

Oracle® Communications
User Data Repository

Software Upgrade Procedure

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See more information on MOS in the Appendix section.

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1. INTRODUCTION

1.1 Purpose and Scope

This document describes the methods utilized and the procedures executed to perform a major upgrade from Oracle Communications User Data Repository 10.2.x, and 12.1 to Oracle Communications User Data Repository 12.3 release. The audience for this document includes Oracle customers as well as the following internal groups: Software Development, Quality Assurance, Product Verification, Information Development, and Consulting Services including NPx. This document provides step-by-step instructions to execute any Release 12.3 or later software upgrade. The Oracle Communications User Data Repository software includes all Oracle's Tekelec Platform Distribution (TPD) software. Any TPD upgrade necessary is included automatically as part of the software upgrade. The execution of this procedure assumes that the Oracle Communications User Data Repository software load (ISO file, CD-ROM or other form of media) has already been delivered to the customer's premises. This includes delivery of the software load to the local workstation being used to perform this upgrade.

1.1.1 What is Not Covered by this Document

- Distribution of Oracle Communications User Data Repository 12.3 software loads. Please visit the Oracle Software Delivery Cloud here: <https://edelivery.oracle.com/osdc/faces/Home.jspx>
- Initial installation of Oracle Communications User Data Repository 12.3 software. Refer [1].
- PM&C upgrade. Refer to [5].
- Firmware upgrade. Refer to [6].

1.2 References

Oracle customer documentation is available on the web at the Oracle Technology Network (OTN) site, <http://docs.oracle.com>. You do not have to register to access these documents. Viewing these files requires Adobe Acrobat Reader, which can be downloaded at www.adobe.com.

1. *Log into the Oracle Technology Network site at <http://docs.oracle.com>.*
2. *Select the tab "Find a product"*
3. *Type "User Data Repository"*
4. *Takes you to "CGBU Documentation"*
5. *Select "User Data Repository" followed by version*

- [1] Oracle Communications User Data Repository *12.3 Installation and Configuration Guide*, EXXXX-01, latest revision
- [2] *TVOE 3.2 Software upgrade Procedure*, E56281, latest revision
- [3] *Tekelec Platform 7.2.x Configuration Guide*, E64363, latest revision
- [4] *PM&C Release 6.2 Incremental Upgrade*, E53487-01, latest revision.
- [5] *Tekelec Platform 7.0.x E57832_01*
- [6] Oracle Communications User Data Repository *Cloud Resource Profile*, EXXXX, latest revision

1.3 Acronyms

Acronym	Meaning
CGBU	Communications Global Business unit
CD-ROM	Compact Disc Read-only Media
CSV	Comma-separated Values
DB	Database
DR	Disaster Recovery
FOA	First Office Application
GA	General Availability
GPS	Global Product Solutions
GUI	Graphical User Interface
HA	High Availability
IMI	Internal Management Interface
IP	Internet Protocol
IPM	Initial Product Manufacture
ISO	ISO 9660 file system (when used in the context of this document)
LA	Limited Availability
MOP	Method of Procedure
MOS	My Oracle Support
MP	Message Processing or Message Processor
MW	Maintenance Window
NE	Network Element
NO	Network OAM&P
NOAMP	Network OAM&P
OA	HP Onboard Administrator
OAM	Operations, Administration and Maintenance
OAM&P	Operations, Administration, Maintenance and Provisioning
OCUDR	Oracle Communications User Data Repository
PM&C	Platform Management and Configuration
RMS	Rack Mount Server
SO	System OAM
SOAM	System OAM
SPR	Subscriber Profile Repository
TPD	Tekelec Platform Distribution
TVOE	Tekelec Virtualized Operating Environment
UDR	User Data Repository
UI	User Interface
VIP	Virtual IP
VM	Virtual Machine
VPN	Virtual Private Network
XMI	External Management Interface
XSI	External Signaling Interface

Table 1 - Acronyms

1.4 Terminology

This section describes terminology as it is used within this document.

Term	Meaning
Upgrade	The process of converting an application from its current release on a System to a newer release.
Major Upgrade	An upgrade from a current release to a newer major release. An example of a major upgrade is: release 10.2 to 12.3, or release 12.1 to release 12.3
Incremental Upgrade	An upgrade from a current build to a newer build within the same major release. An example of an incremental upgrade is: release 12.3.x to 12.3.y.
Release	Release is any particular distribution of software that is different from any other distribution.
Single Server Upgrade	The process of converting an Oracle Communications User Data Repository server from its current release on a single server to a newer release.
Blade (or Managed Blade) Upgrade	Single Server upgrade performed on a blade. This upgrade requires the use of the PM&C GUI.
Standalone Server Upgrade	Single server upgrade performed on a standalone server. This upgrade requires the use of the platcfg UI.
Software Only Upgrade	An upgrade that does not require a Database Schema change, only the software is changed.
DB Conversion Upgrade	An upgrade that requires a Database Schema change performed during upgrade that is necessitated by new feature content or bug fixes.
Backout	The process of converting a single Oracle Communications User Data Repository server to a prior version. This could be performed due to failure in Single Server Upgrade or the upgrade cannot be accepted for some other reason. Backout is a user initiated process.
Downgrade/Backout	The process of converting an Oracle Communications User Data Repository server from its current release to a prior release. This could be performed due to a misbehaving system. Once the upgrade is accepted, servers cannot be backed out to previous release.
Rollback	Automatic recovery procedure that puts a server into its pre-upgrade status. This procedure occurs automatically during upgrade if there is a failure.
Source Release	Software release to upgrade from.
Target Release	Software release to upgrade to.
Oracle RMS	Oracle Server X5-2 or Netra X5-2
Primary NOAM Network Element	The network element that contains the active and standby NOAM servers in an Oracle Communications User Data Repository. If the NOAMs are deployed on a rack-mount server (and often not co-located with any other site), that RMS is considered the primary NOAM network element. If the NOAMs are virtualized on a C-class blade that is part of one of the sites, then the primary NOAM network element and the signaling network element hosting the NOAMs are one and the same.
DR NOAM Network Element	Disaster Recovery NOAMs that are ready to take over as the primary Site if a disaster should occur.
Signaling Network Element	Any network element that contains MPs (and possibly other C-level servers), thus carrying out Diameter signaling functions. Each SOAM pair and its associated C-level servers are considered a single signaling network element. And if a signaling network element includes a server that hosts the NOAMs, that signaling network element is also considered to be the primary NOAM network element.
Site	Physical location where one or more network elements reside.

Term	Meaning
Health Check	Procedure used to determine the health and status of the network. This includes statuses displayed from the GUI. This can be observed Pre-Server Upgrade, In-Progress Server Upgrade, and Post-Server Upgrade.
Upgrade Ready	State that allows for graceful upgrade of a server without degradation of service. It is a state that a server is required to be in before it can be upgraded. The state is defined by the following attributes: Server is Forced Standby Server is Application Disabled (Signaling servers will not process any traffic)
UI	User interface. "Platcfg UI" refers specifically to the Platform Configuration Utility User Interface, which is a text-based user interface.
Management Server	Server deployed with HP c-class or RMS used to host PM&C application, to configure Cisco 4948 switches and to serve other configuration purposes.
PM&C Application	PM&C is an application that provides platform-level management functionality for HPC/RMS system, such as the capability to manage and provision platform components of the system so it can host applications.
Software Centric	The business practice of delivering an Oracle software product, while relying upon the customer to procure the requisite hardware components. Oracle provides the hardware specifications, but does not provide the hardware, and is not responsible for hardware installation, configuration, or maintenance.
Enablement	The business practice of providing support services (hardware, software, documentation, etc) that enable a 3rd party entity to install, configuration, and maintain Oracle products for Oracle customers.
1+1	Setup with one active and one standby MP.
N+0	Setup with N active MP(s) but no standby MP.
NO	Network OAM for Oracle Communications User Data Repository.
SO	System OAM for Oracle Communications User Data Repository.

Table 2 - Terminology

1.5 How to use this Document

When executing this document, there are a few key points which help to ensure that the user understands the author's intent. These points are as follows;

1. Before beginning a procedure, completely read the instructional text (it will appear immediately after the Section heading for each procedure) and all associated procedural WARNINGS or NOTES.
2. Before execution of a STEP within a procedure, completely read the left and right columns including any STEP specific WARNINGS or NOTES.
3. If a procedural STEP fails to execute successfully or fails to receive the desired output, STOP and contact the CAS main number at 1-800-223-1711 (toll-free in the US), or call the Oracle Support hotline for your local country from the list at <http://www.oracle.com/us/support/contact/index.html> for assistance before attempting to continue.

1.5.1 Executing Procedures

The user should be familiar with the structure and conventions used within these procedures before attempting execution. **Table 3** and the details below provide an example of how procedural steps might be displayed within this document.

Column 1: Step

- Column 1 in **Table 3** contains the Step number and also a checkbox if the step requires action by the user.
- Sub-steps within a given Step X are referred to as Step X.Y. (See example: Step 1 has sub-steps Steps 1.1 to 1.2).
- Each checkbox should be checked-off in order to keep track of the progress during execution of the procedure.

Column 2: Procedure

- Column 2 in **Table 3** contains a heading which indicates the server/IP being accessed as well as text instructions and/or notes to the user. This column may also describe the operations to be performed or observed during the step.

Column 3: Result

- Column 3 in **Table 3** generally displays the results of executing the instructions (shown in column 2) to the user.
- The Result column may also display any of the following:
 - Inputs (commands or responses) required by the user.
 - Outputs which should be displayed on the terminal.
 - Illustrations or graphic figures related to the step instruction.
 - Screen captures from the product GUI related to the step instruction.

Procedure x: Verifying the Time in GMT

Step	Procedure	Result
1. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>1)Access the command prompt. 2)Log into the server as the "admusr" user.</p>	<p>Login as: admusr Using keyboard-interactive authentication. Password: <password> NOTE: The password will not appear on the screen as the characters are typed.</p>
2. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Output similar to that shown on the right will appear as the server returns to a command prompt.</p>	<p>*** TRUNCATED OUTPUT ***</p> <pre> VPATH=/opt/TKLCComcol/runcm6.3:/opt/TKLCComcol/cm6.3 PRODPATH= RELEASE=6.3 RUNID=00 VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/udr:/usr/TKLC/awpcomm on:/usr/TKLC/comagent- gui:/usr/TKLC/comagent:/usr/TKLC/dpi:/usr/TKLC/capm/prod/plugins PRODPATH=/opt/comcol/prod RUNID=00 [admusr@908070109-NO-A ~]\$ </pre>
3. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Verify that the correct Date & Time are displayed in GMT (+/- 4 min.)</p>	<pre> date -u Thu Apr 24 17:13:17 UTC 2014 [admusr@908070109-NO-A filemgmt]\$ </pre>
THIS PROCEDURE HAS BEEN COMPLETED		

Table 3 - Sample Procedure

1.6 Recommendations

This section provides some recommendations to consider when preparing to execute the procedures in this document.

1.6.1 Frequency of Health Checks

The user may execute the **Perform Health Check** or **View Logs** steps freely or repeat as many times as desired in between procedures during the upgrade process. It is not recommended to do this in between steps within a procedure, unless there is a failure to troubleshoot.

1.6.2 Logging of Upgrade Activities

It is a best practice to use a terminal session with logging enabled to capture user command activities and output during the upgrade procedures. These can be used for analysis in the event of issues encountered during the activity. These logs should be saved off line at the completion of the activity.

Note that GUI activities are logged in a security log, but it is also recommended to use a screen capture tool to collect a sequence of screen shots before, during, and after the upgrade. This can also be useful for later analysis.

2. GENERAL DESCRIPTION

This document defines the step-by-step actions performed to execute a software upgrade of an in-service Oracle Communications User Data Repository from the source release to the target release. A major upgrade advances the Oracle Communications User Data Repository software from 10.2.X source release, or 12.1.X source release to 12.3 target release. An incremental upgrade advances the software from 12.3.a-b.b.b to 12.3.b-c.c.c.

2.1 Supported Upgrade Paths

The supported Oracle Communications User Data Repository upgrade paths are shown in **Figure 1** below.

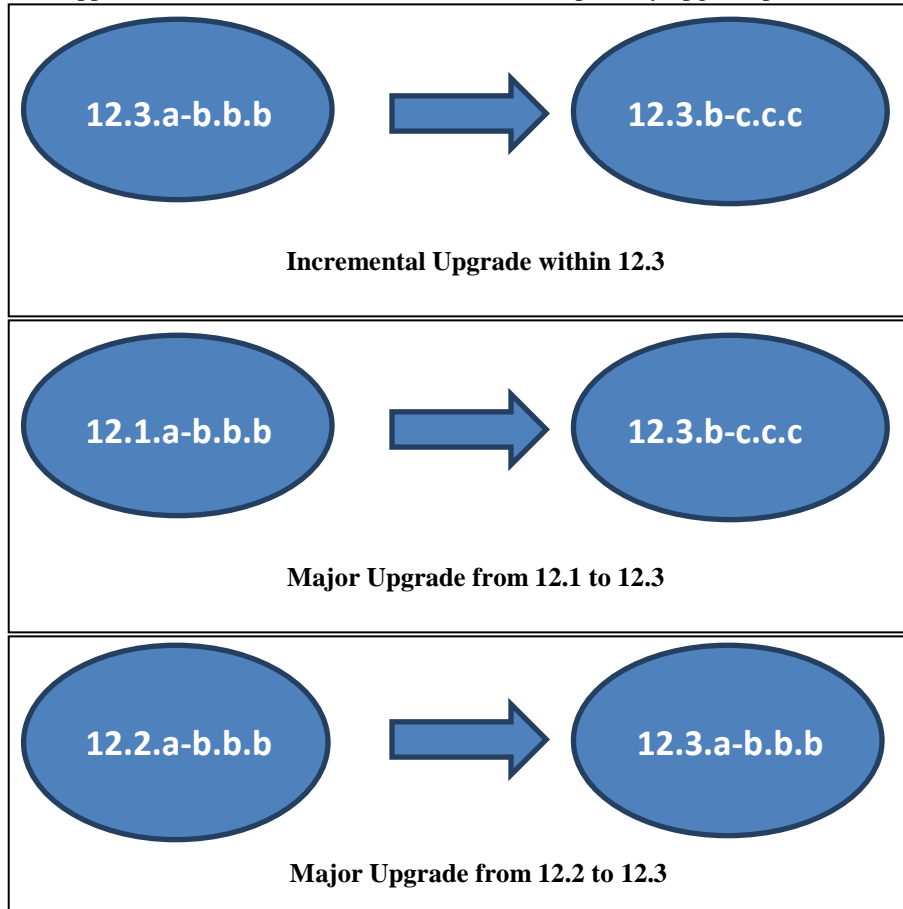


Figure 1: Supported Upgrade Paths

NOTE: Initial installation is not within the scope of this upgrade document. See [1] for initial installation requirements.

2.2 Firmware Updates

Firmware upgrades are not in the scope of this document, but may be required before upgrading Oracle Communications User Data Repository. It is assumed that these are done when needed by the hardware, and there is typically not a dependency between Firmware version and the 12.3 release. Execute firmware upgrade procedures if required by [6].

2.3 PM&C (Management Server) Upgrades

Each site may have a PM&C (Management Server) that provides support for maintenance activities at the site. There is a separate procedure for PM&C upgrade, including TVOE. PM&C must be upgraded before the other servers at the site are upgraded on partially virtualized configurations. Please refer to [5].

2.4 TVOE Upgrade

TVOE (Virtual Operating Environment) is an operating system for a server, which hosts multiple virtual servers on the same hardware. It is typically used to make more efficient use of a Hardware server (Rack Mount or Blade), while maintaining application independence, for Oracle Communications User Data Repository applications that do not require the full resources of a modern Hardware server.

In Oracle Communications User Data Repository architecture, TVOE Hosts are typically used to host several functions, including:

- PM&C
- Oracle Communications User Data Repository NOAMP, SOAM and MP Applications

TVOE Host servers (i.e. servers running TVOE + one or more Oracle Communications User Data Repository applications) must be upgraded before upgrading the guest applications, to assure compatibility. However, TVOE is backward compatible with older application revs, so the TVOE Host and the applications do not have to be upgraded in the same Maintenance window.

The TVOE server hosting PM&C, and the PM&C application, must be upgraded before other TVOE host upgrades, since PM&C is used to perform the TVOE upgrades.

There are three supported strategies for TVOE upgrade (Options A, B and C):

- Option A: Upgrade TVOE environments as a separate activity that is planned and executed days or weeks before the Application upgrades (perhaps site-at-a-time)
- Options to Upgrade TVOE and Application at the same maintenance window:
 - Option B: Upgrade TVOE and Application, followed by another TVOE and Application. Example: for Standby SOAM Upgrade – stop application, upgrade TVOE, upgrade Application, start application; then repeat for Active SOAM.
 - Option C: Upgrade multiple TVOE Hosts at a site, and then start upgrading the Applications (same Maintenance Window)

Note that TVOE upgrades require a brief shutdown of the guest application(s) on the server. Note also that the TVOE virtual hosts may be hosting NOAMP/SOAM/MP applications.

The procedure for upgrading TVOE environments in advance of the application upgrades (Option A) is documented in.3.3.5.

2.5 Traffic Management during Upgrade

Upgrade of NOAM and SOAM servers is not expected to affect traffic handling at the MPs and other traffic-handling servers.

For the upgrade of the MPs, traffic connections are disabled only for the servers being upgraded. The remaining servers continue to service traffic.

2.6 Provisioning during Upgrade

For Oracle Communications User Data Repository 12.4, Provisioning (live traffic) will still continue while upgrade is being executed. While the standby NOAMP is being upgraded, the Active NOAMP will still receive provisioning requests. After the upgrade is complete, replication will be turned on to the Standby NOAMP to sync the most recent requests from the active NOAMP. Then the Standby NOAMP will become active to start receiving provisioning requests, while the previous Active NOAMP is being upgraded.

2.7 Configurations

2.7.1 Normal Capacity Configurations (Partially Virtualized)

Hardware IDs Supported: ProLiantBL460Gen8, ProLiantBL460Gen8+ or ProLiantBL460Gen9

2.7.1.1 G8 Normal Capacity Configuration

This includes 2 MP Host Servers running on a TVOE virtualization environment in each server. The remaining 2 servers host the NOAMP server and database. The same servers can also be configured in a second site for a geo-redundant configuration.

