Run the root.sh script when prompted to do so.
9. lbhypdevdb41: \$ /apps/ra91/oracle/product/10.2.0.3 \$./root.sh
10. Running Oracle10 root.sh script...
11. You must be logged in as root to run root.sh.
12. Log in as root and restart root.sh execution.
13. lbhypdevdb41: \$ /apps/ra91/oracle/product/10.2.0.3 \$ sudo ./root.sh
14. Running Oracle10 root.sh script...and choose the following entries...
15. The following environment variables are set as:
16. ORACLE_OWNER= orahra91
17. ORACLE_HOME= /apps/ra91/oracle/product/10.2.0.3
18. Enter the full pathname of the local bin directory: [/usr/local/bin]:
19. The file "dbhome" already exists in /usr/local/bin. Overwrite it? (y/n) [n]: y
20. Copying dbhome to /usr/local/bin ...
21. The file "oraenv" already exists in /usr/local/bin. Overwrite it? (y/n) [n]: y
22. Copying oraenv to /usr/local/bin ...
23. The file "coraenv" already exists in /usr/local/bin. Overwrite it? (y/n) [n]: y
24. Copying coraenv to /usr/local/bin ...
25. Entries will be added to the /etc/oratab file as needed by
26. Database Configuration Assistant when a database is created

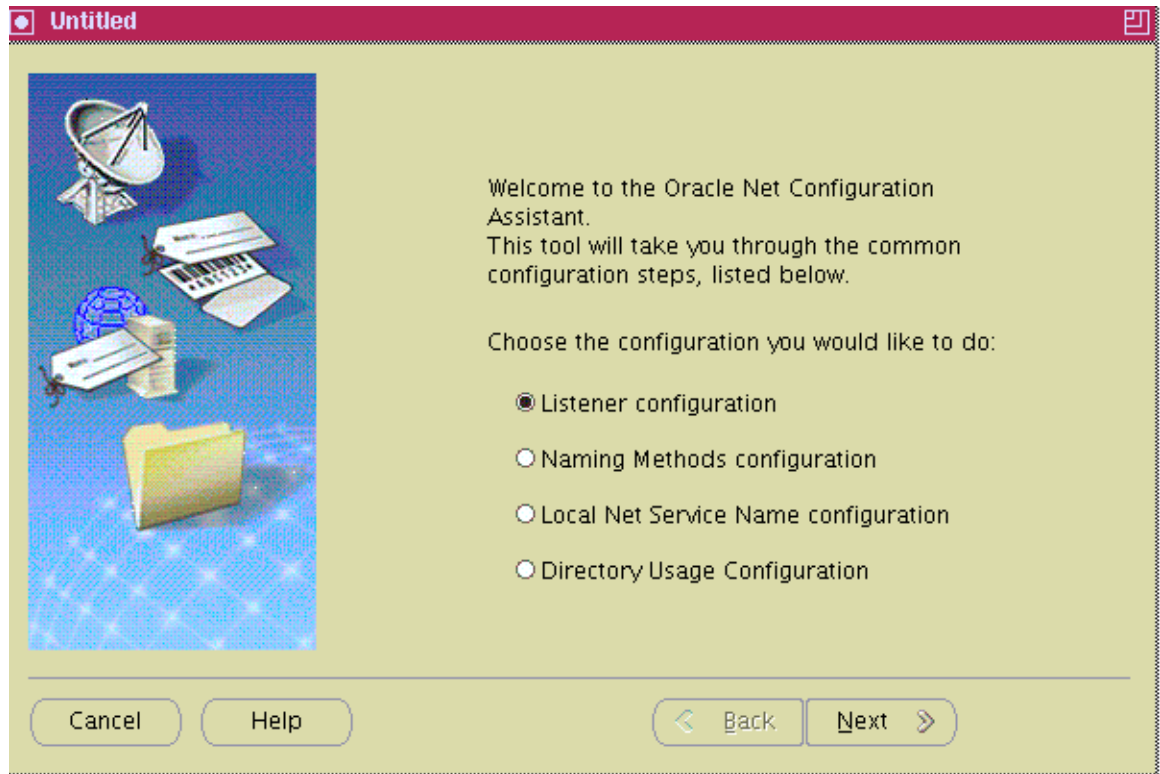
27. Finished running generic part of root.sh script.
28. Now product-specific root actions will be performed.
29. lbhypdevdb41: \$ /apps/ra91/oracle/product/10.2.0.3 \$
30. Go back to the VNC session.



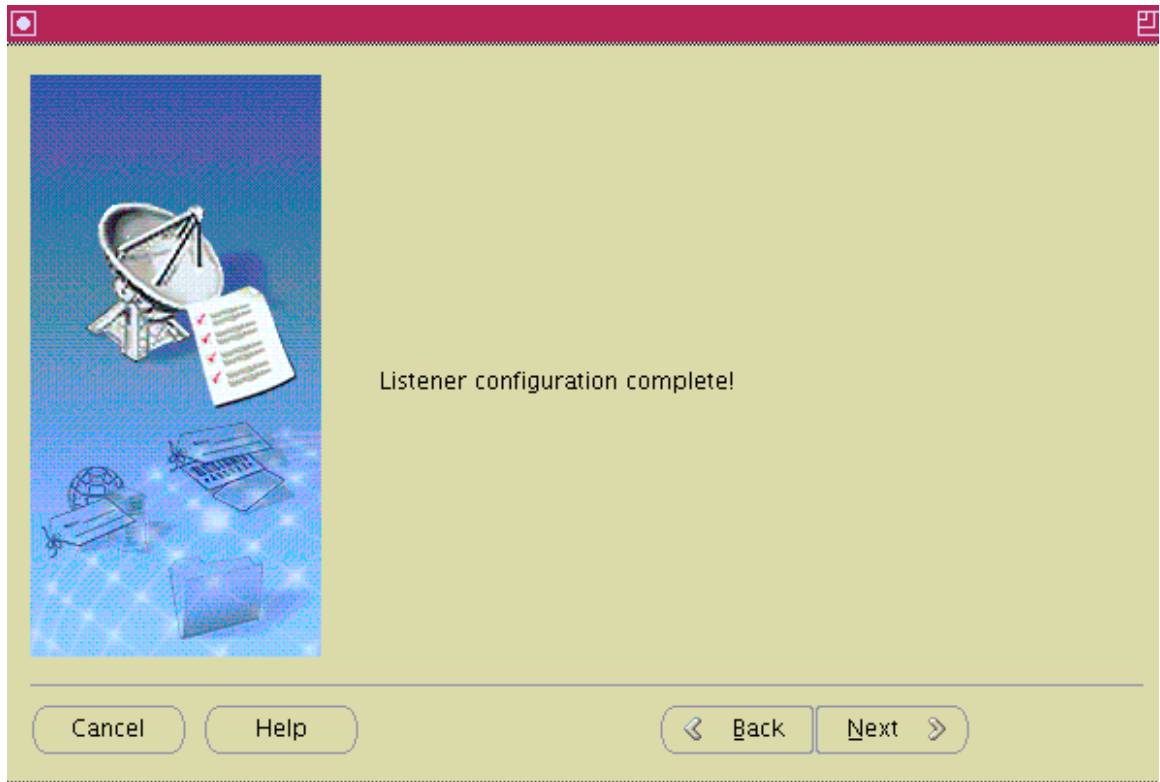
31. Click the Ok button.
32. Click the Exit button.

Setting up Isnrctl

1. Make sure \$ORACLE_HOME is set.
2. export ORACLE_HOME/apps/ra91/oracle/product/10.2.0.3 Go to \$ORACLE_HOME/bin.
3. cd /apps/ra91/oracle/product/10.2.0.3/bin
4. Issue the command. /netca in VNC session, to initiate the Oracle net configuration wizard.



5. Select Listener configuration option.
6. Click the Next button.
7. Click the Next button.
8. Change the listener name to RA91 (should conform to your environment).
9. Click the Next button.
10. Click the Next button.
11. Click the Next button. (port 1521 is the standard port but could be different).
12. Click the Next button, to finish installation.



13. Click the Cancel button.
14. Click the Finish button.

Setting up TNSNAMES

1. Change tnsnames to your environment.
2. `cd /apps/ra91/oracle/product/10.2.0.3/network/admin`
3. copy tnsnames from production and change to fit your environment.
4. `tnsping hd41` to see if everything is ok.
5. `echo $ORACLE_HOME`, should `/apps/ra91/oracle/product/10.2.0.3/` if not do the following:
6. `export ORACLE_HOME=/apps/ra91/oracle/product/10.2.0.3`
7. Issue the following command to see if you log onto sqlplus: `sqlplus / as sysdba`, should get the following:
8. Connected to an idle instance.

APPENDIX BB

NEW SERVER EBS CLONING FOR PLCB

NEW SERVER EBS CLONING FOR PLCB

EBS cloning for PLCB on new servers

As of 04/24/2012

Script location: /production_dump/lcb/scripts/dba/EBS_clone

Pre clone steps

All Servers

- 1a. Contact the Unix Admin group to create an empty file named cc on each of the servers: database/admin tier and each of the mid tier servers.
 - name: cc
 - size (bytes): 0 – empty
 - directory: /usr/bin
 - owner/group: root/system
 - permissions: 755
- b. check for NFS mounted directories /dump and /production_dump. If not mounted contact Unix Admin group to mount them.

Schedule backups of Oracle Home and Apps (admin and mid tiers) directories

On source database/admin tier server

As ora<source SID> OS user

- 2a. Modify crontab entry for ora_home_backup.sh to execute the morning of the requested clone date
 - ###use below to backup the OH for cloning DDW 092810
 - ###00 3 * * 3 /home/oraep01/ora_home_backup.sh ep01 >> /dev/null 2>&1

As apps<source SID> OS user

- b. Modify crontab entry for app_filesystem_backup.sh to execute the morning of the requested clone date
 - ###Use below entry for backup of apps admin tier for cloning DDW 092810
 - ###00 3 * * 3 /home/appep01/app_filesystem_backup.sh ep01 >> /dev/null 2>&1

On source app(mid) tier server

As apps<source SID> OS user

- c. Modify crontab entry for app_filesystem_backup.sh to execute the morning of the requested clone date
 - ###Use below entry for backup of apps mid tier for cloning DDW 092810
 - ###00 3 * * 3 /home/appep01/app_filesystem_backup.sh ep01 >> /dev/null 2>&1
- d. When the backups of the directories are completed, log onto servers and comment out the entries.

On target database/admin tier server

As ora<clone SID> OS user

- 3a. Create .profile and env files in OS user's HOME directory
copy .profile and <SID>_ora.env from another dev DB server
log onto another dev DB server as ora<SID> user
cd ~
copy .profile and <SID>_ora.env to new server in OS user's HOME directory
- ```
rename <SID>_ora.env
mv <SID>_ora.env <clone SID>_ora.env
```
- edit copied files (look for upper and lower case)  
change old SID to new clone SID  
change old server name to new server name  
save files
- edit .profile  
comment out line “. ~/ora<clone SID>/<clone SID>\_ora.env”  
ie. #. ~/ora<clone SID>/<clone SID>\_ora.env
- ```
uncomment lines that start with
###export ORACLE_SID=ea81
###export ORACLE_HOME=/apps/ea81/oracle/10.2.0
###export LD_LIBRARY_PATH=/apps/ea81/<etc>
###export LIBPATH=/apps/ea81/oracle/<etc>
###export TNS_ADMIN=/apps/ea81/oracle/<etc>
```
- save file
- b. set new environment variables
. .profile (dot space .profile)
- c. create directory for cloning
cd /home/ora<clone SID> directory
mkdir clone
chmod 755 clone

Use script NS_ora_pre_clone.ksh for completing steps 4a-c

Parameters: SID

Usage: NS_ora_pre_clone.ksh <clone SID>

- 4a. create ORACLE HOME and arch directories
cd /apps/<clone SID>
mkdir -p arch oracle/10.2.0

```
chmod -R 755 arch oracle/10.2.0
```

- b. create datafile directories
- ```
cd /apps/<clone SID>/oradata
mkdir data<XX>
chmod 755 data<XX>
where <XX> = 01 - 10

cd /apps/<clone SID>/oradata
mkdir redo<XX>
chmod 755 redo<XX>
where <XX> = 01 - 03
```
- c. create directories in “dump”
- ```
cd /dump/database
mkdir <upper clone SID>
chmod 777 <upper clone SID>

cd /dump/filesystem
mkdir <upper clone SID>
chmod 777 <upper clone SID>

cd /production_dump/database
mkdir <upper clone SID>
chmod 777 <upper clone SID>

cd /production_dump/filesystem
mkdir <upper clone SID>
chmod 777 <upper clone SID>
```

As apps<clone SID> OS user

- 5a. Create .profile and env files in OS user’s HOME directory
- ```
copy .profile and <SID>_app.env from another dev DB server
log onto another dev DB server as app<SID> user
cd ~
copy .profile and <SID>_app.env to new server in OS user’s HOME directory

rename <SID>_app.env
mv <SID>_app.env <clone SID>_app.env

edit copied files (look for upper and lower case)
change old SID to new clone SID
change old server name to new server name
save files
```

edit .profile

comment out line “. /apps/<clone SID>/applmgr/apps/apps\_st/appl/APPS<clone SID>\_<hostname>.env”

ie. #. /apps/<clone SID>/applmgr/apps/apps\_st/appl/APPS<clone SID>\_<hostname>.env

save file

- b. set new environment variables  
. .profile (dot space .profile)
- c. create directory for cloning  
cd /home/app<clone SID> directory  
mkdir clone  
chmod 755 clone

Use script NS\_app\_pre\_clone.ksh for completing steps 6a-c

Parameters: SID tier

Usage: NS\_app\_pre\_clone.ksh <clone SID> <ADMIN|MID>

- 6a. create applmgr and applcsf directories  
cd /apps/<clone SID>  
mkdir applmgr applcsf  
chmod 755 applmgr applcsf
- b. create tmp and FILE directories  
cd /apps/<clone SID>/applmgr  
mkdir tmp FILE  
chmod 777 tmp FILE
- c. create CM out and log directories and archive, inbound, outbound and working directories  
cd /apps/<clone SID>/applcsf  
mkdir log out archive inbound outbound working rejected  
chmod 777 log out archive inbound outbound working rejected

### **On target app(mid) tier server**

**As apps<clone SID> OS user**

- 7a. Create .profile and env files in OS user’s HOME directory  
copy .profile and <SID>\_app.env from another mid tier server  
log onto another dev mid tier server as app<SID> user  
cd ~  
copy .profile and <SID>\_app.env to new server in OS user’s HOME directory  
  
rename <SID>\_app.env  
mv <SID>\_app.env <clone SID>\_app.env  
  
edit copied files (look for upper and lower case)  
change old SID to new clone SID  
change old server name to new server name

save files

edit .profile

comment out line “. /apps/<clone SID>/applmgr/apps/apps\_st/appl/APPS<clone SID>\_<hostname>.env”

ie. #. /apps/<clone SID>/applmgr/apps/apps\_st/appl/APPS<clone SID>\_<hostname>.env

save file

- b. set new environment variables  
  . .profile (dot space .profile)
- c. create directory for cloning  
  cd /home/app<clone SID> directory  
  mkdir clone  
  chmod 755 clone

Use script NS\_app\_pre\_clone.ksh for completing steps 8a-b

Parameters: SID tier

Usage: NS\_app\_pre\_clone.ksh <clone SID> <ADMIN|MID>

- 8a. create applmgr directory  
  cd /apps/<clone SID>  
  mkdir applmgr  
  chmod 755 applmgr
- b. create tmp directory  
  cd /apps/<clone SID>/applmgr  
  mkdir tmp  
  chmod 777 tmp

## Cloning target database

### On target database/admin tier server

As ora<clone SID> OS user

Use script ora\_OH\_clone.ksh for completing steps 9a-c

Parameters: SID backup\_date

Usage: ora\_OH\_clone.ksh <clone SID> <backup date>

9a. copy source Oracle Home to target Oracle Home

```
cd /apps/<clone SID>
```

```
gunzip -c /production_dump/filesystem/EP01/10.2.0<backup date>_1020.gz | nohup tar xvf - > /apps/<clone SID>/oracle/ed21OH.log
```

b. rename TNS directory

```
cd $ORACLE_HOME/network/admin
```

```
mv ep01_lbebsprdep01 to <clone SID>_<host name>
```

c. if directories below exists then remove and recreate otherwise create

remove and create dump directories

confirm that permissions on directories are 755

```
cd /apps/<clone SID>/oracle/10.2.0/admin
```

```
rm -rf udump
```

```
rm -rf cdump
```

```
rm -rf bdump
```

```
mkdir udump cdump bdump
```

```
chmod 755 udump cdump bdump
```

```
cd /apps/<clone SID>/oracle
```

```
rm -r tmp
```

```
mkdir tmp
```

```
chmod 755 tmp
```

d. cleanup \$ORACLE\_HOME/dbs directory

remove all unnecessary files and directories

e. create orapw<clone SID>

```
cd $ORACLE_HOME/dbs
```

```
orapwd file=orapw<clone SID> password=<new system password> entries=5
```

- f. create init<clone SID>.ora  
 copy init<SID>.ora from another dev server  
 log onto another dev DB server  
 cd \$ORACLE\_HOME/dbs  
 create new pfile  
 sqlplus as sysdba  
 create pfile from spfile;  
 exit;  
 copy init<SID>.ora to new server in \$ORACLE\_HOME/dbs directory
- rename copied file to init<lower clone SID>.ora  
 mv init<old SID>.ora init<lower clone SID>.ora
- edit init<lower clone SID>.ora (look for upper and lower case)  
 change old SID to new clone SID  
 change old server name to new server name  
 save changes
- g. check network connection and names resolution to databases  
 tnsping ep01 (source database)  
 tnsping rmandph (rman repository database)
- if either fails, correct issue and retest

Use script NS\_ora\_OH\_clone\_2.ksh for completing steps 10a-f  
 Parameters: SID  
 Usage: NS\_ora\_OH\_clone\_2.ksh <clone SID>

- 10a. Source environment variables
- ```
ORACLE_HOME
export ORACLE_HOME=/apps/<clone SID>/oracle/10.2.0
ORACLE_SID
export ORACLE_SID=<clone SID> (lower case)
LIBPATH
export LIBPATH==/apps/<clone SID>/oracle/10.2.0/lib:/usr/dt/lib:/usr/openwin/lib:/apps/
<clone SID>/oracle/10.2.0/ctx/lib:/apps/<clone SID>/oracle/10.2.0/lib32:/apps/
<clone SID>/oracle/10.2.0/ctx/lib
LD_LIBRARY_PATH
Export LD_LIBRARY_PATH=/apps/<clone SID>/oracle/10.2.0/lib:/usr/dt/lib:/usr/openwin/lib:/apps/
<clone SID>/oracle/10.2.0/ctx/lib
TNS_ADMIN
Export TNS_ADMIN=/apps/<clone SID>/oracle/10.2.0/network/admin/<clone SID>_<host name>
```
- b. confirm link to OS libobk.a
 cd \$ORACLE_HOME/lib
 ls -la libobk*
 should have soft link from libobk.a to OS libobk.a64
 ie. libobk.a -> /usr/opensv/netbackup/bin/libobk.a64

if not present, create the link
ln -s /usr/opensv/netbackup/bin/libobk.a64 libobk.a

- c. confirm link of ldflags
cd \$ORACLE_HOME/lib32
link of ldflags should go to \$ORACLE_HOME/lib/ldflags
ie. ldflags -> /apps/<clone SID>/oracle/10.2.0/lib/ldflags
if not correct, drop link and recreate
rm -f ldflags
ln -s /apps/<clone SID>/oracle/10.2.0/lib/ldflags ldflags
- d. add ep01 and rmandph information to tnsnames.ora
cd \${TNS_ADMIN}
cat /production_dump/lcb/scripts/dba/EBS_clone/add_tns_info.txt >> tnsnames.ora
- e. create backup copies of key files
cp \$ORACLE_HOME/dbs/init<clone SID>.ora \$HOME/clone
cp \$ORACLE_HOME/dbs/orapw<clone SID> \$HOME/clone
cp \$TNS_ADMIN/tnsnames.ora \$HOME/clone
- f. start target database with no mount option and using pfile
cd \$ORACLE_HOME/dbs
startup nomount pfile=init<clone SID>.ora

Use script ora_db_dup.ksh for completing step 11a

Execute shell script as nohup

Parameters: SID(clone) SID(source) <restore until date/time>

Usage: nohup ora_db_dup.ksh <clone SID> <source SID> <restore until date/time> &
restore date/time: ("Jul 04 2010 06:00:00" <month> <day of month> <4 digit year> <24HR
hour:minute:seconds>) must be in double quotes

```
monitor log file - rman_<clone SID>_dup.log
cd $HOME/clone
tail -f rman_<clone SID>_dup.log
```

- 11a. clone database from EP01 using RMAN duplicate

call shell script that contains commands similar to:

NOTE: this script is for sbt_tape, if disk remove command "SEND 'NB_...'"

```
#!/usr/bin/ksh
rman trace=rman_<clone SID>_dup.log << EOF
connect catalog rman<source db name>/rman<source db name>@rmandph;
connect target plcbdba/dbaman@<source db name>;
connect auxiliary plcbdba/dbaman;
run {
allocate auxiliary channel ch1 device type SBT_TAPE;
allocate auxiliary channel ch2 device type SBT_TAPE;
```

```

allocate auxiliary channel ch3 device type SBT_TAPE;
SEND 'NB_ORA_CLIENT=<source host name>';
set until time "to_date('<recover until date/time>', 'Mon DD YYYY HH24:MI:SS')";
DUPLICATE TARGET DATABASE TO <clone SID>
logfile '/apps/<clone SID>/oradata/redo01/redo01.log' size 1000M,'/apps/<clone
SID>/oradata/redo02/redo02.log' size 1000M,'/apps/<clone SID>/oradata/redo03/redo03.
log' size 1000M;
}
EOF

```

- b. check RMAN duplicate log file for errors
- ```

cd $HOME/clone
grep -i error rman_<clone SID>_dup.log

```
- 12a. run adcfgclone.pl on Oracle home without using context file
- ```

cd $ORACLE_HOME/appsql/clone/bin
perl adcfgclone.pl dbTechStack

```

NOTE: if error “FAILURE: Please apply the Patch "2896876"” see metalink note#412655.1

modify the adchkutl.sh as follows:

```

From:
printf "FAILURE: Please apply the Patch "2896876" \n";
exit 1;

```

CHANGE TO:-

```

else
printf "FAILURE: Please apply the Patch "2896876" \n";
exit 0;

```

The location of the file is:

Database oracle home:

\$ORACLE_HOME/appsql/clone/bin/adchkutl.sh

EBS applications:

\$COMMON_TOP/clone/bin/adchkutl.sh

see appendix A for answers for adcfgclone questions

- b. check log file for errors
- ```

cd $ORACLE_HOME/appsql/log/<clone SID>_<host name>
LOGFILECFG=`ls -t ApplyDBTechStack* | head -1`
if [[-f $LOGFILECFG]] then
 if [[`grep -c "ERRORCODE = 1" $LOGFILECFG` -gt 0]] then
 echo "error in adcfgclone log file, need to fix"
 fi
else
 echo "error in adcfgclone - no log file"
fi

```

- c. edit .profile to access new environment variables
- ```

cd ~
edit .profile
    uncomment line “. ~/ora<clone SID>/<clone SID>_ora.env”
    ie. . ~/ora<clone SID>/<clone SID>_ora.env

    comment out lines that start with
    export ORACLE_SID=ea81
    export ORACLE_HOME=/apps/ea81/oracle/10.2.0
    export LD_LIBRARY_PATH=/apps/ea81/<etc>
    export LIBPATH=/apps/ea81/oracle/<etc>
    export TNS_ADMIN=/apps/ea81/oracle/<etc>

save file

```
- d. set new environment variables
- ```

. .profile (dot space .profile)

```

### post clone steps - database

Use script ora\_post\_clone.ksh for completing steps 13a-i

Parameters: SID source\_apps\_password new\_system\_password

Usage: ora\_post\_clone.ksh <clone SID> <source apps password> <new system password>

13a. chmod 777 \$ORACLE\_HOME/bin

b. drop all database links

Use script ora\_drop\_all\_dblinks.ksh for completing steps 13b

Parameters: YES

Usage: ora\_drop\_all\_dblinks.ksh YES

to check for database links

```
col owner format a10
```

```
col host format a15
```

```
col db_link format a30
```

```
set lines 100
```

```
set pages 100
```

```
select owner, db_link,username,host from dba_db_links
```

c. copy backed up copies in \$HOME/clone to cloned Oracle Home

```
cd $HOME/clone
```

```
cp init<clone SID>.ora $ORACLE_HOME/dbs/
```

```
cp tnsnames.ora $ORACLE_HOME/network/admin/<clone SID>_<host name>/
```

- d. change sys and system passwords

```
alter user system identified by <new system password>;
alter user sys identified by <new system password>;
```
- e. bounce database, restart using spfile

```
sqlplus as sysdba
shutdown database
startup database using backed up pfile
create spfile from pfile
shutdown database
startup database using spfile
```
- f. execute script (adagentns.pl) to clean up old TNS entries in database

```
cd $ORACLE_HOME/appsutil/bin
adagentns.pl contextfile=$CONTEXT_FILE appspass=<source apps password> -removesystem
```
- g. clean up old entries in FND\_NODES table

```
execute fnd_conc_clone.setup_clean
sqlplus as apps
exec fnd_conc_clone.setup_clean
```
- h. execute adautocfg.sh to populate new TNS entries and FND\_NODES table

```
cd $ORACLE_HOME/appsutil/scripts/<clone SID>_<hostname>
adautocfg.sh appspass=<source apps password>
```
- i. copy backed up copies in \$HOME/clone to cloned Oracle Home after autocfg.sh

```
cd $HOME/clone
cp init<clone SID>.ora $ORACLE_HOME/dbs/
cp tnsnames.ora $ORACLE_HOME/network/admin/<clone SID>_<host name>/
```
- j. copy saved tnsname.ora to ORACLE\_HOME

```
cd $HOME/clone
cp tnsnames.ora $TNS_ADMIN
```
- k. disable resubmitting CM requests (only if requested by developers)

```
XXLCB GL CASH SALES INTERFACE
XXLCB GL WAREHOUSE SUPPLIES INTERFACE
XXLCB GL PAYROLL INTERFACE
XXLCB GL OPERATING EXPENSES
```
- l. add datafiles to TEMP tablespace (if RMAN duplicate does not)
- m. update libraries (if RMAN duplicate does not)

## Cloning EBS Admin tier

### On target database/admin tier server

As apps<clone SID> OS user

Use script NS\_app\_H\_clone.ksh for completing steps 14

Parameters: SID backup\_date tier

Usage: NS\_app\_H\_clone.ksh <clone SID> <backup date> <ADMIN|MID>

14. copy source Admin tier directories to target server

```
cd /apps/<clone SID>
gunzip -c /production_dump/filesystem/EP01/inst<backup date>_admintier.gz | nohup tar xvf - >
/apps/<clone SID>/applmgr/<clone SID>inst.log

gunzip -c /production_dump/filesystem/EP01/apps<backup date>_admintier.gz | nohup tar xvf -
> /apps/<clone SID>/applmgr/<clone SID>apps.log
```
- 15a. execute adcfgclone.pl on EBS Admin tier without using context file

```
cd /apps/<clone SID>/applmgr/apps/apps_st/conn/clone/bin
perl adcfgclone.pl appsTier
```

see appendix B for answers for adcfgclone questions

- b. Check log file for errors

```
INST_TOP=/apps/<clone SID>/applmgr/inst/apps/<clone SID>_<hostname>
cd $INST_TOP/admin/log

LOGFILECFG=`ls -t ApplyAppsTier* | head -1`
if [[-f $LOGFILECFG]] then
 if [[`grep -c "ERRORCODE = 1" $LOGFILECFG` -gt 0]] then
 echo "error in adcfgclone log file, need to fix"
 fi
else
 echo "error in adcfgclone – no log file"
fi
```
- c. edit .profile to access new environment variables

```
cd ~
edit .profile
 uncomment line “. /apps/<clone SID>/applmgr/apps/apps_st/appl/APPS<clone SID>_<hostname>.env”
 ie. #. /apps/<clone SID>/applmgr/apps/apps_st/appl/APPS<clone SID>_<hostname>.env
save file
```
- d. set new environment variables

```
..profile (dot space .profile)
```

## post clone steps – EBS admin tier

### On target database/admin tier server

#### As apps<clone SID> OS user

Use script NS\_app\_admin\_post.ksh for completing steps 16a-f

Parameters: SID system\_password old\_apps\_password new\_apps\_password

Usage: NS\_app\_admin\_post.ksh <clone SID> <system password> <old apps password> <new apps password>

16a. change permissions on key directories

```
chmod -R 777 $INST_TOP/appltmp
```

```
chmod -R 777 $APPL_TOP/xxlcb
```

```
chmod 777 $APPL_TOP/<clone SID>_<host name>.env
```

```
chmod -R 777 /apps/<clone SID>/applmgr/FILE
```

b. correct path of links in \$APPL\_TOP/xxlcb/12.0.0/bin directory

```
XXLCBINTFMOV -> /apps/<clone SID>/applmgr/apps/apps_st/appl/fnd/12.0.0/bin/fndcpesr
```

```
XXLCB_COMMON_EMAIL_NOTIFI -> /apps/<clone SID>/applmgr/apps/apps_st/appl/fnd/12.0.0/bin/fndcpesr
```

```
xxlcb_pos_intcp_files -> /apps/<clone SID>/applmgr/apps/apps_st/appl/fnd/12.0.0/bin/fndcpesr
```

c. remove production directories and files

```
rm -rf /apps/<clone sid>/applmgr/apps/apps_st/appl/admin/ep01
```

```
rm -rf /apps/<clone sid>/applmgr/apps/apps_st/appl/admin/ep01_lbebsprddb01
```

```
rm -rf /apps/<clone sid>/applmgr/inst/apps/ep01_lbebsprddb01
```

```
rm /apps/<clone sid>/applmgr/apps/apps_st/appl/*ep01_lbebsprddb01.e*
```

```
rm /apps/<clone sid>/applmgr/apps/apps_st/comm/clone/context/apps/ep01_lbebsprddb01.x*
```

```
rm /apps/<clone sid>/applmgr/apps/tech_st/10.1.2/network/log/ep01.1*
```

d. change APPS password

```
execute FNDCPASS
```

```
FNDCPASS apps/<old apps password> O Y system/<system password> SYSTEM APPLSYS <new apps password>
```

e. execute adautocfg.sh

```
cd $ADMIN_SCRIPTS_HOME
```

```
adautocfg.sh appspass=<new apps password>
```

f. compile APPS schema with adadmin creating a defaultsfile

### **See Appendix C for instructions to create adadmin defaultsfile**

determine number of invalid objects in the APPS schema

```
sqlplus as sysdba
```

```
select count(*) from dba_objects
```

```
where status = 'INVALID'
```

```
and owner = 'APPS';
```

recompile invalids

```
enter adadmin on command line
```

```
answer questions about APPS environment
```

select option 3 (Compile/Reload Applications Database Entities menu)  
select option 1 (Compile APPS schema)  
press return when recompile completed  
select option 5 (Return to Main Menu)  
select option 6 (Exit AD Administration)

confirm that invalid count for APPS schema close to zero

```
sqlplus as sysdba
select count(*) from dba_objects
where status = 'INVALID'
and owner = 'APPS';
```

- g. only perform below if requested by developers  
check for .netrc file in \$HOME directory

## Cloning EBS app(mid) tier

### On target app(mid) tier server

As apps<clone SID> OS user

Use script NS\_app\_H\_clone.ksh for completing steps 17

Parameters: SID backup\_date tier

Usage: NS\_app\_H\_clone.ksh <clone SID> <backup date> <ADMIN|MID>

17. copy source app(mid) tier directories to target server

```
cd /apps/<clone SID>
```

```
gunzip -c /production_dump/filesystem/EP01/inst<backup date>_midtier.gz | nohup tar xvf - > /apps/<clone SID>/applmgr/<clone SID>inst.log
```

```
gunzip -c /production_dump/filesystem/EP01/apps<backup date>_midtier.gz | nohup tar xvf - > /apps/<clone SID>/applmgr/<clone SID>apps.log
```

18a. execute adcfgclone.pl on EBS Mid tier without using context file

```
cd /apps/<clone SID>/applmgr/apps/apps_st/conn/clone/bin
perl adcfgclone.pl appsTier
```