Hardware Supported: ProLiantBL460Gen8, ProLiantBL460Gen8+

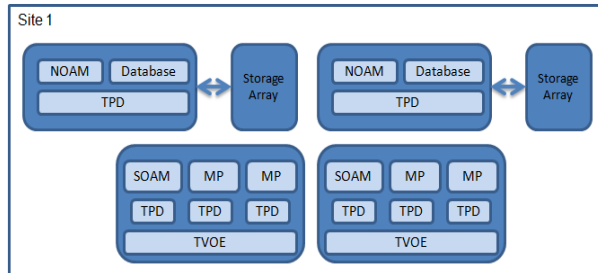


Figure 2: G8 Normal Capacity Single-Site Configuration

2.7.1.2 G9 Normal Capacity Configuration

This includes 2 or 3 MP Host Servers running on a TVOE virtualization environment in each server. The remaining 2 servers host the NOAMP server and database. The same servers can also be configured in a second site for a geo-redundant configuration.

Hardware IDs Supported: ProLiantBL460Gen9

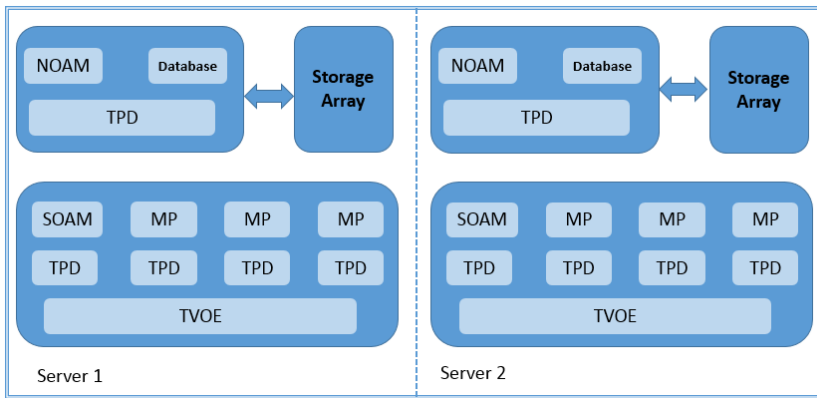


Figure 3: G9 Normal Capacity Single-Site Configuration

2.7.2 Low Capacity Configurations (Fully Virtualized with TVOE)

This includes all Oracle Communications User Data Repository software running on a TVOE virtualization environment in each server, resulting in a fully-virtualized, fully-redundant HA configuration. This can be deployed either as a single site or as a geo-redundant deployment, with 2 servers at each site. (Each blade/server hosts 1 NOAMP, 1 SOAM and 1 MP instance).

DL380 RMS server supports 2 disk configurations: 12 x146GB 15K RPM drives and 6x600GB 10K RPM drives (Low Speed Drive Configuration)

Hardware IDs Supported:

- ProLiantBL460Gen8, ProLiantBL460Gen8+ or ProLiantBL460Gen9
- ProLiantDL380Gen8, ProLiantDL380Gen8+ or ProLiantDL380Gen9
- ORACLESERVERX5-2

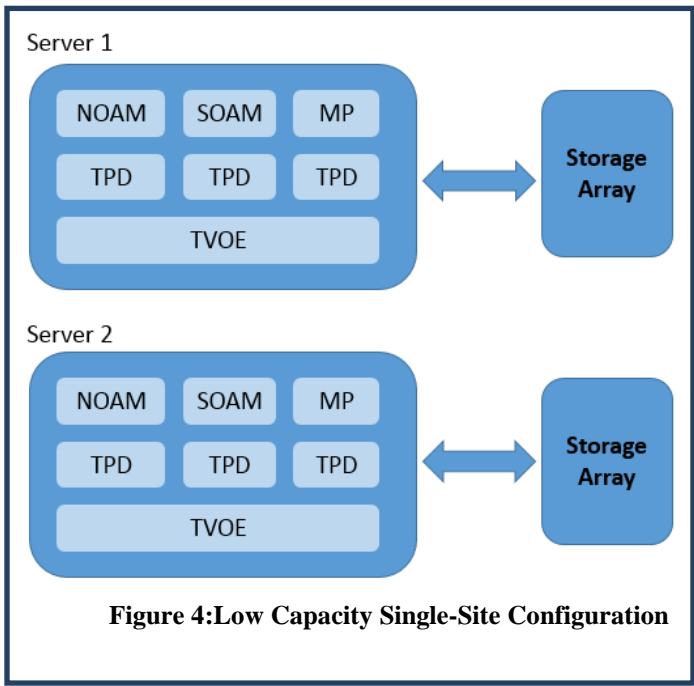


Figure 4: Low Capacity Single-Site Configuration

2.7.3 Cloud Configurations

This includes all Oracle Communications User Data Repository software running within a cloud environment. This can be deployed either as a single site or as a geo-redundant deployment, with 1 or two 2 servers filling each role at each site. See reference [7] for full details.

Non HA				
Min number of VMs	Max number of VMs	Min number of VMs	Max number of VMs	HA config
1	2	2	2	Active-Standby
1	2	2	2	Active-Standby
1	1	2	4	Active-Active

2.8 Multi Active MPs

The site upgrade procedure is for multi-Active MPs. This includes two per site for Low Capacity configurations or up to 4 per site for Normal Capacity Configurations. Single server configurations only have one active MP.

2.9 Sequence of Upgrade

Oracle Communications User Data Repository supports fully virtualized configurations, partially virtualized configurations, and cloud configurations. In fully virtualized configurations PM&C, NOAMP, SOAM, MP functions are hosted over TVOE on one server. In partially virtualized configurations NOAMP is hosted on bare metal server; SOAM, MP functions are hosted over TVOE on a separate servers. In cloud configurations, TVOE and PM&C upgrade operations do not apply. The upgrade procedures vary slightly between these configurations.

Table 4 Sequence of upgrade

Fully Virtualized configurations	Partially Virtualized configurations	Cloud configurations
Required Materials Check	Required Materials Check	Required Materials Check
Update firmware if required. Refer to [6].	Update firmware if required. Refer to [6].	N/A
Upgrade TVOE if required. Refer to [3] [6]	Upgrade PM&C if required. Refer to [5] [6]	N/A
Upgrade PM&C, if required refer [5][6]	Upgrade TVOE, if required Refer [3][6]	N/A
Upgrade Oracle Communications User Data Repository application	Upgrade Oracle Communications User Data Repository application	Upgrade Oracle Communications User Data Repository application

3. UPGRADE PLANNING AND PRE-UPGRADE PROCEDURES

This section contains all information necessary to prepare for and execute an upgrade. The materials required to perform an upgrade are described, as are pre-upgrade procedures that should be run to ensure the system is fully ready for upgrade. Then, the actual procedures for each supported upgrade path are given.

There are overview tables throughout this section that help you plan the upgrade and estimate how long it will take to perform various actions. The stated time durations for each step or group of steps are estimates only. Do not use the overview tables to execute any actions on your system. Only the procedures should be used when performing upgrade actions, beginning with Procedure 1: Required Materials Check.

3.1 Required Materials

The following materials and information are needed to execute an upgrade:

- Target-release application ISO image file, or target-release application media.
- GUI access to the Oracle Communications User Data Repository Network OAM&P VIP with Administrator privileges.
- User logins, passwords, IP addresses and other administration information. See Section 3.1.2.
- SSH/SFTP access to the Oracle Communications User Data Repository Network OAM&P XMI VIP as the “admusr” user.

NOTE: All logins into the Oracle Communications User Data Repository NO servers are made via the External Management (XMI) VIP unless otherwise stated.

- VPN access to the customer’s network is required if that is the only method to log into the OAM servers.
- Direct access to the blades/RMS iLO IP addresses (whichever applicable) from the workstations directly connected to the servers is required.
- Direct access to server IMI IP addresses from the user’s local workstation is preferable in the case of a Backout.

NOTE: If direct access to the IMI IP addresses cannot be made available, then target server access can be made via a tandem connection through the Active Primary NO (i.e. An SSH connection is made to the Active Primary NO XMI first, then from the Active Primary NO, a 2nd SSH connection can be made to the target server’s IMI IP address).

3.1.1 Application ISO Image File / Media

You must obtain a copy of the target release ISO image file. This file is necessary to perform the upgrade. The Oracle Communications User Data Repository ISO image file will be in the following format:

Example: `UDR-12.3.0.0.0_16.3.0-x86_64.iso`

NOTE: Actual number values may vary between releases.

Prior to the execution of this upgrade procedure it is assumed that the Oracle Communications User Data Repository ISO image file has already been delivered to the customer’s premises. The ISO image file must reside on the local workstation used to perform the upgrade, and any user performing the upgrade must have access to the ISO image file. If the user performing the upgrade is at a remote location, it is assumed the ISO file is already available to them before starting the upgrade procedure.

3.1.2 Logins, Passwords and Site Information

Obtain all the	Description	Recorded Value
Credentials	GUI Admin Username 1	
	GUI Admin Password	
	Admusr Password2	
	Root Password3	
	Blades iLO Admin Username	
	Blades iLO Admin Password	
	PM&C GUI Admin Username	
	PM&C GUI Admin Password	
	PM&C root Password	
	PM&C pmaftpusr password	
	OA GUI Username	
	OA GUI Password	
	VPN Access Details	Customer VPN information (if needed)
NO	Primary NOAM&P	
	DR NOAM&P	
	XMI VIP address4	
	NO 1 XMI IP Address	
	NO 2 XMI IP Address	
SO	XMI VIP address	
	SO 1 XMI IP Address (Site 1)	
	SO 2 XMI IP Address (Site 1)	
	SOAM 1 XMI IP Address (Site 2)	
	SOAM 2 XMI IP Address (Site 2)	
	SO 2 iLO IP Address	
	MP 1 iLO IP Address	
	MP 2 iLO IP Address	
	
	MP(n) iLO IP Address (optional)	
PM&C	PM&C Management IP Address (Site 1)	
PM&C	PM&C Management IP Address(Site 2)	
Software	Source Release Number	
	Target Release Number	
	ISO Image (.iso) file name	

¹ Note: The user must have administrator privileges. This means the user belongs to the **admin** group in Group Administration.

² Note: This is the password for the **admusr** login on the servers. This is not the same login as the GUI Administrator. The admusr password is required if recovery procedures are needed. If the admusr password is not the same on all other servers, then all those servers' root passwords must also be recorded; use additional space at the bottom of this table.

³Note:This is the password for the **root** login on the servers. This is not the same login as the GUI Administrator. The root password is required if recovery procedures are needed. If the root password is not the same on all other servers, then all those servers' root passwords must also be recorded; use additional space at the bottom of this table.

⁴ Note: All logins into the NO servers are made via the External Management VIP unless otherwise stated.

3.2 Maintenance Window for PM&C and TVOE Upgrades

This document includes steps to upgrade PM&C and TVOE as an integrated activity with the upgrades of the Oracle Communications User Data Repository application. However, it is an **option** to perform these PM&C and TVOE upgrades as separately planned and executed activities.

- PM&C Upgrade procedure is provided in reference [5].
- TVOE Host environment upgrade procedures are included in architecture-specific sections this document.

Both PM&C and TVOE upgrades are backwards compatible to prior releases on Oracle Communications User Data Repository. It may be done a site-at-a-time.

3.3 Pre-Upgrade Procedures

The pre-upgrade procedures shown in the following table have no effect on the live system.

Table 5 Pre-Upgrade Overview

Procedure Number	Procedure Title	Elapsed Time (Hours:Minutes)	
		This Step	Cumulative
1	<i>Required Materials Check</i>	00:15	00:15
2	ISO Administration	*	*
Appendix B	Perform Health Check (depends on number of servers)	0:10-1:15	00:25-01:30

***NOTE:** ISO transfers to the target systems cannot be estimated since times will vary significantly depending on the number of systems and the speed of the network. The ISO transfers to the target systems should be performed prior to, outside of, the scheduled maintenance window. The user should schedule the required maintenance windows accordingly.

Hardware Upgrade Preparation

There is no hardware preparation necessary when upgrading to release 12.3.

3.3.1 Review Release Notes

Before starting the upgrade, review the Release Notes for the new Oracle Communications User Data Repository 12.3 release to understand the functional differences and possible traffic impacts of the upgrade. Release notes for this and all release are available at <https://docs.oracle.com>.

3.3.2 Required Materials Check

This procedure verifies that all required materials needed to perform an upgrade have been collected and recorded.

Procedure 1: Required Materials Check

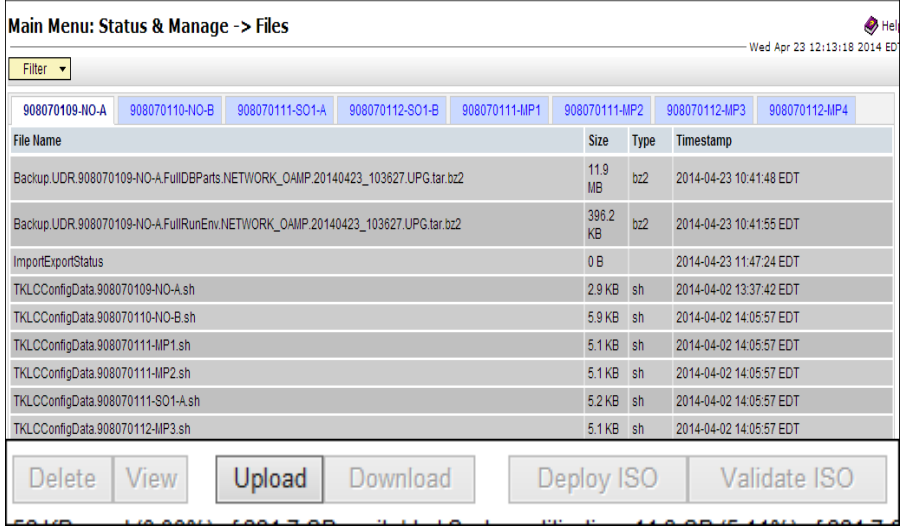
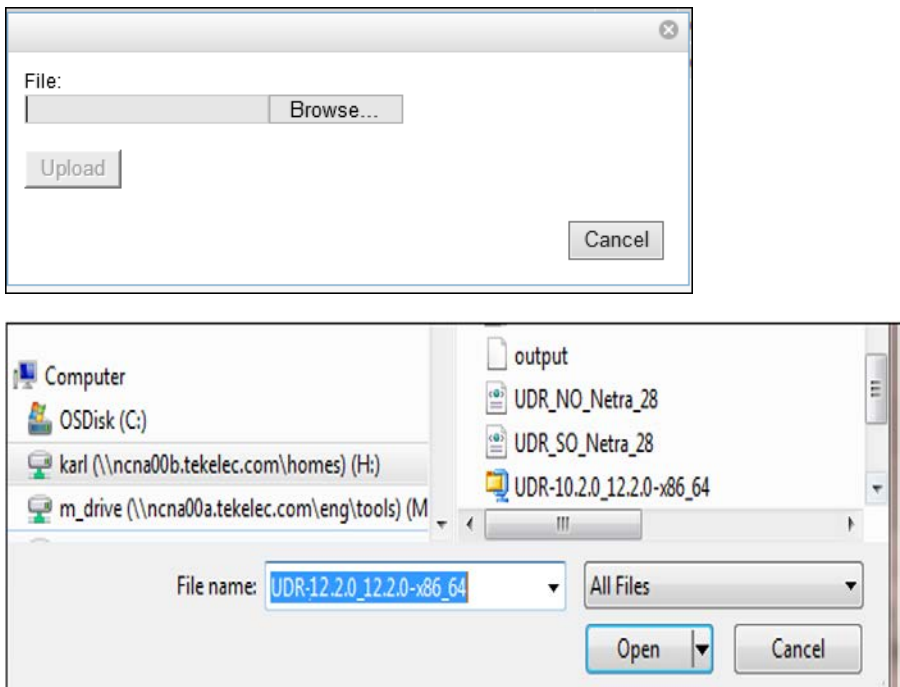
Step	This procedure verifies that all required materials are present. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number.	
1. <input type="checkbox"/>	Verify all required materials are present.	Materials are listed in Section 3.1. Verify all required materials are present.
2. <input type="checkbox"/>	Verify all administration data needed during upgrade.	Double-check that all information in Section 3.1.2 is filled-in and accurate.
3. <input type="checkbox"/>	Contact Oracle CGBU Customer Care Center	Contact the My Oracle Support and inform them of plans to upgrade this system. See Appendix F for these instructions.

3.3.3 Perform Health Check (Upgrade Preparation)

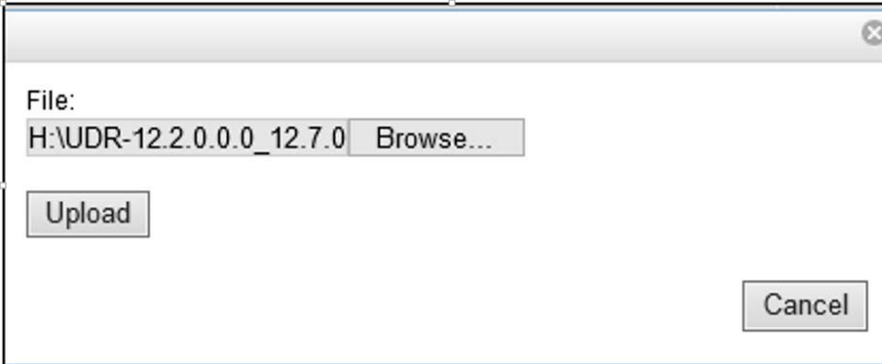
<input type="checkbox"/>	<p>This procedure is part of Software Upgrade Preparation and is used to determine the health and status of the Oracle Communications User Data Repository network and servers. This may be executed multiple times but must also be executed at least once within the time frame of 24-36 hours prior to the start of the upgrade procedures.</p> <ul style="list-style-type: none"> Execute Health Check procedures as specified in Appendix B.
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3.3.4 ISO Administration

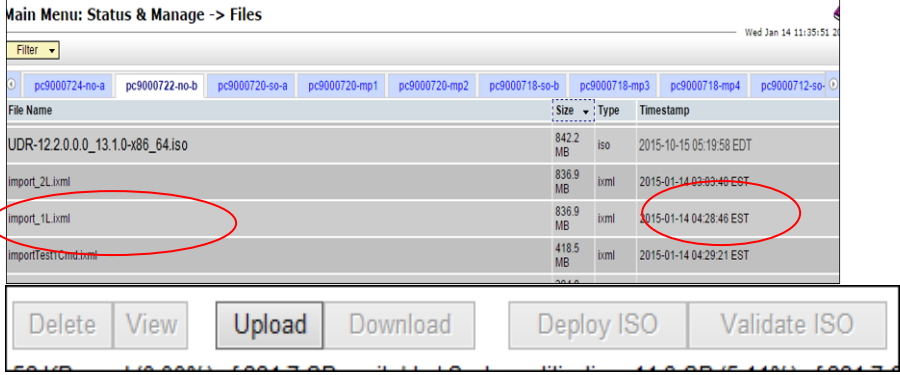
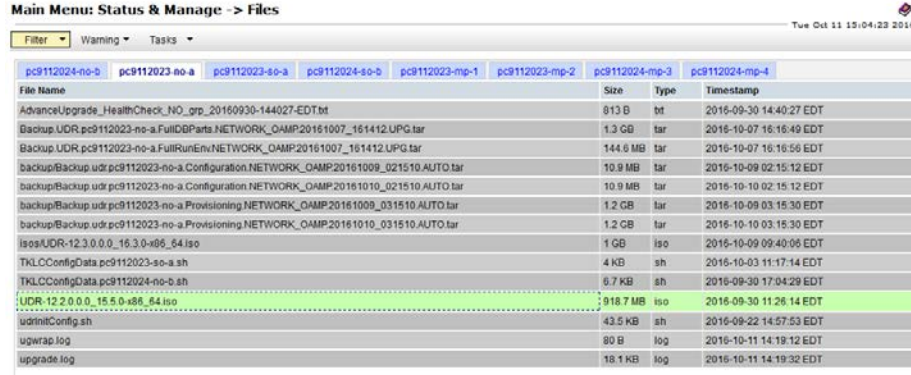
Procedure 2: ISO Administration for Upgrades

Step	Procedure	Result
<p>1.</p> <p><input type="checkbox"/></p>	<p>Using the VIP address, access the Primary NOAMP GUI.</p>	<p>Access the Primary NOAMP GUI as specified in Appendix A.</p>
<p>2.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>Upload ISO file to the Active NOAMP server</p> <p>1) Select... Main Menu → Status & Manage → Files</p> <p>2) Using the cursor, select the active NOAMP server from the list tabs.</p> <p>3) Click on the “Upload” button.</p>	 <p>The screenshot shows the 'Main Menu: Status & Manage -> Files' interface. At the top, there are tabs for different NOAMP servers: 908070109-NO-A, 908070110-NO-B, 908070111-SO1-A, 908070112-SO1-B, 908070111-MP1, 908070111-MP2, 908070112-MP3, and 908070112-MP4. Below the tabs is a table with columns for File Name, Size, Type, and Timestamp. The table lists several files, including backups and configuration data. At the bottom of the table, there are buttons for 'Delete', 'View', 'Upload', 'Download', 'Deploy ISO', and 'Validate ISO'.</p>
<p>3.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>1) Click on the “Browse...” dialogue button located in the middle of the screen.</p> <p>2) Select the Drive and directory location of the ISO file for the target release. Select the ISO file and click on the “Open” dialogue button.</p> <p>3) Click on the “Upload” dialogue button.</p> <p>NOTE 1: <i>It is recommended to access the ISO file for the target release from a local</i></p>	 <p>The first screenshot shows a 'File:' dialog box with a 'Browse...' button, an 'Upload' button, and a 'Cancel' button. The second screenshot shows a Windows File Explorer window. The left pane shows the 'Computer' view with drives like 'OSDisk (C:)', 'karl (\\ncna00b.tekelec.com\homes) (H:)', and 'm_drive (\\ncna00a.tekelec.com\eng\tools) (M)'. The right pane shows the contents of the 'm_drive' folder, including 'output', 'UDR_NO_Netra_28', 'UDR_SO_Netra_28', and 'UDR-10.2.0_12.2.0-x86_64'. The 'File name' field at the bottom is set to 'UDR-12.2.0_12.2.0-x86_64' and the file type is set to 'All Files'. The 'Open' button is highlighted.</p>

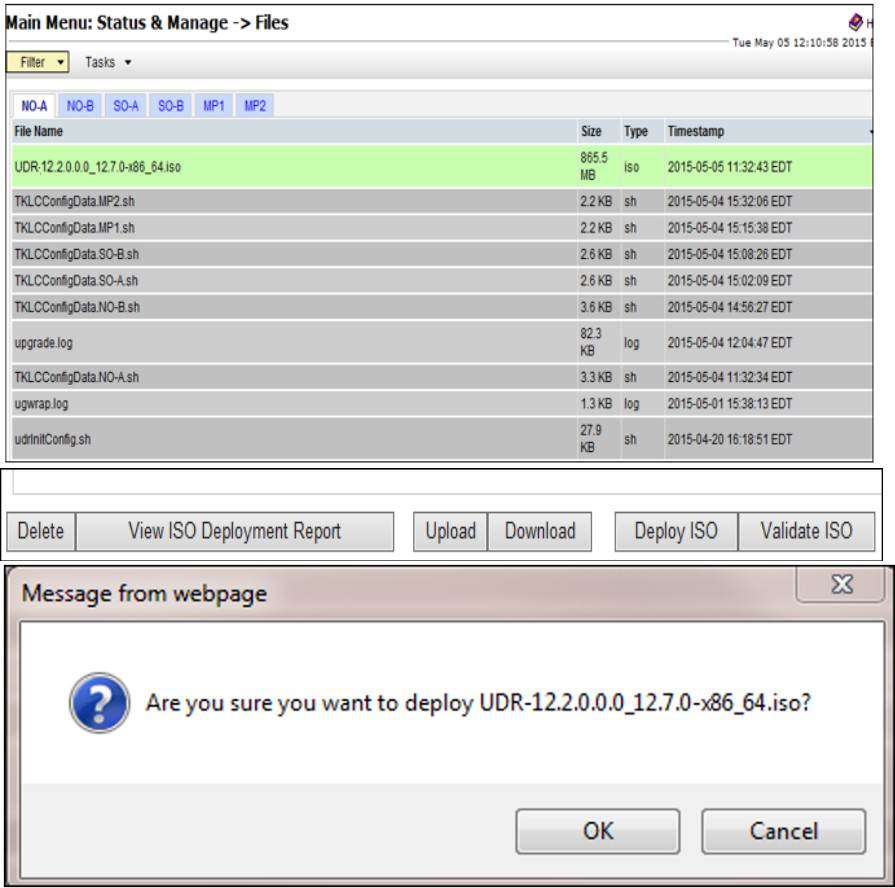
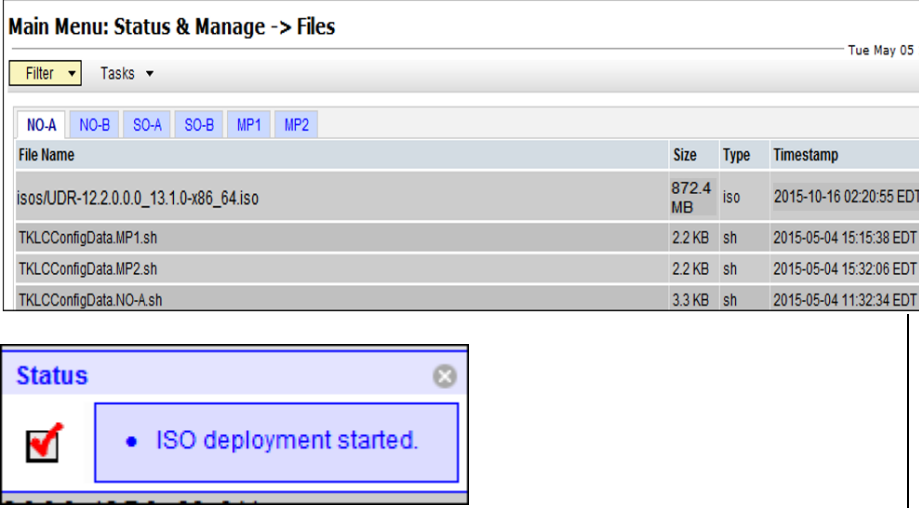
Procedure 2: ISO Administration for Upgrades

Step	Procedure	Result
	<p><i>hard drive partition as opposed to a network or flash drive location.</i></p> <p>NOTE 2: Depending on network conditions, this upload may take an extended period of time (> 60 secs.).</p> <p>NOTE 3: Alternatively, the ISO file can be manually transferred to the "/var/TKLC/db/filemgmt" directory of the Active NOAMP server using SFTP.</p> <p>NOTE 4: The ISO in the file management directory must have global read permission or the GUI ISO transfer will fail, with a security log indicating the lack of read permission. If you upload the file using the GUI, the ISO will have global read permission. If you have already transferred the ISO to the NO without global read permission, you can log in as admusr and use "chmod 644 " to give it read permission.</p> <p><i>Note: When scp</i></p>	

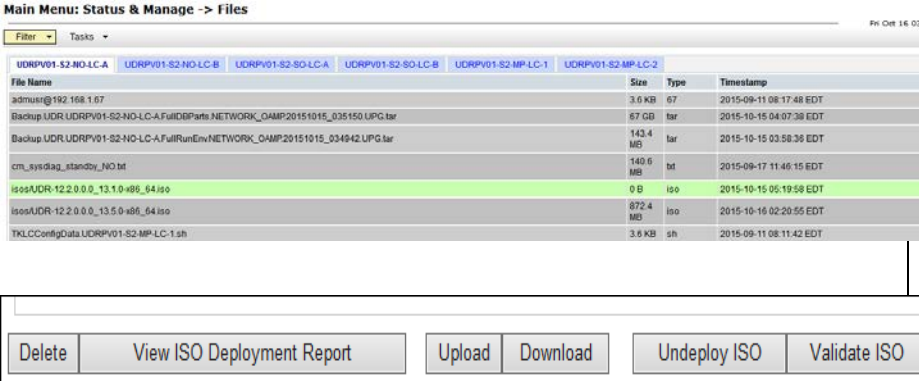
Procedure 2: ISO Administration for Upgrades

Step	Procedure	Result																																																												
<p>4.</p>	<p>files use “scp – p” command.</p> <p>Active NOAMP VIP: Click the Timestamp link located on the top right of the right panel. The user should be presented with a reverse-sorted list of files showing the newest files at the top. The ISO file uploaded in Step 3 of this procedure should now appear at the top most position in the “File Name” column.</p>	 <p>Main Menu: Status & Manage -> Files</p> <table border="1"> <thead> <tr> <th>File Name</th> <th>Size</th> <th>Type</th> <th>Timestamp</th> </tr> </thead> <tbody> <tr> <td>UDR-12.2.0.0.0_13.1.0-x86_64.iso</td> <td>842.2 MB</td> <td>iso</td> <td>2015-10-15 05:19:58 EDT</td> </tr> <tr> <td>import_2L.ixml</td> <td>836.9 MB</td> <td>ixml</td> <td>2015-01-14 03:03:46 EST</td> </tr> <tr> <td>import_1L.ixml</td> <td>836.9 MB</td> <td>ixml</td> <td>2015-01-14 04:28:46 EST</td> </tr> <tr> <td>import16911Cmd.ixml</td> <td>418.5 MB</td> <td>ixml</td> <td>2015-01-14 04:29:21 EST</td> </tr> </tbody> </table> <p>Buttons: Delete, View, Upload, Download, Deploy ISO, Validate ISO</p>	File Name	Size	Type	Timestamp	UDR-12.2.0.0.0_13.1.0-x86_64.iso	842.2 MB	iso	2015-10-15 05:19:58 EDT	import_2L.ixml	836.9 MB	ixml	2015-01-14 03:03:46 EST	import_1L.ixml	836.9 MB	ixml	2015-01-14 04:28:46 EST	import16911Cmd.ixml	418.5 MB	ixml	2015-01-14 04:29:21 EST																																								
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import16911Cmd.ixml	418.5 MB	ixml	2015-01-14 04:29:21 EST																																																											
<p>5.</p>	<p>Active NOAMP VIP: UNDEPLOY all unneeded ISO images.</p>	<p>Step 1. Select Status & Manage → Files from the left-side menu; the Files screen displays.</p>  <p>Main Menu: Status & Manage -> Files</p> <table border="1"> <thead> <tr> <th>File Name</th> <th>Size</th> <th>Type</th> <th>Timestamp</th> </tr> </thead> <tbody> <tr> <td>AdvanceUpgrade_HealthCheck_NO_grp_20160930-144027-EDT.txt</td> <td>813 B</td> <td>txt</td> <td>2016-09-30 14:40:27 EDT</td> </tr> <tr> <td>Backup UDR.pc9112023-no-a-FullDBParts.NETWORK_OAMP20161007_161412.UPG.tar</td> <td>1.3 GB</td> <td>tar</td> <td>2016-10-07 16:16:49 EDT</td> </tr> <tr> <td>Backup UDR.pc9112023-no-a-FullRunEnv.NETWORK_OAMP20161007_161412.UPG.tar</td> <td>144.6 MB</td> <td>tar</td> <td>2016-10-07 16:16:56 EDT</td> </tr> <tr> <td>Backup\Backup udr.pc9112023-no-a-Configuration.NETWORK_OAMP20161009_021510.AUTO.tar</td> <td>10.9 MB</td> <td>tar</td> <td>2016-10-09 02:15:12 EDT</td> </tr> <tr> <td>Backup\Backup udr.pc9112023-no-a-Configuration.NETWORK_OAMP20161010_021510.AUTO.tar</td> <td>10.9 MB</td> <td>tar</td> <td>2016-10-10 02:15:12 EDT</td> </tr> <tr> <td>Backup\Backup udr.pc9112023-no-a-Provisioning.NETWORK_OAMP20161009_031510.AUTO.tar</td> <td>1.2 GB</td> <td>tar</td> <td>2016-10-09 03:15:30 EDT</td> </tr> <tr> <td>Backup\Backup udr.pc9112023-no-a-Provisioning.NETWORK_OAMP20161010_031510.AUTO.tar</td> <td>1.2 GB</td> <td>tar</td> <td>2016-10-10 03:15:30 EDT</td> </tr> <tr> <td>iso\UDR-12.3.0.0.0_16.3.0-x86_64.iso</td> <td>1 GB</td> <td>iso</td> <td>2016-10-09 09:40:06 EDT</td> </tr> <tr> <td>TKLCConfigData.pc9112023-no-a.sh</td> <td>4 KB</td> <td>sh</td> <td>2016-10-03 11:17:14 EDT</td> </tr> <tr> <td>TKLCConfigData.pc9112024-no-b.sh</td> <td>6.7 KB</td> <td>sh</td> <td>2016-09-30 17:04:29 EDT</td> </tr> <tr> <td>UDR-12.2.0.0.0_15.5.0-x86_64.iso</td> <td>918.7 MB</td> <td>iso</td> <td>2016-09-30 11:26:14 EDT</td> </tr> <tr> <td>udriniConfig.sh</td> <td>43.5 KB</td> <td>sh</td> <td>2016-09-22 14:57:53 EDT</td> </tr> <tr> <td>upwrap.log</td> <td>80 B</td> <td>log</td> <td>2016-10-11 14:19:12 EDT</td> </tr> <tr> <td>upgrade.log</td> <td>18.1 KB</td> <td>log</td> <td>2016-10-11 14:19:32 EDT</td> </tr> </tbody> </table> <p>Step 2. Select the ISOs to be undeployed and click ‘Undeploy ISO’ button at the bottom of the table.</p> <p>Step 3. Click “OK” to confirm the ISO undeployment.</p> <p>Step 4: Make sure the ISO undeployment is successful.</p> <p>NOTE: The pull-down Tasks menu message box at the top of the Files page displays the status of the undeployment for each server. In addition, an ISO Deployment report can be viewed by selecting the ISO and clicking View ISO Deployment Report</p>	File Name	Size	Type	Timestamp	AdvanceUpgrade_HealthCheck_NO_grp_20160930-144027-EDT.txt	813 B	txt	2016-09-30 14:40:27 EDT	Backup UDR.pc9112023-no-a-FullDBParts.NETWORK_OAMP20161007_161412.UPG.tar	1.3 GB	tar	2016-10-07 16:16:49 EDT	Backup UDR.pc9112023-no-a-FullRunEnv.NETWORK_OAMP20161007_161412.UPG.tar	144.6 MB	tar	2016-10-07 16:16:56 EDT	Backup\Backup udr.pc9112023-no-a-Configuration.NETWORK_OAMP20161009_021510.AUTO.tar	10.9 MB	tar	2016-10-09 02:15:12 EDT	Backup\Backup udr.pc9112023-no-a-Configuration.NETWORK_OAMP20161010_021510.AUTO.tar	10.9 MB	tar	2016-10-10 02:15:12 EDT	Backup\Backup udr.pc9112023-no-a-Provisioning.NETWORK_OAMP20161009_031510.AUTO.tar	1.2 GB	tar	2016-10-09 03:15:30 EDT	Backup\Backup udr.pc9112023-no-a-Provisioning.NETWORK_OAMP20161010_031510.AUTO.tar	1.2 GB	tar	2016-10-10 03:15:30 EDT	iso\UDR-12.3.0.0.0_16.3.0-x86_64.iso	1 GB	iso	2016-10-09 09:40:06 EDT	TKLCConfigData.pc9112023-no-a.sh	4 KB	sh	2016-10-03 11:17:14 EDT	TKLCConfigData.pc9112024-no-b.sh	6.7 KB	sh	2016-09-30 17:04:29 EDT	UDR-12.2.0.0.0_15.5.0-x86_64.iso	918.7 MB	iso	2016-09-30 11:26:14 EDT	udriniConfig.sh	43.5 KB	sh	2016-09-22 14:57:53 EDT	upwrap.log	80 B	log	2016-10-11 14:19:12 EDT	upgrade.log	18.1 KB	log	2016-10-11 14:19:32 EDT
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Procedure 2: ISO Administration for Upgrades