**see appendix D for answers for adcfgclone questions**

b. check log file for errors

```
cd $INST_TOP/admin/log
```

```
LOGFILECFG=`ls -t ApplyAppsTier* | head -1`
if [[-f $LOGFILECFG]] then
 if [[`grep -c "ERRORCODE = 1" $LOGFILECFG` -gt 0]] then
 echo "error in adcfgclone log file, need to fix"
 fi
else
 echo "error in adcfgclone - no log file"
fi
```

c. edit .profile to access new environment variables

```
cd ~
```

```
edit .profile
```

```
uncomment line ". /apps/<clone SID>/applmgr/apps/apps_st/appl/APPS<clone SID>_<hostname>.env"
```

```
ie. #. /apps/<clone SID>/applmgr/apps/apps_st/appl/APPS<clone SID>_<hostname>.env
```

```
save file
```

d. set new environment variables

```
..profile (dot space .profile)
```



## post clone steps – EBS mid tier

Use script NS\_app\_mid\_post.ksh for completing step 19a-c

Parameters: SID apps\_password

Usage: NS\_app\_mid\_post.ksh <clone SID> <new apps password>

- 19a. change permissions on key directories and files

```
chmod -R 777 $INST_TOP/apltmp
chmod -R 777 $APPL_TOP/xxlcb
chmod 777 $APPL_TOP/${LSID}_${HOSTNAME}.env
```
- b. remove production directories and files

```
rm -rf /apps/<clone sid>/aplmgr/apps/apps_st/appl/admin/ep01
rm -rf /apps/<clone sid>/aplmgr/apps/apps_st/appl/admin/ep01_lbebsprddb01
rm -rf /apps/<clone sid>/aplmgr/inst/apps/ep01_lbebsprddb01
rm /apps/<clone sid>/aplmgr/apps/apps_st/appl/*ep01_lbebsprddb01.e*
rm /apps/<clone sid>/aplmgr/apps/apps_st/comm/clone/context/apps/ep01_lbebsprddb01.x*
rm /apps/<clone sid>/aplmgr/apps/tech_st/10.1.2/network/log/ep01.1*
rm -rf /apps/<clone sid>/aplmgr/inst/apps/ep01_lbebsprddb01
```
- c. recompile jsp files per Metalink Note: 433386.1

```
cd $FND_TOP/patch/115/bin/
perl ojspCompile.pl --compile --flush -p 2
```
- d. edit \$CONTEXT\_FILE  
change https to http in context file  
check the value of the tag sslterminator oa\_var  
it should be: <sslterminator oa\_var="s\_enable\_sslterminator">#</sslterminator>
- e. execute adautocfg.sh

```
cd $ADMIN_SCRIPTS_HOME
adautocfg.sh appspass=<new apps password>
```

**repeat steps (17 - 19) for each mid tier server, if multiple mid tier servers**

## Post cloning tasks - final

### On RMAN database server

#### As orarman OS user

Use script NS\_ora\_mk\_cat\_user.ksh for completing step 20

Parameters: SID

Usage: NS\_ora\_mk\_cat\_user.ksh <clone SID>

20. create RMAN catalog user for new <clone SID>  
sqlplus as sysdba  
create user rman<clone SID> identified by <password>  
temporary tablespace temp  
default tablespace rman  
quota unlimited on rman;  
  
grant connect, resource, recovery\_catalog\_owner to rman<clone SID>;  
grant execute on dbms\_stats to rman<clone SID>;

### On target database/admin tier server

#### As ora<clone SID> OS user

Use script ora\_final\_post\_clone.ksh for completing steps 21a-d

Parameters: SID new\_apps\_password new\_RMS12DEV\_password new\_SIM12DEV\_password  
new\_RMS\_sid new\_SIM\_sid

Usage: ora\_final\_post\_clone.ksh <clone SID> <new apps password> <new rms12dev password>  
<new sim12dev password> <new rms sid> <new sim sid>

#####new server only#####

Need to add rms and sim database tns info to tnsnames.ora

- 21a. create database links  
sqlplus as apps  
create database link ppi connect to lcb\_appuser identified by PA4VXI4N using 'CMIC';
- b. update form header information  
sqlplus as apps  
update fnd\_profile\_option\_values  
set profile\_option\_value = '\${<upper sid>} (production as of <run date>)'  
where application\_id || '-' || profile\_option\_id =  
(select application\_id || '-' || profile\_option\_id from  
applsys.fnd\_profile\_options  
where profile\_option\_name = 'SITENAME')
- c. plcbdba user must have sysdba granted  
to grant  
sqlplus as sysdba  
grant sysdba to plcbdba;
- d. update WF\_NOTIFICATIONS mail\_status to SENT  
if mail\_status = failed, mail, error or is NULL

- e. create database link below if requested by developers.  
 sqlplus as apps  
 create public database link staging connect to teame identified by <passwords> using 'staging'

Use script NS\_ora\_reg\_db\_rman.ksh for completing step 22

Parameters: SID

Usage: NS\_ora\_reg\_db\_rman.ksh <clone SID>

- 22. register database with RMAN repository

```
cd $HOME/clone
```

```
rman trace=reg_db.log << EOF
connect target=plcbdba/dbaman@<clone db name>
connect catalog=rman<clone db name>/rman<clone db name>@rmandph
```

```
create catalog;
```

```
register database;
```

```
run
```

```
{
configure retention policy to recovery window of 7 days;
configure controlfile autobackup on;
configure controlfile autobackup format for device type 'SBT_TAPE' to '%F';
configure device type disk parallelism 3 backup type to backupset;
configure datafile backup copies for device type 'SBT_TAPE' to 1;
configure device type 'SBT_TAPE' parallelism 1 backup type to backupset;
configure channel device type 'SBT_TAPE' parms
 'ENV=<host name>.pa.lcl,NB_ORA_SERV=lberpbkup01b.pa.lcl,
 NB_ORA_POLICY=oracle);
configure channel device type disk format '/dump/database/
 <upper case db name>/Backup%d_DB_%u_%s_%p_%T';
```

```
}
```

```
EOF
```

### As apps<clone SID> OS user

- 23. if link /FILE to /apps/<clone SID>/applmgr not present  
 then root needs to create

```
cd /
```

```
ln -s /apps/<clone SID>/applmgr/FILE FILE
```

- 24. Below not needed unless requested

```
update fnd_profile_option values
```

```
compile crosswalk form
```

```
export FORMS_PATH=$AU_TOP/forms/US:$AU_TOP/resources:$FORMS_PATH
```

```
execute frmcm;_batch.sh
```

```
setup printers
```

### **As ora<clone SID> OS user**

25a. create crontab entries for RMAN full backup and archive log backup

b. backup database using RMAN  
execute crontab script

### **As apps<clone SID> OS user**

26. create crontab entries

### **On target app(mid) tier server**

#### **As apps<clone SID> OS user**

27a. create crontab entries

b. if link /FILE to /apps/<clone SID>/applmgr not present  
then root needs to create  
cd /  
ln -s /apps/<clone SID>/applmgr/FILE FILE

## **Testing of cloned instance**

Log into EBS

Go to Concurrent : Manager -> Administer

Confirm that actual and target process values are equal for each active CM

Submit “Active Users” request and confirm that is completes normal

If request fails check for vnc process on admin tier.

As apps user

vncserver :0

## Appendix A – Manual entries for adcfclone.pl dbTechStack

**Note: SID and server name in lower case**

Target System Hostname (virtual or normal) [<clone DB server name>]: <clone DB server name>.pa.lcl

**NOTE: fully qualified hostname**

Target Instance is RAC (y/n) [n]: n

Target System Database SID: <clone SID>

Target System Base Directory: /apps/<clone SID>/oracle

Target System utl\_file\_dir Directory List: /apps/<clone SID>/applmgr/inst/apps/ep01\_lbebsprddb01/appltmp

Number of DATA\_TOP's on the Target System [4]: 13

Target System DATA\_TOP Directory 1: /apps/<clone SID>/oradata/data01

Target System DATA\_TOP Directory 2: /apps/<clone SID>/oradata/data02

Target System DATA\_TOP Directory 3: /apps/<clone SID>/oradata/data03

Target System DATA\_TOP Directory 4: /apps/<clone SID>/oradata/data04

Target System DATA\_TOP Directory 5: /apps/<clone SID>/oradata/data05

Target System DATA\_TOP Directory 6: /apps/<clone SID>/oradata/data06

Target System DATA\_TOP Directory 7: /apps/<clone SID>/oradata/data07

Target System DATA\_TOP Directory 8: /apps/<clone SID>/oradata/data08

Target System DATA\_TOP Directory 9: /apps/<clone SID>/oradata/data09

Target System DATA\_TOP Directory 10: /apps/<clone SID>/oradata/data10

Target System DATA\_TOP Directory 11: /apps/<clone SID>/oradata/redo01

Target System DATA\_TOP Directory 12: /apps/<clone SID>/oradata/redo02

Target System DATA\_TOP Directory 13: /apps/<clone SID>/oradata/redo03

Target System RDBMS ORACLE\_HOME Directory [/apps/<clone SID>/oracle/db/tech\_st/10.2.0]:  
/apps/<clone SID>/oracle/10.2.0

Do you want to preserve the Display [<clone DB server name>:0.0] (y/n) ?: n

Target System Display [<clone DB server name>:0.0]: <clone DB server name>:0.0

Do you want the the target system to have the same port values as the source system (y/n) [y] ?: n

enter port pool: 2

## Appendix B - Manual entries for adcfgclone.pl appsTier (admin tier)

**Note: SID and server name in lower case**

Target System Hostname (virtual or normal) [<clone DB server name>]: <clone DB server name>.pa.lcl

**NOTE: fully qualified hostname**

Target System Database SID: <clone SID>

Target System Database Server Node [<clone DB server name>]: <clone DB server name>.pa.lcl

Target System Base Directory : /apps/<clone SID>/applmgr

Target System Forms ORACLE\_HOME Directory [/apps/<clone SID>/applmgr/apps/tech\_st/10.1.2]:  
/apps/<clone SID>/applmgr/apps/tech\_st/10.1.2

Target System Web ORACLE\_HOME Directory [/apps/<clone SID>/applmgr/apps/tech\_st/10.1.3]:  
/apps/<clone SDI>/applmgr/apps/tech\_st/10.1.3

Target System APPL\_TOP Mountpoint [/apps/<clone SID>/applmgr/apps/apps\_st/appl]:  
/apps/<cloneSID>/applmgr/apps/apps\_st/appl

Target System COMMON\_TOP Directory [/apps/<clone SID>/applmgr/apps/apps\_st/comm]:  
/apps/<clone SID>/applmgr/apps/apps\_st/comm

Target System Instance Home Directory [/apps/<clone SID>/applmgr/inst]: /apps/<clone SID>/applmgr/inst

Target System Root Service [disabled]: disabled

Target System Web Entry Point Services [disabled]: disabled

Target System Web Application Services [disabled]: disabled

Target System Batch Processing Services [enabled]: enabled

Target System Other Services [disabled]: disabled

Do you want to preserve the Display [<clone DB server name>:0.0] (y/n)?: n

Target System Display [<clone DB server name>:0.0]: <clone DB server name>:0.0

Select same port pool as used in the database cloning steps.

UTL\_FILE\_DIR on database tier consists of the following directories.

1. /apps/<clone SID>/applmgr/inst/apps/ep01\_lbebsprddb01/appltmp
2. /FILE/inbound
3. /FILE/outbound
4. /FILE/archive
5. /FILE/working
6. /FILE/rejected
7. /FILE/POPDF

- 8. /FILE/INVPDF
- 9. /FILE/outbound/RIMS
- 10. /apps/ep01/oracle/10.2.0/appsutil/outbound/ep01\_lbebsprddb01
- 11. /usr/tmp

Choose a value which will be set as APPLPTMP value on the target node [1]: 1

-----

## Appendix C – Create adadmin defaults file for running in non-interactive mode

**Note: SID in lower case**

To create defaults file execute:

```
Adadmin defaultsfile=$APPL_TOP/admin/<clone SID>/ recompile_apps_<clone SID>.txt
```

- answer questions about APPS environment
- select option 3 (Compile/Reload Applications Database Entities menu)
- select option 1 (Compile APPS schema)
- press return when recompile completed
- select option 5 (Return to Main Menu)
- select option 6 (Exit AD Administration)

### screen print of recompile APPS schema using adadmin

```
lbebsdevdb41:apped41@ed41 >> adadmin
defaultsfile=/apps/ed41/applmgr/apps/apps_st/appl/admin/ed41/recompile_apps_ed41.t>
```

```
Copyright (c) 2002 Oracle Corporation
Redwood Shores, California, USA
```

```
Oracle Applications AD Administration
```

```
Version 12.0.0
```

NOTE: You may not use this utility for custom development unless you have written permission from Oracle Corporation.

Your default directory is '/apps/ed41/applmgr/apps/apps\_st/appl'. Is this the correct APPL\_TOP [Yes] ?

AD Administration records your AD Administration session in a text file you specify. Enter your AD Administration log file name or press [Return] to accept the default file name shown in brackets.

Filename [adadmin.log] :

```
***** Start of AD Administration session *****
```

```
AD Administration version: 12.0.0
```

```
AD Administration started at: Fri Oct 22 2010 08:38:23
```

APPL\_TOP is set to /apps/ed41/applmgr/apps/apps\_st/appl

Defaults Feature Enabled = YES.

You can be notified by email if a failure occurs.

Do you wish to activate this feature [No] ?

Please enter the batchsize [1000] :

Please enter the name of the Oracle Applications System that this APPL\_TOP belongs to.

The Applications System name must be unique across all Oracle Applications Systems at your site, must be from 1 to 30 characters long, may only contain alphanumeric and underscore characters, and must start with a letter.

Sample Applications System names are: "prod", "test", "demo" and "Development\_2".

Applications System Name [ed41] : ed41 \*

NOTE: If you do not currently have certain types of files installed in this APPL\_TOP, you may not be able to perform certain tasks.

Example 1: If you don't have files used for installing or upgrading the database installed in this area, you cannot install or upgrade the database from this APPL\_TOP.

Example 2: If you don't have forms files installed in this area, you cannot generate them or run them from this APPL\_TOP.

Example 3: If you don't have concurrent program files installed in this area, you cannot relink concurrent programs or generate reports from this APPL\_TOP.

Do you currently have files used for installing or upgrading the database installed in this APPL\_TOP [YES] ? YES \*

Do you currently have Java and HTML files for HTML-based functionality installed in this APPL\_TOP [YES] ? YES \*

Do you currently have Oracle Applications forms files installed in this APPL\_TOP [YES] ? YES \*

Do you currently have concurrent program files installed in this APPL\_TOP [YES] ? YES \*

Please enter the name Oracle Applications will use to identify this APPL\_TOP.



The APPL\_TOP name you select must be unique within an Oracle Applications System, must be from 1 to 30 characters long, may only contain alphanumeric and underscore characters, and must start with a letter.

Sample APPL\_TOP Names are: "prod\_all", "demo3\_forms2", and "forms1".

APPL\_TOP Name [lbebsdevdb41] : lbebsdevdb41 \*

You are about to use or modify Oracle Applications product tables in your ORACLE database 'ed41' using ORACLE executables in '/apps/ed41/applmgr/apps/tech\_st/10.1.2'.

Is this the correct database [Yes] ?

AD Administration needs the password for your 'SYSTEM' ORACLE schema in order to determine your installation configuration.

Enter the password for your 'SYSTEM' ORACLE schema:

The ORACLE username specified below for Application Object Library uniquely identifies your existing product group: APPLSYS

Enter the ORACLE password of Application Object Library [APPS] :

AD Administration is verifying your username/password.  
The status of various features in this run of AD Administration is:

| <-Feature version in-> |         |         |            |       |       |
|------------------------|---------|---------|------------|-------|-------|
| Feature                | Active? | APPLTOP | Data model | Flags |       |
| CHECKFILE              | Yes     | 1       | 1          | Y     | NNYNY |
| PREREQ                 | Yes     | 6       | 6          | Y     | NNYNY |
| CONCURRENT_SESSIONS    | No      | 2       | 2          | Y     | YNYYN |
| PATCH_TIMING           | Yes     | 2       | 2          | Y     | NNYNY |
| PATCH_HIST_IN_DB       | Yes     | 6       | 6          | Y     | NNYNY |
| SCHEMA_SWAP            | Yes     | 1       | 1          | Y     | NNYYY |
| JAVA_WORKER            | Yes     | 1       | 1          | Y     | NNYNY |
| CODELEVEL              | Yes     | 1       | 1          | Y     | NNYNY |

Identifier for the current session is 37916

Reading product information from file...

Reading language and territory information from file...

Reading language information from applUS.txt ...

AD Administration warning:  
Product Data File

/apps/ed41/applmgr/apps/apps\_st/appl/admin/zfaprod.txt  
does not exist for product "zfa".

This product is registered in the database but the  
above file does not exist in APPL\_TOP. The product  
will be ignored without error.

AD Administration warning:

Product Data File

/apps/ed41/applmgr/apps/apps\_st/appl/admin/zsaprod.txt  
does not exist for product "zsa".

This product is registered in the database but the  
above file does not exist in APPL\_TOP. The product  
will be ignored without error.

AD Administration warning:

Product Data File

/apps/ed41/applmgr/apps/apps\_st/appl/admin/jtsprod.txt  
does not exist for product "jts".

This product is registered in the database but the  
above file does not exist in APPL\_TOP. The product  
will be ignored without error.

Reading database to see what industry is currently installed.

Reading FND\_LANGUAGES to see what is currently installed.  
Currently, the following language is installed:

| Code | Language         | Status |
|------|------------------|--------|
| US   | American English | Base   |

Your base language will be AMERICAN.

Setting up module information.

Reading database for information about the modules.

Saving module information.

Reading database for information about the products.

Reading database for information about how products depend on each other.

Reading topfile.txt ...

Saving product information.

AD code level : [A.4]

### AD Administration Main Menu

---

1. Generate Applications Files menu

2. Maintain Applications Files menu
3. Compile/Reload Applications Database Entities menu
4. Maintain Applications Database Entities menu
5. Change Maintenance Mode
6. Exit AD Administration

Enter your choice [6] : 3

Compile/Reload Applications Database Entities  
-----

1. Compile APPS schema
2. Compile menu information
3. Compile flexfields
4. Reload JAR files to database
5. Return to Main Menu

Enter your choice [5] : 1

```
sqlplus -s APPS/***** @/apps/ed41/applmgr/apps/apps_st/appl/ad/12.0.0/sql/adutlrcmp.sql APPLSYS *****
APPS ***** ***** 0 0 NONE FALSE
```

Review the messages above, then press [Return] to continue.

Backing up restart files, if any.....Done.

Compile/Reload Applications Database Entities  
-----

1. Compile APPS schema
2. Compile menu information
3. Compile flexfields
4. Reload JAR files to database
5. Return to Main Menu

Enter your choice [5] : 5

## AD Administration Main Menu

---

1. Generate Applications Files menu
2. Maintain Applications Files menu
3. Compile/Reload Applications Database Entities menu
4. Maintain Applications Database Entities menu
5. Change Maintenance Mode
6. Exit AD Administration

Enter your choice [6] : 6

Backing up restart files, if any.....Done.

There is no timing information available for the current session.

AD Administration is complete.

Errors and warnings are listed in the log file  
/apps/ed41/applmgr/apps/apps\_st/appl/admin/ed41/log/adadmin.log

and in other log files in the same directory.

## Appendix D - Manual entries for adcfgclone.pl appsTier (mid tier)

**Note: SID and server name in lower case**

Target System Hostname (virtual or normal) [lbebsuatapp91]: <clone app server name>.pa.lcl

**NOTE: fully qualified hostname**

Target System Database SID: <clone SID>

Target System Database Server Node [lbebsuatapp91]: <clone DB server name>.pa.lcl

**NOTE: fully qualified hostname**

Target System Base Directory: /apps/<clone SID>/applmgr

Target System Forms ORACLE\_HOME Directory [/apps/ea91/applmgr/apps/tech\_st/10.1.2]:  
/apps/<clone SID>/applmgr/apps/tech\_st/10.1.2

Target System Web ORACLE\_HOME Directory [/apps/ea91/applmgr/apps/tech\_st/10.1.3]:  
/apps/<clone SID>/applmgr/apps/tech\_st/10.1.3

Target System APPL\_TOP Mountpoint [/apps/ea91/applmgr/apps/apps\_st/appl]:  
/apps/<clone SID>/applmgr/apps/apps\_st/appl

Target System COMMON\_TOP Directory [/apps/ea91/applmgr/apps/apps\_st/comm]:  
/apps/<clone SID>/applmgr/apps/apps\_st/comm

Target System Instance Home Directory [/apps/ea91/applmgr/inst]: /apps/<clone SID>/applmgr/inst

Target System Root Service [enabled]: enabled

Target System Web Entry Point Services [enabled]: enabled

Target System Web Application Services [enabled]: enabled

Target System Batch Processing Services [disabled]: disabled

Target System Other Services [enabled]: enabled

Do you want to preserve the Display [lbebsprdapp01:0.0] (y/n) ?: n

Target System Display [lbebsuatapp91:0.0]: <clone app server name>:0.0

Do you want the the target system to have the same port values as the source system (y/n) [y] ?: n

Select same port pool as used in the database cloning steps.

UTL\_FILE\_DIR on database tier consists of the following directories.

1. /apps/<clone SID>/applmgr/inst/apps/<clone SID>\_<clone app server name>/appltmp
2. /FILE/outbound
3. /FILE/outbound/RIMS

4. /FILE/inbound
5. /FILE/working
6. /FILE/rejected
7. /FILE/archive
8. /FILE/POPDF
9. /FILE/INVPDF
10. /apps/ea91/oracle/10.2.0/appstutil/outbound/ea91\_lbebsuatdb91
11. /usr/tmp

Choose a value which will be set as APPLPTMP value on the target node [1]: 1

## **APPENDIX CC**

### **APPWORX MASTER INSTALL DOCUMENT**

## Appworx Master Install document

Created Unix user 'aw01' Unix ID 208, Group 'aw01' Group id 220

Created /apps/aw01/app/appworks for software to install.

Ran /dump/ossoftware/AppWorx\_v7.0.1/V7/CDINST.SH

Choose AIX 64 bit (Option 7)

Install directory is /apps/aw01/app/appworks.

Install Apache now Y (prerequisite for Apache to install is Jave Run time in \$Path).

Install Master's agent Y

Master : lbapprddb01

Master IP/DNS name : lbapprddb01.pa.lcl

Create Appworx Oracle database

As aw01, \$sqlplus /nolog

```
SQL> connect /as sysdba
```

```
SQL> startup
```

```
SQL> exit
```

```
$ lsnrctl
```

```
LSNRCTL>start
```

Use AppWorx Oracle Login name, password and connect string :appworx, appworx, aw01

Oracle SID : aw01

Full path to SQL\*Loader \*Plus : echo \$ORACLE\_HOME/bin

Oracle instance or DNS hostname : lbapprddb01.pa.lcl

Oracle listener port : 1521

Time Zone : EST

Hostname and port for SMTP server : LBWEBSRV01.pa.lcl port 25



Email for notifications `plcb_batch@lbapprdbb01.pa.lcl`

AWCOMM port 2136

Master requires its own RMI server : Yes

RMI registry port 1099

RMI data port 0

After Master is installed, appworx demons have to be started.

```
$ /apps/aa81/appworx/site $. sosite
```

```
$ /apps/aa81/appworx/site $ startso
```

`$startso` - script to start all demons

`$awstat` - reports status of all demons

`$stopso` - stops all appworx demons

Appworx login

**APPENDIX DD**

**RDW INSTALLATION**

## **RDW Installation 12.0**

Version: 0.1

**TABLE OF CONTENTS**

**Overview..... 3**  
**Installation Instructions ..... 3**  
**RETL Installation..... 4**

## Overview

This document is intended for providing steps in setting up a RDW database incorporating RETL (Retail Extract Transform and Load), this is not a complete document in itself and has to be used in conjunction with the RDW installation guide

[http://download.oracle.com/docs/cd/B31313\\_01/rdw/pdf/120/rdw-120-ig-db.pdf](http://download.oracle.com/docs/cd/B31313_01/rdw/pdf/120/rdw-120-ig-db.pdf).

The steps listed below are based on the assumption that you have already installed Oracle RDBMS 10g Release 2 enterprise edition with all requisite patches applied.

## Installation Instructions

1. Download the rdw12\_db.zip to the database directory hereafter referred to as <base\_dir> on Unix server where the RDW database will be created.
2. Extract the rdw12\_db.zip in the <base\_dir> directory
3. Download the rdw12\_code.zip to the code directory hereafter referred to as <Install\_dir> on Unix server where the RDW database will be created.
4. Extract the rdw12\_code.zip in the <Install\_dir> directory.
5. Login to the database server through a unix user who will be the owner of the database.
6. Create the Oracle recommended OFA directory structure for the database (datafile directories, adump, bdump, cdump, arch, create, exp, pfile, udump, utl\_file\_dir)
7. Copy <base\_dir>/rdw12/create\_db/init.ora to the \$ORACLE\_HOME/pfile directory and rename it to init\${ORACLE\_SID}.ora. Modify the parameters according to guidelines specified in this file.
8. Modify the <base\_dir>/rdw12/create\_db/crdb1.sql file. Refer to comments in this file regarding modifications that need to be made
9. Login to SQL\*Plus as SYSDBA and execute <base\_dir>/rdw12/create\_db/crdb1.sql. Review crdb1.log for errors and correct as needed
10. Login to SQL\*Plus as SYSDBA and execute <base\_dir>/rdw12/create\_db/crdb2.sql. Review crdb2.log for errors and correct as needed.
11. Login to SQL\*Plus as SYSDBA and execute <base\_dir>/rdw12/create\_db/crdb3.sql. Review JServer.log, context.log and xdb\_protocol.log for errors and correct as needed
12. Configure the database listener, if your listener is set on a port other than 1521 then ensure that you have set the local\_listener parameter with the right port in the init<SID>.ora file.

13. As the ora<sid> user, change directories to <base\_dir>/rdw12/create\_db  
 Modify the create\_rdw\_tablespaces.sql script as appropriate  
 Login to SQL\*Plus as SYSDBA and execute:  
 SQL>@create\_rdw\_tablespaces.sql.
14. Review create\_rdw\_tablespaces.log for errors and correct as needed  
 As the ora<sid> user, change directories to <base\_dir>/rdw12/utility
15. Login to SQL\*Plus as SYSDBA and execute the following script:  
 SQL>@crusers.sql  
**Note: We only need to create the rdw12dm/rdw12dev users, comment the user creation scripts for all other users.**
16. As the ora<sid> user, change directories to <base\_dir>/rdw12/ddl/dm.
17. Log in to SQL\*Plus as **rdw12dm** and execute the following script:  
 SQL>@rdw12.sql  
 This script creates the RDW datamart-level tables  
 Review the rdw12dm.log file to verify that the objects were all created successfully
18. Skip the section for installing Microstrategy metadata
19. As the ora<sid> user, change directories on the Unix server to  
 <Install\_Dir>/rdw12.0/dbasql.
20. Login to SQL\*Plus as the schema owner rdw12dm (created earlier) and execute the following scripts to setup permissions to the datamart objects:  
 SQL>@gs\_rdw12\_dm\_ora.sql  
  
 Ignore any text that is generated similar to the following. SP2-0734: unknown command beginning "new 7: ..." - rest of line ignored
21. SQL>@invalids.sql  
  
 Ignore any text that is generated similar to the following.  
 SP2-0734: unknown command beginning "no rows se..." - rest of line ignored
22. Verify the scripts executed correctly by reviewing the following files:  
 g\_rdw12\_dm.lst, s\_rdw12\_dm.lst

### **RETL Installation**

To proceed ahead with the RDW setup RETL needs to be installed/ configured at this point of time, Install RETL on each server system that will be involved in inputting, outputting, or processing data. That is, if one system outputs data files and another system inputs that data and processes it, install RETL on both systems.

Download retl\_12.0\_install.zip (the install package) and retl\_12.0\_doc.zip (documentation) and place the RETL install package on your UNIX server

Change directories to the location where the package is installed at  
 <Install\_Dir>/<rfx\_dir>

At a UNIX prompt enter: >./install.sh

Follow the prompts to install RETL for your configuration

```

$./install.sh
Enter directory for RETL software:
---> <enter path to RFX_HOME> i.e. (/home/rfxdf01)
Is this the correct directory for the install? y or n
RFX_HOME: <path to RFX_HOME>
---> y
Creating RFX_HOME directory <path to RFX_HOME> ...
Creating install directory in <path to RFX_HOME> ...
Copying Library Files...
Copying Sample Files...
Copying Executables...
Copying Config File...
Copying JRE Files...
Installing The Java Runtime Environment (JRE) for <platform>...
JRE installed successfully at <path to RFX_HOME>/JRE/HP-UX/jre
Successful completion of RETL Install

```

To complete the RETL setup and installation:

1) Place the following in a .profile to retain setup variables:

```

RFX_HOME= /home/rfxdf01
PATH= /home/rfxdf01/bin:$PATH

```

2) Be sure to verify any additional environment setup as per the "Setup" section of the Programmers Guide.

3) Verify the installation by running the following command:

```

$RFX_HOME/bin/repl -version
$

```

Review the install.log file in the <base directory>/install to verify that RETL was installed successfully

Verify the installation and setup by running the "verify\_repl" script

Change directories to <Install\_Dir>/rdw12.0/afx/etc  
 Modify the rdw\_config.env script to match your environment

Update the following parameters in the rdw\_config.env file respective to the environment

- 1) DBNAME
- 2) DM\_OWNER
- 3) BA\_OWNER
- 4) ORACLE\_PORT
- 5) ORACLE\_HOST
- 6) TEMP\_DIR

Log in to a Unix session on the RDW database server as the ora<sid> user. Modify .profile by setting MMUSER to the data mart owner, rdw12dm. Set PASSWORD to the appropriate password as determined when the crusers.sql script was run.

Ensure that the following parameters are set as appropriate for your instance as in the example below.

```
ORACLE_HOME=/apps/df01/oracle/product/10201; export ORACLE_HOME
PATH=.:$ORACLE_HOME/bin:$ORACLE_HOME/OPatch:/home/rfxdf01/bin:$PATH
;export PATH
LD_LIBRARY_PATH=$ORACLE_HOME/lib ;export LD_LIBRARY_PATH
ORACLE_SID=DF01 export ORACLE_SID
export MMHOME=/apps/df01/oracle/RDW
export RFX_HOME=/home/rfxdf01
export MMUSER=RDW12DM
```

```
export PASSWORD=change
export UP=$MMUSER/$PASSWORD@$ORACLE_SID
```

At the Unix prompt, enter: default\_load.ksh

Rerun the RDW profile and verify the MMUSER and PASSWORD variables are set to the batch user, rdw12dev and the appropriate password.

At the Unix prompt, enter: time\_static\_load.ksh.

This would populate the default data into all the RDW tables.

### Populate Time Dimension

Refer to section “Populate Time Dimension” of the RDW installation guide. Under section “Create time in RDW” proceed from Step 2 onwards. For step 7 choose option 1 (454 time) Skip step 10

### Populate Static Dimension Data

Perform steps 1 & 2  
Skip steps 3 – 6  
Continue from step 7 onwards



# **APPENDIX EE**

## **RMS AND SIM CLONE**

## **RMS AND SIM CLONE**

### **DB CLONNING OF RMS and SIM**

|                                                   |           |
|---------------------------------------------------|-----------|
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| <b>Setting up the VNCSERVER.....</b>              | <b>3</b>  |
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## Profiles: Environment Variable Setup

1. When cloning it is best to check the production environment .profile and it's .env file.
2. Go to the /home/orara91 directory.
3. Issue ls -lart command to see the profiles.

```
lbhypedevdb41: $ /home/orahd41 $ ls -lart
total 72
drwxr-xr-x 2 orahd41 dba 256 Oct 6 15:00 lost+found
drwxr-xr-x 57 bin 4096 Oct 25 13:03 ..
drwxrwx--- 3 orahd41 dba 256 Dec 13 15:03 .java
drwxrwxr-x 7 orahd41 dba 4096 Dec 14 09:47 oraInventory
drwxr-xr-x 2 orahd41 dba 256 Dec 14 10:14 .vnc
-rw----- 1 orahd41 dba 106 Dec 14 10:14 .Xauthority
-rwxrwxrwx 1 orahd41 dba 353 Dec 14 10:34 .profile_HD41.env
drwxr-xr-x 6 orahd41 dba 4096 Dec 14 10:34 .
-rw----- 1 orahd41 dba 28 Dec 14 10:59 .vi_history
-rwxr-xr-x 1 orahd41 dba 617 Dec 14 10:59 .profile
-rw----- 1 orahd41 dba 4576 Dec 14 11:07 .sh_history
lbhypedevdb41: $ /home/orahd41 $
```

4. Create the new profile by issuing the following command: vi .profile\_HD41.env. The naming convention should match your environment.
5. vi .profile\_HD41.env and add the following from a production environment (changing paths to match your environment):  
export ORACLE\_HOME=/apps/ra911/oracle/product/10.2.0.3  
export ORACLE\_SID=RA91  
export PATH=\$ORACLE\_HOME/perl/bin:\$ORACLE\_HOME/bin:\$PATH  
export SHLIB\_PATH=\$ORACLE\_HOME/lib:/usr/lib:\$ORACLE\_HOME/ctx/lib  
export  
LD\_LIBRARY\_PATH=\$ORACLE\_HOME/lib:/usr/openwin/lib:\$ORACLE\_HOME/ctx/lib  
export DISPLAY=lbrmsuatdb91:1  
export TNS\_ADMIN=/apps/hd41/oracle/10.2.0/network/admin
6. Copy .profile from production to the non-prod environment.
7. cd /home/orara91
8. ls -lart (change according to your environment)  
PATH=/usr/bin:/etc:/usr/sbin:/usr/ucb:\$HOME/bin:/usr/bin/X11:/sbin:

```
export PATH
```

```
if [-s "$MAIL"] # This is at Shell startup. In normal
then echo "$MAILMSG" # operation, the Shell checks
fi
```

```
set -o vi
stty erase ^?
```

- ```

export PS1=`hostname`: $PWD$
echo " option 1 : Login as Database Owner"
#echo " option 2 : Login as Hyp Owner"
#echo " option 3 : Login as Weblogic Server Owner"
read opt
if [[ $opt == 1 ]]
then
# Execute the SS DB and Applications Profile
echo "Running HD41 DB - Hyperion UAT Database Profile"
. .profile_RA91.env
fi

```
9. Set up OraInventory directory at /apps/sa81/oracle/product/OraInventory (according to your environment).
 10. chmod 777 OraInventory for full permission.
 11. /apps/sa81/oracle/product/OraInventory
 12. lbsimuatdb81: /apps/sa81/oracle/product/OraInventory\$ more /etc/oraInst.loc
 13. vi /etc/oraInst.loc
 14. Comment out the following oraInst.loc file entry.
 15. #inventory_loc=/home/oraoem/oraInventory
 16. Add the following to the oraInventory file
 17. inventory_loc=/apps/sa81/oracle/product/OraInventory
 18. Save the changes.