Step	Procedure	Result																																												
<p>6.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP (GUI):</p> <p>Transfer ISO to all remaining servers via the GUI session.</p> <p>Select the <ISO filename> and then click on “Deploy ISO” button.</p> <p>Select “OK” button.</p>	 <p>Main Menu: Status & Manage -> Files</p> <p>Filter Tasks</p> <table border="1"> <thead> <tr> <th>File Name</th> <th>Size</th> <th>Type</th> <th>Timestamp</th> </tr> </thead> <tbody> <tr> <td>UDR-12.2.0.0.0_12.7.0-x86_64.iso</td> <td>865.5 MB</td> <td>iso</td> <td>2015-05-05 11:32:43 EDT</td> </tr> <tr> <td>TKLCConfigData.MP2.sh</td> <td>2.2 KB</td> <td>sh</td> <td>2015-05-04 15:32:06 EDT</td> </tr> <tr> <td>TKLCConfigData.MP1.sh</td> <td>2.2 KB</td> <td>sh</td> <td>2015-05-04 15:15:38 EDT</td> </tr> <tr> <td>TKLCConfigData.SO-B.sh</td> <td>2.6 KB</td> <td>sh</td> <td>2015-05-04 15:08:26 EDT</td> </tr> <tr> <td>TKLCConfigData.SO-A.sh</td> <td>2.6 KB</td> <td>sh</td> <td>2015-05-04 15:02:09 EDT</td> </tr> <tr> <td>TKLCConfigData.NO-B.sh</td> <td>3.6 KB</td> <td>sh</td> <td>2015-05-04 14:56:27 EDT</td> </tr> <tr> <td>upgrade.log</td> <td>82.3 KB</td> <td>log</td> <td>2015-05-04 12:04:47 EDT</td> </tr> <tr> <td>TKLCConfigData.NO-A.sh</td> <td>3.3 KB</td> <td>sh</td> <td>2015-05-04 11:32:34 EDT</td> </tr> <tr> <td>ugwrap.log</td> <td>1.3 KB</td> <td>log</td> <td>2015-05-01 15:38:13 EDT</td> </tr> <tr> <td>udrinitConfig.sh</td> <td>27.9 KB</td> <td>sh</td> <td>2015-04-20 16:18:51 EDT</td> </tr> </tbody> </table> <p>Delete View ISO Deployment Report Upload Download Deploy ISO Validate ISO</p> <p>Message from webpage</p> <p>Are you sure you want to deploy UDR-12.2.0.0.0_12.7.0-x86_64.iso?</p> <p>OK Cancel</p>	File Name	Size	Type	Timestamp	UDR-12.2.0.0.0_12.7.0-x86_64.iso	865.5 MB	iso	2015-05-05 11:32:43 EDT	TKLCConfigData.MP2.sh	2.2 KB	sh	2015-05-04 15:32:06 EDT	TKLCConfigData.MP1.sh	2.2 KB	sh	2015-05-04 15:15:38 EDT	TKLCConfigData.SO-B.sh	2.6 KB	sh	2015-05-04 15:08:26 EDT	TKLCConfigData.SO-A.sh	2.6 KB	sh	2015-05-04 15:02:09 EDT	TKLCConfigData.NO-B.sh	3.6 KB	sh	2015-05-04 14:56:27 EDT	upgrade.log	82.3 KB	log	2015-05-04 12:04:47 EDT	TKLCConfigData.NO-A.sh	3.3 KB	sh	2015-05-04 11:32:34 EDT	ugwrap.log	1.3 KB	log	2015-05-01 15:38:13 EDT	udrinitConfig.sh	27.9 KB	sh	2015-04-20 16:18:51 EDT
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<p>7.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP (GUI):</p> <p>This will move the ISO file to the “isos” directory and start the secure copy of the ISO to each server in the system. A status window will pop up as well.</p>	 <p>Main Menu: Status & Manage -> Files</p> <p>Filter Tasks</p> <table border="1"> <thead> <tr> <th>File Name</th> <th>Size</th> <th>Type</th> <th>Timestamp</th> </tr> </thead> <tbody> <tr> <td>isos/UDR-12.2.0.0.0_13.1.0-x86_64.iso</td> <td>872.4 MB</td> <td>iso</td> <td>2015-10-16 02:20:55 EDT</td> </tr> <tr> <td>TKLCConfigData.MP1.sh</td> <td>2.2 KB</td> <td>sh</td> <td>2015-05-04 15:15:38 EDT</td> </tr> <tr> <td>TKLCConfigData.MP2.sh</td> <td>2.2 KB</td> <td>sh</td> <td>2015-05-04 15:32:06 EDT</td> </tr> <tr> <td>TKLCConfigData.NO-A.sh</td> <td>3.3 KB</td> <td>sh</td> <td>2015-05-04 11:32:34 EDT</td> </tr> </tbody> </table> <p>Status</p> <p>ISO deployment started.</p>	File Name	Size	Type	Timestamp	isos/UDR-12.2.0.0.0_13.1.0-x86_64.iso	872.4 MB	iso	2015-10-16 02:20:55 EDT	TKLCConfigData.MP1.sh	2.2 KB	sh	2015-05-04 15:15:38 EDT	TKLCConfigData.MP2.sh	2.2 KB	sh	2015-05-04 15:32:06 EDT	TKLCConfigData.NO-A.sh	3.3 KB	sh	2015-05-04 11:32:34 EDT																								
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Procedure 2: ISO Administration for Upgrades

Step	Procedure	Result
<p>8.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP: (GUI):</p> <p>To view the status of the deployed ISO, select the file "isos/<ISO filename>" and then select the "View ISO Deployment Report". (This button only appears when a deployed ISO is selected. The button is typically the "View" button), or click the Tasks dropdown. To view the 'isos' directory on each server that is deployed, select the server tabs near the top of the menu. As an optional check (after the ISO is deployed), can select the "Validate ISO" button to ensure it's valid.</p>	 <p>Main Menu: Status & Manage -> Files [View]</p> <pre> Main Menu: Status & Manage -> Files [View] Fri Oct 16 03:26:45 2015 EDT Deployment report for UDR-12.2.0.0.0_13.1.0-x86_64.iso: Deployed on 6/6 servers. UDRPV01-S2-NO-LC-A: Deployed UDRPV01-S2-NO-LC-B: Deployed UDRPV01-S2-SO-LC-A: Deployed UDRPV01-S2-SO-LC-B: Deployed UDRPV01-S2-MP-LC-1: Deployed UDRPV01-S2-MP-LC-2: Deployed </pre>
<p>9.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP terminal</p> <p>Log on to the Active NOAMP terminal using the credentials provided.</p>	<p>Use your SSH client to connect to the server (ex. ssh, putty):</p> <pre>ssh<server address></pre> <p>login as: admusr password: <enter password></p>
<p>10.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP terminal:</p> <p>Mount the ISO image.</p>	<p>Mount the new ISO image that is used for upgrade</p> <pre>\$ sudo mount -o loop /var/TKLC/db/filemgmt/isos/UDR-12.3.0.0.0_16.3.0-x86_64.iso /mnt/upgrade</pre>

Procedure 2: ISO Administration for Upgrades

Step	Procedure	Result
11. <input type="checkbox"/>	Active NOAMP terminal: Extract and copy the script to /var/tmp	Copy the file to /var/tmp for execution. <code>\$ cp /mnt/upgrade/upgrade/bin/changeLinksToFiles.php /var/tmp</code>
12. <input type="checkbox"/>	Active NOAMP terminal: Unmount the ISO image.	<code>\$ sudo umount /mnt/upgrade</code>
13. <input type="checkbox"/>	Active NOAMP terminal: Make sure the script copied is executable	<code>\$ chmod +x /var/tmp/changeLinksToFiles.php</code>
14. <input type="checkbox"/>	Active NOAMP terminal: Execute the script	<code>\$ /var/tmp/changeLinksToFiles.php</code>
THIS PROCEDURE HAS BEEN COMPLETED		

3.3.5 Upgrade TVOE Hosts at a Site (prior to application upgrade MW)

This procedure applies if the TVOE Hosts at a site (primary or DR) will be upgraded BEFORE the start of the Oracle Communications User Data Repository 12.3 Upgrade of the NOs and other servers. Performing the TVOE upgrade BEFORE reduces the time required for Oracle Communications User Data Repository Application Upgrade procedures.

Precondition: The PM&C Application at each site (and the TVOE Host running the PM&C Virtual server, must be upgraded before performing TVOE Host OS Upgrade for servers that are managed by this PM&C.

Impact: TVOE Host upgrades require that the Oracle Communications User Data Repository Applications running on the host be shut down for up to 30 minutes during the upgrade.

Procedure	This Step	Cum.	Procedure Title	Impact
Appendix B	0:01-0:05	0:01-0:05	Verify health of site	
Refer to [3] [6]	30 min per TVOE Host (see note)	0:01- 3:05	Upgrade TVOE Hosts at a Site (prior to application upgrade MW)	Oracle Communications User Data Repository servers running as virtual guests on the TVOE host will be stopped and unable to perform their Oracle Communications User Data Repository role while the TVOE Host is being upgraded.
Appendix B	0:01-0:05	0:02- 3:10	Verify health of site	

Note: Depending on the risk tolerance of the customer, it is possible to execute multiple TVOE Upgrades in parallel.

Oracle Communications User Data Repository Software Upgrade Procedure

Detailed steps are shown in the procedure below.

Procedure 3: Upgrade TVOE Hosts at a Site (prior to application upgrade MW)

Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.

Step	Procedure	Result
1. <input type="checkbox"/>	Record site	Record Site to be upgraded _____
2. <input type="checkbox"/>	Select Order of TVOE server upgrades	Record the TVOE Hosts to be upgraded, in order: (It is best to upgrade Standby Servers before Active servers, to minimize failovers. Otherwise, any order is OK.) _____ _____ _____ _____ _____ Note: the site PM&C, "Software Inventory" form, will typically list the TVOE Hosts at a site, and their versions.
3. <input type="checkbox"/>	Upgrade the TVOE hosting the standby server(s)	Upgrade the TVOE Host of a standby server: Execute Appendix H – Upgrade TVOE Platform
4. <input type="checkbox"/>	Upgrade the TVOE hosting the active server(s)	Upgrade TVOE of the Active server Execute Appendix H – Upgrade TVOE Platform Note: This will cause a failover of the Oracle Communications User Data Repository on the TVOE.
5. <input type="checkbox"/>	Repeat for TVOE Hosts at a Site	Repeat steps 3 and 4 for multiple TVOE Hosts at a site, as time permits.

3.4 Order of Application Upgrade

The following list displays the order to upgrade the Servers (Primary and DR sites):

1. Primary Standby NOAMP
2. Primary Active NOAMP
3. Site 2 NOAMPs (DR Spares)
4. Site 1 SOAMs (Standby)
5. Site 1 SOAMs (Active)

6. Site 2 SOAMs (DR site – Spares)
7. Site 1 MPs (one at a time)
8. Site 2 MPs (DR site – one at a time)

3.5 Upgrade Execution Overview for Normal Capacity C-Class Configuration

3.5.1 Primary NOAMP / DR NOAMP Execution Overview

The procedures shown in each table below are the estimated times for upgrading 2 NOAMPs and 2 DR NOAMPs. The primary NOAMPs are upgraded first, followed by the DR NOAMPs.

Procedure Number	Procedure Title	Elapsed Time (Hours:Minutes)	
		This Step	Cumulative
4	<i>Remove Additional GUI Sessions</i>	00:05	00:05
5	<i>Full Database Backup</i>	00:30	00:35
6 or 7	Major Upgrade Primary NOAMP NE - 4.2.3 Incremental Upgrade Primary NOAMP NE - 4.2.4	03:30	04:05

Table 6 - Primary NOAMP Upgrade Procedures

Procedure Number	Procedure Title	Elapsed Time (Hours:Minutes)	
		This Step	Cumulative
8 or 9	Major Upgrade DR NOAMP NE - 4.2.5 Incremental Upgrade DR NOAMP NE - 4.2.6	03:30	03:30

Table 7 - DR NOAMP Upgrade Procedures

***NOTE:** Times estimates are based on a large Database.

3.5.2 SOAM Server Upgrade Execution Overview

The procedures shown in the following table are the estimated times for upgrading the two SOAM Servers. SOAMs should be upgraded one site at a time (site 1 followed by site 2).

Procedure Number	Procedure Title	Elapsed Time (Hours:Minutes)	
		This Step	Cumulative
10 or 11	Major Upgrade SOAM NE - 5.2.1 Incremental Upgrade SOAM NE - 5.2.2	00:45	00:45

Table 8 - SOAM Upgrade Procedures

3.5.3 MP Server Upgrade Execution Overview

The procedure shown in the following table is the estimated time for upgrading MP Servers. MP Servers should be upgraded one site at a time (site 1 followed by site 2).

Procedure Number	Procedure Title	Elapsed Time (Hours:Minutes)	
		This Step	Cumulative
12 or 13	Major Upgrade MP NE - 5.3.1 Incremental Upgrade MP NE - 5.3.2	00:45	00:45

Table 9 – MP Server Upgrade Procedures for C-Class Configuration

3.6 Upgrade Execution Overview for Low Capacity Configurations

3.6.1 Primary NOAMP / DR NOAMP Execution Overview

The procedures shown in each table below are the estimated times for upgrading 2 NOAMPs and 2 DR NOAMPs. The primary NOAMPs are upgraded first, followed by the DR NOAMPs.

Procedure Number	Procedure Title	Elapsed Time (Hours:Minutes)	
		This Step	Cumulative
4	<i>Remove Additional GUI Sessions</i>	00:05	00:05
5	<i>Full Database Backup</i>	00:30	00:35
6 or 7	Major Upgrade Primary NOAMP NE - 4.2.3 Incremental Upgrade Primary NOAMP NE - 4.2.4	01:00	01:35

Table 10 - Primary NOAMP Upgrade Procedures

Procedure Number	Procedure Title	Elapsed Time (Hours:Minutes)	
		This Step	Cumulative
8 or 9	Major Upgrade DR NOAMP NE - 4.2.5 Incremental Upgrade DR NOAMP NE - 4.2.6	01:00	01:00

Table 11 - DR NOAMP Upgrade Procedures

*NOTE: Times estimates are based on a small Database.

3.6.2 SOAM Server Upgrade Execution Overview

The procedures shown in the following table are the estimated times for upgrading the two SOAM Servers. SOAMs should be upgraded one site at a time (site 1 followed by site 2).

Procedure Number	Procedure Title	Elapsed Time (Hours:Minutes)	
		This Step	Cumulative
10 or 11	Major Upgrade SOAM NE - 5.2.1 Incremental Upgrade SOAM NE - 5.2.2	00:45	00:45

Table 12 - SOAM Upgrade Procedures

3.6.3 MP Server Upgrade Execution Overview

The procedures shown in the following tables are the estimated times for upgrading two MP Servers. MP Servers should be upgraded one site at a time (site 1 followed by site 2).

Procedure Number	Procedure Title	Elapsed Time (Hours:Minutes)	
		This Step	Cumulative
12 or 13	Major Upgrade MP NE - 5.3.1 Incremental Upgrade MP NE - 5.3.2	00:25	00:25

Table 13 – MP Server Upgrade Procedures for low capacity Configurations

3.7 Upgrade Acceptance Overview

Procedure Number	Procedure Title	Elapsed Time (Hours:Minutes)	
		This Step	Cumulative
15	<i>Accept Upgrade</i>	00:20	00:20

Table 14 – Upgrade Acceptance overview

4. PRIMARY NOAMP / DR NOAMP UPGRADE EXECUTION

Open A Service Ticket at My Oracle Support (Appendix F) and inform them of your plans to upgrade this system prior to executing this upgrade.

Before upgrade, users must perform the system Health Check **Appendix B**.

This check ensures that the system to be upgraded is in an upgrade-ready state. Performing the system health check determines which alarms are present in the system and if upgrade can proceed with alarms.

**** WARNING ****

If there are servers in the system, which are not in Normal state, these servers should be brought to the Normal or the Application Disabled state before the upgrade process is started.

The sequence of upgrade is such that servers providing support services to other servers will be upgraded first.

**** WARNING ****

Please read the following notes on this procedure:

Procedure completion times shown here are estimates. Times may vary due to differences in database size, user experience, and user preparation.

Where possible, command response outputs are shown as accurately as possible. EXCEPTIONS are as follows:
Session banner information such as time and date.

System-specific configuration information such as hardware locations, IP addresses and hostnames.

ANY information marked with "XXXX" or "YYYY." Where appropriate, instructions are provided to determine what output should be expected in place of "XXXX or YYYY"

Aesthetic differences unrelated to functionality such as browser attributes: window size, colors, toolbars and button layouts.

After completing each step and at each point where data is recorded from the screen, the technician performing the upgrade must mark the provided Check Box.

For procedures which are executed multiple times, a mark can be made below the Check Box (in the same column) for each additional iteration of the step executed.

Retention of Captured data is required for as a future support reference this procedure is executed by someone other than Oracle's Consulting Services.

4.1 Perform Health Check (Pre Upgrade)

This procedure is part of Software Upgrade Preparation and is used to determine the health and status of the Oracle Communications User Data Repository network and servers. This may be executed multiple times but must also be executed at least once within the time frame of 24-36 hours prior to the start of a maintenance window.

Execute Health Check procedures as specified in **Appendix B**.

4.2 Primary NOAMP / DR NOAMP Upgrade

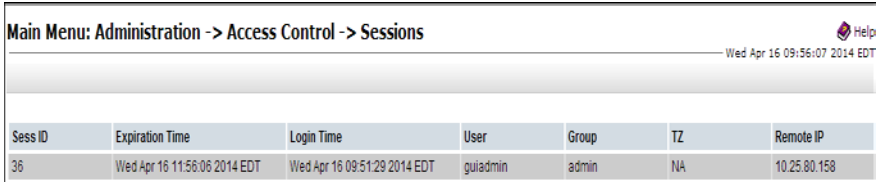
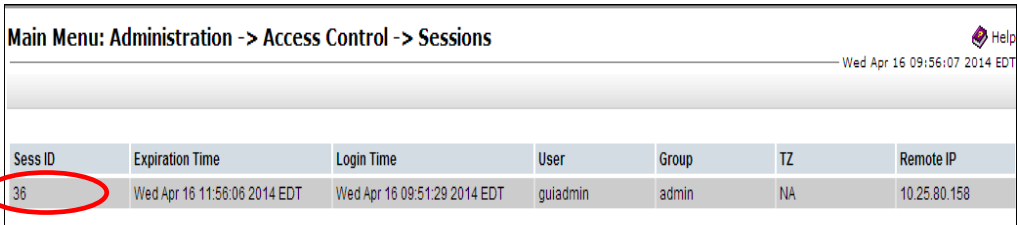
The following procedures detail how to perform upgrades for Primary NOAMP and DR NOAMP Servers.