Setting up the VNCSERVER

1. If this is a new server and the VNCSERVER needs to be set up do the following:
2. Issue the following command:

```

echo $DISPLAY
export DISPLAY=lbsimuatdb91:1.0
xhost +

```
3. Issue the following command to start the server: vncserver.
4. The first time you will need to supply a password:
You will require a password to access your desktops.

Password:
5. Please use the ora/app user that you are logged into

New Oracle Home Installation

1. Go to the downloaded files and VNC into the server that you want to install Oracle.
Usually the files are located here on [/production_dump/ora_media/DB10g](#)
2. `./runInstaller`
3. Install oracle home.

Welcome to the Oracle Database 10g Installation
Select the installation method that you want to use.

Basic Installation

Oracle Home Location:

Installation Type:

UNIX DBA Group:

Create Starter Database (additional 720MB)

Global Database Name:

Database Password: Confirm Password:

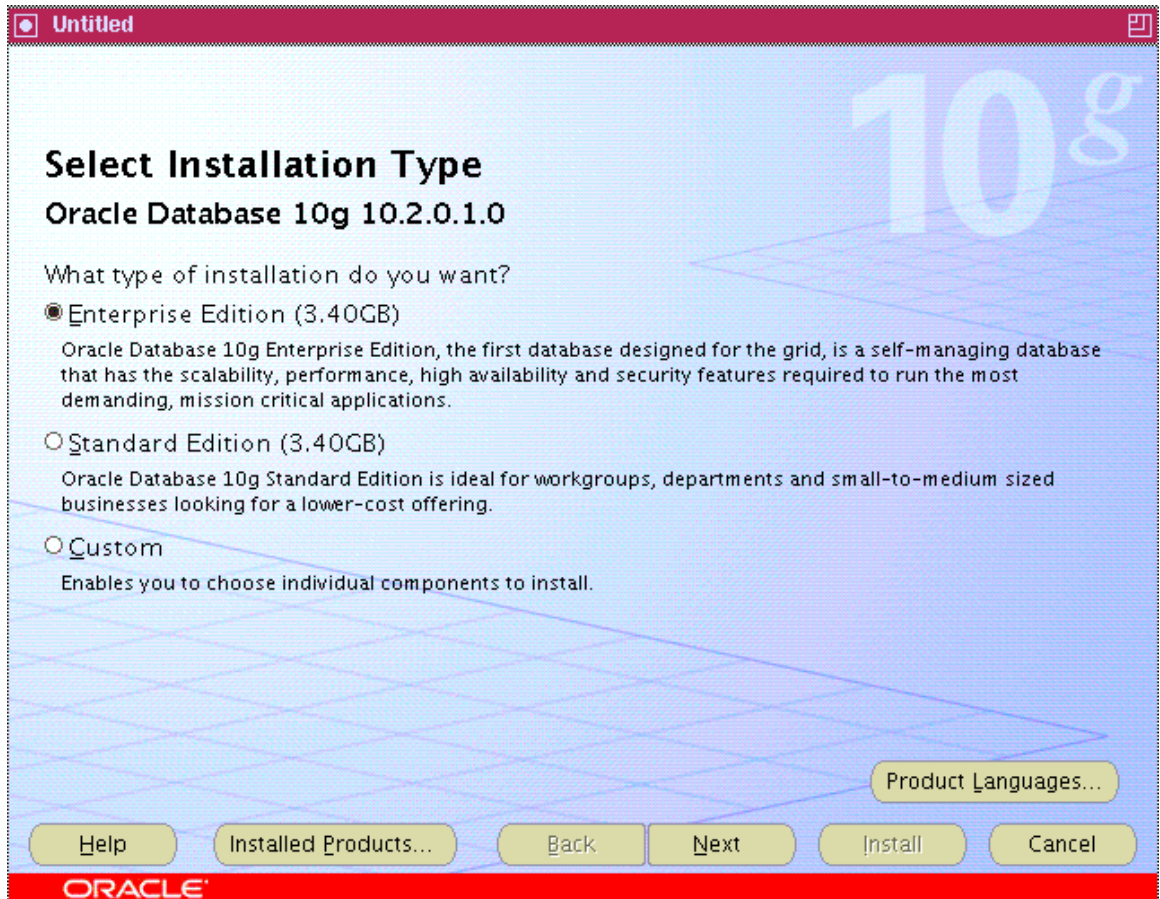
This password is used for the SYS, SYSTEM, SYSMAN, and DBSNMP accounts.

Advanced Installation

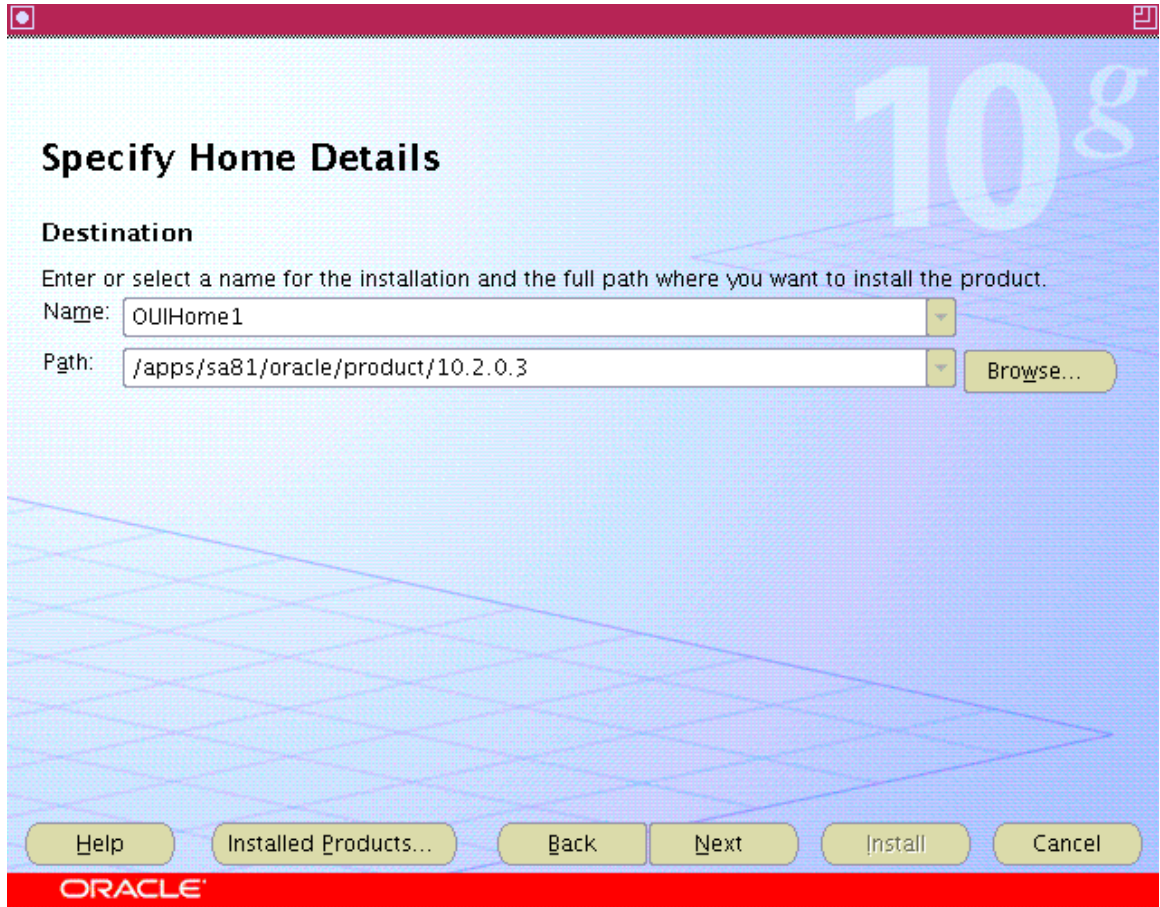
Allows advanced selections such as different passwords for the SYS, SYSTEM, SYSMAN, and DBSNMP accounts, database character set, product languages, automated backups, custom installation, and alternative storage options such as Automatic Storage Management.

ORACLE

4. Click the Advanced Installation Radio button.
5. Click the Next button.
6. Give the oraInventory location.
7. Click the Next button.
8. Check verification prereqs.



9. Select Enterprise Edition Radio Button.
10. Click the Next button.

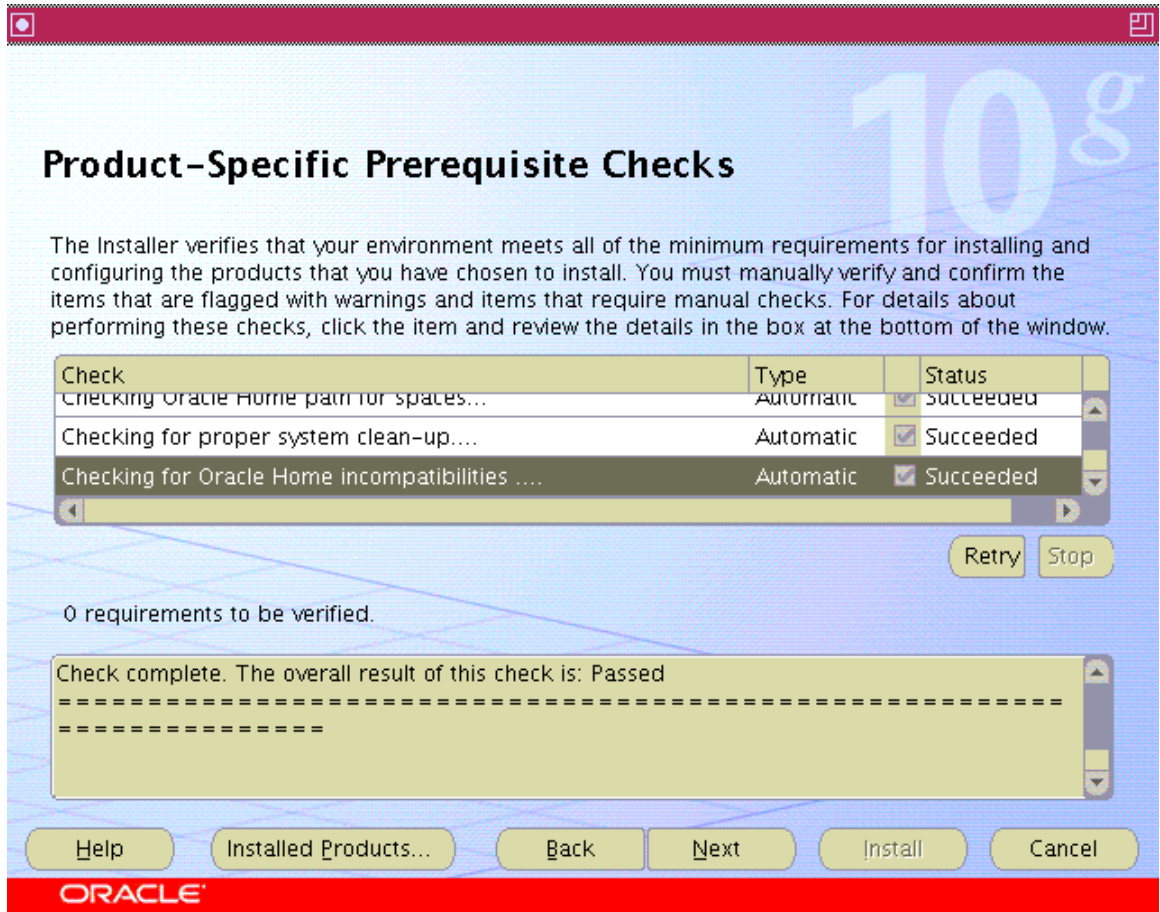


11. Click the Next button.

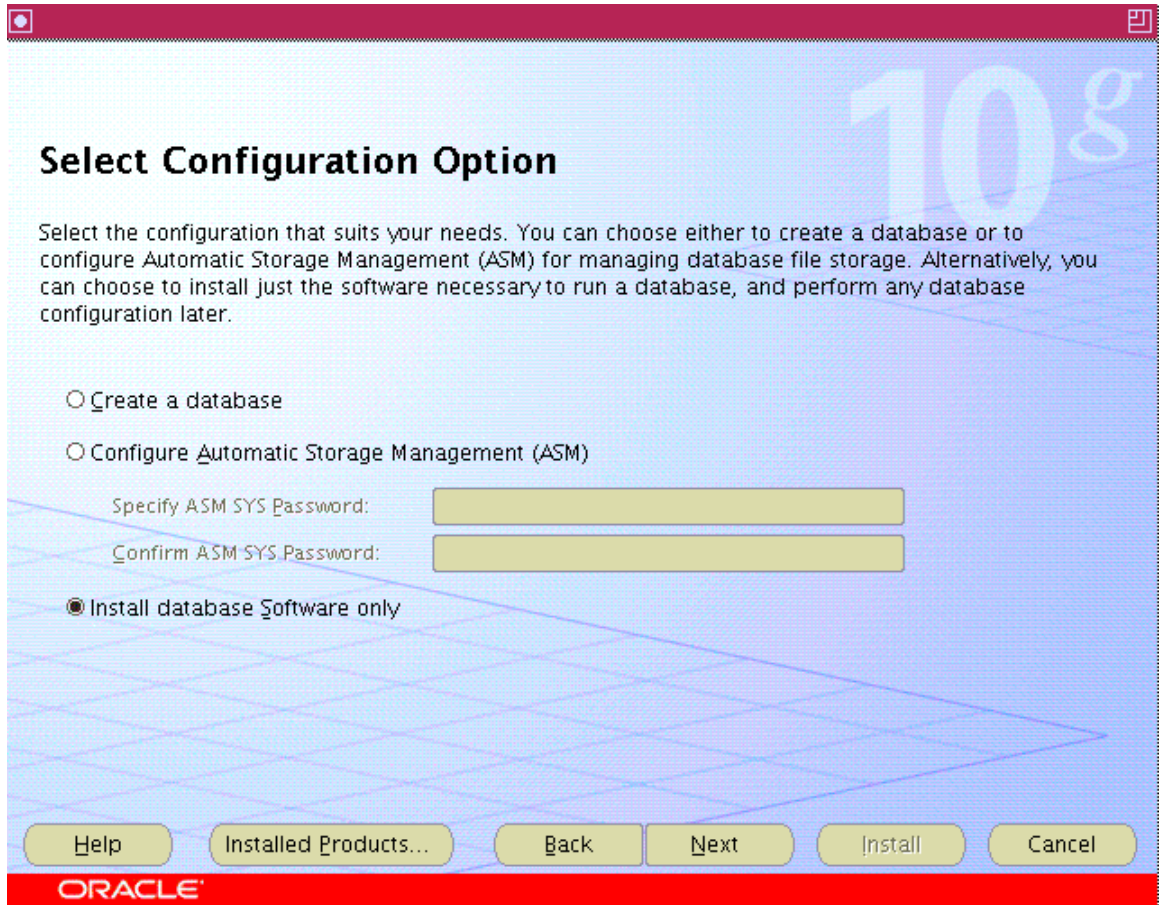
12. Click the Next button.
13. Click the Install button.
14. Run the required .sh scripts.

Installation of Companion

1. cd to Disk1/companion and run the installer.



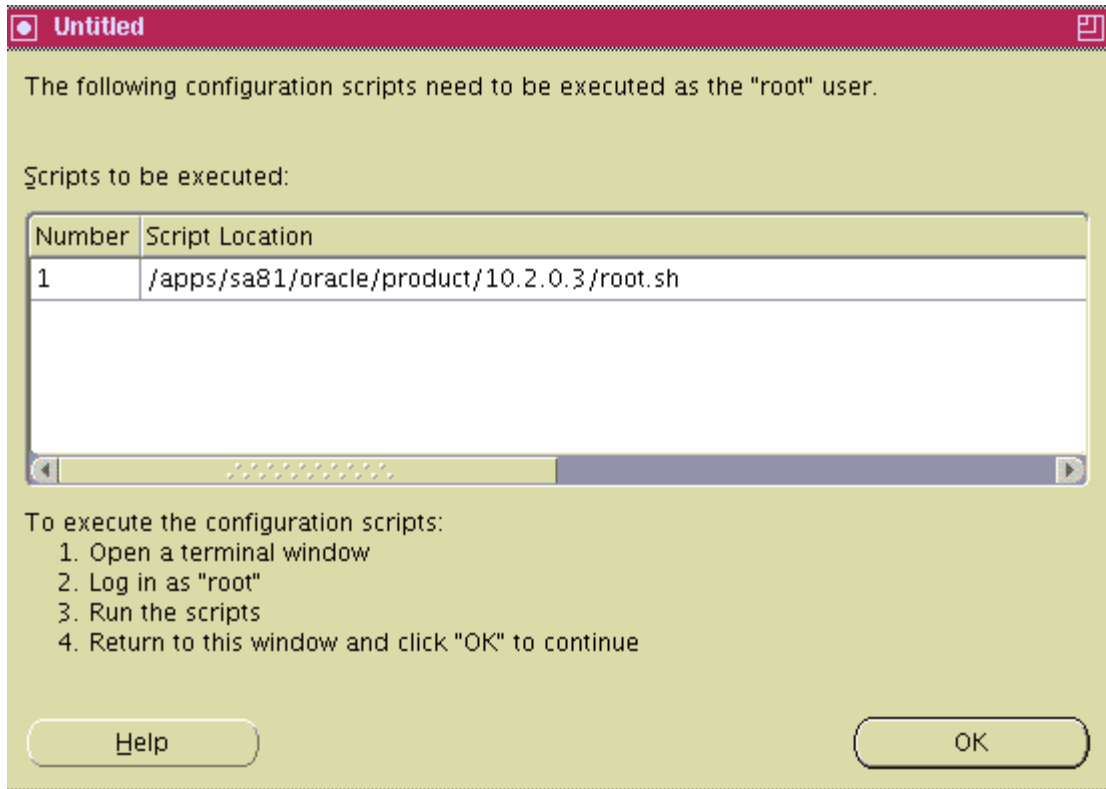
2. Click the Next button.



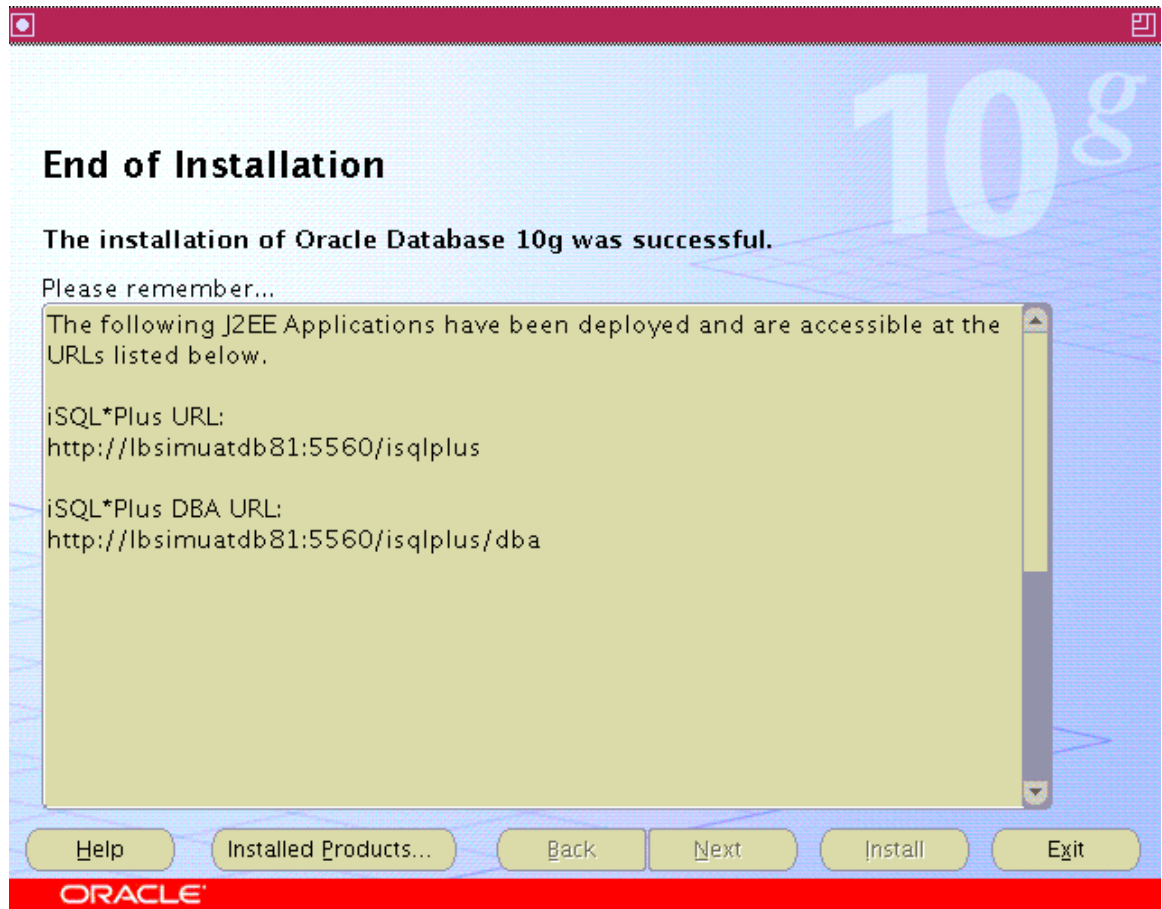
3. Click the Install database Software only Radio button.
4. Click the Next button.



5. Click the Install button.
6. Run `sudo /apps/sa81/oracle/product/10.2.0.3/root.sh` when prompted to do so.



7. Click the OK button after the root.sh script has completed.



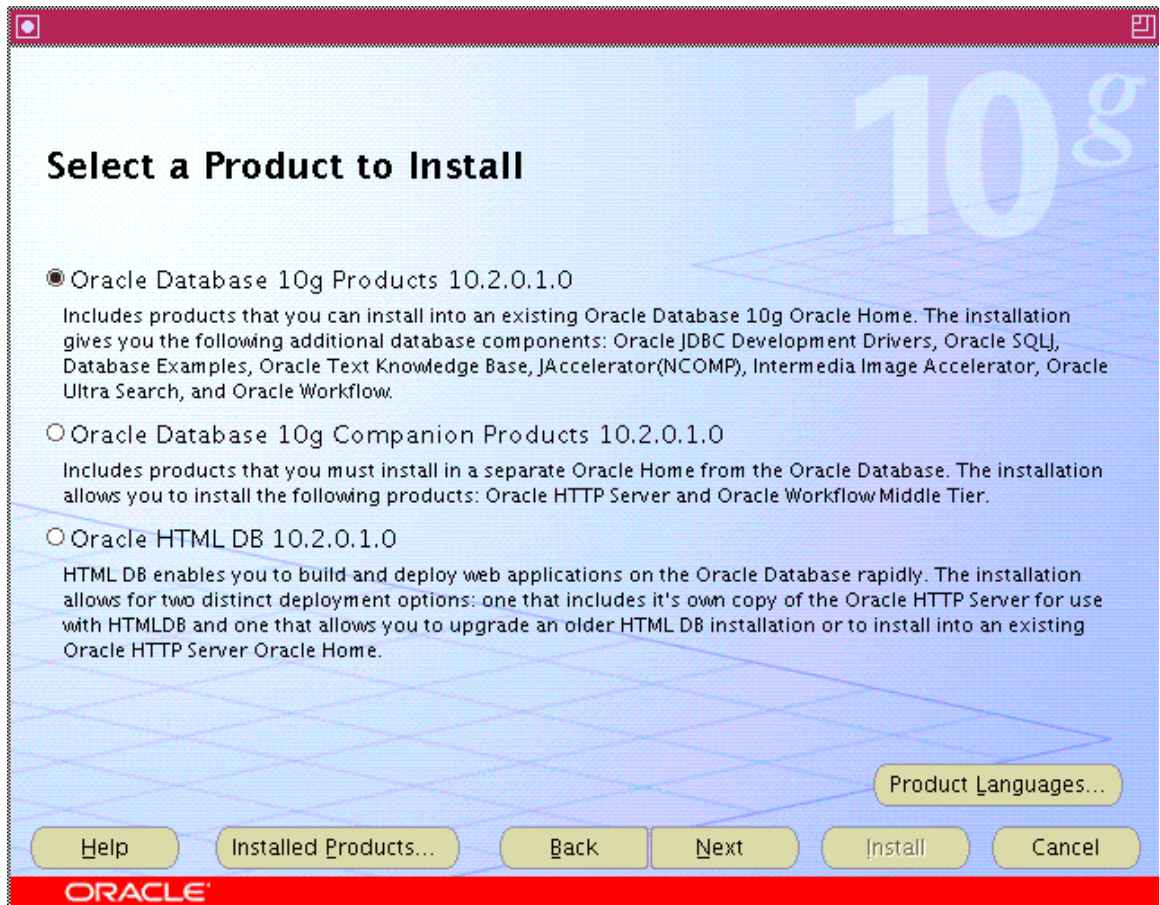
8. Click the Exit button.

10.2.0.1 Companion Installation

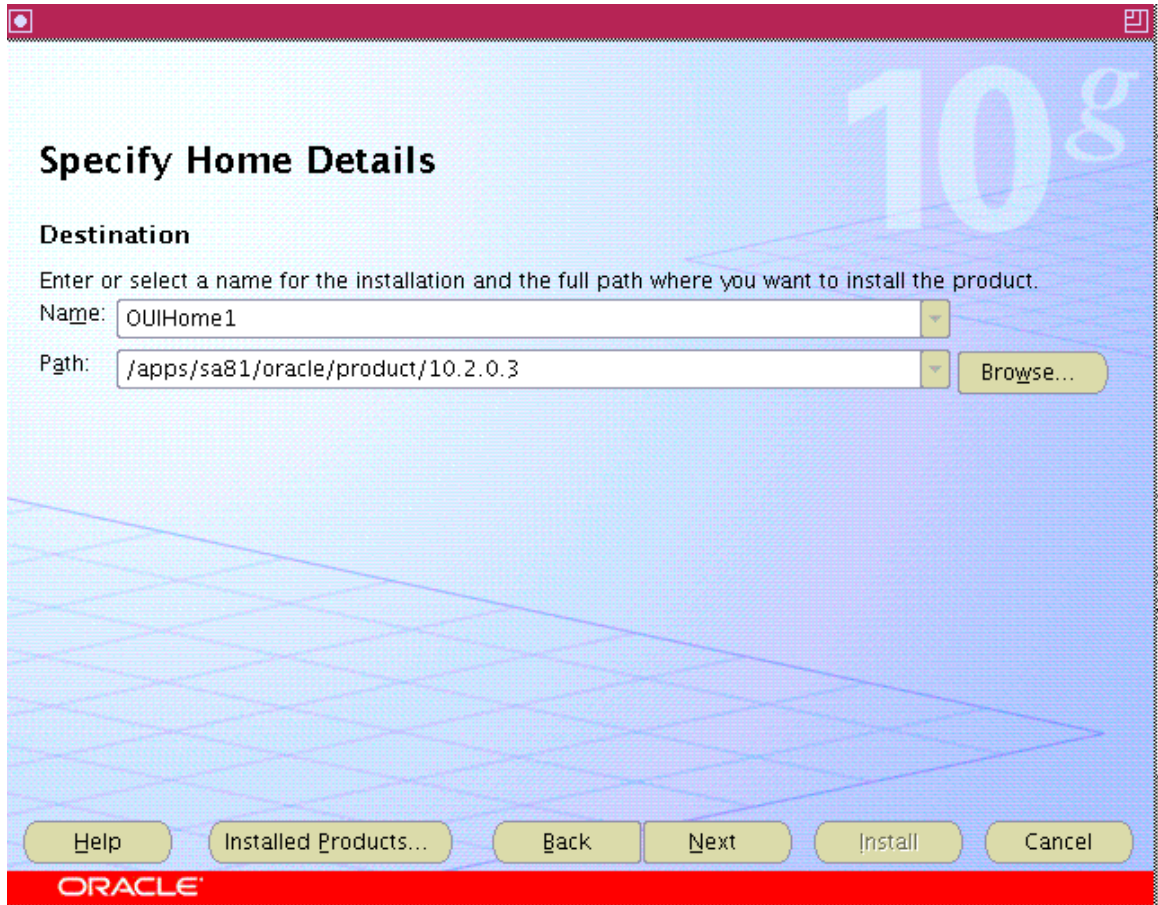
1. `cd /production_dump/ora_media/DB10g/102010/Disk1/companion`
2. Run the installer `./runInstaller`.



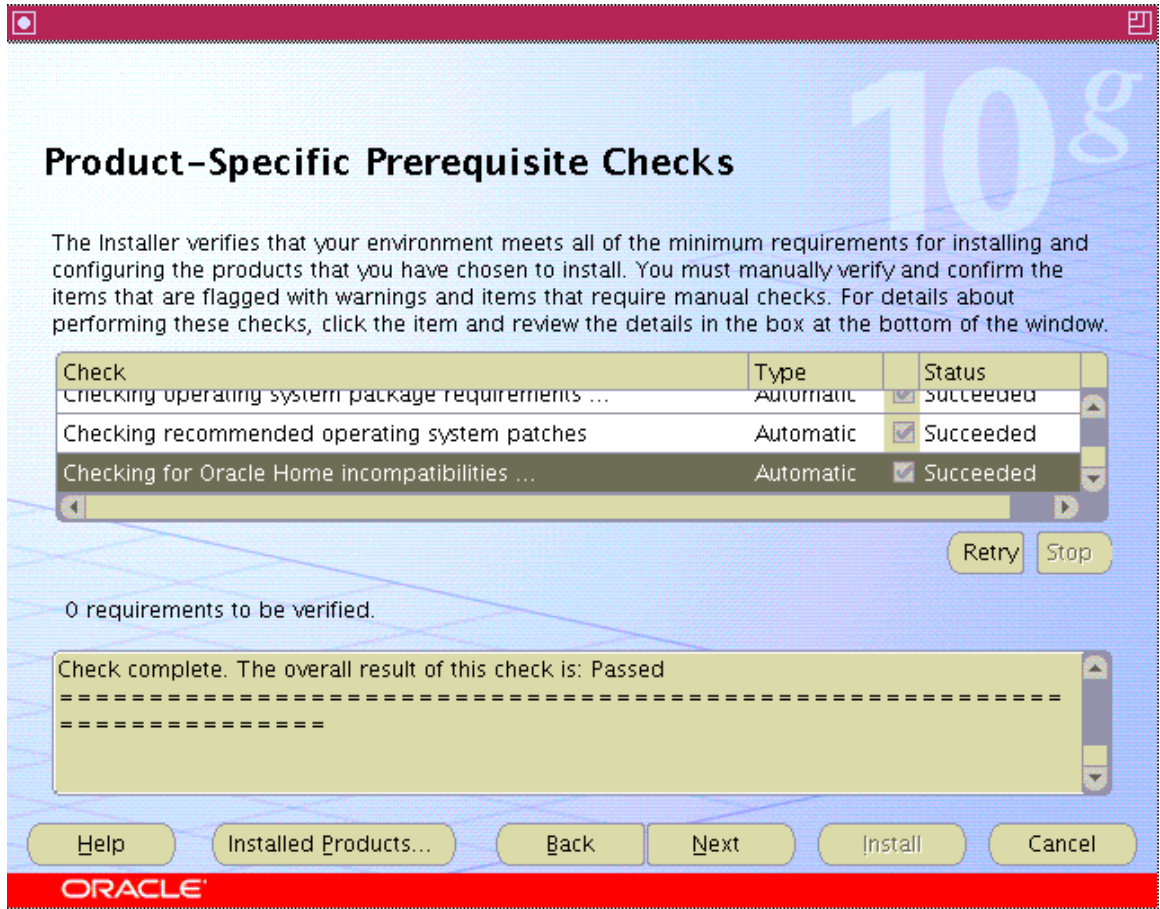
3. Click the Next button.
4. Choose Oracle 10g Productions option.



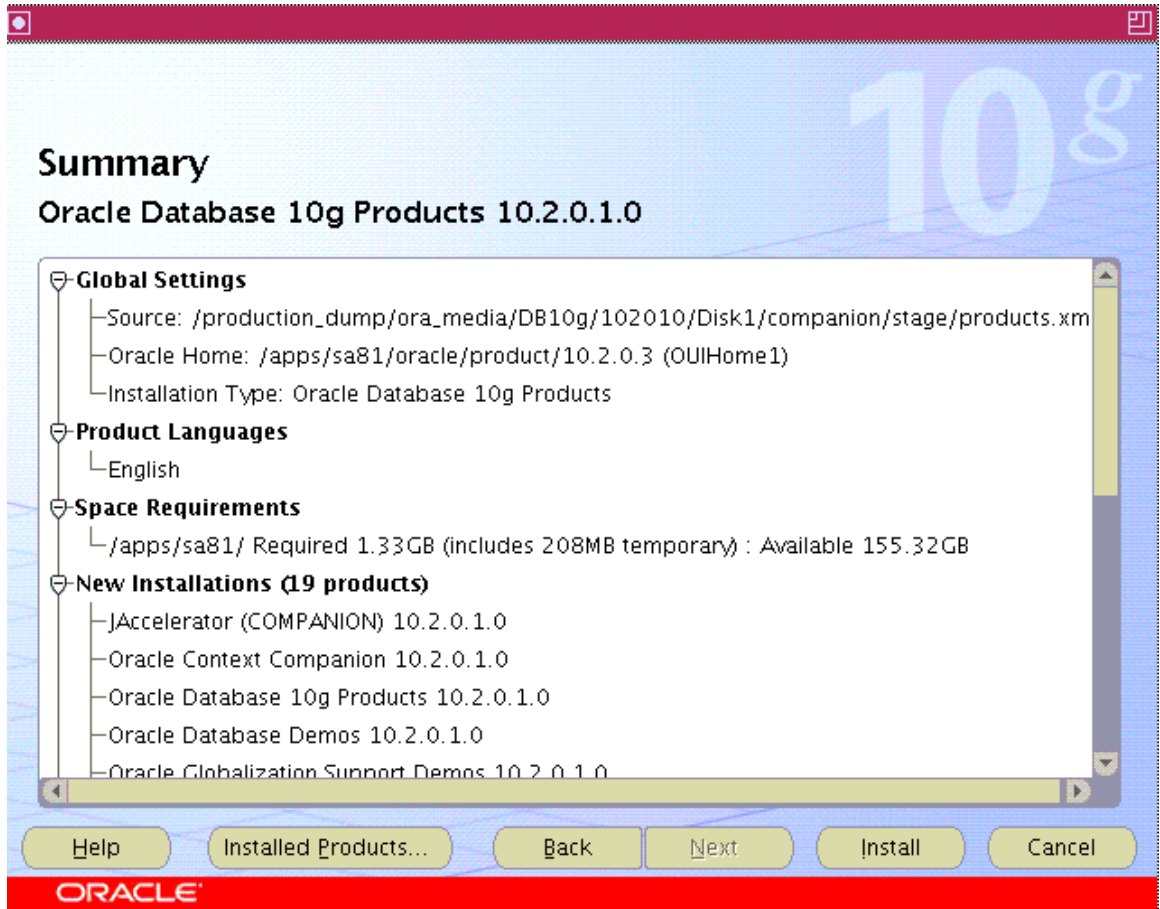
5. Click the Next button.



6. Choose the same Oracle home.
7. Choose the Next button.



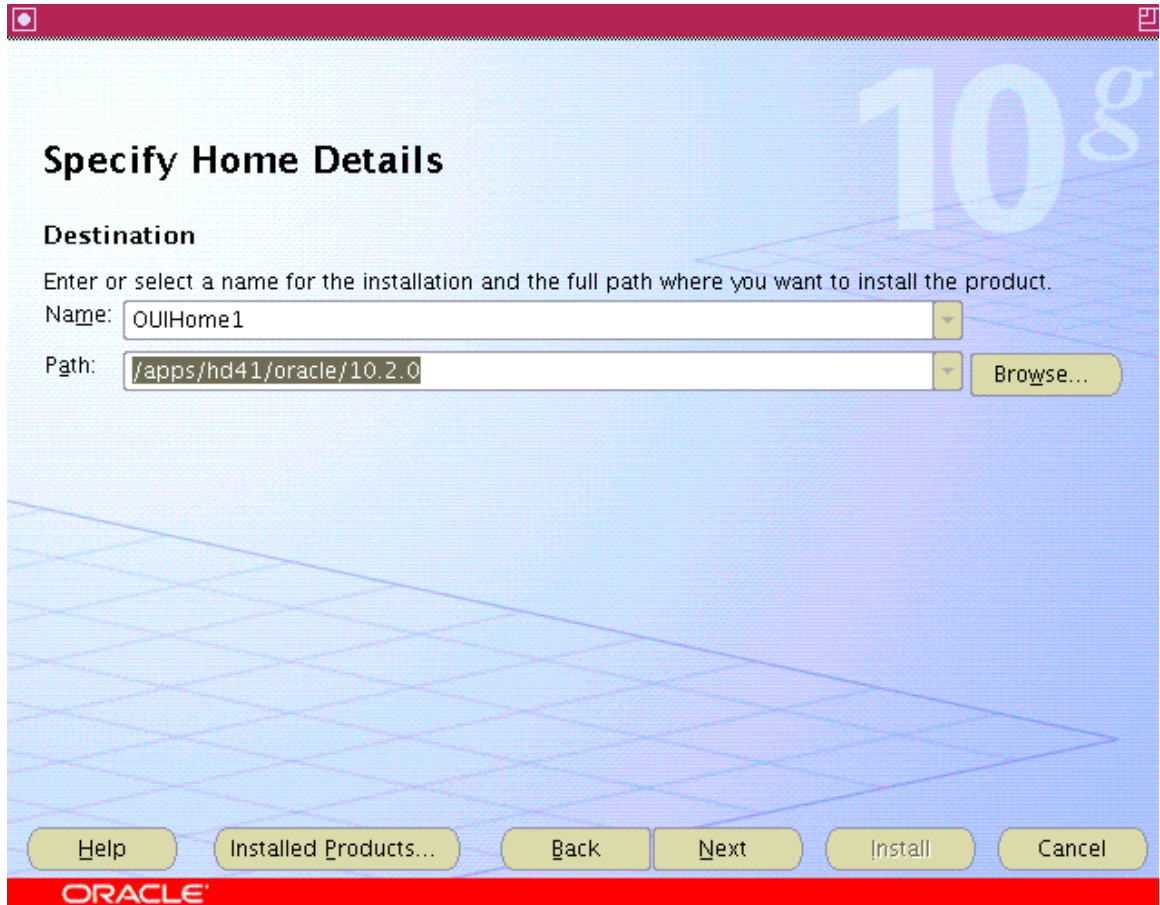
8. Choose the Next button.



9. Choose the Install button.

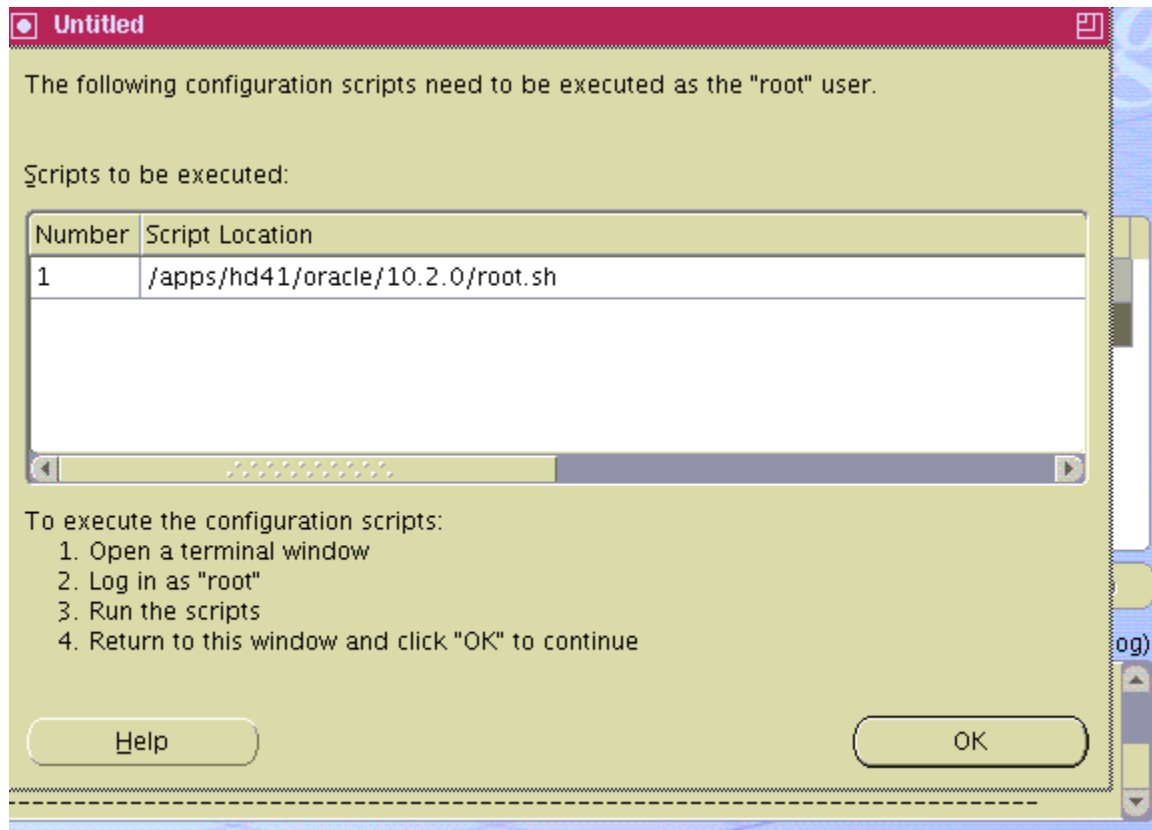
Upgrade to 10.2.0.3

1. In VNC go to
/production_dump/ora_media/DB10g/OracleDB10.2.0.3PatchSet/Disk1 (this path may change according to your installation).
2. Run the clean script prior to installation: /usr/sbin/slibclean.
3. Run the following installation script to by pass the prereqs if applicable:
./runInstaller -ignoreSysPrereq or ./runInstaller
4. Click the Next button.
5. Change the Oracle home location to the 10.2.0.1 installation.



6. Click the Next button.
7. Click the Install button.
8. Run the root.sh script when prompted to do so.
9. lbhypdevdb41: \$ /apps/ra91/oracle/product/10.2.0.3 \$./root.sh
10. Running Oracle10 root.sh script...
11. You must be logged in as root to run root.sh.
12. Log in as root and restart root.sh execution.
13. lbhypdevdb41: \$ /apps/ra91/oracle/product/10.2.0.3 \$ sudo ./root.sh
14. Running Oracle10 root.sh script...and choose the following entries...
15. The following environment variables are set as:
16. ORACLE_OWNER= orahra91
17. ORACLE_HOME= /apps/ra91/oracle/product/10.2.0.3
18. Enter the full pathname of the local bin directory: [/usr/local/bin]:
19. The file "dbhome" already exists in /usr/local/bin. Overwrite it? (y/n) [n]: y
20. Copying dbhome to /usr/local/bin ...
21. The file "oraenv" already exists in /usr/local/bin. Overwrite it? (y/n) [n]: y
22. Copying oraenv to /usr/local/bin ...
23. The file "coraenv" already exists in /usr/local/bin. Overwrite it? (y/n) [n]: y
24. Copying coraenv to /usr/local/bin ...
25. Entries will be added to the /etc/oratab file as needed by
26. Database Configuration Assistant when a database is created

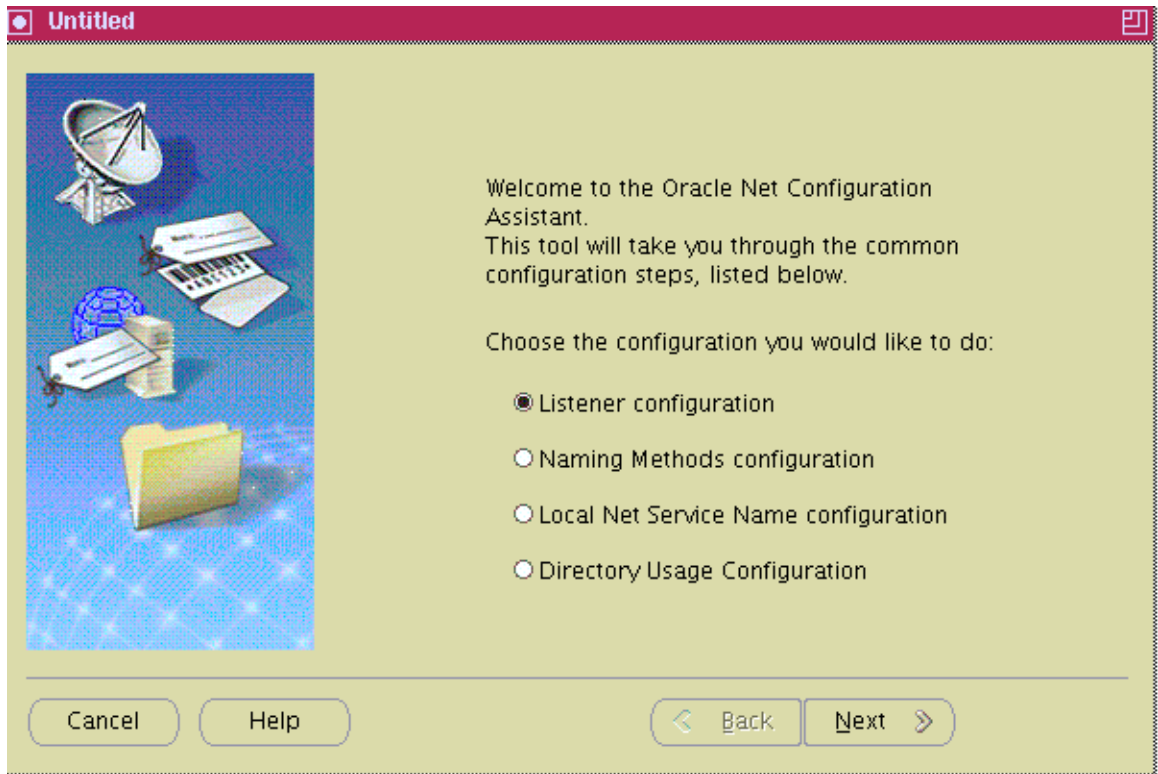
27. Finished running generic part of root.sh script.
28. Now product-specific root actions will be performed.
29. lbhypdevdb41: \$ /apps/ra91/oracle/product/10.2.0.3 \$
30. Go back to the VNC session.



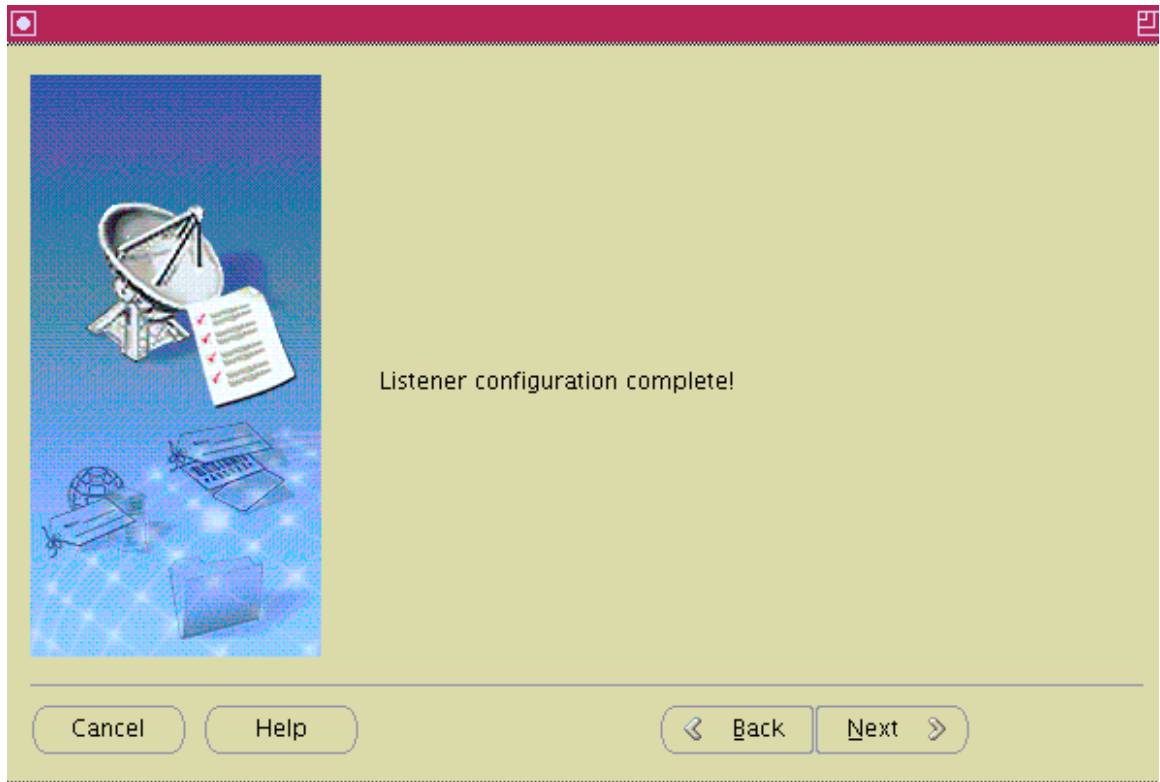
31. Click the Ok button.
32. Click the Exit button.

Setting up Isnrctl

1. Make sure \$ORACLE_HOME is set.
2. export ORACLE_HOME/apps/ra91/oracle/product/10.2.0.3 Go to \$ORACLE_HOME/bin.
3. cd /apps/ra91/oracle/product/10.2.0.3/bin
4. Issue the command. /netca in VNC session, to initiate the Oracle net configuration wizard.



5. Select Listener configuration option.
6. Click the Next button.
7. Click the Next button.
8. Change the listener name to RA91 (should conform to your environment).
9. Click the Next button.
10. Click the Next button.
11. Click the Next button. (port 1521 is the standard port but could be different).
12. Click the Next button, to finish installation.



13. Click the Cancel button.
14. Click the Finish button.

Setting up TNSNAMES

1. Change tnsnames to your environment.
2. `cd /apps/ra91/oracle/product/10.2.0.3/network/admin`
3. copy tnsnames from production and change to fit your environment.
4. `tnsping hd41` to see if everything is ok.
5. `echo $ORACLE_HOME`, should `/apps/ra91/oracle/product/10.2.0.3/` if not do the following:
6. `export ORACLE_HOME=/apps/ra91/oracle/product/10.2.0.3`
7. Issue the following command to see if you log onto sqlplus: `sqlplus / as sysdba`, should get the following:
8. Connected to an idle instance.

DB Clonning steps from Production

Make clone Directory in /home/orara91 and

1) Copy the following files (tnsnames, listener, initSA91.ora) to the CLONE directory from respective instance (like if you are doing uat instance clone copy it from UAT instance) and made the changes accordingly

Ex: `scp -r orara91@lbrmsuatdb91:$ORACLE_HOME/dbs .`
Once init.ora file modified copy to `:$ORACLE_HOME/dbs`

```
-rw-r--r-- 1 orasa81 dba      702 Dec 21 14:37 tnsnames.ora
-rw-r--r-- 1 orasa81 dba      474 Dec 21 14:41 listener.ora
-rwxr-xr-x 1 orasa81 dba     2462 Dec 21 14:46 initSA91.ora
```

Make a backup of all .ora files in the clone directory.

Modify these files before moving them to their respective directories.
By using this unix command `:%s/SA91/SA81/g` in VI entry mode.

VI initSA91.ora file and make sure that directories exist and are pointing to the correct environment.

Create ora password file in `:$ORACLE_HOME/dbs`.

Run the following command in the dbs directory:

```
orapwd FILE=orapwSA81 PASSWORD=manager ENTRIES=20
```

Move the above files to their respective directories:

1. `cp initSA81.ora /apps/sa81/oracle/product/10.2.0.3/dbs`
2. `cp tnsnames.ora listener.ora /apps/sa81/oracle/product/10.2.0.3/network/admin`

Check the listener status: `lsnrctl status sa81`.

If the listener is down, then start the listener: `lsnrctl start sa81`.

If the listener is up, then stop it then start it.

Start in directory `/apps/sa81/oracle/product/10.2.0.3/dbs` so you can copy and paste the pfile.

2) Startup the database with nomount using Pfile

ex: `sqlplus / as sysdba`

```
startup nomount pfile=path of the init.ora file
```

3) Run the RMAN script

The RMAN script will be

```
/production_dump/lcb/scripts/dba/RMS_clone/ora_db_dup.ksh
```

```
If it is SIM it will be in /production_dump/lcb/scripts/dba/SIM_clone/
ora_db_dup.ksh
```

Make sure that the script conforms to your ORACLE_SID environment.
Connect to RMAN

```
connect catalog ${CAT_USER}/${CAT_USER}@${RMAN_SID};  
connect target ${TARGET_USER}/${TARGET_PASS}@${SOURCE_SID};  
connect auxiliary ${TARGET_USER}/${TARGET_PASS};
```

```
RMAN_SID=rmandph  
TARGET_USER=plcbdba  
TARGET_PASS=dbaman
```

1. rman
2. connect catalog rmansp01/rmansp01@rmandph (this will connect to sp01).
3. connect target plcbdba/dbaman@sp01
4. connect auxiliary/ (connected to auxiliary database: SA81 (not mounted))
5. exit out of rman (to check to see if rman is correct).
6. go to /production_dump/lcb/scripts/dba/SIM_clone.
7. create soft link for libobk.a in \$ORACLE_HOME/lib
8. libobk.a -> /usr/opencv/netbackup/bin/libobk.a64
9. Modify the script below to fit your environment

Run the RMS script below

```
nohup ora_db_dup.ksh sa81 sp01 "Dec 20 2010 14:00:00" &  
|cloneSID| sourceSID |restore time
```

Example:

```
lbsimuatdb81: /production_dump/lcb/scripts/dba/SIM_clone$ nohup ora_db_dup.ksh  
sa81 sp01 "Dec 20 2010 14:00:00" &  
[1] 671982  
lbsimuatdb81: /production_dump/lcb/scripts/dba/SIM_clone$ Sending nohup output  
to nohup.out.
```

```
lbsimuatdb81: /production_dump/lcb/scripts/dba/SIM_clone$ cd  
lbsimuatdb81: /home/orasa81$ cd clone  
lbsimuatdb81: /home/orasa81/clone$ ls  
initSA81.ora initSA81.ora_bk listener.ora listener.ora_bk  
rman_sa81_dup.log tnsnames.ora tnsnames.ora_bk  
lbsimuatdb81: /home/orasa81/clone$ tail -f rman_sa81_dup.log  
restoring datafile 00036 to /apps/sa81/oradata/data03/undo_ts03.dbf  
restoring datafile 00037 to /apps/sa81/oradata/data02/users01.dbf  
restoring datafile 00038 to /apps/sa81/oradata/data03/xxlcb_data01.dbf  
restoring datafile 00039 to /apps/sa81/oradata/data03/lob_data01.dbf  
restoring datafile 00040 to /apps/sa81/oradata/data02/undo_ts11.dbf  
restoring datafile 00041 to /apps/sa81/oradata/data01/retek_index11.dbf
```


restoring datafile 00042 to /apps/sa81/oradata/data01/retek_data09.dbf
restoring datafile 00043 to /apps/sa81/oradata/data03/sepuser_data01.dbf
restoring datafile 00044 to /apps/sa81/oradata/data03/backup01.dbf

OPatch (Checking for any patches)

1. Log onto the production unix box.
2. Go to the Oracle Home of that box.
3. Go to the OPatch directory.
4. Use the following command, optch lsinventory.

Recycle Database

1. Shut immediate. (Will take sometime since it is a clone).
2. startup mount.

System Password Changes

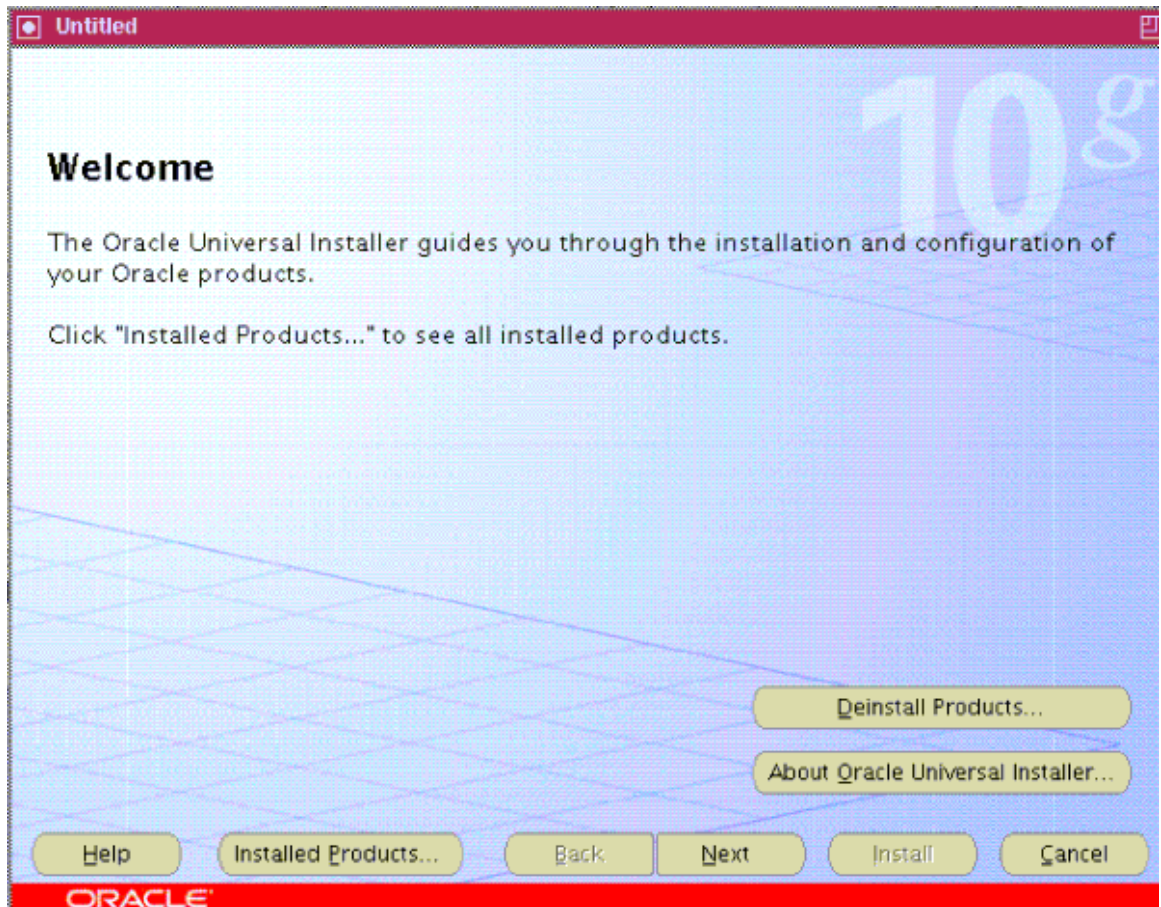
1. Since this is a clone from production, passwords will be as production.
2. alter user username identified by password. This will need to be done for the sim12dev user.

Drop Database Links

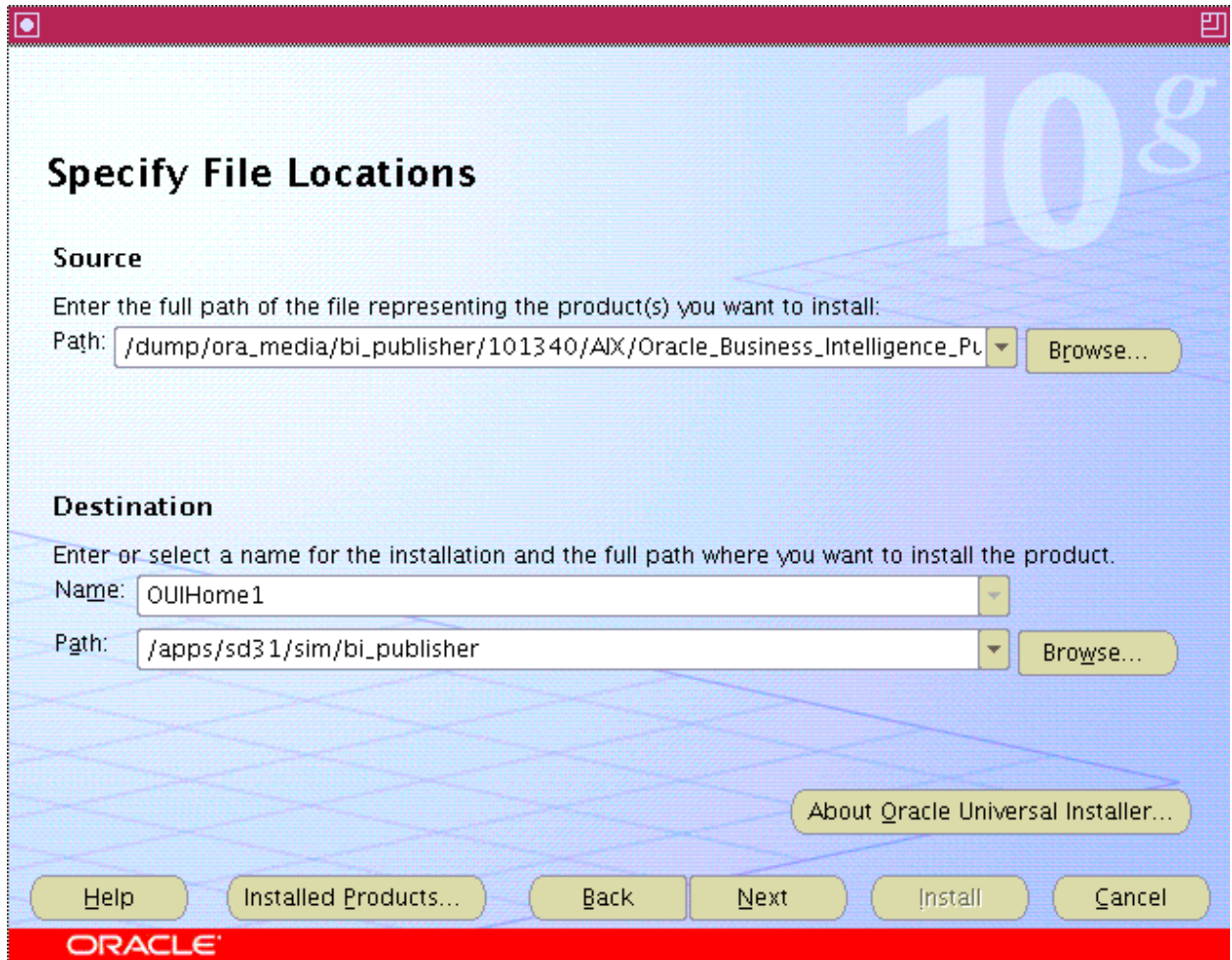
- 1.