WARNING: The Database Audit stays disabled throughout the whole upgrade, until all of the SOAM sites are upgraded!

Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.

4.2.1 Remove Additional GUI Sessions

Procedure 4: Remove Additional GUI Sessions

Step	Procedure	Result														
1. <input type="checkbox"/>	Using the VIP address, access the Primary NOAMP GUI.	Access the Primary NOAMP GUI as specified in Appendix A .														
2. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu → Administration → Access Control → Sessions</p> <p>...as shown on the right.</p>	 <table border="1"> <thead> <tr> <th>Sess ID</th> <th>Expiration Time</th> <th>Login Time</th> <th>User</th> <th>Group</th> <th>TZ</th> <th>Remote IP</th> </tr> </thead> <tbody> <tr> <td>36</td> <td>Wed Apr 16 11:56:06 2014 EDT</td> <td>Wed Apr 16 09:51:29 2014 EDT</td> <td>guiadmin</td> <td>admin</td> <td>NA</td> <td>10.25.80.158</td> </tr> </tbody> </table>	Sess ID	Expiration Time	Login Time	User	Group	TZ	Remote IP	36	Wed Apr 16 11:56:06 2014 EDT	Wed Apr 16 09:51:29 2014 EDT	guiadmin	admin	NA	10.25.80.158
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3. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>In the right panel, the user will be presented with the list of Active GUI sessions connected to the Active NOAMP server.</p>	 <table border="1"> <thead> <tr> <th>Sess ID</th> <th>Expiration Time</th> <th>Login Time</th> <th>User</th> <th>Group</th> <th>TZ</th> <th>Remote IP</th> </tr> </thead> <tbody> <tr> <td>36</td> <td>Wed Apr 16 11:56:06 2014 EDT</td> <td>Wed Apr 16 09:51:29 2014 EDT</td> <td>guiadmin</td> <td>admin</td> <td>NA</td> <td>10.25.80.158</td> </tr> </tbody> </table>	Sess ID	Expiration Time	Login Time	User	Group	TZ	Remote IP	36	Wed Apr 16 11:56:06 2014 EDT	Wed Apr 16 09:51:29 2014 EDT	guiadmin	admin	NA	10.25.80.158
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Procedure 4: Remove Additional GUI Sessions

Step	Procedure	Result																												
4. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>The User ID and Remote IP address of each session will be displayed as seen on the right.</p> <p>Every attempt should be made to contact users not engaged in this Upgrade activity and request that they discontinue GUI access until the upgrade activity has completed.</p>	<table border="1"> <thead> <tr> <th>Sess ID</th> <th>Expiration Time</th> <th>Login Time</th> <th>User</th> <th>Group</th> <th>TZ</th> <th>Remote IP</th> </tr> </thead> <tbody> <tr> <td>36</td> <td>Wed Apr 16 11:56:06 2014 EDT</td> <td>Wed Apr 16 09:51:29 2014 EDT</td> <td>guiadmin</td> <td>admin</td> <td>NA</td> <td>10.25.80.158</td> </tr> </tbody> </table>	Sess ID	Expiration Time	Login Time	User	Group	TZ	Remote IP	36	Wed Apr 16 11:56:06 2014 EDT	Wed Apr 16 09:51:29 2014 EDT	guiadmin	admin	NA	10.25.80.158														
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5. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>If unable to identify or contact the session owners, sessions not related to the upgrade activity may be selected and deleted as follows:</p> <ol style="list-style-type: none"> 1) Select the session for deletion with the cursor. 2) In the bottom left of the right panel, click the "Delete" dialogue button. 3) In the pop-up window, click on the "OK" dialogue button. 	<table border="1"> <thead> <tr> <th>Sess ID</th> <th>Expiration Time</th> <th>Login Time</th> <th>User</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>No Expiry</td> <td>Wed Sep 21 10:10:12 2011 EDT</td> <td>guiadmin</td> </tr> <tr> <td>13</td> <td>No Expiry</td> <td>Tue Sep 20 23:21:30 2011 EDT</td> <td>guiadmin</td> </tr> <tr> <td>14</td> <td>No Expiry</td> <td>Wed Sep 21 08:16:34 2011 EDT</td> <td>guiadmin</td> </tr> <tr> <td>16</td> <td>No Expiry</td> <td>Wed Sep 21 08:36:09 2011 EDT</td> <td>guiadmin</td> </tr> <tr> <td>17</td> <td>No Expiry</td> <td>Wed Sep 21 09:24:30 2011 EDT</td> <td>guiadmin</td> </tr> <tr> <td>17</td> <td>No Expiry</td> <td>Wed Sep 21 09:15:04 2011 EDT</td> <td>guiadmin</td> </tr> </tbody> </table> <p>NOTE: The Session screen prevents users from deleting the session which they are currently connected to. If attempting to do so by accident, a message may be received in the Banner area stating "Logout to delete your own session (id=xx)".</p>	Sess ID	Expiration Time	Login Time	User	10	No Expiry	Wed Sep 21 10:10:12 2011 EDT	guiadmin	13	No Expiry	Tue Sep 20 23:21:30 2011 EDT	guiadmin	14	No Expiry	Wed Sep 21 08:16:34 2011 EDT	guiadmin	16	No Expiry	Wed Sep 21 08:36:09 2011 EDT	guiadmin	17	No Expiry	Wed Sep 21 09:24:30 2011 EDT	guiadmin	17	No Expiry	Wed Sep 21 09:15:04 2011 EDT	guiadmin
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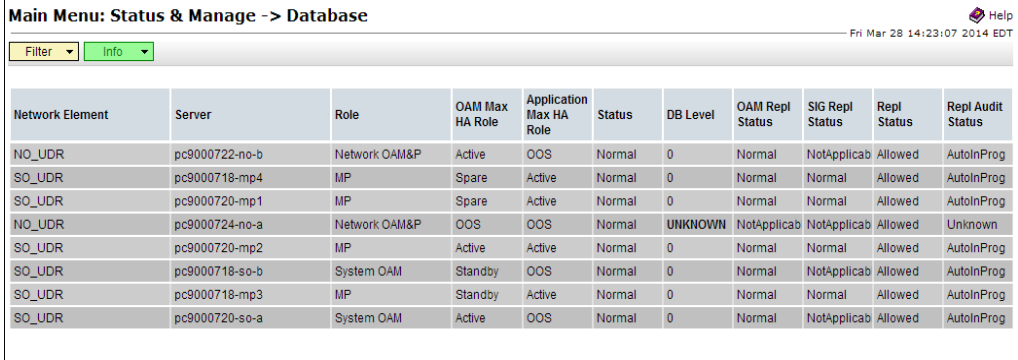
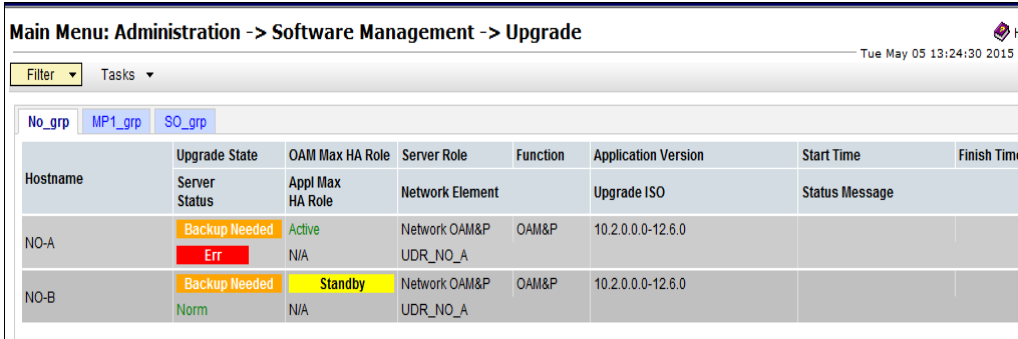
Procedure 4: Remove Additional GUI Sessions

Step	Procedure	Result
<p>6.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>The user will receive a confirmation message in the Info tab indicating the session ID which was deleted.</p>	
<p>7.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Delete any additional GUI sessions as needed.</p>	<p>Repeat Steps 5-6 of this Procedure for each additional GUI session to be deleted.</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

4.2.2 Full Database Backup (All Network Elements, All Servers)

This procedure is part of Software Upgrade Preparation and is used to conduct a full backup of the COMCOL run environment on every server, to be used in the event of a backout/rollback of the new software release.

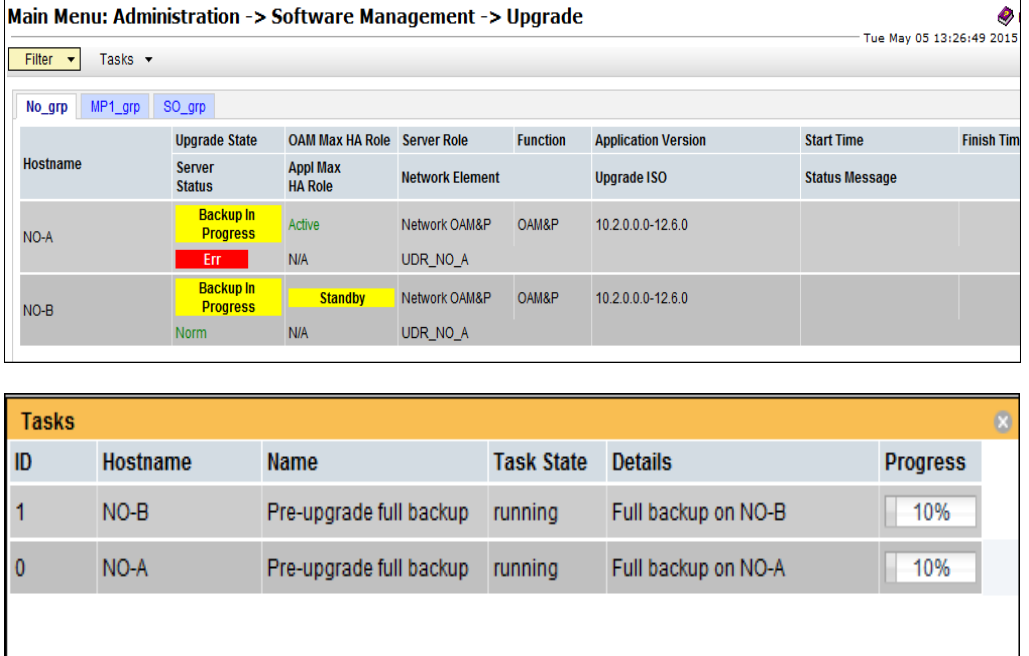
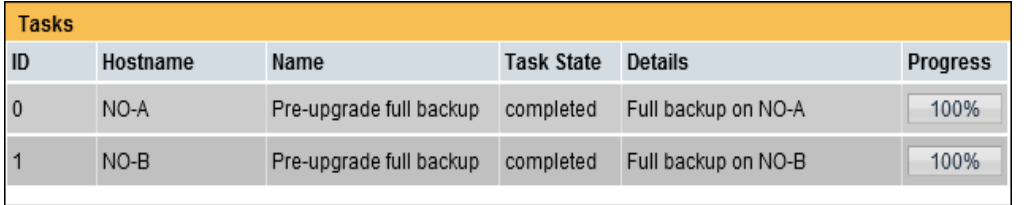
Procedure 5: Full Database Backup

Step	Procedure	Result																																																																																																			
1. <input type="checkbox"/>	Using the VIP address, access the Primary NOAMP GUI.	Access the Primary NOAMP GUI as specified in Appendix A .																																																																																																			
2. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu → Status & Manage → Database</p> <p>...as shown on the right.</p>	 <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server</th> <th>Role</th> <th>OAM Max HA Role</th> <th>Application Max HA Role</th> <th>Status</th> <th>DB Level</th> <th>OAM Repl Status</th> <th>SIG Repl Status</th> <th>Repl Status</th> <th>Repl Audit Status</th> </tr> </thead> <tbody> <tr> <td>NO_UDR</td> <td>pc9000722-no-b</td> <td>Network OAM&P</td> <td>Active</td> <td>OOS</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>NotApplicab</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000718-mp4</td> <td>MP</td> <td>Spare</td> <td>Active</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000720-mp1</td> <td>MP</td> <td>Spare</td> <td>Active</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>NO_UDR</td> <td>pc9000724-no-a</td> <td>Network OAM&P</td> <td>OOS</td> <td>OOS</td> <td>Normal</td> <td>UNKNOWN</td> <td>NotApplicab</td> <td>NotApplicab</td> <td>Allowed</td> <td>Unknown</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000720-mp2</td> <td>MP</td> <td>Active</td> <td>Active</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000718-so-b</td> <td>System OAM</td> <td>Standby</td> <td>OOS</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>NotApplicab</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000718-mp3</td> <td>MP</td> <td>Standby</td> <td>Active</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000720-so-a</td> <td>System OAM</td> <td>Active</td> <td>OOS</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>NotApplicab</td> <td>Allowed</td> <td>AutoInProg</td> </tr> </tbody> </table>	Network Element	Server	Role	OAM Max HA Role	Application Max HA Role	Status	DB Level	OAM Repl Status	SIG Repl Status	Repl Status	Repl Audit Status	NO_UDR	pc9000722-no-b	Network OAM&P	Active	OOS	Normal	0	Normal	NotApplicab	Allowed	AutoInProg	SO_UDR	pc9000718-mp4	MP	Spare	Active	Normal	0	Normal	Normal	Allowed	AutoInProg	SO_UDR	pc9000720-mp1	MP	Spare	Active	Normal	0	Normal	Normal	Allowed	AutoInProg	NO_UDR	pc9000724-no-a	Network OAM&P	OOS	OOS	Normal	UNKNOWN	NotApplicab	NotApplicab	Allowed	Unknown	SO_UDR	pc9000720-mp2	MP	Active	Active	Normal	0	Normal	Normal	Allowed	AutoInProg	SO_UDR	pc9000718-so-b	System OAM	Standby	OOS	Normal	0	Normal	NotApplicab	Allowed	AutoInProg	SO_UDR	pc9000718-mp3	MP	Standby	Active	Normal	0	Normal	Normal	Allowed	AutoInProg	SO_UDR	pc9000720-so-a	System OAM	Active	OOS	Normal	0	Normal	NotApplicab	Allowed	AutoInProg
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3. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Record the names of all servers.</p>	<p>Using the information provided in Section 3.1.2 (<i>Logins, Passwords and Site Information</i>) record the names of all servers to the Servers Worksheet in Appendix C.2(print or photocopy additional pages if necessary to accommodate your number of Network Elements).</p> <p>*The full backup on every server can be done from the NOAMP GUI.</p>																																																																																																			
4. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Main Menu → Administration → Software Management → Upgrade</p> <p>...as shown on the right.</p> <p>Backup the COMCOL run environment</p>	 <table border="1"> <thead> <tr> <th>Hostname</th> <th>Upgrade State</th> <th>OAM Max HA Role</th> <th>Server Role</th> <th>Function</th> <th>Application Version</th> <th>Start Time</th> <th>Finish Time</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>Backup Needed Err</td> <td>Active</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.2.0.0.0-12.6.0</td> <td></td> <td></td> </tr> <tr> <td>NO-B</td> <td>Backup Needed Norm</td> <td>Standby</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.2.0.0.0-12.6.0</td> <td></td> <td></td> </tr> </tbody> </table>	Hostname	Upgrade State	OAM Max HA Role	Server Role	Function	Application Version	Start Time	Finish Time	NO-A	Backup Needed Err	Active	Network OAM&P	OAM&P	10.2.0.0.0-12.6.0			NO-B	Backup Needed Norm	Standby	Network OAM&P	OAM&P	10.2.0.0.0-12.6.0																																																																													
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Procedure 5: Full Database Backup