SIM BI PUBLISHER INSTALLATION

1. Log into SIM app unix server as ora user according to the environment. Ex. lbsimdevapp31/orasd31.
2. Set up .profile as per another working environment.
3. Set up vncserver per vncserver setup.
4. Create the bi_publisher dir as ora user /apps/sd31/sim/bi_publisher
5. Chmod 777 bi_publisher
6. On unix box do the following: vncserver :0 to start vncserver serssion.
7. Log into VNCSEVER as app user.
8. Go to the following installer:
/dump/ora_media/bi_publisher/101340/AIX/Oracle_Business_Intelligence_Publis
her_Standalone/install
9. ./runInstaller



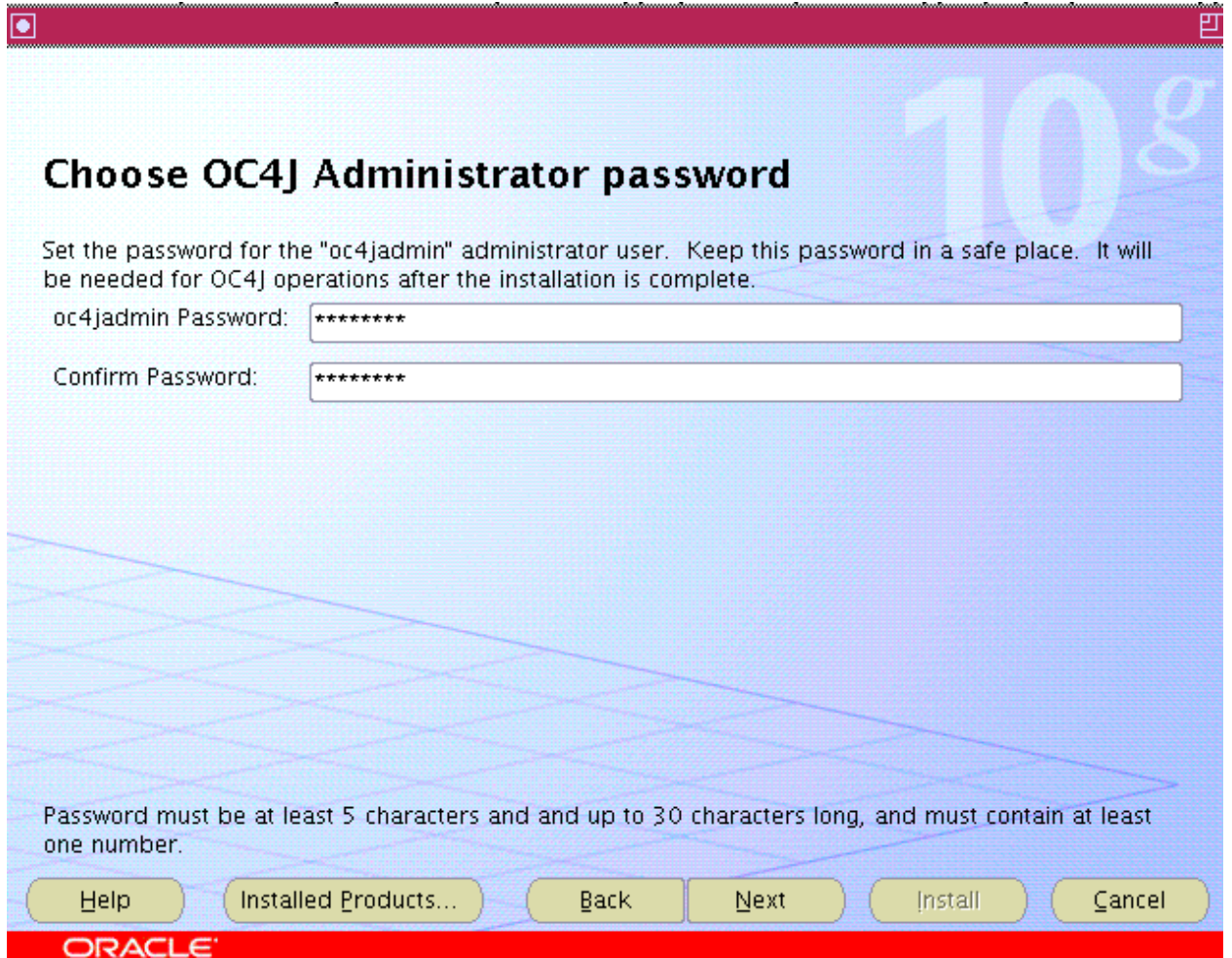
10. Click the Next button.



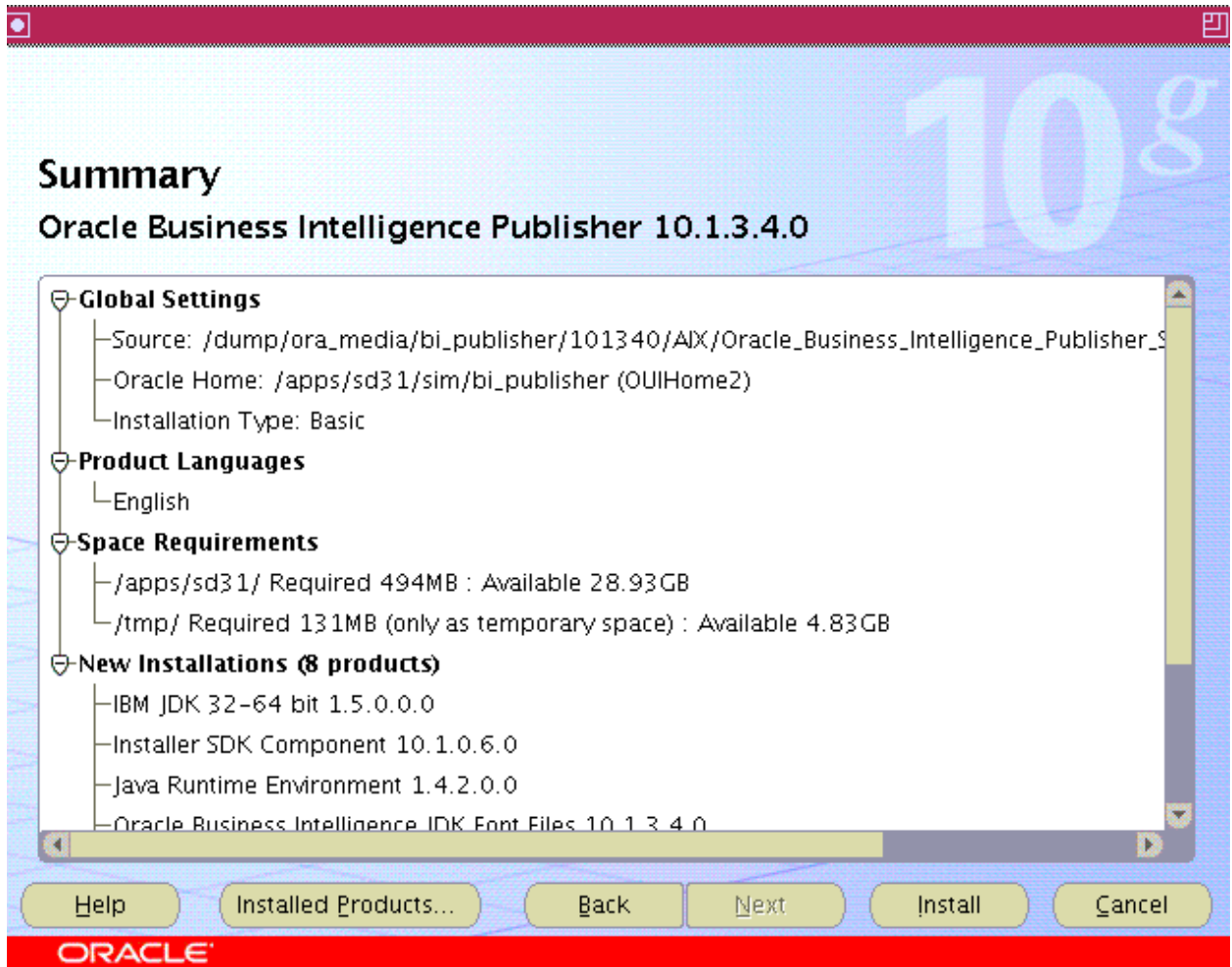
11. Click the Next button.



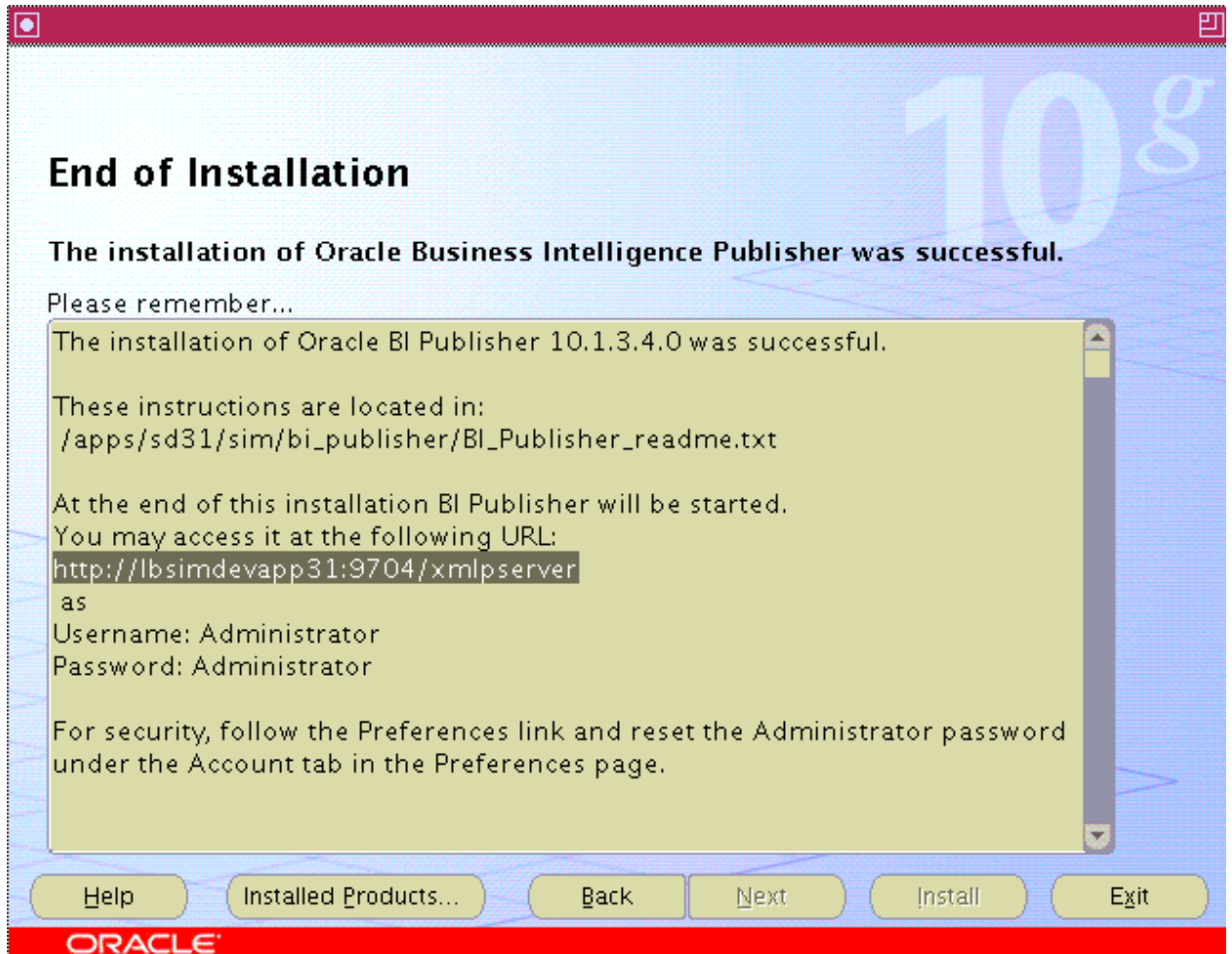
12. Choose Basic.
13. Click next.
- 14.



15. Enter the oc4jadmin password.
16. Click the next button.



17. Click the install button.
18. This will take some time to install.



APPENDIX FF

RMS REFRESH

RMS REFRESH

DB/APP Refresh of RMS

DB REFRESH-TNSNAMES: RP01 and RMANDPH.....	2
Delete .dbf, .log, .ctl files.....	2
RMAN SCRIPT	3
POST RMS Requirements	4
Post DB restore validations.....	7
RMS APPLICATION POST CLONE ACTIVITIES.....	9

DB CHECK TNSNAMES: RP01 and RMANDPH

1. Make sure that entries for rp01 and rmandph are included in the tnsnames.ora file on target server.
2. Log onto target server as oraxxxx user.
3. `cd /apps/rxxx/oracle/product/10.2.0.3/network/admin`

```
rmandph =
(DESCRIPTION =
  (ADDRESS = (PROTOCOL = TCP)(HOST = lbprodmonitor)(PORT = 1521))
  (CONNECT_DATA =
    (SERVER = DEDICATED)
    (SERVICE_NAME = rmandph)
  )
)
```

```
RP01 =
(DESCRIPTION =
  (ADDRESS_LIST =
    (ADDRESS = (PROTOCOL = tcp)(host = lbrmsprddb01.pa.lcl)(Port = 1521))
  )
  (CONNECT_DATA =
    (SERVICE_NAME = rp01)
    (INSTANCE_NAME = rp01)
    (SID = rp01)
    (GLOBAL_NAME = rp01.world)
  )
)
```

Delete .dbf, .log, .ctl files

1. Delete all .dbf, .log, and .ctl files in `/apps/rxxx/oradata`.
2. These files may also be spread out on other mount points. Cd to the directories containing the files and execute a `rm -Rf *`
3. remove control files located at `/apps/rxxx/arch/control_files`.
4. `cd /home/orarxxx/clone`
5. remove `rm -r rman_rxxx_dup.log rman_rxxx_reg.log`. These files are generated with the clone.
6. Check oracle home variable: `cd $ORACLE_HOME`.
7. Cd to `$ORACLE_HOME/dbs$ sqlplus / as sysdba`
8. Start db in no mount with pfile.
9. `SQL> startup nomount pfile/apps/rxxx/oracle/product/10201/dbs/initRXXX.ora`

RMAN SCRIPT

1. Run the rman scripts: `cd /production_dump/lcb/scripts/dba/RMS_clone`
2. `rm -r nohup.out` if applicable. `vi ora_db_dup.ksh`
3. Execute script with the following syntax:
4. `nohup ora_db_dup.ksh rxx1 rp01 "Mar 14 2011 12:00:00" &`. Adjust data and time as required.
5. Go to `/home/orarxx1/clone` to see check log file to see if restore is cloning environment. `/home/orarxx1/clone$ tail -f rman_rxx1_dup.log`

Once database clone is complete follow postclone steps on next page>

POST RMS DB Clone Requirements

The Post Clone script should be ran as follows:

All steps performed by script will be labeled (script).

Following is the location of the post clone DB script

Note:

Author : Satyakam Bhat

Date : 08/06/2010

/dump/scripts/filesystem/prod_scripts/clone_scripts/post_clone.sh

This script should be run after the DB clone is completed and the clone database is up and running

Salient features of the script ...

- 1) Interactive script
- 2) Can be rerun multiple times
- 3) You can choose to run specific functions of the script
- 4) Detailed log files created for all script executions

The script performs the following functions

- 1) Reset passwords.
- 2) Unlock user accounts.
- 3) Drop and recreate DB links.
- 4) Drop and recreate Database directories.
- 5) Miscellaneous database updates.

Reset Passwords (script):

This function will do the following :

- 1) Reset passwords for important schemas like rms12dev/alloc12dev/rsm12dev
- 2) Reset the passwords for all ReIM users in IM_USER_AUTHORIZATION table
- 3) Reset the passwords for all Allocation users in ALC_USERS table

The script will prompt you to provide the following info ...

- a) New password for RMS12DEV
- b) New password for ALLOC12DEV
- c) New password for RSM12DEV

Note : Please have this information handy with you before you execute this portion of the script

Unlock user accounts (script):

This function will check for any user accounts in dba_users table which are in locked status and will unlock those user accounts

No user inputs are required for this function

Drop and create DB links (script):

This function will drop and recreate all the database links which are pointing to production servers

The script will prompt for the following inputs

Apps password for the corresponding EBS instance

SIM12DEV password for the corresponding SIM instance

RDW12DM password for the corresponding RDW instance

Note :

Please ensure that you have the above passwords ready with you before you invoke the script

Please ensure that you have the tns entries set up for the instances referred by the db links

Drop and create directories (script):

This function will drop and recreate all the database directories which are pointing to production servers

The script will prompt for the SID of the cloned RMS instance which should be entered in lower case

Miscellaneous updates (script):

This function will perform following miscellaneous database updates..

- 1) Update rib doc types URL in rib_doctypes table
- 2) Update various values in xxlcb_properties_xref table
- 3) Delete records from the following RIB tables
 - rib_message_routing_info
 - rib_message_failure
 - rib_message_hospital_ref
 - rib_message

Note : Please ensure that you have the following info with you before you invoke this script

a) RIB dtd url b) BPEL url c) RMS report server name

URL examples:

a.RIB doctype for postclone script(see spreadsheet)

<http://lbrmsdevapp31.pa.lcl:7779/dtd>

b.BPEL url for script:

<http://lbbpeldevdb31.pa.lcl:7777>

URL examples continued:

c.Report server:

rep_lbrmsdevapp31_ouihome1

Other post DB clone steps:

Must do following manual updates:

Some directories are not corrected by the script some examples from 31 clone are:

create or replace directory DATA_PUMP_DIR1 as '/production_dump/database/RD31';

create or replace directory QUEST_SOO_ADUMP_DIR as
'/apps/rd31/arch/admin/adump/';

create or replace directory QUEST_SOO_BDUMP_DIR as
'/apps/rd31/arch/admin/bdump/';

create or replace directory QUEST_SOO_CDUMP_DIR as
'/apps/rd31/arch/admin/cdump/';

create or replace directory QUEST_SOO_UDUMP_DIR as
'/apps/rd31/arch/admin/udump/';

create or replace directory REPL_RESULTS as '/production_dump/rd31';

Update xxlcb. xxlcb_properties_xref with current BPEL Server details.

a) Change all email IDs - update xxlcb_properties_xref set property_value = 'LB-ERPtestusers@state.pa.us' where property_value like '%deloitte'

Update xxlcb. xxlcb_properties_xref set property_value = 'LB-ERPtestusers@state.pa.us' where property_value like '%deloitte.com';

b) Update bpel host information - update xxlcb_properties_xref set property_value = replace(property_value, 'lbbpelprddb01.pa.lcl:7778', 'lbsbxrmsdb01.pa.lcl:7777')

c) update xxlcb_properties_xref set property_name = 'RXXX' where property_name = 'RP01'

Verify all references to prod in table are changed.

Also change where property_name='SMTP_HOST'
To smtp.lcb.state.pa.us

Also

Update the reports_server, webhelp_server, and app_server fields in rms12dev.lang table.

On Target DB Server, change directory to /apps/rxx1/rms/install_dir/rms/data, sqlplus as rms schema owner, then run @drop_filter_policy.sql and @add_filter_policy.sql

On Target DB Server, Compile invalid objects in the database. Change directory to \$INSTALL_DIR/utility, sqlplus as RMS schema owner and run @inv_obj_comp.sql

Usually never needed: If schema name is different in the Target DB, then update system_options table to set table_owner = <schema owner>

On the target DB host, recreate batch libraries. Change directory to \$INSTALL_DIR/db_objects, sqlplus as RMS schema owner and run @createordlib.sql, @dealinlib.sql, @dealordlib.sql and @scllib.sql

IN DB sever:

Compile Batch Libraries

1. Copy the files from STAGING_AREA/batch/lib/src to INSTALL_DIR/rms/oracle/lib/src.
2. Change directories to INSTALL_DIR/rms/oracle/lib/src.
3. Create library dependencies.
 - a. For UNIX, run this command:
make -f retek.mk depend 2>&1 | tee libdpnd.log should just need to run this command files are in place.
 - c. Check the libdpnd.log file for errors.

Unregister old database with database removed

1. Log into rman database on lbprodmonitor : unix login as: orarman
2. Sqlplus rman<cloneSID>@rmandph
3. Ex. sqlplus rmanrxx1@rmandph
4. Login as rman<cloneSID>
5. Password: same name.
6. Query to find dbid of old database.
7. Select dbid, name from rc_database;
8. Note the dbid.

SQL> select * from rc_database;

DB_KEY	DBINC_KEY	DBID	NAME	RESETLOGS_CHANGE#	RESETLOGS
1	2 2659983639	RD31		3.5634E+12	14-MAR-11
8321	8322 2666276219	RD31		3.5672E+12	25-MAY-11

9. Run unreg script on /production_dump/lcb/scripts/dba/EBS_clone/ ora_unreg_rman_dbid.ksh

10. Include the clone_SID and dbid (upper case if applicable).

11. Ex. ora_unreg_rman_dbid.ksh <cloneSID> <dbid>.

12. There is a bug with this unreg command in rman

13. RMAN>

14. database name is "RA81" and DBID is 2398101848

15. database unregistered from the recovery catalog

16.

17. RMAN-00571:

18. RMAN-00569: ===== ERROR MESSAGE STACK FOLLOWS

19. RMAN-00571:

20. RMAN-03002: failure of DBNAME command at 06/15/2011 16:45:37

21. RMAN-06014: command not implemented yet: DBNAME

22. Check: SQL> select dbid, name from rc_database;

23.

24. no rows selected

25.

26. SQL>

Go to target database server and run this:

Registering database with RMAN Repository

Must be in archivelog mode

1. Location: /production_dump/lcb/scripts/dba/EBS_clone.

2. Run ora_reg_db_rman.ksh <cloneSID>. Ex. ora_reg_db_rman.ksh sa81

3. Crontab -e

4. Only on brand new db: Set arch script to run and complete for first time:

5. 35 15 * * * /dump/scripts/DB/rman_tape_archive.sh SA81 >> /dev/null 2>&1

6. Save crontab changes.

7. When finished, comment out same: #35 15 * * *

/dump/scripts/DB/rman_tape_archive.sh SA81 >> /dev/null 2>&1

8. Crontab -e

9. Start full backup for first time: 45 15 * * * /dump/scripts/DB/rman_tape_full.sh

SA81 >> /dev/null 2>&1

10. Save crontab changes.
11. Comment out full backup when completed: #45 15 * * *
/dump/scripts/DB/rman_tape_full.sh SA81 >> /dev/null 2>&1
12. Save crontab changes.
13. Done ?.

Crosschecking

1. rman
2. connect target
3. connect catalog rman<sid>/<password/same name (rman)>@rmandph
4. crosscheck archivelog all;
5. delete expired archivelog all;

If you have to move archivelogs because of space issues;

1. Move archivelogs back to original location.
2. Run archive backup.
3. Run full backup.
4. Run archive backup.

Remove tns entry for rp01 from tnsnames.ora file on db server when db clone steps are complete.

POST RMS Application Refresh Requirements

On database server must push contents of the following two directories to the target server (example is rd31):

```
scp -pr /apps/rp01/oracle/XXLCB orard31@lbrmsdevdb31:/apps/rd31/oracle/
```

```
scp -pr /apps/rp01/rms/install_dir orard31@lbrmsdevdb31:/apps/rd31/rms/
```

Once copied delete any un-needed folders. Change permissions to 777 recursively if needed to copy them to target server.

Change server details in

INT067.properties, INT287.properties, INT147.properties, INT052.properties

There may be additional .properties files to be checked as well.

If install_dir is copied from some other database, Remove all traces of database connection details from file under /XXLCB/bin

Must look in XXLCB/bin and XXLCB/sql for environment specific info and change using %s/rp01/rxxx/g when possible.

```
find . -exec grep -q "rp01" '{}' \; -print  
find . -exec grep -q "RP01" '{}' \; -print  
find . -exec grep -q "oldm0nk" '{}' \; -print  
find . -exec grep -q "lbrmsprddb01" '{}' \; -print
```

On Applications server must push contents of the following two directories to the target server (example is rd31):

```
scp -pr /apps/rp01/rms/install_dir appr31@lbrmsdevapp31:/apps/rd31/rms/
```

```
scp -r /apps/rp01/rms/XXLCB appr31@lbrmsdevapp31:/apps/rd31/rms/
```

Again use search strings above to locate and change any production references. It may also be useful to search for cp01 or sp01.

APPENDIX GG

RPAS CLONE DOCUMENT

RPAS Clone

Version: 1.0

- 1. Backup.**
- 2. Copy Source to Target.**
- 3. Modify env files on target**
- 4. Create secondary env on test env.**
- 5. Make changes to client foundation.fcf**

1. Backup

Put down RPAS services with command
"stoprpas" from user apppp01.
Verify no services are running from location /apps/pp01/rpas.

Backup the whole filesystem under /apps/pp01/rpas.

2. Copy Source to Target

Approach 1

While the services are down copy the production to target.
Eg if source is lbplnprdapp01 and target is lbplntstapp81
Create directory /apps/pp01/rpas in the target location.
Cd /apps/pp01/rpas
scp -rp apppp01@lbplnprdapp01:/apps/pp01/rpas .

Approach 2.

Extract the production backup tar file to target server with the same directory path.
Ie create ./apps/pp01/rpas and extract all the files from tar to this location.

3. Modify env files on the target.

If the Daemon service port change is required , that can be done in retaillogin.ksh in /apps/pp01/rpas.

The section where the change goes is
echo
#echo "Setting startrpas/stoprpas aliases in the shell"
alias startrpas="DomainDaemon -port 33333 -start &"
alias stoprpas="DomainDaemon -port 33333 -stop"

4. Create Secondary env in target location.

As we are not using standard clone procedure of rpas we cannot clone rpas from production to non production using rpas clone procedure and create a new env with different paths on the first stage

To create a new env in non-production we should first create a production replica as from step 3.

Once you have the production replica from the step above

Then create the new directory

eg /apps/pd01/rpas

Apart from domains folder copy everything from /apps/pp01/rpas to your target folder /apps/pd01/rpas.

Make the necessary changes for the paths and port in retaillogin.ksh and all the scripts referenced in it. ie toolslogin.ksh, jdbclogin.ksh and rpaslogin.ksh

Create empty directory structure

/apps/pd01/rpas/domains/rdf1

and

/apps/pd01/rpas/domains/cm

As the target user run retaillogin.ksh and source the env.

Run command to copy domains to target location.

```
cd /apps/pd01/rpas/domains/rdf1
```

```
copyDomain -d /apps/pp01/rpas/domains/rdf1/RDF_12 .
```

```
cd /apps/pd01/rpas/domains/cm
```

```
copyDomain -d /apps/pp01/rpas/domains/cm/Cat_Man .
```

the above copyDomain commands can be run in parallel.

Once the above commands completes you have a new cloned env.

5. Make changes to Foundation.fcf

For clients to connect to the new environment make sure the client foundation.fcf file is updated with the new env details.

APPENDIX HH

SIM APPLICATION CLONE

SIM Application clone

SIM Application clone involves following steps

- A. Copying files from source system
- B. Run sign/unsigned

A. Copying files from source system

1. Stop wavelink service
2. Stop application server
3. Backup application server
4. Copy following files/directory from Source system
 - \$ORACLE_HOME/j2ee/sim-<env>/sim-home/library
 - \$ORACLE_HOME/j2ee/sim-<env>/applications/sim-client/sim-client/lib
 - \$ORACLE_HOME/j2ee/sim-<env>/applications/sim12.ear

Note - This list will change as we modify the files for extensions and migrations

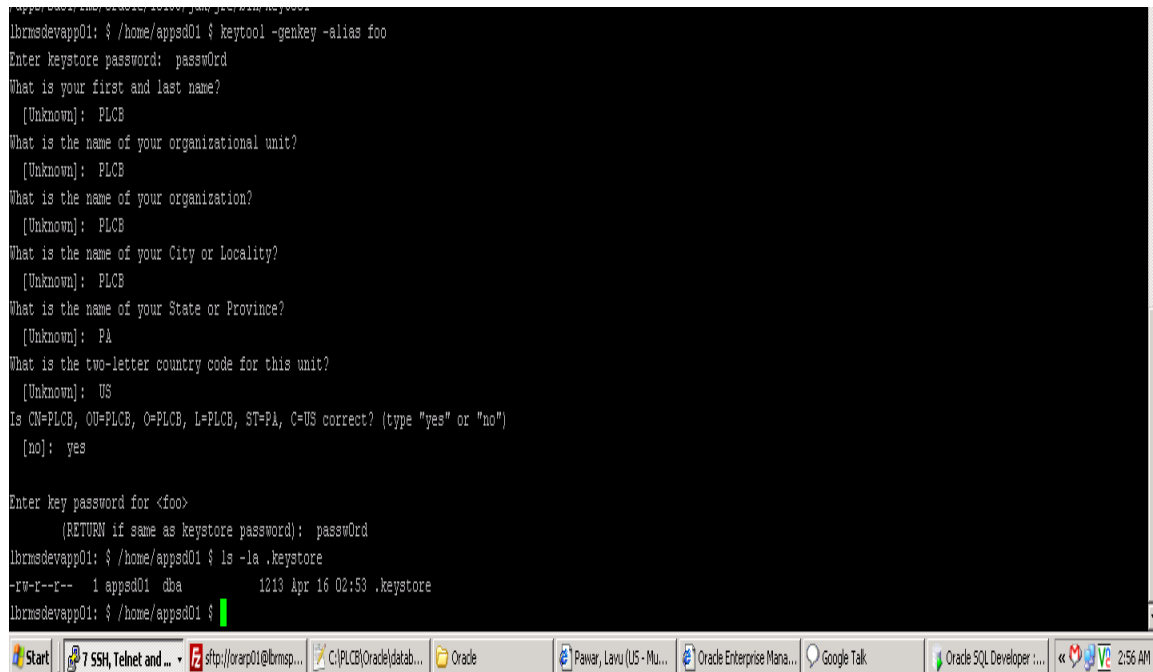
B. Run sign/unsigned

- Manual Procedure for Sign/Unsigned
- Automated process for Sign/Unsigned

Manual Procedure for Sign/Unsigned

1. Create key to be used for Sign/Unsigned by using keytool command. This command prompts for a keystore password along with organizational info. This is one-time activity, and it is done when SIM Application is installed

```
lbrmsdevapp01: $ /home/apps01 $ keytool -genkey -alias foo
Enter keystore password: passw0rd
What is your first and last name?
[Unknown]: PLCB
What is the name of your organizational unit?
[Unknown]: PLCB
What is the name of your organization?
[Unknown]: PLCB
What is the name of your City or Locality?
[Unknown]: PLCB
What is the name of your State or Province?
[Unknown]: PA
What is the two-letter country code for this unit?
[Unknown]: US
Is CN=PLCB, OU=PLCB, O=PLCB, L=PLCB, ST=PA, C=US correct? (type "yes" or "no")
[no]: yes
Enter key password for <foo>
(RETURN if same as keystore password): passw0rd
lbrmsdevapp01: $ /home/apps01 $ ls -la .keystore
-rw-r--r-- 1 apps01 dba      1213 Apr 16 02:53 .keystore
lbrmsdevapp01: $ /home/apps01 $
```



2. Unsign and Sign the jar

1. Copy the Jar to temp directory
2. Extract the jar by using `jar -xvf <jarname>`
3. Unsign the jar by navigating to META-INF directory and remove files with extension *.SF *.DSA and *.RSA
4. Jar the file again by using command `jar -cvf <jarname> *`
5. Sign the jar by using command `jarsigner <jarname> <alias>`

This needs to be done for all jar files in directory \$ORACLE_HOME/j2ee/sim-
<env>/applications/sim-client/sim-client/lib. The current count of jar file is 64


```

lbrmsdevapp01: $ /home/oras01/temp $ cd $ORACLE_HOME/j2ee/sim-sd01/applications/sim-client/sim-client/lib
lbrmsdevapp01: $ /apps/sd01/cms/oracle/10133/j2ee/sim-sd01/applications/sim-client/sim-client/lib $ cp sim-config.jar /home/oras01/temp
lbrmsdevapp01: $ /apps/sd01/cms/oracle/10133/j2ee/sim-sd01/applications/sim-client/sim-client/lib $ cd /home/oras01/temp
lbrmsdevapp01: $ /home/oras01/temp $ jar -xvf sim-config.jar
inflated: META-INF/MANIFEST.MF
inflated: META-INF/FOO.SF
inflated: META-INF/FOO.DSA
  created: META-INF/
  created: retek/
inflated: client_master.cfg
inflated: date.cfg
inflated: ejb.cfg
inflated: log4j.xml
inflated: retek/rules_sim.xml
inflated: services.cfg
inflated: sim.cfg
inflated: wireless_client_master.cfg
lbrmsdevapp01: $ /home/oras01/temp $ cd META-INF
lbrmsdevapp01: $ /home/oras01/temp/META-INF $ rm *.SF *.DSA *.RSA
rm: *.RSA: A file or directory in the path name does not exist.
lbrmsdevapp01: $ /home/oras01/temp/META-INF $ cd ..
lbrmsdevapp01: $ /home/oras01/temp $ ls -l
total 128
drwxr-xr-x  2 oras01  dba          256 Apr 16 03:28 META-INF
-rw-r--r--  1 oras01  dba          8771 Apr 16 03:27 client_master.cfg
-rw-r--r--  1 oras01  dba         12287 Apr 16 03:27 date.cfg
-rw-r--r--  1 oras01  dba           189 Apr 16 03:27 ejb.cfg
-rw-r--r--  1 oras01  dba         1866 Apr 16 03:27 log4j.xml
drwxr-xr-x  2 oras01  dba          256 Apr 16 03:27 retek
-rw-r--r--  1 oras01  dba          5467 Apr 16 03:27 services.cfg
-rw-r--r--  1 oras01  dba         13650 Apr 16 03:27 sim-config.jar
-rw-r--r--  1 oras01  dba          2430 Apr 16 03:27 sim.cfg
-rw-r--r--  1 oras01  dba          288 Apr 16 03:27 wireless_client_master.cfg
lbrmsdevapp01: $ /home/oras01/temp $ cd META-INF
lbrmsdevapp01: $ /home/oras01/temp/META-INF $ ls -l
total 8
-rw-r--r--  1 oras01  dba           635 Apr 16 03:27 MANIFEST.MF
lbrmsdevapp01: $ /home/oras01/temp/META-INF $ cd ..
lbrmsdevapp01: $ /home/oras01/temp $ rm -f sim-config.jar

```

```

lbrmsdevapp01.PALCL - PuTTY
lbrmsdevapp01: $ /home/oras01/temp $ jar
lbrmsdevapp01: $ /home/oras01/temp $ jar -cvf sim-config.jar *
added manifest
ignoring entry META-INF/
ignoring entry META-INF/MANIFEST.MF
adding: client_master.cfg(in = 8771) (out= 2713) (deflated 69%)
adding: date.cfg(in = 12287) (out= 2081) (deflated 83%)
adding: ejb.cfg(in = 189) (out= 147) (deflated 22%)
adding: log4j.xml(in = 1866) (out= 680) (deflated 63%)
adding: retek/(in = 0) (out= 0) (stored 0%)
adding: retek/rules_sim.xml(in = 40426) (out= 2749) (deflated 93%)
adding: services.cfg(in = 5467) (out= 765) (deflated 86%)
adding: sim.cfg(in = 2430) (out= 1198) (deflated 50%)
adding: wireless_client_master.cfg(in = 288) (out= 221) (deflated 23%)
lbrmsdevapp01: $ /home/oras01/temp $ ls -l
total 120
drwxr-xr-x  2 oras01  dba          256 Apr 16 03:28 META-INF
-rw-r--r--  1 oras01  dba          8771 Apr 16 03:27 client_master.cfg
-rw-r--r--  1 oras01  dba         12287 Apr 16 03:27 date.cfg
-rw-r--r--  1 oras01  dba           189 Apr 16 03:27 ejb.cfg
-rw-r--r--  1 oras01  dba         1866 Apr 16 03:27 log4j.xml
drwxr-xr-x  2 oras01  dba          256 Apr 16 03:27 retek
-rw-r--r--  1 oras01  dba          5467 Apr 16 03:27 services.cfg
-rw-r--r--  1 oras01  dba         11923 Apr 16 03:33 sim-config.jar
-rw-r--r--  1 oras01  dba          2430 Apr 16 03:27 sim.cfg
-rw-r--r--  1 oras01  dba          288 Apr 16 03:27 wireless_client_master.cfg
lbrmsdevapp01: $ /home/oras01/temp $ ls -lr sim-config.jar
-rw-r--r--  1 oras01  dba         11923 Apr 16 03:33 sim-config.jar
lbrmsdevapp01: $ /home/oras01/temp $ jarsigner sim-config.jar foo
Enter Passphrase for keystore: PasswOrd

Warning: The signer certificate has expired.
lbrmsdevapp01: $ /home/oras01/temp $ jar -xvf sim-config.jar
inflated: META-INF/MANIFEST.MF
inflated: META-INF/FOO.SF
inflated: META-INF/FOO.DSA
  created: META-INF/
  created: retek/
inflated: client_master.cfg
inflated: date.cfg
inflated: ejb.cfg
inflated: log4j.xml
  created: retek/
inflated: retek/rules_sim.xml
inflated: services.cfg
inflated: sim.cfg
inflated: wireless_client_master.cfg
lbrmsdevapp01: $ /home/oras01/temp $ cd META-INF
lbrmsdevapp01: $ /home/oras01/temp/META-INF $ ls -l
total 24
-rw-r--r--  1 oras01  dba         1054 Apr 16 03:34 FOO.DSA
-rw-r--r--  1 oras01  dba          712 Apr 16 03:34 FOO.SF
-rw-r--r--  1 oras01  dba          591 Apr 16 03:34 MANIFEST.MF
lbrmsdevapp01: $ /home/oras01/temp/META-INF $

```

3. Package all jar files (available in lib directory) in sim-client.war
 1. Copy \$ORACLE_HOME/j2ee/sim-\$env1/applications/sim-client/sim-client.war into temp directory
 2. Unjar the war file (jar -xvf sim-client.war)
 3. Copy all jar files (newly signed) from lib directory to respective location in sim-client.war file
 4. And jar the sim-client.war (jar -cvf sim-client.war *), copy to its original location (\$ORACLE_HOME/j2ee/sim-\$env1/applications/sim-client/sim-client.war)

4. Package the sim-client.war in sim-client.ear
 1. Copy \$ORACLE_HOME/j2ee/sim-\$env1/applications/sim-client.ear to temp location
 2. Unjar the sim-client.ear (jar -xvf sim-client.ear)
 3. Copy newly created sim-client.war file into sim-client.ear file
 4. Jar the sim-client.war (jar -cvf sim-client.ear *) and copy it to
 5. sim-client.ear \$ORACLE_HOME/j2ee/sim-\$env1/applications/.

5. Start the Application and wavelink services

Automated process for Sign/Unsign

This is usually done by automated script `simpatch.sh`, located at `($HOME/unsign)`.

Option to be selected as

1 - Apply patch at sim client

2 - Run sign and unsign (Ensure that 500 MB size available at \$HOME Dir))

```
lhrmsdevapp01: $ /home/orasd01/unsign $ ./simpatch.sh
SIM Patch Application utility

Hostname - lhrmsdevapp01
User - orasd01

1 - Apply Patch at SIM Client
2 - Apply patch at SIM server
3 Exit

Selection: 1

SIM Patch Application utility

Hostname - lhrmsdevapp01
User - orasd01

1 - Update jar at SIM Client
2 - Run sign/unsign
3 Exit

Selection: █
```

APPENDIX II
SIM REFRESH

SIM REFRESH

DB/APP Refresh SIM

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DB REFRESH-TNSNAMES: SP01 and RMANDPH

1. Check tnsnames.ora file and make sure that entries for sp01 and rmandph are included.
2. Log onto lbsimuatdb81 as orasa81.
3. cd /apps/sa81/oracle/product/10.2.0.3/network/admin
4. more tnsnames.ora
5. make sure the following entries are in tnsnames.ora:
6. rmandph =

RMANDPH=

```
(DESCRIPTION =  
  (ADDRESS = (PROTOCOL = TCP)(HOST = lbprodmonitor)(PORT = 1521))  
  (CONNECT_DATA =  
    (SERVER = DEDICATED)  
    (SERVICE_NAME = rmandph)  
  )  
)
```

SP01 =

```
(DESCRIPTION =  
  (ADDRESS_LIST =  
    (ADDRESS = (PROTOCOL = TCP)(HOST = lbsimprddb01.pa.lcl)(PORT = 1521))  
  )  
  (CONNECT_DATA =  
    (SERVICE_NAME = sp01)  
    (INSTANCE_NAME = sp01)  
  )  
)
```

Delete .dbf, .log, .ctl files

1. Delete all .dbf, .log, and .ctl files in /apps/sa81/oradata.
2. lbsimuatdb81: /apps/sa81/oradata/data01\$ rm -Rf *
3. remove /apps/sa81/arch/control_files, if applicable.
4. Disable crontab jobs if applicable.
5. cd /home/orasa81/clone
6. remove rm -r rman_sa81_dup.log rman_sa81_reg.log
7. These files are generated with the clone.
8. Check oracle home variable: cd \$ORACLE_HOME
9. lbsimuatdb81: /apps/sa81/oracle/product/10.2.0.3/dbs\$ sqlplus / as sysdba
10. Start db in no mount with pfile.
11. SQL> startup nomount pfile=/apps/sa91/oracle/product/10.2.0.3/dbs/initSA91.ora

RMAN SCRIPT

1. Run the rman scripts:
2. cd /production_dump/lcb/scripts/dba/SIM_clone
3. rm -r nohup.out if applicable.

4. vi ora_db_dup.ksh
5. make sure that ora_db_dup.ksh has the correct variables, ex. DB_VER=10203
6. next command line make sure Month is **MMM**.
7. nohup ora_db_dup.ksh sa81 sp01 "MAY 16 2011 06:00:00" &
8. Make sure that nohup is lower case, and " are correct.
9. lbsimuatdb81: /production_dump/lcb/scripts/dba/SIM_clone\$ nohup ora_db_dup.ksh sa81 sp01 "MAY 16 2011 06:00:00" &
10. Go to /home/orasa81/clone to see check log file to see if restore is cloning environment.
11. lbsimuatdb81: /home/orasa81/clone\$ tail -f rman_sa81_dup.log
12. if an error occurs and rmandph cannot find a log file.
13. Check toad to see missing log file sequence:

```
select name, sequence#, next_time from v$sarchived_log
where sequence#=5328
```

NAME	SEQUENCE#	NEXT_TIME
SPDR01	5328	5/16/2011 6:06:32 AM
	5328	5/16/2011 6:06:32 AM

1. The sequence number was found from error message on environment being refreshed.
RMAN-00571:

```
=====
```

```
RMAN-00569: ===== ERROR MESSAGE STACK FOLLOWS
```

```
=====
```

```
RMAN-00571:
```

```
=====
```

```
RMAN-03002: failure of Duplicate Db command at 05/16/2011 12:36:19
```

```
RMAN-03015: error occurred in stored script Memory Script
```

```
RMAN-06053: unable to perform media recovery because of missing log
```

```
RMAN-06025: no backup of log thread 1 seq 5328 lowscn 3566761589247 found  
to restore
```

2. Kick off the backup in SP01 in crontab -e
3. To reflect the missing sequence number:
4. 10 13 * * * /dump/scripts/DB/rman_tape_archive.sh SP01 >> /dev/null 2>&1
5. When completed, check to make sure that the seq number exists from this backup:
6. archive log filename=/apps/sp01/arch/SP01_0001_683753972_000000**5328**.ARC
recid=8250 stamp=751270001
7. Comment out the crontab on production.
8. Crontab -e
9. #10 13 * * * /dump/scripts/DB/rman_tape_archive.sh SP01 >> /dev/null 2>&1

POST SIM Requirements

Post DB restore validations

1. Check RMAN DBID, if not changed, change it.
2. Add temp file, if it not there:

```
SQL> select file_name from dba_temp_files;  
FILE_NAME
```

```
-----  
/apps/sa81/oradata/data03/temp01.dbf  
/apps/sa81/oradata/data03/temp02.dbf  
/apps/sa81/oradata/data02/temp03.dbf
```

3. Reset sim12dev passwords.
4. Drop and recreate DB links.

```
Check TOAD for DB LINKS:  
create database link EBS_TO_SIM.PA.LCL  
connect to APPS  
identified by xxx  
using 'EA81';
```

```
--create as system  
create public database link RMS_TO_SIM  
connect to RMS12DEV  
identified by xxx  
using 'ra81';
```

```
create database link RMS_TO_SIM  
connect to RMS12DEV  
identified by xxx  
using 'ra81';
```

5. Drop and recreate Database directories.
6. If database directory will not create, shut down the database, and retry.
7. desc dba_directories;
CREATE OR REPLACE DIRECTORY DATA_PUMP_DIR AS
'/apps/sa81/oracle/product/10.2.0.3/rdbms/log';
CREATE OR REPLACE DIRECTORY RESA_DIR AS
'/apps/sa81/oracle/INSTALL_DIR/batch/resa';


```

CREATE OR REPLACE DIRECTORY RESA_ORIGINAL_DIR AS
/apps/sa81/oracle/INSTALL_DIR/batch/stockcount';
CREATE OR REPLACE DIRECTORY STOCK_COUNT_DIR AS
/apps/sa811/oracle/INSTALL_DIR/batch/resaOriginal';
CREATE OR REPLACE DIRECTORY STOCK_COUNT_UPLOAD_DIR AS
/apps/sa81/oracle/INSTALL_DIR/batch/stockcountUpload';
CREATE OR REPLACE DIRECTORY ORACLE_OCM_CONFIG_DIR AS
/apps/sa81/oracle/product/10203/ccr/hosts/lbsimprddb01/state';

```

8. Update rib doc types URL in rib_doctypes table:
update rib_doctypes set DOC_TYPE_URL=replace(DOC_TYPE_URL,
'lbrmsprdapp01','lbrmsuatapp81') where DOC_TYPE_URL like '%lbrmsprdapp01%'

9. Update various values in xxlcb_properties_xref table

Change Email IDs

Change All BPEL Production references

Changes ALL sp01 references

10. Delete records from the following RIB tables

11. rib_message_routing_info

```
TRUNCATE TABLE rib_message_routing_info REUSE STORAGE;
```

12. rib_message_failure

```
TRUNCATE TABLE rib_message_failure REUSE STORAGE;
```

13. rib_message_hospital_ref

```
TRUNCATE TABLE rib_message_hospital_ref REUSE STORAGE;
```

14. rib_message

15.

```
TRUNCATE TABLE rib_message REUSE STORAGE;
```

If constraints, run

```
select constraint_name, status from user_constraints
where table_name='RIB_MESSAGE'
```

alter table

```
RIB_MESSAGE
DISABLE constraint
SYS_C006175;
```

alter table

```
RIB_MESSAGE
DISABLE constraint
SYS_C006176;
```

```
alter table
  RIB_MESSAGE
DISABLE constraint
  SYS_C006177;
```

```
alter table
  RIB_MESSAGE
DISABLE constraint
  SYS_C006178;
```

```
alter table
  RIB_MESSAGE
DISABLE constraint
  SYS_C006179;
```

```
alter table
  RIB_MESSAGE
DISABLE constraint
  SYS_C006180;
```

```
alter table
  RIB_MESSAGE
DISABLE constraint
  SYS_C006181;
```

```
alter table
  RIB_MESSAGE
DISABLE constraint
  SYS_C006182;
```

```
alter table
  RIB_MESSAGE
DISABLE constraint
  SYS_C006183;
```

```
alter table
  RIB_MESSAGE
DISABLE constraint
  SYS_C006184;
```

```
alter table
  RIB_MESSAGE
DISABLE constraint
  SYS_C006185;
```

```
alter table
  RIB_MESSAGE
DISABLE constraint
  PK_RIB_MESSAGE;
```

If dependencies exist then:

```
alter table rib_message disable constraint pk_rib_message cascade;
alter table rib_message enable constraint pk_rib_message;
```

16. Enable all constraints again.

Reporting--

17. update rk_retail_store_printer
update rk_retail_store_printer set
printer_network_address=replace(printer_network_address,'lbsimprddb01','lbsimuatdb81'
) where printer_network_address like '%lbsimprddb01%'
Also, update the P1 value of printer name to PT for training stores:
5133, 9114, 2215, 4013, 2516, 0214, 2514, 3302

18. update rk_store_config set config_value=replace(config_value,'sp01','sa81') where
config_value like '%sp01%'

19. update rk_store_config set
config_value=replace(config_value,'lbsimprddb01','lbsimdevapp21') where config_value
like '%lbsimprddb01%' (Assumption here is lbsimuatapp91 is bi publisher host and it is
using same port 7777)

SIM APPLICATION POST CLONE ACTIVITIES

1. Stop Wavelink Service:
2. Log into app server as ora user
3. cd /apps/sa81/sim/oracle/10133/j2ee/sim-sa81/sim-home/wavelink/bin
4. wavelink-shutdown.sh
5. opmnctl status -l check if application is down, make sure it is down.
6. Copy 10133 to same directory as a backup.
7. cd /home/<orauser>
8. lbsimuatapp81: \$ /home/orasa81 \$ keytool -genkey -alias foo
9. Enter keystore password: Passw0rd
10. cd \$HOME/unsign
11. run ./simpatch.sh
12. Select 1. Apply patch at SIM client.

13. Select 2. Run sign/unsign.

Unregister old database with database removed

1. Log into rman database schema owner on lbprodmonitor
2. Sqlplus rman<cloneSID>@rmandph
3. Ex. sqlplus rmansa81@rmandph
4. Login as rman<cloneSID>
5. Password: same name.
6. Query to find dbid of old database.
7. Select dbid, name from rc_database;
8. Note the dbid.
9. Run unreg script on /production_dump/lcb/scripts/dba/EBS_clone/ ora_unreg_rman_dbid.ksh
10. Include the clone_SID and dbid (upper case if applicable).
11. Ex. ora_unreg_rman_dbid.ksh <cloneSID> <dbid>.
12. There is a bug with this unreg command in rman
13. RMAN>
14. database name is "RA81" and DBID is 2398101848
15. database unregistered from the recovery catalog
- 16.
17. RMAN-00571:
=====
18. RMAN-00569: ===== ERROR MESSAGE STACK FOLLOWS
=====
19. RMAN-00571:
=====
20. RMAN-03002: failure of DBNAME command at 06/15/2011 16:45:37
21. RMAN-06014: command not implemented yet: DBNAME
22. Check: SQL> select dbid, name from rc_database;
- 23.
24. no rows selected
- 25.
26. SQL>

Registering database with RMAN Repository

Must be in archivelog mode

1. Location: /production_dump/lcb/scripts/dba/EBS_clone.
2. Run ora_reg_db_rman.ksh <cloneSID>. Ex. ora_reg_db_rman.ksh sa81
3. Crontab -e
4. Set arch script to run and complete for first time:
5. 35 15 * * * /dump/scripts/DB/rman_tape_archive.sh SA81 >> /dev/null 2>&1
6. Save crontab changes.
7. When finished, comment out same: #35 15 * * * /dump/scripts/DB/rman_tape_archive.sh SA81 >> /dev/null 2>&1

8. Crontab -e
9. Start full backup for first time: `45 15 * * * /dump/scripts/DB/rman_tape_full.sh SA81 >> /dev/null 2>&1`
10. Save crontab changes.
11. Comment out full backup when completed: `#45 15 * * * /dump/scripts/DB/rman_tape_full.sh SA81 >> /dev/null 2>&1`
12. Save crontab changes.
13. Done ☺.

Crosschecking




1. Run on database server you are cloning
2. `rman`
3. `connect target`
4. `connect catalog rman<sid>/<password/>same name (rman>@rmandph`
5. `crosscheck archivelog all;`
6. `delete expired archivelog all;`

If you have to move archivelogs because of space issues;

1. Move archivelogs back to original location.
2. Run archive backup.
3. Run full backup.
4. Run archive backup.

APPENDIX JJ
RISK TRACKER


Sample Risk Tracker Data Entry Screen


Title *	<input type="text"/>
Assigned To	<input type="text"/>  
Status *	<input type="text"/>
Impact *	<input type="text"/>
Description	<div style="border: 1px solid #ccc; padding: 5px;"> <div style="border-bottom: 1px solid #ccc; margin-bottom: 5px;"> A A↑ B I U ☰ ☱ ☲ ☳ ☴ ☵ ☶ ☷ ☰ ☱ ☲ ☳ ☴ ☵ ☶ ☷ ☰ ☱ ☲ ☳ ☴ ☵ ☶ ☷ ☰ ☱ ☲ ☳ ☴ ☵ ☶ ☷ ☰ ☱ ☲ ☳ ☴ ☵ ☶ ☷ </div> <div style="height: 100px;"></div> </div>
Category *	<input type="text"/>
Related Risks	<div style="display: flex; align-items: flex-start;"> <div style="border: 1px solid #ccc; padding: 5px; width: 200px;"> <ul style="list-style-type: none"> <li style="background-color: #e0e0e0;">2 - Appworx 8 license 3 - Integration/ Regre 4 - Data loading sche 5 - Appworx installati 6 - Potential outsourc 7 - Other projects rur 8 - Treasury impleme 9 - Core IT Vacancies 10 - KT sessions canr 11 - Complete Updat </div> <div style="margin-left: 10px;"> <input type="button" value="Add >"/> <input type="button" value=" < Remove"/> </div> <div style="border: 1px solid #ccc; width: 100px; height: 100px; margin-left: 10px;"></div> </div>
Comments	<div style="border: 1px solid #ccc; padding: 5px;"> <div style="border-bottom: 1px solid #ccc; margin-bottom: 5px;"> A A↑ B I U ☰ ☱ ☲ ☳ ☴ ☵ ☶ ☷ ☰ ☱ ☲ ☳ ☴ ☵ ☶ ☷ ☰ ☱ ☲ ☳ ☴ ☵ ☶ ☷ ☰ ☱ ☲ ☳ ☴ ☵ ☶ ☷ </div> <div style="height: 100px;"></div> </div>
Potential Impact Date	<input type="text"/> 
Response	<input type="text"/>
Project Impact *	<div style="border: 1px solid #ccc; height: 100px;"></div>
Source of Risk	<input type="text"/>
Assigned Team	<input type="text"/>
Activity ID	(None) <input type="text"/>


APPENDIX KK
DEFECT TRACKER


IBMS Test Defects - New Item
Sample Defect Tracker Data Entry Screen


Edit



Save
Commit



Cancel
































































































Paste
Clipboard


Cut
Clipboard


Copy
Clipboard


Attach File
Actions


Spelling
Spelling

Title *	<input type="text"/>
Test Case ID *	<input type="text"/>
Test Phase *	06-CUTOVER ▼
Module or System *	<input type="text"/> ▼
Severity *	<input type="text"/> ▼
Defect Status *	00-NEW ▼
Environment *	04-PRD05 ▼
Detected By *	<input type="text"/>  
Assigned To	<input type="text"/>  
45 - Tester	<input type="text"/>  
Due Date	<input type="text"/> 
Priority	<input type="text"/> ▼
Defect Details *	<div style="border: 1px solid #ccc; padding: 5px;"> <div style="background-color: #e0e0e0; padding: 2px; font-size: 0.9em;"> A A1 B I U                              </div> <div style="height: 80px; border: 1px solid #ccc;"></div> </div>
Steps to Reproduce *	<div style="border: 1px solid #ccc; padding: 5px;"> <div style="background-color: #e0e0e0; padding: 2px; font-size: 0.9em;"> A A1 B I U                              </div> <div style="height: 80px; border: 1px solid #ccc;"></div> </div>
Recommended Action	<div style="border: 1px solid #ccc; padding: 5px;"> <div style="background-color: #e0e0e0; padding: 2px; font-size: 0.9em;"> A A1 B I U                              </div> <div style="height: 20px; border: 1px solid #ccc;"></div> </div>

APPENDIX LL

NON-IBMS APPLICATION INVENTORY

Appendix LL, Non-IBMS Application Inventory

General				Technical								
Ref. #	Agency Name	MidRange ID/Name	Primary Role (Prod/Test)	Server Manufacturer	Model	Processor Type and Speed	Number of Cores	Number of LPARs	Amount of Memory	Operating System	Operating System Version	Other software running on Server
**	Department X			IBM						LINUX	3.2.3-42	
1	PLCB	Server-8205-E6C-SN0694A8R-p740	Test	IBM	8205-E6C	64 Bit/3550 MZ	16	4	51GB	AIX	5.3	
2	PLCB	Server-9133-55A-SN0649A5H-DR-1	Test	IBM	9133-55A	64 bit/1648 MZ	8	9	40GB	AIX	5.3	
3	PLCB	Server-9133-55A-SN065BCFH-DR-2	Test	IBM	9133-55A	64 bit/1648 MZ	8	8	40GB	AIX	5.3	
4	PLCB	Server-8205-E6B-SN10BD02P-Trn	Test	IBM	8205-E6B	64 Bit/3550 MZ	16	12	11GB	AIX	5.3	
5	PLCB	Server-9117-570-SN06593E0-DR1	Prod	IBM	9117-570	64 Bit/2198 MZ	16	14	51GB	AIX	5.3	
6	PLCB	lbgift1	Prod	IBM	9131-52a	64 Bit/2097 MZ	1	1	2GB	AIX	5.3	
7	PLCB	lbgift2	Prod	IBM	9131-52a	64 Bit/2097 MZ	1	1	2GB	AIX	5.3	
8	PLCB	lbdrwms	Prod	IBM	9131-55a	64 Bit/1896 MZ	2	1	4GB	AIX	5.3	
9	PLCB	netman	Test	IBM	7025-F50	32 Bit/332 MZ	2	1	1GB	AIX	5.1	

Appendix LL, Non-IBMS Application Inventory

General				Technical									
Ref. #	Agency Name	Server ID/Name	Primary Role (Prod/Test)	Server Manufacturer	Capacity				System Software				
					Model	CPU Type & Number	RAM	Physical / Virtual	Local Disk Capacity	Operating System	Operating System Version	Other software running on Server	
**	Department X			IBM	BladeSystem c3000						LINUX	3.2.3-42	
1	PLCB	LB_DC_ERP	Prod	IBM		2	1024 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
2	PLCB	LBACT01	Test	IBM		1	1024 MB	Virtual			Microsoft Windows XP Professional (32-bit)		
3	PLCB	lbavaenterprise01	Prod	IBM		2	4096 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
4	PLCB	LBBAC_Client21	Test	IBM		2	2048 MB	Virtual			Microsoft Windows XP Professional (32-bit)		
5	PLCB	LBBAC21	Test	IBM		4	4096 MB	Virtual			Microsoft Windows Server 2008 R2 (64-bit)		
6	PLCB	lbbranchtest	Test	IBM		1	1024 MB	Virtual			Novell SUSE Linux Enterprise 11 (64-bit)		
7	PLCB	LBCOEVSTST01	Test	IBM		2	4096 MB	Virtual			Microsoft Windows Server 2008 R2 (64-bit)		
8	PLCB	LBCRYRPTDEV21	Test	IBM		2	4096 MB	Virtual			Microsoft Windows Server 2008 R2 (64-bit)		
9	PLCB	LBCRYRPTDEV31	Test	IBM		2	4096 MB	Virtual			Microsoft Windows Server 2008 R2 (64-bit)		
10	PLCB	LBCRYRPTDEV41	Test	IBM		2	4096 MB	Virtual			Microsoft Windows Server 2008 R2 (64-bit)		
11	PLCB	LBCSMGR01	Prod	IBM		2	2048 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
12	PLCB	LBCVS01	Prod	IBM		2	2048 MB	Virtual			Novell SUSE Linux Enterprise 11 (64-bit)		
13	PLCB	LBDDBTEST01	Test	IBM		4	8192 MB	Virtual			Novell SUSE Linux Enterprise 11 (64-bit)		
14	PLCB	LBDIRLINUXTEST01	Test	IBM		1	2048 MB	Virtual			Novell SUSE Linux Enterprise 11 (64-bit)		
15	PLCB	LBDIRSRV01	Prod	IBM		2	2048 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
16	PLCB	LBDIRSRV02	Prod	IBM		2	2048 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
17	PLCB	LBDYNDEV21	Test	IBM		4	4096 MB	Virtual			Microsoft Windows Server 2008 R2 (64-bit)		
18	PLCB	LBDYNPROD01	Prod	IBM		2	4096 MB	Virtual			Microsoft Windows Server 2008 R2 (64-bit)		
19	PLCB	LBEJSRV01	Prod	IBM		2	2048 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
20	PLCB	LBEPODR01	Test	IBM		2	1024 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
21	PLCB	LBEPODR02	Test	IBM		2	1024 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
22	PLCB	LBERPBACK01	Prod	IBM		2	1024 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
23	PLCB	LBERPBACK02	Prod	IBM		2	1024 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
24	PLCB	LBERPBI01	Prod	IBM		1	2048 MB	Virtual			Microsoft Windows XP Professional (32-bit)		
25	PLCB	LBERPSSO01	Prod	IBM		2	4096 MB	Virtual			Novell SUSE Linux Enterprise 10 (32-bit)		
26	PLCB	lbfwmgmt01	Prod	IBM		2	4096 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
27	PLCB	lbhypdevdb25	Test	IBM		1	22528 MB	Virtual			Red Hat Enterprise Linux 5 (64-bit)		
28	PLCB	lbimagesandbox01_sp1	Test	IBM		2	2048 MB	Virtual			Novell SUSE Linux Enterprise 11 (32-bit)		
29	PLCB	LBIME01	Prod	IBM		2	2048 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
30	PLCB	LBINSIGHT01	Prod	IBM		2	2048 MB	Virtual			Novell SUSE Linux Enterprise 11 (64-bit)		
31	PLCB	LBIPMGMT01	Prod	IBM		2	2048 MB	Virtual			Ubuntu Linux (64-bit)		
32	PLCB	lbjavastress01	Test	IBM		4	10240 MB	Virtual			Novell SUSE Linux Enterprise 11 (64-bit)		
33	PLCB	LBLICBACK02	Prod	IBM		1	1024 MB	Virtual			Microsoft Windows XP Professional (32-bit)		
34	PLCB	LBLICBACK03	Prod	IBM		1	1024 MB	Virtual			Microsoft Windows XP Professional (32-bit)		
35	PLCB	LBMANUSR01	Prod	IBM		2	4096 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
36	PLCB	LBMANUTST01	Test	IBM		2	4096 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		

Appendix LL, Non-IBMS Application Inventory

Ref. #	Agency Name	Server ID/Name	Primary Role (Prod/Test)	Server Manufacturer	Model	CPU Type & Number	RAM	Physical / Virtual	Local Disk Capacity	Operating System	Operating System Version	Other software running on Server
37	PLCB	LBMIS91TKZF1.PA.LCL	Test	IBM		2	4096 MB	Virtual		Microsoft Windows XP Professional (32-bit)		
38	PLCB	LBNBOPSCTR01	Test	IBM		2	2048 MB	Virtual		Microsoft Windows Server 2003 Standard (32-bit)		
39	PLCB	LBNETASPPRD01	Prod	IBM		2	4096 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
40	PLCB	LBNFSSRV01	Prod	IBM		2	1024 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		
41	PLCB	LBNFSWINTST01	Test	IBM		2	2048 MB	Virtual		Microsoft Windows Server 2003 Standard (32-bit)		
42	PLCB	lrobi01	Prod	IBM		2	4096 MB	Virtual		Microsoft Windows XP Professional (32-bit)		
43	PLCB	LBOEMRGN2	Prod	IBM		2	12288 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		
44	PLCB	LBORCODEVAPP21	Test	IBM		2	8192 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		
45	PLCB	LBORCODEVDB21	Test	IBM		2	8192 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		
46	PLCB	LBORCOTRAPP61	Test	IBM		2	2048 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		
47	PLCB	LBORCOTRNDB61	Test	IBM		2	2048 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		
48	PLCB	LBPAYSWITCH01	Test	IBM		2	2048 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		
49	PLCB	LBPAYSWITCHPROD	Prod	IBM		2	2048 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		
50	PLCB	LBPERLTRAN01	Prod	IBM		2	2048 MB	Virtual		Microsoft Windows Server 2003 Standard (32-bit)		
51	PLCB	LBPERLTRAN02	Prod	IBM		2	2048 MB	Virtual		Microsoft Windows Server 2003 Standard (32-bit)		
52	PLCB	LBPITWCS01	Prod	IBM		2	2048 MB	Virtual		Microsoft Windows Server 2003 Standard (32-bit)		
53	PLCB	LBPLNDEVAPP25	Test	IBM		1	4096 MB	Virtual		Red Hat Enterprise Linux 5 (64-bit)		
54	PLCB	LBROLL01	Prod	IBM		2	1024 MB	Virtual		Microsoft Windows Server 2003 Standard (32-bit)		
55	PLCB	LBPOSDEV01	Test	IBM		2	8192 MB	Virtual		Microsoft Windows 7 (64-bit)		
56	PLCB	LBPSRV01	Prod	IBM		2	4096 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
57	PLCB	LBPSRV03	Prod	IBM		2	2048 MB	Virtual		Microsoft Windows Server 2003 Standard (32-bit)		
58	PLCB	LBRDSDBO1	Prod	IBM		4	4096 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
59	PLCB	lbrdwdevdb25	Test	IBM		1	4096 MB	Virtual		Red Hat Enterprise Linux 5 (64-bit)		
60	PLCB	LBRedHat-Tom	Test	IBM		2	1024 MB	Virtual		Red Hat Enterprise Linux 5 (64-bit)		
61	PLCB	LBREGMAN01	Prod	IBM		1	2048 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		
62	PLCB	lbrobinsXPvm	Test	IBM		2	2048 MB	Virtual		Microsoft Windows XP Professional (32-bit)		
63	PLCB	LBSAFEBOOT01	Prod	IBM		2	1024 MB	Virtual		Microsoft Windows XP Professional (32-bit)		
64	PLCB	LBSANRSM01	Prod	IBM		2	2048 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		
65	PLCB	LBSECSAN01	Prod	IBM		4	4096 MB	Virtual		Ubuntu Linux (64-bit)		
66	PLCB	LBSECSQUIDDEV21	Test	IBM		2	2048 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		
67	PLCB	LBSECTEST01	Test	IBM		2	4096 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
68	PLCB	LBSECTEST03	Test	IBM		2	1024 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		
69	PLCB	LBSECTWDEV21	Test	IBM		2	4096 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
70	PLCB	LBSHRPNTDEV01	Test	IBM		2	4096 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
71	PLCB	LBSHRSQLDEV21	Test	IBM		4	4096 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
72	PLCB	LBSHRSQLPROD01	Prod	IBM		4	8192 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
73	PLCB	LBSHRSQLUAT91	Test	IBM		2	4096 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
74	PLCB	LBSHRFSDEV21	Test	IBM		4	4096 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
75	PLCB	LBSLEPOSADMIN01	Prod	IBM		4	8192 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		
76	PLCB	LBSLESADMIN01_SP1	Prod	IBM		2	2048 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		