Step	Procedure	Result																																																												
<p>5.</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin-bottom: 10px;"></div> <p>Click “Backup All” button at left bottom of the screen; the full backups will begin.</p> <p>After clicking backup – an additional screen will pop up.</p> <p>Default is to exclude the database parts (If the database parts are included – then the backup will take longer and produce larger backup files in /var/TKLC/db/filemgmt. They are not required for a full backup.</p> <p>Click “OK” to begin the backup.</p>	<p>Active NOAMP VIP:</p>	<div style="border: 1px solid gray; padding: 5px;"> <p>Main Menu: Administration -> Software Management -> Upgrade Tue May 05 13:23:37 2015</p> <p>Filter Tasks</p> <p>No_grp MP1_grp SO_grp</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Hostname</th> <th>Upgrade State</th> <th>OAM Max HA Role</th> <th>Server Role</th> <th>Function</th> <th>Application Version</th> <th>Start Time</th> <th>Finish Time</th> </tr> <tr> <th></th> <th>Server Status</th> <th>Appl Max HA Role</th> <th>Network Element</th> <th></th> <th>Upgrade ISO</th> <th></th> <th>Status Message</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td style="background-color: #ffcc00;">Backup Needed</td> <td>Active</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.2.0.0.0-12.6.0</td> <td></td> <td></td> </tr> <tr> <td></td> <td style="background-color: #ff0000; color: white;">Err</td> <td>N/A</td> <td>UDR_NO_A</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>NO-B</td> <td style="background-color: #ffcc00;">Backup Needed</td> <td style="background-color: #ffff00;">Standby</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.2.0.0.0-12.6.0</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Norm</td> <td>N/A</td> <td>UDR_NO_A</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <div style="text-align: center; margin: 10px 0;"> <div style="border: 1px solid gray; padding: 5px; display: inline-block;">Backup All</div> </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Network element</th> <th>Action</th> <th>Server(s) in the proper state for backup</th> </tr> </thead> <tbody> <tr> <td>UDR_NO</td> <td><input checked="" type="checkbox"/> Back up</td> <td>NOA</td> </tr> <tr> <td>UDR_SO</td> <td><input checked="" type="checkbox"/> Back up</td> <td>SOA MP1 SOB MP2</td> </tr> </tbody> </table> <p>Full backup options</p> <table style="width: 100%;"> <tr> <td style="width: 30%;">Database parts exclusion</td> <td> <input checked="" type="radio"/> Exclude <input type="radio"/> Do not exclude </td> <td> Select "Exclude" to perform a full backup of the COMCOL run environment, excluding the database parts specified in the files in /usr/TKLC/apworks/etc/exclude_parts.d. Select "Do not exclude" to perform a full backup of the COMCOL run environment without excluding any database parts. This will take longer and produce larger backup files in /var/TKLC/db/filemgmt. </td> </tr> </table> <div style="text-align: right; margin-top: 10px;"> <div style="border: 1px solid gray; padding: 2px 10px; margin-right: 10px;">Ok</div> <div style="border: 1px solid gray; padding: 2px 10px;">Cancel</div> </div> </div>	Hostname	Upgrade State	OAM Max HA Role	Server Role	Function	Application Version	Start Time	Finish Time		Server Status	Appl Max HA Role	Network Element		Upgrade ISO		Status Message	NO-A	Backup Needed	Active	Network OAM&P	OAM&P	10.2.0.0.0-12.6.0				Err	N/A	UDR_NO_A					NO-B	Backup Needed	Standby	Network OAM&P	OAM&P	10.2.0.0.0-12.6.0				Norm	N/A	UDR_NO_A					Network element	Action	Server(s) in the proper state for backup	UDR_NO	<input checked="" type="checkbox"/> Back up	NOA	UDR_SO	<input checked="" type="checkbox"/> Back up	SOA MP1 SOB MP2	Database parts exclusion	<input checked="" type="radio"/> Exclude <input type="radio"/> Do not exclude	Select "Exclude" to perform a full backup of the COMCOL run environment, excluding the database parts specified in the files in /usr/TKLC/apworks/etc/exclude_parts.d. Select "Do not exclude" to perform a full backup of the COMCOL run environment without excluding any database parts. This will take longer and produce larger backup files in /var/TKLC/db/filemgmt.
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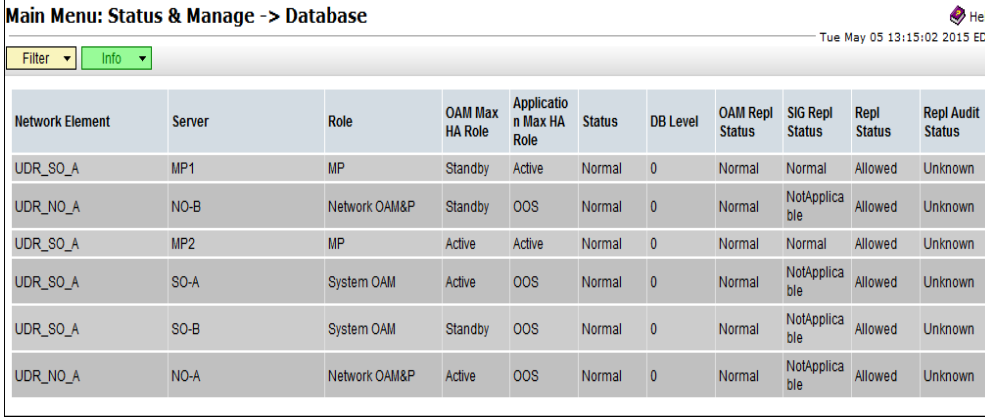
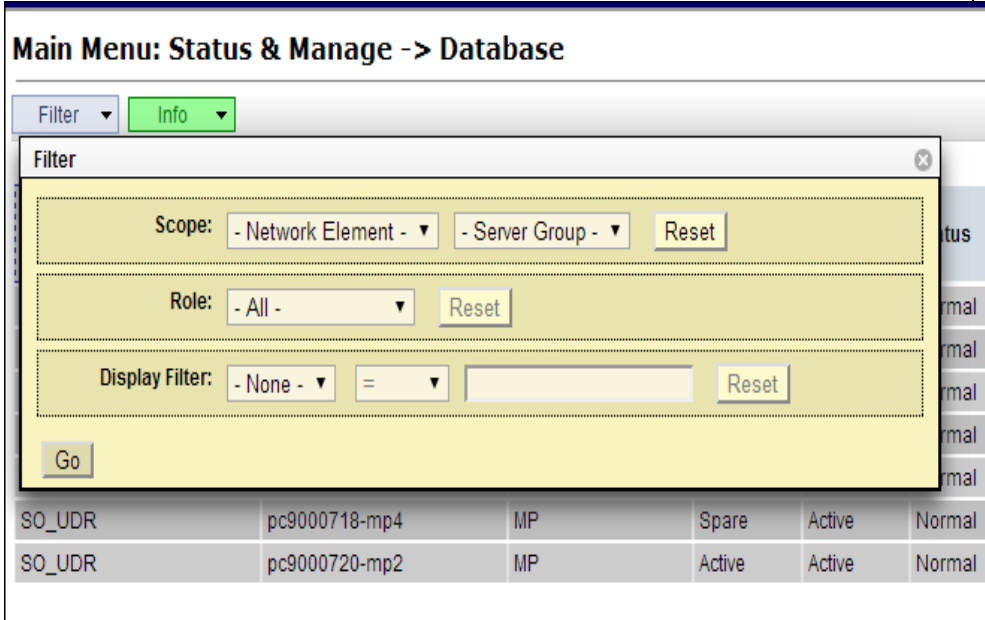
Procedure 5: Full Database Backup

Step	Procedure	Result																																																																																				
<p>6.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>The “Server Status” box indicates “Backup in Progress” The progress of the full backups can be viewed in the pulldown Tasks box, as well as from the Status & Manage->Tasks->Active Tasks screen.</p> <p>As each full backup completes, its task will update to indicate its success or failure. When all full backup tasks finish successfully, this procedure is complete.</p>	 <p>Main Menu: Administration -> Software Management -> Upgrade</p> <p>Tue May 05 13:26:49 2015</p> <table border="1"> <thead> <tr> <th>No_grp</th> <th>MP1_grp</th> <th>SO_grp</th> <th>Upgrade State</th> <th>OAM Max HA Role</th> <th>Server Role</th> <th>Function</th> <th>Application Version</th> <th>Start Time</th> <th>Finish Time</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td></td> <td></td> <td>Backup In Progress</td> <td>Active</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.2.0.0.0-12.6.0</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>Err</td> <td>N/A</td> <td>UDR_NO_A</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>NO-B</td> <td></td> <td></td> <td>Backup In Progress</td> <td>Standby</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.2.0.0.0-12.6.0</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>Norm</td> <td>N/A</td> <td>UDR_NO_A</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>ID</th> <th>Hostname</th> <th>Name</th> <th>Task State</th> <th>Details</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>NO-B</td> <td>Pre-upgrade full backup</td> <td>running</td> <td>Full backup on NO-B</td> <td>10%</td> </tr> <tr> <td>0</td> <td>NO-A</td> <td>Pre-upgrade full backup</td> <td>running</td> <td>Full backup on NO-A</td> <td>10%</td> </tr> </tbody> </table> <p>Main Menu: Status & Manage -> Tasks -> Active Tasks</p> <p>Tue May 05 13:28:46 2015 EDT</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Name</th> <th>Status</th> <th>Start Time</th> <th>Update Time</th> <th>Result</th> <th>Result Details</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Pre-upgrade full backup</td> <td>running</td> <td>2015-05-05 13:26:43 EDT</td> <td>2015-05-05 13:26:43 EDT</td> <td>0</td> <td>Full backup on NO-A</td> <td>10%</td> </tr> </tbody> </table>	No_grp	MP1_grp	SO_grp	Upgrade State	OAM Max HA Role	Server Role	Function	Application Version	Start Time	Finish Time	NO-A			Backup In Progress	Active	Network OAM&P	OAM&P	10.2.0.0.0-12.6.0						Err	N/A	UDR_NO_A					NO-B			Backup In Progress	Standby	Network OAM&P	OAM&P	10.2.0.0.0-12.6.0						Norm	N/A	UDR_NO_A					ID	Hostname	Name	Task State	Details	Progress	1	NO-B	Pre-upgrade full backup	running	Full backup on NO-B	10%	0	NO-A	Pre-upgrade full backup	running	Full backup on NO-A	10%	ID	Name	Status	Start Time	Update Time	Result	Result Details	Progress	0	Pre-upgrade full backup	running	2015-05-05 13:26:43 EDT	2015-05-05 13:26:43 EDT	0	Full backup on NO-A	10%
No_grp	MP1_grp	SO_grp	Upgrade State	OAM Max HA Role	Server Role	Function	Application Version	Start Time	Finish Time																																																																													
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<p>7.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>Main Menu →Administration →Software Management →Upgrade</p> <p>Click the Tasks dropdown.</p>	 <table border="1"> <thead> <tr> <th>ID</th> <th>Hostname</th> <th>Name</th> <th>Task State</th> <th>Details</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>NO-A</td> <td>Pre-upgrade full backup</td> <td>completed</td> <td>Full backup on NO-A</td> <td>100%</td> </tr> <tr> <td>1</td> <td>NO-B</td> <td>Pre-upgrade full backup</td> <td>completed</td> <td>Full backup on NO-B</td> <td>100%</td> </tr> </tbody> </table> <p>When complete, Progress should display 100%.</p>	ID	Hostname	Name	Task State	Details	Progress	0	NO-A	Pre-upgrade full backup	completed	Full backup on NO-A	100%	1	NO-B	Pre-upgrade full backup	completed	Full backup on NO-B	100%																																																																		
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<p>8.</p> <p><input type="checkbox"/></p>	<p>Mark this server's backup as complete.</p>	<p>Reference the Servers Worksheet in Appendix C.2 and check off the server which just completed backup.</p>																																																																																				
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>																																																																																						

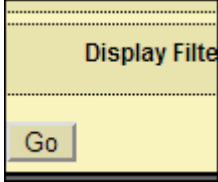


4.2.3 Major Upgrade Primary NOAMP NE

The following procedures detail how to perform major upgrades for Primary NOAMP server to various possible upgrade paths.



Procedure 6: Major Upgrade Primary NOAMP NE

Step	Procedure	Result																																																																													
<p>1.</p> <input type="checkbox"/>	<p>Using the VIP address, access the Primary NOAMP GUI.</p>	<p>Access the Primary NOAMP GUI as specified in Appendix A.</p>																																																																													
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Procedure 6: Major Upgrade Primary NOAMP NE

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<p>5.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Click on the “GO” dialogue button located on the right end of the filter bar.</p>																																		
<p>6.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>The user should be presented with the list of servers associated with the Primary NOAMP Network Element.</p> <p>Identify each “Server” and its associated “Role” and “HA Role”.</p>	<p>Main Menu: Status & Manage -> Database (Filtered) Wed Jan 14 14:05:16</p> <p>Filter <input type="text"/> Info <input type="text"/></p> <table border="1" data-bbox="537 646 1518 751"> <thead> <tr> <th>Network Element</th> <th>Server</th> <th>Role</th> <th>OAM Max HA Role</th> <th>Application Max HA Role</th> <th>Status</th> <th>DB Level</th> <th>OAM Repl Status</th> <th>SIG Repl Status</th> <th>Repl Status</th> <th>Repl Statu</th> </tr> </thead> <tbody> <tr> <td>NO_UDR</td> <td>pc9000724-no-a</td> <td>Network OAM&P</td> <td>Standby</td> <td>OOS</td> <td>Normal</td> <td>195849266</td> <td>Normal</td> <td>NotApplicabl</td> <td>Allowed</td> <td>Unkr</td> </tr> <tr> <td>NO_UDR</td> <td>pc9000722-no-b</td> <td>Network OAM&P</td> <td>Active</td> <td>OOS</td> <td>Normal</td> <td>195849404</td> <td>Normal</td> <td>NotApplicabl</td> <td>Allowed</td> <td>Unkr</td> </tr> </tbody> </table>	Network Element	Server	Role	OAM Max HA Role	Application Max HA Role	Status	DB Level	OAM Repl Status	SIG Repl Status	Repl Status	Repl Statu	NO_UDR	pc9000724-no-a	Network OAM&P	Standby	OOS	Normal	195849266	Normal	NotApplicabl	Allowed	Unkr	NO_UDR	pc9000722-no-b	Network OAM&P	Active	OOS	Normal	195849404	Normal	NotApplicabl	Allowed	Unkr
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<p>7.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Record the “Server” names appropriately in the space provided to the right.</p>	<p>Identify the Primary NOAMP “Server” names and record them in the space provided below:</p> <p>Standby NOAMP: _____</p> <p>Active NOAMP: _____</p>																																	
<p> NOTE: Step 8 is for the STANDBY NOAMP ONLY.</p>																																			
<p>8.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Upgrade Server for the Standby NOAMP Server.</p>	<p>Upgrade Server for the Standby NOAMP Server (identified in Step 7 of this Procedure) as specified in Appendix C.1 Upgrade Server</p>																																	
<p> !! WARNING !! STEP 8 MUST BE COMPLETED BEFORE CONTINUING ON TO STEP 9.</p> <p>*** Verify the Databases are in sync using Appendix E before upgrading the Active Server</p>																																			

Procedure 6: Major Upgrade Primary NOAMP NE

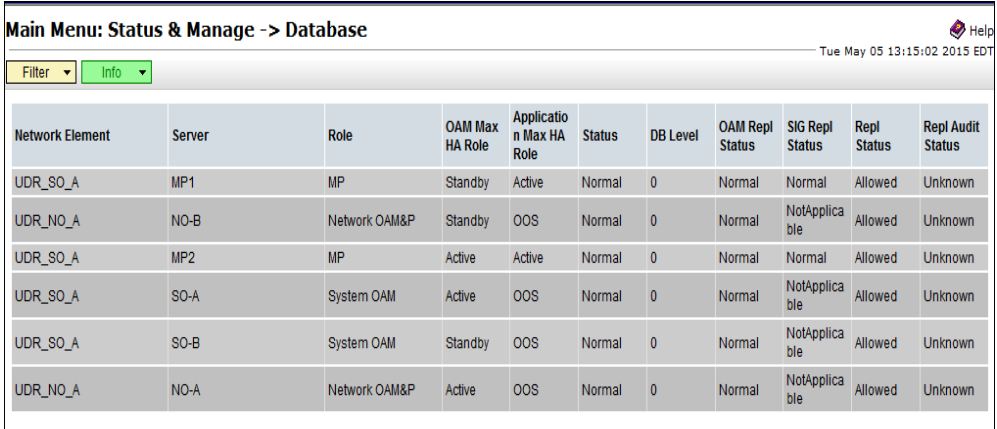
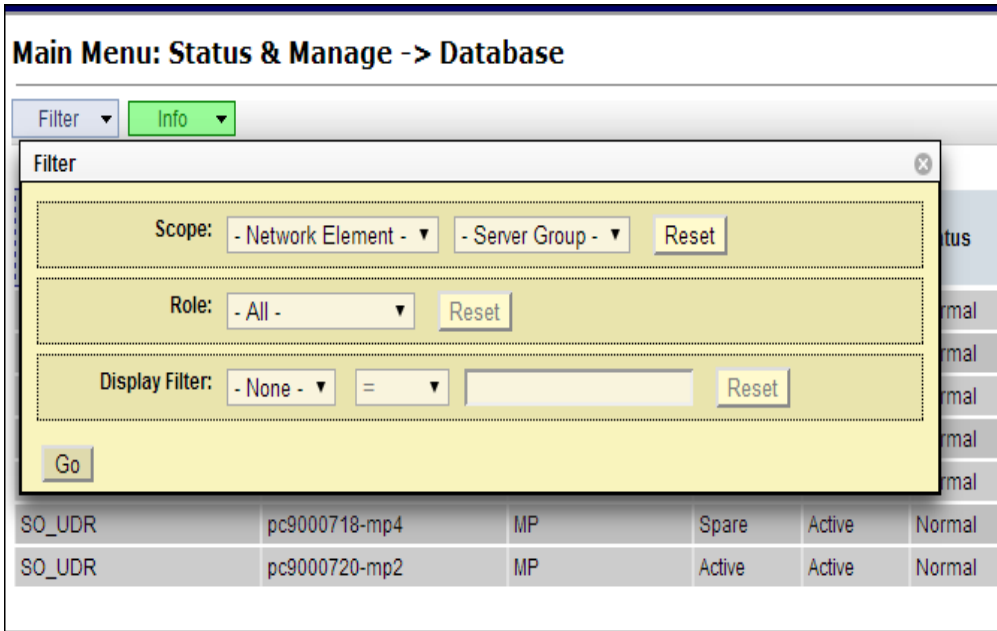
Step	Procedure	Result
<p>9.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Upgrade Server for the Active NOAMP Server.</p>	<p>Upgrade Server for the Active NOAMP Server (identified in Step 7 of this Procedure) as specified in Appendix C.1 Upgrade Server.</p>
 <p>NOTE: Steps 10 to 14 are for upgrading G9 low capacity setup from 10.2 release to 12.x release. ** If upgrading Gen-8 server, step 10 to 14 are not required.</p>		
<p>10.</p> <input type="checkbox"/>	<p>Active NOAMP server:</p> <p>Execute loader script to update Gen9 12.x release specific parameters</p>	<p>Execute the script at any path on Active NOAMP console:</p> <pre>[root@UDRPV01-S1-NO-A ~]# upgrade_G9_LC_10.2_to_12.x.sh</pre>
<p>11.</p> <input type="checkbox"/>	<p>Standby NOAMP server:</p> <p>Change number of VCPU cores allocated to standby NOAMP from PM&C GUI</p>	<p>Change number of VCPU cores allocated to standby NOAMP server as specified in Appendix J.1: Change Number of VCPU Cores and RAM allocated to NOAMP Guests.</p>
<p>12.</p>	<p>TVOE of Standby NOAMP server:</p> <p>Execute vCPU pinning script at TVOE server of standby NOAMP server.</p>	<p>Execute vCPU pinning script at TVOE server hosting the standby NOAMP server as specified in Procedure 22: TVOE performance tuning.</p>
<p>13.</p> <input type="checkbox"/>	<p>Active NOAMP server:</p> <p>Change number of VCPU cores allocated to Active NOAMP from PM&C GUI</p>	<p>Change number of VCPU cores allocated to active NOAMP server as specified in Appendix J.1: Change Number of VCPU Cores and RAM allocated to NOAMP Guests.</p>
<p>14.</p>	<p>TVOE of Active NOAMP server:</p> <p>Execute vCPU pinning script at TVOE server of standby NOAMP server.</p>	<p>Execute vCPU pinning script at TVOE server hosting the Active NOAMP server as specified in Procedure 22: TVOE performance tuning.</p>
 <p>NOTE: Steps 15 to 18 are for upgrading Oracle RMS low capacity setup from 10.2 to 12.x releases.</p>		

Procedure 6: Major Upgrade Primary NOAMP NE

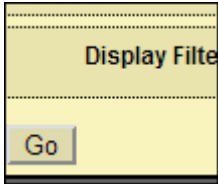
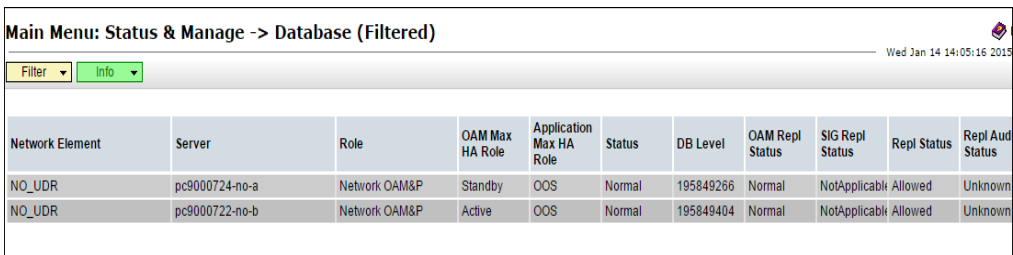


Step	Procedure	Result																											
<p>15.</p> <input type="checkbox"/>	<p><i>For Active NOAMP only:</i></p> <p>Log into the NOAM server console as the "root" user.</p>	<p>NO-A login: <code>root</code> Password: <code><root_password></code></p>																											
<p>16.</p> <input type="checkbox"/>	<p>For Active NOAMP only:</p> <p>Execute loader script to update Oracle RMS 12.x release specific parameters.</p>	<p>Execute the script at any path on NOAM console:</p> <pre>[root@NO-A ~]# upgrade_X52_LC_10.2_to_12.x.sh</pre> <p>Force a NOAMP switchover by changing HA Status from Main Menu: Status & Manage->HA Screen. Set the max HA role of the current standby NOAMP to Active and the max HA role of the current Active NOAMP to Standby.</p> <div data-bbox="540 667 1474 1108" style="border: 1px solid black; padding: 5px;"> <p>Main Menu: Status & Manage -> HA [Edit]</p> <p>Info ▾</p> <table border="1"> <thead> <tr> <th>Hostname</th> <th>Max Allowed HA Role</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>pc9000724-no-a</td> <td>Standby ▾</td> <td>The maximum desired HA Role for pc9000724-no-a</td> </tr> <tr> <td>pc9000722-no-b</td> <td>Active ▾</td> <td>The maximum desired HA Role for pc9000722-no-b</td> </tr> <tr> <td>pc9000720-so-a</td> <td>Active ▾</td> <td>The maximum desired HA Role for pc9000720-so-a</td> </tr> <tr> <td>pc9000720-mp1</td> <td>Active ▾</td> <td>The maximum desired HA Role for pc9000720-mp1</td> </tr> <tr> <td>pc9000720-mp2</td> <td>Active ▾</td> <td>The maximum desired HA Role for pc9000720-mp2</td> </tr> <tr> <td>pc9000718-so-b</td> <td>Active ▾</td> <td>The maximum desired HA Role for pc9000718-so-b</td> </tr> <tr> <td>pc9000718-mp3</td> <td>Active ▾</td> <td>The maximum desired HA Role for pc9000718-mp3</td> </tr> <tr> <td>pc9000718-mp4</td> <td>Active ▾</td> <td>The maximum desired HA Role for pc9000718-mp4</td> </tr> </tbody> </table> <p style="text-align: right;">Ok Cancel</p> </div> <p>Repeat step 15, step 16 on the new active NOAMP server.</p>	Hostname	Max Allowed HA Role	Description	pc9000724-no-a	Standby ▾	The maximum desired HA Role for pc9000724-no-a	pc9000722-no-b	Active ▾	The maximum desired HA Role for pc9000722-no-b	pc9000720-so-a	Active ▾	The maximum desired HA Role for pc9000720-so-a	pc9000720-mp1	Active ▾	The maximum desired HA Role for pc9000720-mp1	pc9000720-mp2	Active ▾	The maximum desired HA Role for pc9000720-mp2	pc9000718-so-b	Active ▾	The maximum desired HA Role for pc9000718-so-b	pc9000718-mp3	Active ▾	The maximum desired HA Role for pc9000718-mp3	pc9000718-mp4	Active ▾	The maximum desired HA Role for pc9000718-mp4
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<p>17.</p> <input type="checkbox"/>	<p><i>For All NOAMP Servers:</i></p> <p>Change number of VCPU cores from PM&C GUI</p>	<p>Change number of VCPU cores allocated to all NOAMP servers as specified in Appendix J.1: Change Number of VCPU Cores and RAM allocated to NOAMP Guests.</p> <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> NOAMP-A: _____ <input type="checkbox"/> NOAMP-B _____</p>																											
<p>18.</p>	<p>TVOE of Active NOAMP server:</p> <p>Execute vCPU pinning script at TVOE server of standby NOAMP server.</p>	<p>Execute vCPU pinning script at TVOE server hosting the Active NOAMP server as specified in Procedure 22: TVOE performance tuning.</p>																											
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4.2.4 Incremental Upgrade Primary NOAMP NE

Procedure 7: Incremental Upgrade Primary NOAMP NE

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1. <input type="checkbox"/>	Using the VIP address, access the Primary NOAMP GUI.	Access the Primary NOAMP GUI as specified in Appendix A .																																																																													
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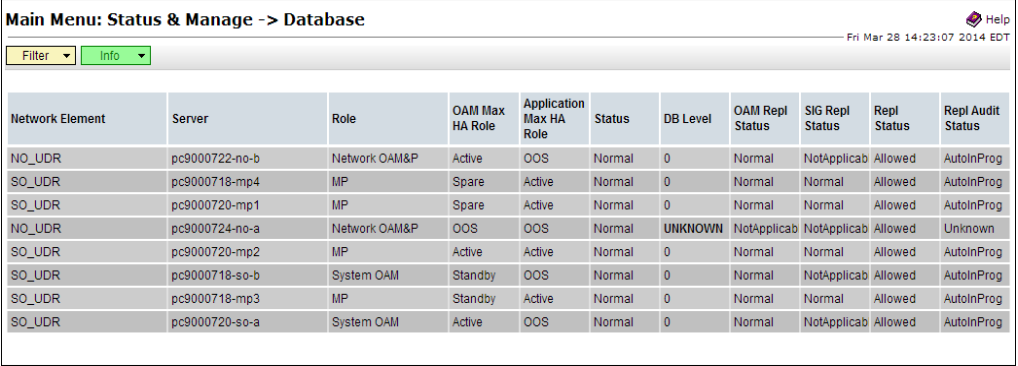
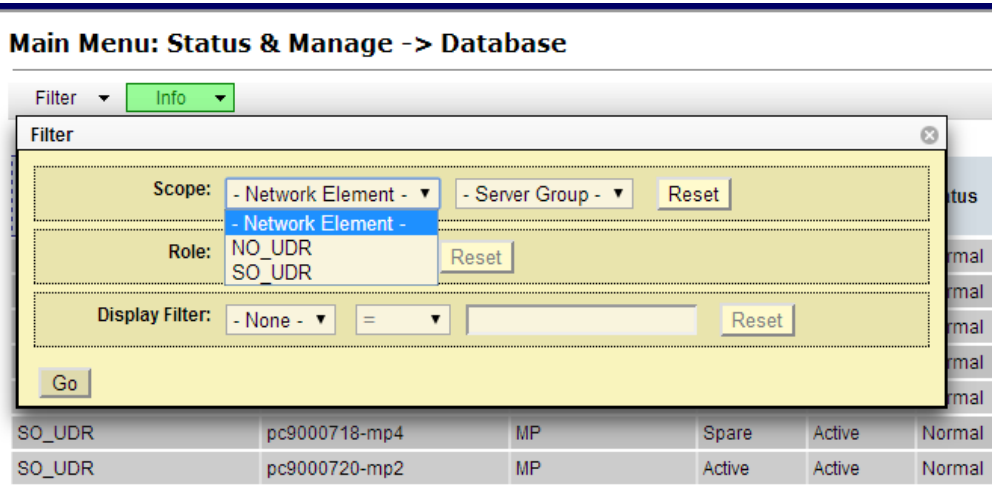
Procedure 7: Incremental Upgrade Primary NOAMP NE

Step	Procedure	Result
5. <input type="checkbox"/>	Active NOAMP VIP: Click on the “GO” dialogue button located on the right end of the filter bar.	
6. <input type="checkbox"/>	Active NOAMP VIP: The user should be presented with the list of servers associated with the Primary NOAMP Network Element . Identify each “ Server ” and its associated “ Role ” and “ HA Role ”.	
7. <input type="checkbox"/>	Active NOAMP VIP: Record the “ Server ” names appropriately in the space provided to the right.	Identify the Primary NOAMP “Server” names and record them in the space provided below: Standby NOAMP: _____ Active NOAMP: _____
 <p>NOTE: Step 8 is for the STANDBY NOAMP ONLY.</p>		
8. <input type="checkbox"/>	Active NOAMP VIP: Upgrade Server for the Standby NOAMP Server .	Upgrade Server for the Standby NOAMP Server (identified in Step 0 of this Procedure) as specified in Appendix C.1 Upgrade Server
 <p>!! WARNING !!STEP 8 MUST BE COMPLETED BEFORE CONTINUING ON TO STEP9. *** Verify the Databases are in sync using Appendix E before upgrading the Active Server</p>		
9. <input type="checkbox"/>	Active NOAMP VIP: Upgrade Server for the Active NOAMP Server .	Upgrade Server for the Active NOAMP Server (identified in Step 0 of this Procedure) as specified in Appendix C.1 Upgrade Server .
THIS PROCEDURE HAS BEEN COMPLETED		

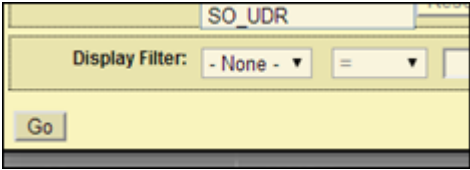

4.2.5 Major Upgrade DR NOAMP NE

The following procedures give details on how to perform major upgrades for DR NOAMP server to various possible upgrade paths.



Procedure 8: Major Upgrade DR NOAMP NE

Step	Procedure	Result																																																																																																			
1. <input type="checkbox"/>	Using the VIP address, access the Primary NOAMP GUI.	Access the Primary NOAMP GUI as specified in Appendix A .																																																																																																			
2. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu → Status & Manage → Database</p> <p>...as shown on the right.</p>	 <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server</th> <th>Role</th> <th>OAM Max HA Role</th> <th>Application Max HA Role</th> <th>Status</th> <th>DB Level</th> <th>OAM Repl Status</th> <th>SIG Repl Status</th> <th>Repl Status</th> <th>Repl Audit Status</th> </tr> </thead> <tbody> <tr> <td>NO_UDR</td> <td>pc9000722-no-b</td> <td>Network OAM&P</td> <td>Active</td> <td>OOS</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>NotApplicab</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000718-mp4</td> <td>MP</td> <td>Spare</td> <td>Active</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000720-mp1</td> <td>MP</td> <td>Spare</td> <td>Active</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>NO_UDR</td> <td>pc9000724-no-a</td> <td>Network OAM&P</td> <td>OOS</td> <td>OOS</td> <td>Normal</td> <td>UNKNOWN</td> <td>NotApplicab</td> <td>NotApplicab</td> <td>Allowed</td> <td>Unknown</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000720-mp2</td> <td>MP</td> <td>Active</td> <td>Active</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000718-so-b</td> <td>System OAM</td> <td>Standby</td> <td>OOS</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>NotApplicab</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000718-mp3</td> <td>MP</td> <td>Standby</td> <td>Active</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000720-so-a</td> <td>System OAM</td> <td>Active</td> <td>OOS</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>NotApplicab</td> <td>Allowed</td> <td>AutoInProg</td> </tr> </tbody> </table>	Network Element	Server	Role	OAM Max HA Role	Application Max HA Role	Status	DB Level	OAM Repl Status	SIG Repl Status	Repl Status	Repl Audit Status	NO_UDR	pc9000722-no-b	Network OAM&P	Active	OOS	Normal	0	Normal	NotApplicab	Allowed	AutoInProg	SO_UDR	pc9000718-mp4	MP	Spare	Active	Normal	0	Normal	Normal	Allowed	AutoInProg	SO_UDR	pc9000720-mp1	MP	Spare	Active	Normal	0	Normal	Normal	Allowed	AutoInProg	NO_UDR	pc9000724-no-a	Network OAM&P	OOS	OOS	Normal	UNKNOWN	NotApplicab	NotApplicab	Allowed	Unknown	SO_UDR	pc9000720-mp2	MP	Active	Active	Normal	0	Normal	Normal	Allowed	AutoInProg	SO_UDR	pc9000718-so-b	System OAM	Standby	OOS	Normal	0	Normal	NotApplicab	Allowed	AutoInProg	SO_UDR	pc9000718-mp3	MP	Standby	Active	Normal	0	Normal	Normal	Allowed	AutoInProg	SO_UDR	pc9000720-so-a	System OAM	Active	OOS	Normal	0	Normal	NotApplicab	Allowed	AutoInProg
Network Element	Server	Role	OAM Max HA Role	Application Max HA Role	Status	DB Level	OAM Repl Status	SIG Repl Status	Repl Status	Repl Audit Status																																																																																											
NO_UDR	pc9000722-no-b	Network OAM&P	Active	OOS	Normal	0	Normal	NotApplicab	Allowed	AutoInProg																																																																																											
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SO_UDR	pc9000718-mp3	MP	Standby	Active	Normal	0	Normal	Normal	Allowed	AutoInProg																																																																																											
SO_UDR	pc9000720-so-a	System OAM	Active	OOS	Normal	0	Normal	NotApplicab	Allowed	AutoInProg																																																																																											
3. <input type="checkbox"/>	Record the name of the DR NOAMP Network Element in the space provided to the right.	<p>Using the information provided in Section 3.1.2 (<i>Logins, Passwords and Site Information</i>) record the name of the DRNOAMP Network Element in the space provided below:</p> <p>DR NOAMP Network Element: _____</p>																																																																																																			
4. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>From the “Network Element” filter pull-down, select the NE name for the DR NOAMP.</p>																																																																																																				

Procedure 8: Major Upgrade DR NOAMP NE

Step	Procedure	Result																						
5. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Click on the “GO” dialogue button located on the left bottom of the filter bar.</p>																							
6. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>The user should be presented with the list of servers associated with DR NOAMP Network Element.</p>	<p>Main Menu: Status & Manage -> Database (Filtered) Help</p> <p style="text-align: right;">Wed Apr 16 14:36:21 2014 EDT</p> <p>Filter <input type="button" value="Info"/></p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server</th> <th>Role</th> <th>OAM Max HA Role</th> <th>Application Max HA Role</th> <th>Status</th> <th>DB Level</th> <th>OAM Repl Status</th> <th>SIG Repl Status</th> <th>Repl Status</th> <th>Repl Audit Status</th> </tr> </thead> <tbody> <tr> <td>NO_UDR</td> <td>pc9000722-no-b</td> <td>Network OAM&P</td> <td>Active</td> <td>OOS</td> <td>Normal</td> <td>65685400</td> <td>Normal</td> <td>NotApplicab</td> <td>Allowed</td> <td>AutoInProg</td> </tr> </tbody> </table> <p>Identify each “Server” and its associated “Role” and “HA Role”.</p>	Network Element	Server	Role	OAM Max HA Role	Application Max HA Role	Status	DB Level	OAM Repl Status	SIG Repl Status	Repl Status	Repl Audit Status	NO_UDR	pc9000722-no-b	Network OAM&P	Active	OOS	Normal	65685400	Normal	NotApplicab	Allowed	AutoInProg
Network Element	Server	Role	OAM Max HA Role	Application Max HA Role	Status	DB Level	OAM Repl Status	SIG Repl Status	Repl Status	Repl Audit Status														
NO_UDR	pc9000722-no-b	Network OAM&P	Active	OOS	Normal	65685400	Normal	NotApplicab	Allowed	AutoInProg														
7. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Record the “Server” names appropriately in the space provided to the right.</p>	<p>Identify the DR NOAMP “Server” names and record them in the space provided below:</p> <p>Spare NOAMP Server: _____</p> <p>Spare NOAMP Server: _____</p>																						
<p> NOTE: For Step 8 of this Procedure, select one spare DR NOAMP.</p> <p>*** Verify the Databases are in sync using Appendix E before upgrading each spare server.</p>																								
8. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Upgrade Server for the first Spare DR NOAMP Server.</p>	<p>Upgrade Server for the first Spare DR NOAMP Server (identified in Step 0 of this Procedure) as specified in Appendix C.1 Upgrade Server</p>																						
9. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Upgrade Server for the second Spare DR NOAMP Server.</p>	<p>Upgrade Server for the second Spare DR NOAMP Server (identified in Step 0 of this Procedure) as specified in Appendix C.1 Upgrade Server</p>																						