Appendix LL, Non-IBMS Application Inventory

Ref. #	Agency Name	Server ID/Name	Primary Role (Prod/Test)	Server Manufacturer	Model	CPU Type & Number	RAM	Physical / Virtual	Local Disk Capacity	Operating System	Operating System Version	Other software running on Server
77	PLCB	LBSPDEVAPP21	Test	IBM		2	8192 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
78	PLCB	LBSPDEVAPP29	Test	IBM		2	8192 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
79	PLCB	LBSPDEVWEB21	Test	IBM		2	8192 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
80	PLCB	LBSPDEVWEB22	Test	IBM		2	8192 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
81	PLCB	LBSPPRDAPP01	Prod	IBM		2	8192 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
82	PLCB	LBSPPRDAPP09	Prod	IBM		2	8192 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
83	PLCB	LBSPPRDWEB01	Prod	IBM		2	8192 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
84	PLCB	LBSPPRDWEB02	Prod	IBM		2	8192 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
85	PLCB	LBSOSS0101	Prod	IBM		2	4096 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
86	PLCB	LBSPTFSPROD01	Prod	IBM		4	8192 MB	Virtual		Microsoft Windows Server 2008 R2 (64-bit)		
87	PLCB	lbsquidtest007	Test	IBM		2	2048 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		
88	PLCB	LBSRV04	Prod	IBM		2	4096 MB	Virtual		Microsoft Windows Server 2003 Standard (32-bit)		
89	PLCB	lbsrv06	Prod	IBM		1	1024 MB	Virtual		Microsoft Windows Server 2003 Standard (32-bit)		
90	PLCB	LBSRV07	Prod	IBM		2	1024 MB	Virtual		Microsoft Windows Server 2003 Standard (32-bit)		
91	PLCB	lbsrv11	Prod	IBM				Virtual				
92	PLCB	LBSRV12	Prod	IBM		2	4096 MB	Virtual		Microsoft Windows Server 2003 Standard (32-bit)		
93	PLCB	LBSRVPROXY01	Prod	IBM		1	1024 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		
94	PLCB	LBSRVTRNG01	Prod	IBM		2	2048 MB	Virtual		Microsoft Windows Server 2003 Standard (32-bit)		
95	PLCB	LBTSEBSDB03	Prod	IBM		4	4096 MB	Virtual		Microsoft Windows Server 2003 (32-bit)		
96	PLCB	LBTSEBSDB04	Prod	IBM				Virtual				
97	PLCB	LBTSRMTADM01	Prod	IBM		2	2048 MB	Virtual		Microsoft Windows Server 2003 Standard (32-bit)		
98	PLCB	LBUCMPRDAPP02	Prod	IBM		2	2048 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		
99	PLCB	LBUCMPRDDB01	Prod	IBM		2	2048 MB	Virtual		Microsoft Windows Server 2003 Standard (32-bit)		
100	PLCB	lbvma01	Prod	IBM		1	600 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		
101	PLCB	LBWAN01	Prod	IBM				Virtual				
102	PLCB	lbwan02	Prod	IBM		2	2084 MB	Virtual		Microsoft Windows Server 2003 Standard (32-bit)		
103	PLCB	lbwavelink01	Prod	IBM				Virtual				
104	PLCB	LBWEBCR01	Prod	IBM				Virtual				
105	PLCB	LBWEBDEP_Client01	Prod	IBM		2	8192 MB	Virtual		Microsoft Windows 7 (64-bit)		
106	PLCB	LBWEBECPDRWNO1	Prod	IBM		1	2048 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		
107	PLCB	lbwebectst01	Test	IBM		2	4096 MB	Virtual		Novell SUSE Linux Enterprise 11 (64-bit)		
108	PLCB	LBWEBFTPSRV01	Prod	IBM		2	2048 MB	Virtual		Microsoft Windows Server 2003 Standard (32-bit)		
109	PLCB	lbwebmiswebvm01	Test	IBM				Virtual				
110	PLCB	lbwebmiswebvm03	Test	IBM		2	2048 MB	Virtual		Microsoft Windows XP Professional (32-bit)		
111	PLCB	LBWEBPRDAPP11	Prod	IBM		2	2048 MB	Virtual		Other 2.6.x Linux (64-bit)		
112	PLCB	LBWEBSRV01A	Prod	IBM		4	4096 MB	Virtual		Microsoft Windows Server 2003 Standard (32-bit)		
113	PLCB	LBWin2k8Test	Test	IBM				Virtual				
114	PLCB	LBWUP01	Prod	IBM		2	4096 MB	Virtual		Microsoft Windows Server 2003 Standard (32-bit)		
115	PLCB	LBZENPRD01	Prod	IBM				Virtual				
116	PLCB	vReplicator-Appliance-lbvm3850s4	Prod	IBM		1	512 MB	Virtual		Other 2.6.x Linux (32-bit)		

Appendix LL, Non-IBMS Application Inventory

Ref. #	Agency Name	Server ID/Name	Primary Role (Prod/Test)	Server Manufacturer	Model	CPU Type & Number	RAM	Physical / Virtual	Local Disk Capacity	Operating System	Operating System Version	Other software running on Server
117	PLCB	vReplicator-Appliance-lbvm3850s5	Prod	IBM		1	512 MB	Virtual		Other 2.6.x Linux (32-bit)		
118	PLCB	vReplicator-Appliance-lbvm3850s6	Prod	IBM				Virtual				
119	PLCB	lbvm3850s1	Prod	IBM	3850	4	65534 MB	Physical				
120	PLCB	lbvm3850s2	Prod	IBM	3850	4	65534 MB	Physical				
121	PLCB	lbvm3850s3	Prod	IBM	3850	4	65534 MB	Physical				
122	PLCB	lbvm3850s4	Prod	IBM	3850	4	262126 MB	Physical				
123	PLCB	lbvm3850s5	Prod	IBM	3850	4	262126 MB	Physical				
124	PLCB	lbvm3850s6	Prod	IBM	3850	4	262126 MB	Physical				
125	PLCB	lbvm3850s7	Prod	IBM	3850	4	262090 MB	Physical				
126	PLCB	lbvm3850s1	Prod	IBM	3850	4	65534 MB	Physical				
127	PLCB	lbvm3850s2	Prod	IBM	3850	4	65534 MB	Physical				
128	PLCB	lbvm3850s3	Prod	IBM	3850	4	65534 MB	Physical				
129	PLCB	lbvm3850s4	Prod	IBM	3850	4	262126 MB	Physical				
130	PLCB	lbvm3850s5	Prod	IBM	3850	4	262126 MB	Physical				
131	PLCB	lbvm3850s6	Prod	IBM	3850	4	262126 MB	Physical				
132	PLCB	lbvm3850s7	Prod	IBM	3850	4	262090 MB	Physical				
133	PLCB	LBSRV01	Prod	IBM	3650	2	36GB	Physical		Microsoft Windows Server 2008 R2 (64-bit)		
134	PLCB	LBERPSS02	Prod	IBM	3650	2	46GB	Physical		Other 2.6.x Linux (32-bit)		
135	PLCB	LBSRV13	Prod	IBM	XS 346	2	3.25GB	Physical		Microsoft Windows Server 2003 Standard (32-bit)		
136	PLCB	LBMQSRV01	Prod	IBM	XS 346	2	3.37GB	Physical		Microsoft Windows Server 2003 Standard (32-bit)		
137	PLCB	LBTFSBLD01	Prod	IBM	3550 M2	2	4GB	Physical	450GB	Microsoft Windows Server 2008 R2 (64-bit)		
138	PLCB	LBTFSBLD02	Prod	IBM	3550 M2	2	4GB	Physical	450GB	Microsoft Windows Server 2008 R2 (64-bit)		
139	PLCB	LBLOADTST01	Prod	IBM	3650	2	4GB	Physical	273GB	Microsoft Windows Server 2003 Standard (32-bit)		
140	PLCB	LBLOADTST02	Prod	IBM	3650	2	4GB	Physical	273GB	Microsoft Windows Server 2003 Standard (32-bit)		
141	PLCB	LBLOADTST03	Prod	IBM	3650	2	4GB	Physical	273GB	Microsoft Windows Server 2003 Standard (32-bit)		
142	PLCB	LBLOADTST04	Prod	IBM	3650	2	4GB	Physical	273GB	Microsoft Windows Server 2003 Standard (32-bit)		
143	PLCB	LBVMBACK01	Prod	IBM	3650	2	4GB	Physical	1.63TB	Microsoft Windows Server 2003 Standard (32-bit)		
144	PLCB	LBVSPHERE5	Prod	IBM	3550 M2	2	2GB	Physical	464GB	Microsoft Windows Server 2008 R2 (64-bit)		
145	PLCB	LBSURFCONTROL01	Prod	IBM	3550 M2	2	4GB	Physical	464GB	Microsoft Windows Server 2008 R2 (64-bit)		
146	PLCB	LBERPBKUP01	Prod	IBM	3850	2	8GB	Physical	68GB	Microsoft Windows Server 2003 Standard (32-bit)		
147	PLCB	LBTSEBSDB01	Prod	IBM	3850	2	8GB	Physical	68GB	Microsoft Windows Server 2003 Standard (32-bit)		
148	PLCB	LBTSEBSDB02	Prod	IBM	3850	2	8GB	Physical	68GB	Microsoft Windows Server 2003 Standard (32-bit)		
149	PLCB	LBUPKEBSDB01	Prod	IBM	3850	2	16GB	Physical	68GB	Microsoft Windows Server 2003 Standard (32-bit)		
150	PLCB	LBLINUXSRV02	Prod	IBM	8670 LSX			Physical				
151	PLCB	LBEJSRV01	Prod	IBM	XS 346	2	2GB	Physical	70GB	Microsoft Windows Server 2003 Standard (32-bit)		

Appendix LL, Non-IBMS Application Inventory

General				Technical								System Software	
Ref. #	Agency Name	Server ID/Name	Primary Role (Prod/Test)	Capacity							Operating System	Operating System Version	Other software running on Server
				Server Manufacturer	Model	CPU Type & Number	RAM	Physical / Virtual	Local Disk Capacity				
**	Department X			IBM	BladeSystem c3000						LINUX	3.2.3-42	
1	PLCB	LB_DC_ERP	Prod	IBM		2	1024 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
2	PLCB	LBACT01	Test	IBM		1	1024 MB	Virtual			Microsoft Windows XP Professional (32-bit)		
3	PLCB	lbavaenterprise01	Prod	IBM		2	4096 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
4	PLCB	LBBAC_Client21	Test	IBM		2	2048 MB	Virtual			Microsoft Windows XP Professional (32-bit)		
5	PLCB	LBBAC21	Test	IBM		4	4096 MB	Virtual			Microsoft Windows Server 2008 R2 (64-bit)		
6	PLCB	lbbranchtest	Test	IBM		1	1024 MB	Virtual			Novell SUSE Linux Enterprise 11 (64-bit)		
7	PLCB	LBCOEVSTST01	Test	IBM		2	4096 MB	Virtual			Microsoft Windows Server 2008 R2 (64-bit)		
8	PLCB	LBCRYRPTDEV21	Test	IBM		2	4096 MB	Virtual			Microsoft Windows Server 2008 R2 (64-bit)		
9	PLCB	LBCRYRPTDEV31	Test	IBM		2	4096 MB	Virtual			Microsoft Windows Server 2008 R2 (64-bit)		
10	PLCB	LBCRYRPTDEV41	Test	IBM		2	4096 MB	Virtual			Microsoft Windows Server 2008 R2 (64-bit)		
11	PLCB	LBCSMGR01	Prod	IBM		2	2048 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
12	PLCB	LBCVS01	Prod	IBM		2	2048 MB	Virtual			Novell SUSE Linux Enterprise 11 (64-bit)		
13	PLCB	LBDDBTEST01	Test	IBM		4	8192 MB	Virtual			Novell SUSE Linux Enterprise 11 (64-bit)		
14	PLCB	LBDIRLINUXTEST01	Test	IBM		1	2048 MB	Virtual			Novell SUSE Linux Enterprise 11 (64-bit)		
15	PLCB	LBDIRSRV01	Prod	IBM		2	2048 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
16	PLCB	LBDIRSRV02	Prod	IBM		2	2048 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
17	PLCB	LBDYNDEV21	Test	IBM		4	4096 MB	Virtual			Microsoft Windows Server 2008 R2 (64-bit)		
18	PLCB	LBDYNPROD01	Prod	IBM		2	4096 MB	Virtual			Microsoft Windows Server 2008 R2 (64-bit)		
19	PLCB	LBEJSRV01	Prod	IBM		2	2048 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
20	PLCB	LBEPODR01	Test	IBM		2	1024 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
21	PLCB	LBEPODR02	Test	IBM		2	1024 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
22	PLCB	LBERPBACK01	Prod	IBM		2	1024 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
23	PLCB	LBERPBACK02	Prod	IBM		2	1024 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
24	PLCB	LBERPBI01	Prod	IBM		1	2048 MB	Virtual			Microsoft Windows XP Professional (32-bit)		
25	PLCB	LBERPSSO01	Prod	IBM		2	4096 MB	Virtual			Novell SUSE Linux Enterprise 10 (32-bit)		
26	PLCB	lbfwmgmt01	Prod	IBM		2	4096 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
27	PLCB	lbhypdevdb25	Test	IBM		1	22528 MB	Virtual			Red Hat Enterprise Linux 5 (64-bit)		
28	PLCB	lbimagesandbox01_sp1	Test	IBM		2	2048 MB	Virtual			Novell SUSE Linux Enterprise 11 (32-bit)		
29	PLCB	LBIME01	Prod	IBM		2	2048 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
30	PLCB	LBINSIGHT01	Prod	IBM		2	2048 MB	Virtual			Novell SUSE Linux Enterprise 11 (64-bit)		
31	PLCB	LBIPMGMT01	Prod	IBM		2	2048 MB	Virtual			Ubuntu Linux (64-bit)		
32	PLCB	lbjavastress01	Test	IBM		4	10240 MB	Virtual			Novell SUSE Linux Enterprise 11 (64-bit)		
33	PLCB	LBLICBACK02	Prod	IBM		1	1024 MB	Virtual			Microsoft Windows XP Professional (32-bit)		
34	PLCB	LBLICBACK03	Prod	IBM		1	1024 MB	Virtual			Microsoft Windows XP Professional (32-bit)		
35	PLCB	LBMANUSR01	Prod	IBM		2	4096 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		
36	PLCB	LBMANUTST01	Test	IBM		2	4096 MB	Virtual			Microsoft Windows Server 2003 Standard (32-bit)		

Appendix LL, Non-IBMS Application Inventory

Overview and Instructions

Please populate the outstanding fields based on the descriptions provided below.

Application Inventory

Instructions

Application Name:	Insert the name of the application.
Application Age:	Identify the age of the application.
Mission Critical	Identify if the application is mission critical for the business
Restoration Requirement	Identify how quickly the application must be restored.
Key Business Function Supported	Identify the business and user population (citizen, business partner, staff)
Number of Users	Identify the number of users (approximate)
Last Major Update:	Date when was the last major upgrade performed.
Hardware Platform:	Identify the hardware platform upon which the application runs
Hardware Platform Name(s)	Identify the server(s) names that support the application.
System Location	Identify the datacenter where the computing infrastructure is located (i.e. DPH, EDC, agency
Software Platform	Has the application software platform (i.e. COTS, Custom, etc.)?
Integration with Other Systems:	To what degree does the application have integration points with other system?

Application Has Disaster Recovery:	Indiciate a disaster recovery capability is in place to support the application.	
Application Documented in Disaster Recovery Plan	Need to indicate if the application is documented in the current version of the DR Plan	
Application Disaster Recover Test Results Documented	Need to indicate if the results of the latest DR Test are documented.	
Inhouse or Outsourced Disaster Recovery:	Identify whether the disaster recover capability is provided through internal systems or from	

Agency	Application Name	Internet/Intranet	Upgrade Strategy/Scope	PCI Requirements	Software/Development Platform	Team Supporting	CA ²	Major Functions	Sample Requirement Questions	Age	Mission Critical?	Restoration Requirement	Key Business Function Supported	Number of Users	Last Major Update	System Location	Hardware Platform	Hardware Platform Name(s)	Integration with Other Systems	Security Requirements (Highest Level Only)	Application Has Disaster Recovery	Documented in Disaster Recovery Plan	Documented Disaster Recovery Test Results	Inhouse or Outsourced Disaster Recovery	
LCB	Access Request Form	Intranet			ASP/ASP.NET	Web Services	N/A	Security Applications Access Request System. Add new Request. (Access for New Hire or	Security sign-in? Type of functionality for editing roles and requests?	>5 years															
LCB	Adopted Amendments to Board Regulations	Intranet			ASP/ASP.NET	Web Services	N/A	Delete - Decommissioned app.		>5 years			Chief Counsel												
LCB	Advisory Opinion maintenance - (Internet)	Internet	UCM ??	No	ASP/ASP.NET	Web Services	None	Search Legal Advisory Opinions by Opinion Title/Subject and by year. Search Legal Advisory Opinions by Opinion Text and by year.	What search criteria is needed? What information should display on PLCB Employee Orders' Summary?	7 years	No	1 month	Legal, Licensees	4	4-Feb-09	Inhouse	x86	lbwebdev03 lbhbgas01 lbhbgws01a, lbhbgsw01b	No Integration	OA-ITBs	Yes	No	No	Inhouse	
LCB	Advisory Opinion maintenance - (Intranet)	Intranet			ASP/ASP.NET	Web Services	N/A	User Manual for Creating Opinions. Create, Search or Edit Legal Advisory Opinions. Create or Edit Opinions on Appeals.	Login criteria? Who is responsible for updating information?	>5 years			Office of Chief Counsel only					lbwebdev02a lbwebdev02b lbwebdev01a							
LCB	Bin Labels Maintenance	Intranet			ASP/ASP.NET	Web Services	N/A	Bin Labels Maintenance.	Authentication required? Print functionality? Required information?	>5 years			Wine					lbwebdev02a lbwebdev02b lbwebdev01a							
LCB	Bin Labels Report	Intranet			ASP/ASP.NET	Web Services	N/A	Decommissioned app.		>5 years			Wine					lbwebdev02a lbwebdev02b lbwebdev01a							
LCB	Bulk Purchase Order - (Internet)	Internet	Licensing Mod	No	ASP/ASP.NET	Web Services	None	Bulk Alcohol Purchase Order Request System.	Does user have valid Permit and License number in order to proceed? Fields necessary to move forward? What type of security is needed?	>6 years	No	1 month	Product Management/Licensing, Retail Sales	-50	15-Mar-10	Inhouse, EDC	x86	lbwebdev03 lbhbgas01 lbhbgws01a, lbhbgsw01b	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Bulk Purchase Order (Internal)	Intranet	Licensing Mod	No	ASP/ASP.NET	Admin/Imaging	N/A	Allows Licensee requests for bulk purchases of alcohol. Mainly ethyl or ethanol alcohol (190 – 200 proof). Used by Product Management either approve or deny the request. Lists of suppliers are also provided in this system.	Any new data items to be tracked? Any reporting changes needed? Any application changes needed?	2 years	No	1 week	Product Management/Licensing	5	1-Jun-12	Inhouse	x86	lbwebdev2x lbwebuat9x lbwebord0x	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Case Hearing Scheduling System - Intranet	Intranet	Licensing Mod	No	ASP/ASP.NET	Admin/Imaging	N/A	Used by ALJ to schedule Citation case hearings. Allows them to auto-schedule Judges, PSP attorneys and LCE officers as needed for a particular hearing location and date. Lists of attorneys are also provided in this system.	Any new functionality needed to be added to scheduling process? Any additional data that needs provided in the hearing scheduling process?	3 years	No	1 week	ALJ	8	Unknown	Inhouse	x86	lbwebdev2x lbwebuat9x lbwebord0x	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Case Information Access System - CIAS (Consumer Inquiry Cases Only)	Intranet	CRM - Store Ops	No	ASP/ASP.NET	Admin/Imaging	N/A	Used by Consumer Relations to track and respond to Store Consumer inquiries, complaints, etc. Cases can come in from the Internet Facing Consumer relations application, email or other communication.	Any new data items to be tracked? Any reporting changes needed? Any application changes needed?	3 years	Yes	24 hours	Store Operations/Consumer Relations	500+	Unknown	Inhouse	x86	lbwebdev2x lbwebuat9x lbwebord0x	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Case Information Access System - CIAS (Correspondence and Litigation Cases Only)	Intranet	CRM - OCC	No	ASP/ASP.NET	Admin/Imaging	N/A	Used by Chief counsel to track their Correspondences with the public, etc. Each case gets a unique tracking number. Litigation cases are being kept for historical purposes only. They are not currently entering any.	Any new data items to be tracked? Any reporting changes needed? Any application changes needed?	3 years	Yes	24 hours	Legal	50+	Unknown	Inhouse	x86	lbwebdev2x lbwebuat9x lbwebord0x	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Case Information Access System - CIAS (Disciplinary, Grievance Cases Only)	Intranet	CRM - HR	No	ASP/ASP.NET	Admin/Imaging	N/A	Used by Labor Relations to track their Disciplinary and Grievance cases. Each case gets a unique tracking number.	Any new data items to be tracked? Any reporting changes needed? Any application changes needed?	3 years	Yes	24 hours	HR	200+	Unknown	Inhouse	x86	lbwebdev2x lbwebuat9x lbwebord0x	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Case Information Access System - CIAS (Incident, Citation, Nuisance Bar, Application Cases Only)	Intranet	Licensing Mod	No	ASP/ASP.NET	Admin/Imaging	N/A	Used to track Licensee related cases, such as Incidents, Citations, Nuisance Bar and Application Cases. Each case gets a unique tracking number. This is used heavily in conjunction with LIAS by the	Any new data items to be tracked? Any reporting changes needed? Any application changes needed?	3 years	Yes	24 hours	ALJ/Legal/Licensing	1200+	Unknown	Inhouse	x86	lbwebdev2x lbwebuat9x lbwebord0x	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Case Search System - Intranet	Intranet	Licensing Mod	No	ASP/ASP.NET	Admin/Imaging	N/A	Provides the ability to search Consumer Inquiry, Incident, Application, Citation, Correspondence, Litigation and Nuisance Bar cases by case number, county or municipality associated to the case (where	Any changes to the search Criteria? Any additional search criteria needed? Any additional data items that are needed on the display of data?	3 years	No	1 week	ALJ/Legal/HR, Licensees	160+	Unknown	Inhouse	x86	lbwebdev2x lbwebuat9x lbwebord0x	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Code Sales History Report - Report 529 - Intranet	Intranet			ASP/ASP.NET	RICEW	N/A	INVALID LINK. I don't think this application is in use anymore. It does not exist on the new production web server.	Internal.	>5 years			Supply Chain					lbwebdev02a lbwebdev02b lbwebdev01a							
LCB	Consumer Inquiry	Internet		No	Updated - 10-29-2013	Web Services	None	Customer Satisfaction Form for store service. Form for customers to enter input level of satisfaction they received from our stores to assist our goal of providing quality service. These are sent to Consumer relations and if they decide to respond they will enter into the CIAS Consumer Inquiry Tracking system.	Where does form get submitted to? What type of security is needed? What information is needed?	6 years Updated 10-29-2013	No	1 week	Store Operations/Consumer Relations	unknown	Unknown	Inhouse, EDC	x86	lbwebdev03 lbhbgas01 lbhbgws01a, lbhbgsw01b	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Cost Center Information Access System - CCIAS - Intranet	Intranet	CRM - HR	No	ASP/ASP.NET	Admin/Imaging	N/A	Used by HR to enter store employee classification quotas. Mainly done once or at most twice a year. Also used by OITS to update a calendar SQL table that is used by several applications that need date and	Any new data items to be tracked? Any reporting changes needed? Any application changes needed?	3 years	No	1 week	Multiple	140+	Unknown	Inhouse	x86	lbwebdev2x lbwebuat9x lbwebord0x	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Cost Center Search System - Intranet	Intranet	CRM - HR	No	ASP/ASP.NET	Admin/Imaging	N/A	Users can search cost centers by (store cost centers, administrative, etc.) they can also search by county, store region, store district, store number, name type containing text, zip code range, etc. It provides a list of cost centers that match the search criteria and then can drill down to a specific cost center in the CCIAS system	Any changes to the search Criteria? Any additional search criteria needed? Any additional data items that are needed on the display of data?	3 years	No	1 week	Multiple	140+	Unknown	Inhouse	x86	lbwebdev2x lbwebuat9x lbwebord0x	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Credit Card Merchant	Intranet			ASP/ASP.NET	Web Services	N/A	Decommissioned app.					Store Operations					lbwebdev02a lbwebdev02b lbwebdev01a							

Agency	Application Name	Internet/Intranet	Upgrade Strategy/Scope	PCI Requirements	Software/Development Platform	Team Supporting	CA ²	Major Functions	Sample Requirement Questions	Age	Mission Critical?	Restoration Requirement	Key Business Function Supported	Number of Users	Last Major Update	System Location	Hardware Platform	Hardware Platform Name(s)	Integration with Other Systems	Security Requirements (Highest Level Only)	Application Has Disaster Recovery	Documented in Disaster Recovery Plan	Documented Disaster Recovery Test Results	Inhouse or Outsourced Disaster Recovery	
LCB	Direct Wine Shippers - (Internet)	Internet	Licensing Mod???	No	ASP/ASP.NET	Web Services	None	Provides links and contact information for licensed Direct Shippers.	Authentication required? Contact for updated Shipper information? Where is information pulled from?	6 years	No	1 month	Product Management/Licensing, Retail Sales	~50	17-Feb-10	Inhouse, EDC	x86	lbwebdev03 lbhbgas01 lbhbgsw01a, lbhbgsw01b	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Direct Wine Shippers - (Intranet)	Intranet			ASP/ASP.NET	Web Services	N/A	Direct Wine Shipper - PLCB Employee Orders' Summary	What search criteria is needed? What information should display on PLCB Employee Orders' Summary?	>5 years			Store Operations				lbwebdev02a lbwebdev02b lbwebdev01a								
LCB	DirectWine Shipping (Internal)	Intranet	Licensing Mod???	No	ASP/ASP.NET	Web Services	N/A	Decommissioned???		6 years	No	1 month	Licensing/Store Operations/Product Management, Retail Sales	5	4-Jan-10	Inhouse	x86	lbwebdev02a lbwebdev02b lbwebdev01a	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	eCommerce Build and Deploy	Intranet	Unknown	No	COTS	Web Services	N/A	Extracts source code from source repository builds and deploys the eCommerce application to all environments (Dev, UAT and Production)	Source Code location, destination application servers, resources to be deployed.	New Application	No	1 week	Staff, Testing & development	N/A	19-Jul-11	Inhouse	x86	lbwebdev01		Other	No	No	No	Inhouse	
LCB	eCommerce Data Load Build	Unknown	Unknown	No	Java/.Net/vbScripting	Web Services	N/A	Batch applications that extract data from sql tables and format to be loaded to WebSphere. Product catalogs, Prices, Store hours, snapshot to Store Inventory	Data required by WebSphere Commerce, format of CSV files, transfer files to destination servers.	9 years	Yes	24 hours	Staff, Testing & development	5	19-Jul-11	Inhouse	x86	lbtfpsrv01, lbtsrsprod01,	Significant	Other	No	No	No	Inhouse	
LCB	Ecommerce Maintenance (online catalog) Production	Unknown	Unknown	No	ASP/ASP.NET	eCommerce	N/A	Supports FWGS Online product information, Product Description, Categories, Prices, Reporting of sales results and wineclub subscriptions information.	Allow maintenance for Consumer friendly Description, Maintain Categories and relationships between products and categories. Maintain Prices that are in WebSphere for instore and Online store catalogs.	>9 years	No	1 week	Retail Sales, Citizens	5	20-Jul-09	Inhouse	x86	lbwebdev01a, lbtsrsprod01	Partial	Other	Yes	No	No	Inhouse	
LCB	eCommerce Network Deployment Production	Unknown	Unknown	Yes	COTS	eCommerce	N/A	eCommerce - (Administration use) used to maintain WebSphere Cluster and Nodes, Configuration, deployment, starting, stopping and monitoring the Application servers	Administration use	6 years	Yes	24 hours	Retail Sales, Citizens	5	19-Jul-11	Inhouse	x86	lbwebdevprodWND01		Other	Yes	No	No	Inhouse	
LCB	eCommerce Product Manager	Intranet	Web Services		ASP/ASP.NET	Web Services	N/A	Provides Ecommerce information which includes: - Websphere Commerce Accelerator - Reports comparing RLC brand for all codes on Product Catalogue - Code Details - Category Maintenance Ecommerce Information Wine Club Information	Where is data being pulled from? Reports to be accessed? Authentication required?	>5 years							lbwebdev02a lbwebdev02b lbwebdev01a								
LCB	eCommerce Production	Unknown	Unknown	Yes	Java	eCommerce	N/A	(WebSphere Commerce Pro) Retail Online Store.	Allow customers to Shop and Purchase products. Allow customer to select shipping destination in PA. Allow Consumer to Join Wine Club. Interface with back end systems.	9 years - Rewritten Major upgrade - 3 years	Yes	24 hours	Retail Sales, Citizens	N/A	19-Jul-11	MS-Lite	x86	lbtcisp001, lbtcisp002, lbtcapp001, lbtcapp002, lbtcapp003, lbtcapp001	Partial	Other	Yes	No	No	Combination	
LCB	EDU 08% Update	Internet	Unknown		ASP/ASP.NET	Web Services	N/A	Summary that contains information on changes to the Crimes, Judiciary, and Vehicle Codes that are amended by Act 24 of 2003. Provides links to Bills and Legislation changing the State's drunk driving laws.	Who to contact for updates and new materials?	11 years			Alcohol Education					lbwebdev03 lbhbgas01 lbhbgsw01a, lbhbgsw01b							
LCB	EDU County Resources	Internet	Unknown		ASP/ASP.NET	Web Services	None	Decommissioned???		>5 years			Alcohol Education					lbwebdev03 lbhbgas01 lbhbgsw01a, lbhbgsw01b							
LCB	EDU Event Registration - (Internet)	Internet	Unknown	No	ASP/ASP.NET	Web Services	None	Provides RAMP educational information on Outside Trainers.	Secure sign-in? Who to contact for updates and list of Outside Trainers?	>6 years	No	1 month	Alcohol Education/RAMP, Public	N/A	4-Feb-11	Inhouse, EDC	x86	lbwebdev03 lbhbgas01 lbhbgsw01a, lbhbgsw01b	No Integration	OA-ITBs	Yes	No	No	Inhouse	
LCB	EDU EventTracking	Intranet	Unknown	No	ASP/ASP.NET	Web Services	N/A	Decommissioned???		>6 years	No	1 month	Alcohol Education/RAMP, Public	5	30-Dec-09	Inhouse	x86	lbwebdev02a lbwebdev02b lbwebdev01a	No Integration	OA-ITBs	Yes	No	No	Inhouse	
LCB	EDU Materials - (Internet)	Internet	Unknown	No	ASP/ASP.NET	Web Services	None	Available Alcohol Educational Materials Online Order Form. Online Form that allows individuals and organizations to order, at no charge, educational materials which provide information about the effects of alcohol and the laws governing its use in the Commonwealth of Pennsylvania. Provides option to receive our on-line newsletter via email. Provides form that will allow for shipping of the educational materials.	Does user role of public have a current valid email address? Has user ordered from us before? If so, does user have a valid Customer ID number?	>6 years	No	1 month	Alcohol Education/RAMP, Public	N/A	18-May-10	Inhouse, EDC	x86	lbwebdev03 lbhbgas01 lbhbgsw01a, lbhbgsw01b	No Integration	OA-ITBs	Yes	No	No	Inhouse	

Agency	Application Name	Internet/Intranet	Upgrade Strategy/Scope	PCI Requirements	Software/Development Platform	Team Supporting	CA ²	Major Functions	Sample Requirement Questions	Age	Mission Critical?	Restoration Requirement	Key Business Function Supported	Number of Users	Last Major Update	System Location	Hardware Platform	Hardware Platform Name(s)	Integration with Other Systems	Security Requirements (Highest Level Only)	Application Has Disaster Recovery	Documented in Disaster Recovery Plan	Documented Disaster Recovery Test Results	Inhouse or Outsourced Disaster Recovery
LCB	EDU Materials Maintenance	Unknown	Unknown	No	ASP/ASP.NET		None			>6 years	No	1 month	Alcohol Education	5	19-May-10	Inhouse	x86	lbwebdev02a lbwebdev02b lbwebsrv01a	No Integration	OA-ITBs	Yes	No	No	Inhouse
LCB	Electronic Store Journal	Intranet	Unknon		ASP/ASP.NET		N/A			>5 years			Store Operations					lbwebdev02a lbwebdev02b lbwebsrv01a						
LCB	E-Licensing System - Internet	Internet	Licensing Mod	YES	ASP/ASP.NET	Admin/Imaging	not been scanned	On-Line Licensing Processing System for Wholesale, Retail and Club license type Licensees ONLY. Allows for on-Line Licensing renewals and/or validations. Contains Internet Security Login page which requires LID and Password supplied in users' renewal/validation packets.	Any changes to the forms being filed? Any new edits needed for the Question and Answer process? Is the back-end import to image process impacted?	8 years	No	1 week	Licensing, Licensees	17,000+	Unknown	Inhouse, EDC	x86	lbwebdev03 lbhbgas01 lbhbgws01a, lbhbgws01b	Partial	OA-ITBs	Yes	No	No	Inhouse
LCB	Employee Information Access System - EIAS	Intranet	CRM - HR	No	ASP/ASP.NET	Admin/Imaging	N/A	Provides HR users the ability to see General employee information about an employee. Data is used extensively by the Store Time and Attendance system and other systems that need employee information, such as name, employee number, position number, etc.	Any new data items to be tracked? Any changes to the SAP import process that loads this data weekly? Any reporting changes needed? Any application changes needed?	3 years	Yes	24 hours	HR	170+	Unknown	Inhouse	x86	lbwebdev2x lbwebuat9x lbwebord0x	Partial	OA-ITBs	Yes	No	No	Inhouse
LCB	Employee of the Month - Intranet	Intranet	Unknown		ASP/ASP.NET	Web Services	N/A	Decommissioned		>5 years			HR					lbwebdev02a lbwebdev02b lbwebsrv01a						
LCB	Employee Search System - Intranet	Intranet	CRM - HR	No	ASP/ASP.NET	Admin/Imaging	N/A	Provides EIAS users the ability to search for an employee by employee #, position #, last four digits of SS#, by association to one of the CIAS employee-related case types, job class, County they reside, Store Region, District or number that they are associated too, by name type containing specific text. This will provide a list of employees that meet the criteria and then allow the user to click on a employee and go directly to that employee in the EIAS system.	Any changes to the search Criteria? Any additional search criteria needed? Any additional data items that are needed on the display of data? Any additional security levels need added?	3 years	No	1 week	Multiple	160+	Unknown	Inhouse	x86	lbwebdev2x lbwebuat9x lbwebord0x	Partial	OA-ITBs	Yes	No	No	Inhouse
LCB	FileNet Imaging System	Client Server	Licensing Mod	No	Visual Basic/VB.NET	Admin/Imaging	N/A	Client based applications used by ALJ, Chief Counsel, Licensing, PSP, etc. to perform document imaging and archival. Licensing also has a transactional piece with work flow that is used solely for their day to day operations in processing Licensee related documents.	Any new documents to be tracked? Any reporting changes needed? Any application routing changes needed? Any client or server FileNet Software upgrades needed? Any Office upgrades needed - WORD especially? Blank line and Adobe unrarables needed?	19 years upgraded in 2010 in conjunction with Office 2010	Yes	24 hours	Licensing/Legal/AL J, Licensees	180	Unknown	Inhouse	x86	lbipis01	Partial	OA-ITBs	Yes	No	No	Inhouse
LCB	Form Server (FMS)	Internet	Licensing Mod		ASP/ASP.NET	Admin/Imaging	N/A	In conjunction with E-licensing. Allows Licensing back-end Administrators to run credit card reports, look up e-filings by LID #, transaction numbers, etc.	Any changes to the search Criteria? Any additional search criteria needed? Any additional data items that are needed on the display of data? Any additional security levels need added?	8 years	No	1 week	Licensing					lbwebdev03 lbhbgas01 lbhbgws01a, lbhbgws01b						
LCB	FormCenter	Intranet			ASP/ASP.NET	Admin/Imaging	N/A	Defunct app. Never fully implemented. Will be replaced by the Sharepoint forms site.					Support Services					lbwebdev2x lbwebuat9x lbwebord0x						
LCB	Fraud and Abuse Management System - Intranet	Intranet	Unknown		ASP/ASP.NET	Web Services	N/A	System used to report instances of Fraud and Abuse. Has capabilities to search for records.	Secure sign-in? Search credentials? What specific fields, and information to be displayed?	>5 years			EEO			Inhouse	x86	lbwebdev02a lbwebdev02b lbwebsrv01a	Partial	OA-ITBs	Yes	No	No	Inhouse
LCB	Gift Card balance lookup - (Internet)	Internet	Unknown	No	ASP/ASP.NET	Web Services	Cert. Phase Review	PLCB Gift Card Balance Inquiry. Displays users' Gift Card Balance upon entry of Gift Card Number. Gift Card balance is accurate as of the close of the previous business day.	Does user have a valid Gift Card Number? When is gift card balance updated? Secure sign-in?	1 year	No	1 month	Product Management/Store Operations, Citizens, Retail Sales	N/A	15-Oct-10	Inhouse	x86	lbwebdev03 lbhbgas01 lbhbgws01a, lbhbgws01b	Partial	OA-ITBs	Yes	No	No	Inhouse
LCB	Higher Education - (Internet)	Unknown	Unknown	Internet	HTML, DHTML, XHTML	Web Services	N/A	PLCB Website that addresses high-risk and underage drinking.	Contact for updated information? Site functionality? Registration credentials?	3 years	No	1 month	Alcohol Education, Citizens	N/A	25-Aug-08	Inhouse, EDC	x86	lbwebdev03 lbhbgas01 lbhbgws01a, lbhbgws01b	No Integration	OA-ITBs	Yes	No	No	Inhouse
LCB	HR Recruitment System	Intranet	Unknown	No	ASP/ASP.NET	Admin/Imaging (No Longer needed)	N/A	DELETE - Decommissioned app.		8 years	No	2-weeks	HR	15	Unknown	Inhouse	x86	lbwebdev02a lbwebdev02b lbwebsrv01a	Partial	OA-ITBs	Yes	No	No	Inhouse
LCB	IBMS EBS Licensee Interface	Intranet	Licensing Mod	No	SQL	Admin/Imaging	N/A	Provides Licensee data to our EBS system. Mainly for the Licensee Order portal. Provides also whether the Licensee can currently purchase Liquor or not.	Any new data items to be included in the interface file? Additional run times needed during the day? Location of output file changing?	3 years	No	Immediate	Licensee Sales	unknown	1-Jul-10	Inhouse	x86	lbmsdevdb21, lbmsuatdb01, lbmsrdb01	No Integration	OA-ITBs	No	No	No	NA
LCB	Instant Redeemable Coupons Report (IRC Reports)	Intranet	Unknown		ASP/ASP.NET	Web Services	N/A	Displays Instant Redeemable Coupons Report sorted by: Item Code, Brand Description, Item Size, Coupon Amount, Coupon Start Date, Coupon Expiration Date. Reporting Options: Break Out by Distribution, Show Comments.	What is the sort criteria? What are the Reporting Options? What information should be displayed on Report?	>5 years			Bureau of Product Selection					lbwebdev02a lbwebdev02b lbwebsrv01a						

Agency	Application Name	Internet/Intranet	Upgrade Strategy/Scope	PCI Requirements	Software/ Development Platform	Team Supporting	CA ²	Major Functions	Sample Requirement Questions	Age	Mission Critical?	Restoration Requirement	Key Business Function Supported	Number of Users	Last Major Update	System Location	Hardware Platform	Hardware Platform Name(s)	Integration with Other Systems	Security Requirements (Highest Level Only)	Application Has Disaster Recovery	Documented in Disaster Recovery Plan	Documented Disaster Recovery Test Results	Inhouse or Outsourced Disaster Recovery
LCB	Legal Search - (Internet)	Internet	UCM??	Internet	ASP/ASP.NET	Web Services	None	Search Legal Advisory Opinions by Opinion Title/Subject and by year. Search Legal Advisory Opinions by Opinion Text and by year.	What search criteria is needed? What information should display on PLCB Employee Orders' Summary?	>6 years	No	1 month	Legal, Citizens, Licensees	N/A	23-Mar-09	Inhouse, EDC	x86	lbwebdev03 lbhbgas01 lbhbgws01a, lbhbgsw01b	No Integration	OA-ITBs	Yes	No	No	Inhouse
LCB	License Information Access System - LIAS	Intranet	Licensing Mod	No	ASP/ASP.NET	Admin/Imaging	N/A	System used extensively by Licensing, ALJ, Chief Counsel, Alcohol Ed and PSP users for their daily operational needs. Provides Licensee general information and also links to over 60 other database tables that have data related to a Licensee. Officer information, application cases, citation cases, incident cases, nuisance bar cases, document storage, mail to address, safekeeping addresses, pending codes, etc. The majority of the data related to a Licensee is captured within this application.	Any new data items to be tracked? Any reporting changes needed? Any application changes needed?	3 years	Yes	24 hours	Licensing/ALJ/Lega I/PSP, Licensees	590	Unknown	Inhouse	x86	lbwebdev2x lbwebuat9x lbwebord0x	Partial	OA-ITBs	Yes	No	No	Inhouse
LCB	License Search System - Internet	Internet	Licensing Mod		ASP/ASP.NET	Admin/Imaging	not been scanned	System used to search for Licensee's in many different ways. Used extensively by public users. Search by LID #, License #, By License Status, License type, county or municipality where license resides, or by name type beginning with or containing specific text, also by address type, city name, street name, zip code range or specific zip code.	Any changes to the search Criteria? Any additional search criteria needed? Any additional data items that are needed on the display of data?	6 years		24 hours	Licensing					lbwebdev03 lbhbgas01 lbhbgws01a, lbhbgsw01b						
LCB	License Search System - Intranet	Intranet	Licensing Mod	No	ASP/ASP.NET	Admin/Imaging	N/A	System used to search for Licensee's in many different ways. Used extensively by Licensing, ALJ, Chief Counsel, Alcohol Ed and PSP users for their daily operational needs. Search by LID #, License #, last 4 digits of an associated officers SS #, By License Status, License type, county or municipality where license resides, or by name type beginning with or containing specific text, also by address type, city name, street name, zip code range or specific zip code. A list of Licensees and specific information is provided. The user can also drill down to the LIAS system for more licensee detail by clicking on the LID	Any changes to the search Criteria? Any additional search criteria needed? Any additional data items that are needed on the display of data? Any additional security levels need added?	3 years	Yes	24 hours	Licensing/ALJ/Lega I/PSP, Licensees	500	Unknown	Inhouse	x86	lbwebdev2x lbwebuat9x lbwebord0x	Partial	OA-ITBs	Yes	No	No	Inhouse
LCB	Licensee Registration - (Internet)	Internet			ASP/ASP.NET	Web Services		Online Licensee Registration. (LID, Licensee Type, Licensee Number, Email address.	Login criteria? Valid email address? Registration information?	>5 years			Licensing					lbwebdev03 lbhbgas01 lbhbgws01a, lbhbgsw01b						
LCB	Licensing Investigation Request, Assignment, Reports, Query, Reports Entry and Daily Assignment Reporting Systems - Intranet	Intranet	Licensing Mod	No	ASP/ASP.NET	Admin/Imaging	N/A	Licensing investigation related systems that allow for creation, assignment of investigations to a field analyst and field analysts enter their investigation form information into the Reporting system. Tracking of daily activities is done in the Daily Report form application	Any new data items to be tracked? Any other reporting or application changes needed?	11 years	Yes	24 hours	Licensing, Public	170+	Unknown	Inhouse	x86	lbwebdev2x lbwebuat9x lbwebord0x	Partial	OA-ITBs	Yes	No	No	Inhouse
LCB	Licensing Remittance System	Intranet	Licensing Mod	No	ASP/ASP.NET	Admin/Imaging	N/A	System used by Licensing to track all monies received from Licensees related to the Licensing forms that they complete. Ex. Renewals/validations, change of officers, amusement and Sunday sales permit fees, etc.	Any new data items to be tracked? Any changes needed to how the data is retrieved? Any other reporting or application changes needed?	3 years	Yes	24 hours	Licensing, Citizens, Revenue	10+	Unknown	Inhouse	x86	lbwebdev02a lbwebdev02b lbwebstrv01a	Partial	OA-ITBs	Yes	No	No	Inhouse
LCB	Limited Winery Renewal - (Internet)	Internet	Licensing Mod		ASP/ASP.NET	Admin/Imaging	not been scanned	On-Line Licensing Processing System for Limited Winery license type Licensees ONLY. Process for On-Line Licensing renewals or validations. Also requires limited winery production totals to be entered. Contains Internet Security Login page which requires LID and Password supplied in users' renewal/validation packets	Any changes to the forms being filed? Any new edits needed for the Question and Answer process? Is the back-end import to image process impacted?	3 years			Licensing, Licensees					lbwebdev03 lbhbgas01 lbhbgws01a, lbhbgsw01b						
LCB	Mailing Label System	Intranet	Unknown	No	ASP/ASP.NET	RICEW Don Becker	N/A	Web application for making snail mail lists and printing snail mail addresses on envelopes and/or labels by users and/or mailroom.	Internal.	1 year	No	2 weeks	All mass mailings	unknown	1-Jul-09	Inhouse	x86	lbwebdev02a lbwebdev02b lbwebstrv01a	Significant	OA-ITBs	No	No	No	Inhouse
LCB	Mobile app barcode resolver web service	Unknown	Unknown	No	PHP	Web Services	N/A	Decommissioned???		< 1 year	Yes	24 hours	Retail Sales, Citizens	N/A	New application	Inhouse	x86	lbwebprdap11	Partial	OA-ITBs	Yes	No	No	Inhouse
LCB	NABCA Interfaces	Unknown	Unknown	No	SQL	Web Services	N/A	Decommissioned???		1 to 3 years	No	2 weeks	Retail Sales, Citizens	unknown	1-Jul-10	Inhouse	x86	lbmsdevdb21, lbmsuatdb91, lbmsorddb01	No Integration	OA-ITBs	No	No	No	NA
LCB	Online Alcohol Prevention Programs Assessment	Internet	Unknown		ASP/ASP.NET	Web Services	None	List of a comparison of online assessment tools aimed at reducing high risk drinking. Allows college and university staff the opportunity to review many of the more popular sites.	How many programs? Program names? College and university contacts?	>5 years			Alcohol Education					lbwebdev03 lbhbgas01 lbhbgws01a, lbhbgsw01b						

Agency	Application Name	Internet/Intranet	Upgrade Strategy/Scope	PCI Requirements	Software/Development Platform	Team Supporting	CA ²	Major Functions	Sample Requirement Questions	Age	Mission Critical?	Restoration Requirement	Key Business Function Supported	Number of Users	Last Major Update	System Location	Hardware Platform	Hardware Platform Name(s)	Integration with Other Systems	Security Requirements (Highest Level Only)	Application Has Disaster Recovery	Documented in Disaster Recovery Plan	Documented Disaster Recovery Test Results	Inhouse or Outsourced Disaster Recovery
LCB	Online Reports / Reports Dictionary	Intranet	Licensing Mod - reports that pertain the Licensing related functions ONLY	No	ASPI/ASP.NET	Admin/Imaging (CR Reports Only and REP538) RICEW (All other REP reports)	N/A	Maintains information about the various agency reports and also provides the ability to access over 300+ ad-hoc reports. Reports are used by all bureaus within the agency. Batch report output also is stored here. Multiple batch versions are kept on-line for historical viewing as well.	Internal.	2 years	Yes	48 hours	All	unknown	Jul-11	Inhouse	x86	lbwebdev2x lbwebuat9x lbwebord0x	No Integration		No	No	No	NA
LCB	Online Reports / Oracle_RMS / Rep510	Intranet	Unknown		ASPI/ASP.NET	RICEW	N/A	No longer being used.		>5 years			Wine				lbwebdev02a lbwebdev02b lbwebstr01a				No	No	No	NA
LCB	Oracle UCM	Internet	Unknown	No	COTS		None			< 1 year	Yes	Immediate	External Affairs, Citizens	N/A	In progress, com	Inhouse, EDC	x86	LBUCMUATAPP91.L BCTCISS003.LBCTCI SS004	No Integration	OA-ITBs	No	No	No	NA
LCB	PLCB License Search System (Press Office)	Intranet	Licensing - Mod		ASPI/ASP.NET	Admin/Imaging (No Longer needed)	N/A	DELETE - Same application as the License Search System application.					External Affairs				lbwebdev02a lbwebdev02b lbwebstr01a							
LCB	PLCB Parking	Intranet	Unknown	No	ASPI/ASP.NET	RICEW	N/A	PLCB Parking application. Reserve/Release parking spaces.	Internal.	4 years	No	1 month	Support Services	2	Unknown	Inhouse	x86	lbwebdev02a lbwebdev02b lbwebstr01a	No Integration	OA-ITBs	Yes	No	No	Inhouse
LCB	PLCB Sales Report - (Report 326) Store Sales Inventory - Intranet	Intranet	Unknown		ASPI/ASP.NET	RICEW	N/A	Period Unit Sales Summary.	Internal.	>5 years			Store Operations				lbwebdev02a lbwebdev02b lbwebstr01a							
LCB	PLCB Wine Signage System	Intranet	Unknown		ASPI/ASP.NET	RICEW	N/A		Internal.	>5 years			Wine				lbwebdev02a lbwebdev02b lbwebstr01a							
LCB	Pool Car Request	Intranet	Unknown		ASPI/ASP.NET	Web Services	N/A	Form to be completed in order to ensure a reservation for a Pool Car.	Criteria needed? Valid email? Login credentials?	>5 years			Support Services				lbwebdev02a lbwebdev02b lbwebstr01a							
LCB	Power Purchases	Intranet	Unknown		ASPI/ASP.NET	Web Services	N/A	No longer being used.		>5 years			Product Management				lbwebdev02a lbwebdev02b lbwebstr01a							
LCB	Product Assortment Reports	Intranet	Unknown		ASPI/ASP.NET	Web Services	N/A	No longer being used.		>5 years			Product Management				lbwebdev02a lbwebdev02b lbwebstr01a							
LCB	Product Lookup - Intranet	Intranet	Unknown		ASPI/ASP.NET	Web Services	N/A	Search system for looking up eCommerce products based on preferred criteria	What types of search criteria needed? What fields will need to be returned?	>5 years							lbwebdev02a lbwebdev02b lbwebstr01a							
LCB	RAMP (internal)	Unknown	Unknown	Intranet	ASPI/ASP.NET		N/A			>6 years	No	1 month	Alcohol Education/RAMP, Licensees	5	22-Jun-11	Inhouse	x86	lbwebdev02a lbwebdev02b lbwebstr01a	No Integration	OA-ITBs	Yes	No	No	Inhouse
LCB	Ramp Login / Registration	Unknown	Unknown	No	ASPI/ASP.NET		None			>6 years	No	1 month	Alcohol Education/RAMP, Licensees	-200	12-Aug-10	Inhouse	x86	lbwebdev02a lbwebdev02b lbwebstr01a	No Integration	OA-ITBs	Yes	No	No	Inhouse
LCB	RAMP Owner Manager Mandate tracking	Unknown	Unknown	No	Java/GWT	RICEW	N/A	Search for RAMP Training Sessions by county.	Is county information current and up to date? Is training information current and up to date?	< 1 year	No	1 week	Alcohol Education/RAMP, Licensees	5	New application	Inhouse	x86	lbwebprdp11	Partial	OA-ITBs	Yes	No	No	Inhouse
LCB	RAMP Seller server vendor web service	Unknown	Unknown	No	PHP	Web Services	N/A	View for PLCB Approved Independent Server Trainers Session. Search for Independent Server Trainers Sessions by county. View Independent Server Trainer Session dates and information.	Is county information current and up to date? Is training information current and up to date?	1 year	Yes	24 hours	Alcohol Education/RAMP, Licensees	N/A	New application	Inhouse	x86	lbwebprdp11	Partial	OA-ITBs	Yes	No	No	Inhouse
LCB	Real Estate System	Intranet	Unknown		ASPI/ASP.NET	RICEW (No Longer needed)	N/A	DELETE - Decommissioned app.		>5 years			Store Operations				lbwebdev02a lbwebdev02b lbwebstr01a							
LCB	Registered Malt or Brewed Beverage Brands - (Internet)	Internet	Licensing Mod???	No	ASPI/ASP.NET	Web Services	None	Search system for Registered Malt or Brewed Beverage Brands	Search criteria? Search functionality? Type of Records displayed?	>6 years	No	1 month	Licensing, Licensees, Citizens	N/A	11-Jun-10	Inhouse, EDC	x86	lbwebdev03 lbhbgas01 lbhbgws01a, lbhbgws01b	Partial	OA-ITBs	Yes	No	No	Inhouse
LCB	Report Center - Intranet	Intranet			ASPI/ASP.NET	Admin/Imaging (No Longer needed)	N/A	DELETE - Decommissioned app. Incorporated into On-line Reports System.		>5 years			LCB Services				lbwebdev02a lbwebdev02b lbwebstr01a							
LCB	Search Adjudications - (Internet)	Internet	UCM ??	No	ASPI/ASP.NET	Web Services	None	Search system for PLCB Adjudications.	Search criteria? Search functionality? Type of Records displayed?	>6 years	No	1 month	ALJ/Legal, Licensees, Citizens	N/A	28-Dec-05	Inhouse, EDC	x86	lbwebdev03 lbhbgas01 lbhbgws01a, lbhbgws01b	No Integration	OA-ITBs	Yes	No	No	Inhouse
LCB	Search Center	Intranet	Licensing Mod		ASPI/ASP.NET	Admin/Imaging	N/A	Provides licensee and licensee case related data in report or flat file data format. Multiple search criteria are used to provide a list of Licensees and associated	Any changes to the search Criteria? Any additional search criteria needed? Any additional data items that are needed on the	6 years			ALJ				lbwebdev2x lbwebuat9x lbwebord0x							
LCB	Send Email	Intranet	Unknown		ASPI/ASP.NET	Web Services	N/A	No longer being used.		>5 years			External Affairs				lbwebdev02a lbwebdev02b lbwebstr01a							
LCB	SLO System	Intranet	Unknown		ASPI/ASP.NET	Web Services	N/A	Special Liquor Order System. Allows for preparing and submitting an order through the Intranet.	Pick up location? Who can order on-line? Credentials for on-line ordering?	>5 years			Product Management				lbwebdev02a lbwebdev02b lbwebstr01a							

Agency	Application Name	Internet/Intranet	Upgrade Strategy/Scope	PCI Requirements	Software/ Development Platform	Team Supporting	CA ²	Major Functions	Sample Requirement Questions	Age	Mission Critical?	Restoration Requirement	Key Business Function Supported	Number of Users	Last Major Update	System Location	Hardware Platform	Hardware Platform Name(s)	Integration with Other Systems	Security Requirements (Highest Level Only)	Application Has Disaster Recovery	Documented in Disaster Recovery Plan	Documented Disaster Recovery Test Results	Inhouse or Outsourced Disaster Recovery	
LCB	Special Report Center	Internet	Licensing Mod	No	ASP/ASP.NET	Admin/Imaging	N/A	Provides licensee data in report or flat file data format. Multiple search criteria are used to provide a list of Licensees that match that criteria. Eventually this system will be replaced by the Search Center.		6 years			Licensing					lbwebdev03 lbhbgas01 lbhbgws01a, lbhbgws01b							
LCB	Store Hours Maintenance	Intranet	Unknown		ASP/ASP.NET	Web Services	N/A	Application for maintaining PLCB store hours.	Login credentials? Contact for store hour updates?	>5 years			Store Operations					lbwebdev02a lbwebdev02b							
LCB	Store Locator - (Internet)	Internet	Unknown	No	ASP/ASP.NET	Web Services	None	Application that allows for searching and selecting store sites within that county and their hours of operation.	Search criteria? Search functionality? Contact for store information updates?	>6 years	No	1 month	Product Management/Store Operations, Citizens, Retail Sales	N/A	22-Jul-09	Inhouse, EDC	x86	lbwebdev03 lbhbgas01 lbhbgws01a, lbhbgws01b	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Store portal - barcode/shelf label	Unknown	Unknown	No	PHP					1 year	Yes	24 hours	Store Operations, Retail Sales	~1000	New application	Inhouse	x86	lbwebprdapp11	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Store Reports (Intranet)	Intranet	Unknown		ASP/ASP.NET	Web Services	N/A	No longer being used.		>5 years			Store Operations					lbwebdev02a lbwebdev02b lbwebdev01a							
LCB	Store Time and Attendance System	Intranet	TimeLink?	No	ASP.NET 4.0	Admin/Imaging	N/A	Provides all stores the ability to enter their "positive" time into this system one week at a time. Both Regular time for the current work week, and Correction time for previous work weeks can be entered. System handles entry of all store related	Any new data items to be tracked? Any changes to the SAP import process that loads this data weekly? Any reporting changes needed? Any application changes needed?	2 years	Yes	24 hours	HR	800+	Unknown	Inhouse	x86	lbwebdev2x lbwebuat9x lbwebord0x	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Tip Line - (Internet)	Internet	Unknown	No	ASP/ASP.NET	Web Services	Cert. Phase	A public facing reporting process for complaints.	Criteria needed? Valid email? Login credentials? Stored on database?	< 1 year	No	1 month	Equal Opportunities, Citizens	N/A	7-Jun-11	Inhouse, EDC	x86	lbwebdev03 lbhbgas01 lbhbgws01a, lbhbgws01b	No Integration	OA-ITBs	Yes	No	No	Inhouse	
LCB	Upcoming Chairman's Selection's Maintenance	Intranet	Unknown		ASP/ASP.NET	Web Services	N/A	Links to Search application for Upcoming Chairman's Selection products.	Sort criteria? Sort functionality? Contact information?	>5 years			Product Management					lbwebdev02a lbwebdev02b lbwebdev01a							
LCB	Vehicle Information Access System - VIAS	Intranet	CRM - Support Services	No	ASP/ASP.NET	Admin/Imaging	N/A	System used by Support Services to track the LCB fleet of vehicles, employees that have vehicles, parking lots and parking spaces assigned to employees, etc.	Any new data items to be tracked? Any changes needed to how the data is retrieved? Any other reporting or application changes needed?	3 years	No	1 week	Support Services	7	Unknown	Inhouse	x86	lbwebdev2x lbwebuat9x lbwebord0x	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Vehicle request system (Internal)	Intranet	CRM - Support Services	No	ASP/ASP.NET		N/A			>6 years	No	1 month	Support Services	2	Unknown	Inhouse	x86	lbwebdev02a lbwebdev02b lbwebdev01a	No Integration	OA-ITBs	Yes	No	No	Inhouse	
LCB	Vehicle Search System - Intranet	Intranet	CRM - Support Services	No	ASP/ASP.NET	Admin/Imaging	N/A	Provides Support Services the ability to search an agency vehicle, or employee that has parking, etc. in various ways. Once a list of matching information is shown the user can click on a specific one it will take them into the detail view of that vehicle or Employee in the VIAS system.	Any changes to the search Criteria? Any additional search criteria needed? Any additional data items that are needed on the display of data? Any additional security levels need added?	3 years	No	1 week	Support Services	7	Unknown	Inhouse	x86	lbwebdev2x lbwebuat9x lbwebord0x	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Vendor Login - (Internet)	Internet	Unknown		ASP/ASP.NET	Web Services	None	PLCB Vendor Login Page.	Login required? Security required? Functionality?	>5 years			For Industry Partners					lbwebdev03 lbhbgas01 lbhbgws01a, lbhbgws01b							
LCB	Vendor Online Reports System	Intranet	Unknown		ASP/ASP.NET	Web Services	N/A	Vendor Reports and File downloads Management application.	Fields needed? Edit capabilities? Display functionality?	>5 years			Product Management					lbwebdev02a lbwebdev02b lbwebdev01a							
LCB	Vendor SCC and Item Information - Intranet	Intranet			ASP/ASP.NET	Web Services	N/A	Application that allows for selecting PLCB Vendor name and number to display a listing of all your codes currently on the PLCB's item files.	Vendor selection functionality? Sort criteria? What information is to be displayed?	>5 years			Supply Chain					lbwebdev02a lbwebdev02b lbwebdev01a							
LCB	Web Services Requests tracking system	Intranet	Unknown	No	PHP	Web Services	N/A	Application for new requests that deal with Intranet Portal issues.	Authentication required? What information is required to successfully fulfill the request?	1 year	No	1 week	Staff, Testing & development	5	New application	Inhouse	x86	lbwebprdapp11	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Web-based Imaging Inquiry System (ALJ)	Intranet	Licensing Mod	No	ASP/ASP.NET	Admin/Imaging	N/A	Web based imaging query used by ALJ to access Licensing related Imaged documents.	Any additional search criteria? Any modifications to the security structure or additional user types that need created?	7 years	Yes	24 hours	ALJ	30 +	Unknown	Inhouse	x86	lbwebdev02a lbwebdev02b lbwebdev01a	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Web-based Imaging Inquiry System (ALJ)	Intranet	Licensing Mod	No	ASP/ASP.NET	Admin/Imaging	N/A	Web based imaging query used by ALJ and Chief Counsel to access ALJ related Imaged documents.	Any additional search criteria? Any modifications to the security structure or additional user types that need created?	7 years	Yes	24 hours	ALJ/Legal	30 +	Unknown	Inhouse	x86	lbwebdev02a lbwebdev02b lbwebdev01a	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Web-based Imaging Inquiry System (Alcohol Ed)	Intranet	Licensing Mod	No	ASP/ASP.NET	Admin/Imaging	N/A	Web based imaging query used by Alcohol Ed to access Licensing related Imaged documents.	Any additional search criteria? Any modifications to the security structure or additional user types that need created?	7 years	Yes	24 hours	Alcohol Ed	30 +	Unknown	Inhouse	x86	lbwebdev02a lbwebdev02b lbwebdev01a	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Web-based Imaging Inquiry System (Licensing)	Intranet	Licensing Mod	No	ASP/ASP.NET	Admin/Imaging	N/A	Web based imaging query used by Licensing users to access Licensing related Imaged documents. Multiple levels of security based on the user signon and access levels that they have been granted.	Any additional search criteria? Any modifications to the security structure or additional user types that need created?	7 years	Yes	24 hours	Licensing	124	Unknown	Inhouse	x86	lbwebdev02a lbwebdev02b lbwebdev01a	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Web-based Imaging Inquiry System (PSP)	Intranet	Licensing Mod	No	ASP/ASP.NET	Admin/Imaging	N/A	Web based imaging query used by PSP users to access certain Licensing related Imaged documents. Multiple levels of security based on the user signon and access levels that they have been granted.	Any additional search criteria? Any modifications to the security structure or additional user types that need created?	7 years	Yes	24 hours	PSP, Citizens	235	Unknown	Inhouse	x86	lbwebdev02a lbwebdev02b lbwebdev01a	Partial	OA-ITBs	Yes	No	No	Inhouse	
LCB	Wine and Spirits Hotline	Intranet	Unknown		ASP/ASP.NET	Web Services	N/A	No longer being used.		>5 years			Product Management					lbwebdev02a lbwebdev02b							

Agency	Application Name	Internet/Intranet	Upgrade Strategy/Scope	PCI Requirements	Software/ Development Platform	Team Supporting	CA ²	Major Functions	Sample Requirement Questions	Age	Mission Critical?	Restoration Requirement	Key Business Function Supported	Number of Users	Last Major Update	System Location	Hardware Platform	Hardware Platform Name(s)	Integration with Other Systems	Security Requirements (Highest Level Only)	Application Has Disaster Recovery	Documented in Disaster Recovery Plan	Documented Disaster Recovery Test Results	Inhouse or Outsourced Disaster Recovery
LCB	Wine Tasting Calendar - Internet	Internet	Unknown	No	ASP/ASP.NET	Web Services	None	Public Wine Tasting Calendar View Menu. Search application that displays upcoming PLCB Wine Tastings and other events and contains a link to the WTC Tastings Schedule Report.	What search criteria is needed? What type of functionality should search perform? Contact person for updates?	3 years	No	1 month	Product Management, Retail Sales, Citizens	~100	21-Jan-10	Inhouse, EDC	x86	lbwebdev03 lbhbgas01 lbhbgws01a, lbhbgsw01b	Partial	OA-ITBs	Yes	No	No	Inhouse
LCB	Wine Tasting Calendar - Intranet	Intranet	Unknown		ASP/ASP.NET	Web Services	N/A	Internal Wine Tasting Calendar View Menu. Search application that displays upcoming	What search criteria is needed? What type of functionality should search	>5 years			Product Management				lbwebdev02a lbwebdev02b lbwebdev01a							
LCB	XXLCB_RMS_DATA_EXTRACTION Production	Unknown	Unknown	No	PL/SQL		None			2 years	Yes	24 hours	Retail Sales, Citizens	5	20-Jul-09	DPH	x86	lbmsprdB01	Partial		Yes	No	No	Inhouse