Procedure 8: Major Upgrade DR NOAMP NE

Step	Procedure	Result
 <p>NOTE: Steps 10 to 13 are for upgrading G9 low capacity setup from 10.2 Release to 12.x release. ** If upgrading a Gen-8 server, step 10 to 13 are not required.</p>		
<p>10.</p> <input type="checkbox"/>	<p>First spare NOAMP server: Change number of VCPU cores allocated to first spare NOAMP from PM&C GUI</p>	<p>Change number of VCPU cores allocated to first spare NOAMP server as specified in Appendix J.1: Change Number of VCPU Cores and RAM allocated to NOAMP Guests.</p>
<p>11.</p>	<p>TVOE of first spare NOAMP server: Execute vCPU pinning script at TVOE server of first spare NOAMP server.</p>	<p>Execute vCPU pinning script at TVOE server hosting the first spare NOAMP server as specified in Procedure 22: TVOE performance tuning.</p>
<p>12.</p> <input type="checkbox"/>	<p>Second spare NOAMP server: Change number of VCPU cores allocated to second spare NOAMP from PM&C GUI</p>	<p>Change number of VCPU cores allocated to second spare NOAMP server as specified in Appendix J.1: Change Number of VCPU Cores and RAM allocated to NOAMP Guests.</p>
<p>13.</p>	<p>TVOE of second spare NOAMP server: Execute vCPU pinning script at TVOE server of second spare NOAMP server.</p>	<p>Execute vCPU pinning script at TVOE server hosting the second spare NOAMP server as specified in Procedure 22: TVOE performance tuning.</p>
 <p>NOTE: Steps 14 to 17 are for upgrading Oracle RMS low capacity setup from 10.2 to 12.x releases.</p>		
<p>14.</p> <input type="checkbox"/>	<p>First spare NOAMP server: Change number of VCPU cores allocated to first spare NOAMP from PM&C GUI</p>	<p>Change number of VCPU cores allocated to first spare NOAMP server as specified in Appendix J.1: Change Number of VCPU Cores and RAM allocated to NOAMP Guests.</p>

Procedure 8: Major Upgrade DR NOAMP NE

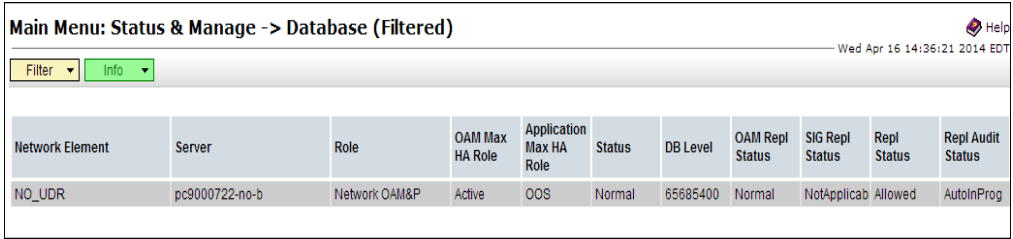

Step	Procedure	Result
15.	<p><i>TVOE of first spare NOAMP server:</i> Execute vCPU pinning script at TVOE server of first spare NOAMP server.</p>	<p>Execute vCPU pinning script at TVOE server hosting the first spare NOAMP server as specified in Procedure 22: TVOE performance tuning.</p>
16. <input type="checkbox"/>	<p><i>Second spare NOAMP server:</i> Change number of VCPU cores allocated to second spare NOAMP from PM&C GUI</p>	<p>Change number of VCPU cores allocated to second spare NOAMP server as specified in Appendix J.1: Change Number of VCPU Cores and RAM allocated to NOAMP Guests.</p>
17.	<p><i>TVOE of second spare NOAMP server:</i> Execute vCPU pinning script at TVOE server of second spare NOAMP server.</p>	<p>Execute vCPU pinning script at TVOE server hosting the second spare NOAMP server as specified in Procedure 22: TVOE performance tuning.</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

4.2.6 Incremental Upgrade DR NOAMP NE

Procedure 9: Incremental Upgrade DR NOAMP NE

Step	Procedure	Result																																																																																																			
1. <input type="checkbox"/>	Using the VIP address, access the Primary NOAMP GUI.	Access the Primary NOAMP GUI as specified in Appendix A .																																																																																																			
2. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu → Status & Manage → Database</p> <p>...as shown on the right.</p>	<table border="1"> <thead> <tr> <th>Network Element</th> <th>Server</th> <th>Role</th> <th>OAM Max HA Role</th> <th>Application Max HA Role</th> <th>Status</th> <th>DB Level</th> <th>OAM Repl Status</th> <th>SIG Repl Status</th> <th>Repl Status</th> <th>Repl Audit Status</th> </tr> </thead> <tbody> <tr> <td>NO_UDR</td> <td>pc9000722-no-b</td> <td>Network OAM&P</td> <td>Active</td> <td>OOS</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>NotApplicab</td> <td>Allowed</td> <td>AutoinProg</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000718-mp4</td> <td>MP</td> <td>Spare</td> <td>Active</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoinProg</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000720-mp1</td> <td>MP</td> <td>Spare</td> <td>Active</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoinProg</td> </tr> <tr> <td>NO_UDR</td> <td>pc9000724-no-a</td> <td>Network OAM&P</td> <td>OOS</td> <td>OOS</td> <td>Normal</td> <td>UNKNOWN</td> <td>NotApplicab</td> <td>NotApplicab</td> <td>Allowed</td> <td>Unknown</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000720-mp2</td> <td>MP</td> <td>Active</td> <td>Active</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoinProg</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000718-so-b</td> <td>System OAM</td> <td>Standby</td> <td>OOS</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>NotApplicab</td> <td>Allowed</td> <td>AutoinProg</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000718-mp3</td> <td>MP</td> <td>Standby</td> <td>Active</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoinProg</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000720-so-a</td> <td>System OAM</td> <td>Active</td> <td>OOS</td> <td>Normal</td> <td>0</td> <td>Normal</td> <td>NotApplicab</td> <td>Allowed</td> <td>AutoinProg</td> </tr> </tbody> </table>	Network Element	Server	Role	OAM Max HA Role	Application Max HA Role	Status	DB Level	OAM Repl Status	SIG Repl Status	Repl Status	Repl Audit Status	NO_UDR	pc9000722-no-b	Network OAM&P	Active	OOS	Normal	0	Normal	NotApplicab	Allowed	AutoinProg	SO_UDR	pc9000718-mp4	MP	Spare	Active	Normal	0	Normal	Normal	Allowed	AutoinProg	SO_UDR	pc9000720-mp1	MP	Spare	Active	Normal	0	Normal	Normal	Allowed	AutoinProg	NO_UDR	pc9000724-no-a	Network OAM&P	OOS	OOS	Normal	UNKNOWN	NotApplicab	NotApplicab	Allowed	Unknown	SO_UDR	pc9000720-mp2	MP	Active	Active	Normal	0	Normal	Normal	Allowed	AutoinProg	SO_UDR	pc9000718-so-b	System OAM	Standby	OOS	Normal	0	Normal	NotApplicab	Allowed	AutoinProg	SO_UDR	pc9000718-mp3	MP	Standby	Active	Normal	0	Normal	Normal	Allowed	AutoinProg	SO_UDR	pc9000720-so-a	System OAM	Active	OOS	Normal	0	Normal	NotApplicab	Allowed	AutoinProg
Network Element	Server	Role	OAM Max HA Role	Application Max HA Role	Status	DB Level	OAM Repl Status	SIG Repl Status	Repl Status	Repl Audit Status																																																																																											
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SO_UDR	pc9000720-so-a	System OAM	Active	OOS	Normal	0	Normal	NotApplicab	Allowed	AutoinProg																																																																																											
3. <input type="checkbox"/>	Record the name of the DR NOAMP Network Element in the space provided to the right.	<p>Using the information provided in Section 3.1.2 (<i>Logins, Passwords and Site Information</i>) record the name of the DRNOAMP Network Element in the space provided below:</p> <p>DR NOAMP Network Element: _____</p>																																																																																																			
4. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>From the “Network Element” filter pull-down, select the NE name for the DR NOAMP.</p>																																																																																																				
5. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Click on the “GO” dialogue button located on the left bottom of the filter bar.</p>																																																																																																				

Procedure 9: Incremental Upgrade DR NOAMP NE

Step	Procedure	Result
6. <input type="checkbox"/>	Active NOAMP VIP: The user should be presented with the list of servers associated with DR NOAMP Network Element.	 <p>Identify each “Server” and its associated “Role” and “HA Role”.</p>
7. <input type="checkbox"/>	Active NOAMP VIP: Record the “ Server ” names appropriately in the space provided to the right.	<p>Identify the DR NOAMP “Server” names and record them in the space provided below:</p> <p>Spare NOAMP Server: _____</p> <p>Spare NOAMP Server: _____</p>
 <p>NOTE: For Step0 of this Procedure, select one spare DR NOAMP.</p> <p>*** Verify the Databases are in sync using Appendix E before upgrading each spare server.</p>		
8. <input type="checkbox"/>	Active NOAMP VIP: Upgrade Server for the first Spare DR NOAMP Server .	Upgrade Server for the first Spare DR NOAMP Server (identified in Step 0 of this Procedure) as specified in Appendix C.1 Upgrade Server
9. <input type="checkbox"/>	Active NOAMP VIP: Upgrade Server for the second Spare DR NOAMP Server .	Upgrade Server for the second Spare DR NOAMP Server (identified in Step 0 of this Procedure) as specified in Appendix C.1 Upgrade Server
THIS PROCEDURE HAS BEEN COMPLETED		

4.3 Perform Health Check (Post Primary NOAMP / DR NOAMP Upgrade)

<input type="checkbox"/>	This procedure is part of Software Upgrade Preparation and is used to determine the health and status of the Oracle Communications User Data Repository network and servers. Execute Health Check procedures as specified in Appendix B .
--------------------------	--

5. SOAM SITE UPGRADE EXECUTION

Open A Service Ticket at My Oracle Support (Appendix F) and inform them of your plans to upgrade this system prior to executing this upgrade.

Before upgrade, users must perform the system Health Check **Appendix B**.

This check ensures that the system to be upgraded is in an upgrade-ready state. Performing the system health check determines which alarms are present in the system and if upgrade can proceed with alarms.

***** WARNING *****

If there are servers in the system, which are not in Normal state, these servers should be brought to the Normal or the Application Disabled state before the upgrade process is started.

The sequence of upgrade is such that servers providing support services to other servers will be upgraded first.

***** WARNING *****

Please read the following notes on this procedure:

Procedure completion times shown here are estimates. Times may vary due to differences in database size, user experience, and user preparation.

Where possible, command response outputs are shown as accurately as possible. EXCEPTIONS are as follows:

Session banner information such as time and date.

System-specific configuration information such as hardware locations, IP addresses and hostnames.

ANY information marked with “XXXX” or “YYYY.” Where appropriate, instructions are provided to determine what output should be expected in place of “XXXX or YYYY”

Aesthetic differences unrelated to functionality such as browser attributes: window size, colors, toolbars and button layouts.

After completing each step and at each point where data is recorded from the screen, the technician performing the upgrade must mark the provided Check Box.

For procedures which are executed multiple times, a mark can be made below the Check Box (in the same column) for each additional iteration of the step executed.

Retention of Captured data is required for as a future support reference this procedure is executed by someone other than Oracle’s Consulting Services.

5.1 Perform Health Check (Pre Upgrade)

<input type="checkbox"/>	<p>This procedure is part of Software Upgrade Preparation and is used to determine the health and status of the Oracle Communications User Data Repository network and servers. This may be executed multiple times but must also be executed at least once within the time frame of 24-36 hours prior to the start of a maintenance window.</p> <p>Execute Health Check procedures as specified in Appendix B.</p>
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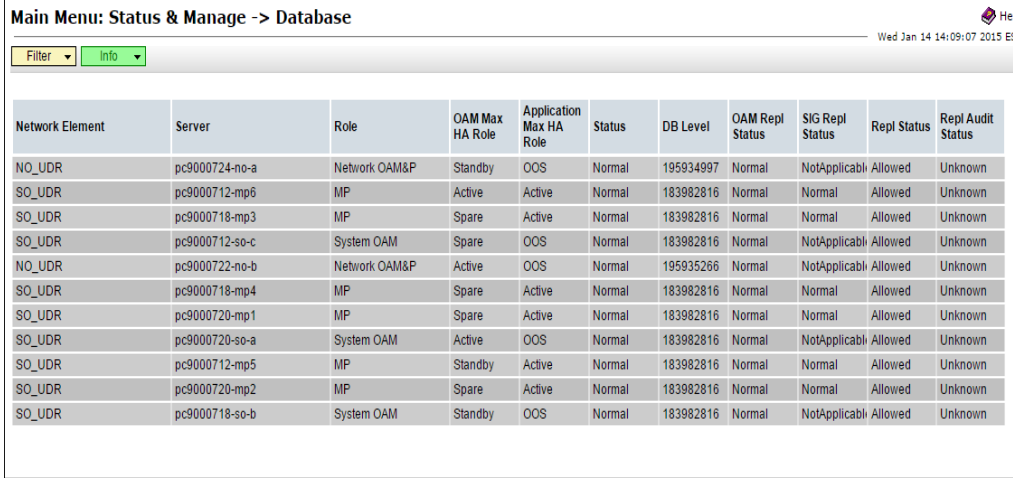
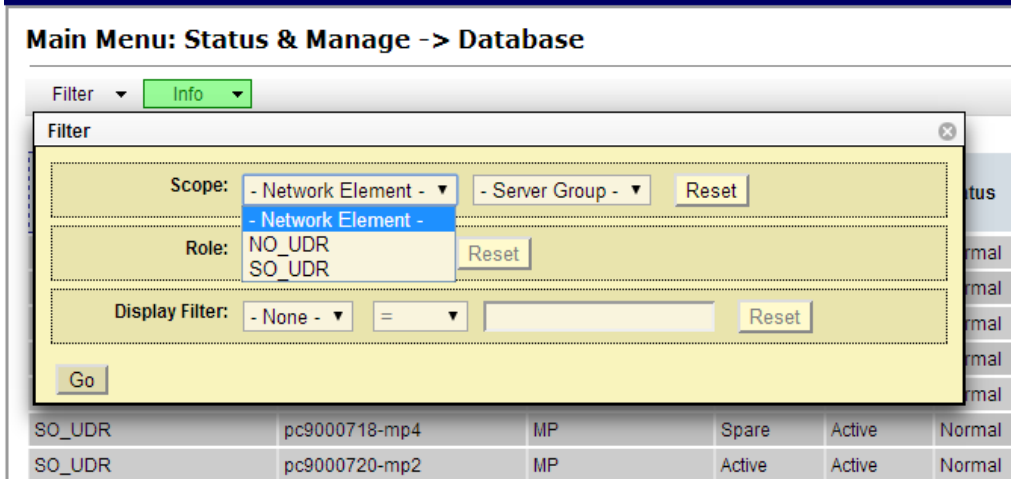
5.2 SOAM Upgrade

The following procedure details how to upgrade Oracle Communications User Data Repository SOAMs.

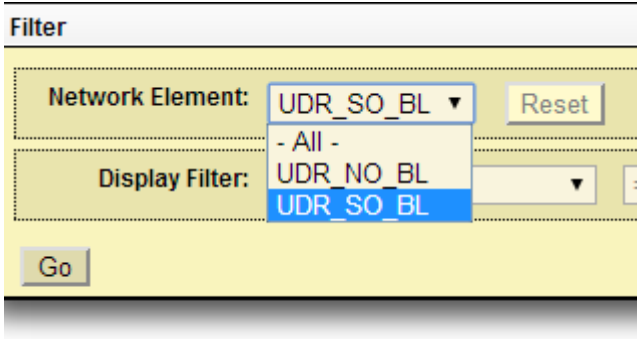
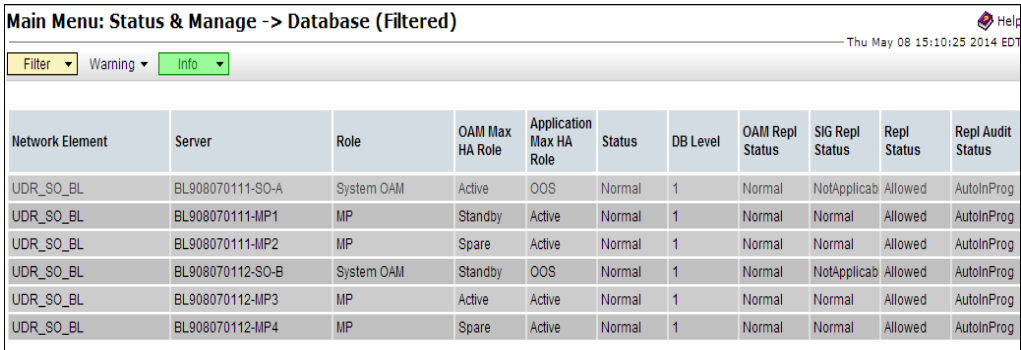

Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.

5.2.1 Major Upgrade SOAM NE


Procedure 10: Major Upgrade SOAM NE

Step	Procedure	Result																																																																																																																																				
1. <input type="checkbox"/>	Using the VIP address, access the Primary NOAMP GUI.	Access the Primary NOAMP GUI as specified in Appendix A .																																																																																																																																				
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3. <input type="checkbox"/>	Record the name of the SOAM NE in the space provided to the right.	<p>Using the information provided in Section 3.1.2 (<i>Logins, Passwords and Site Information</i>) record the name of the SOAM Network Element in the space provided below:</p> <p>SOAM Network Element: _____</p>																																																																																																																																				
4. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>From the “Network Element” filter pull-down, select the name for the SOAMNE.</p>	 <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server</th> <th>Role</th> <th>OAM Max HA Role</th> <th>Application Max HA Role</th> <th>Status</th> <th>DB Level</th> <th>OAM Repl Status</th> <th>SIG Repl Status</th> <th>Repl Status</th> <th>Repl Audit Status</th> </tr> </thead> <tbody> <tr><td>SO_UDR</td><td>pc9000718-mp4</td><td>MP</td><td>Spare</td><td>Active</td><td>Normal</td><td>183982816</td><td>Normal</td><td>Normal</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>SO_UDR</td><td>pc9000720-mp2</td><td>MP</td><td>Spare</td><td>Active</td><td>Normal</td><td>183982816</td><td>Normal</td><td>Normal</td><td>Allowed</td><td>Unknown</td></tr> </tbody> </table>	Network Element	Server	Role	OAM Max HA Role	Application Max HA Role	Status	DB Level	OAM Repl Status	SIG Repl Status	Repl Status	Repl Audit Status	SO_UDR	pc9000718-mp4	MP	Spare	Active	Normal	183982816	Normal	Normal	Allowed	Unknown	SO_UDR	pc9000720-mp2	MP	Spare	Active	Normal	183982816	Normal	Normal	Allowed	Unknown																																																																																																			
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Procedure 10: Major Upgrade SOAM NE

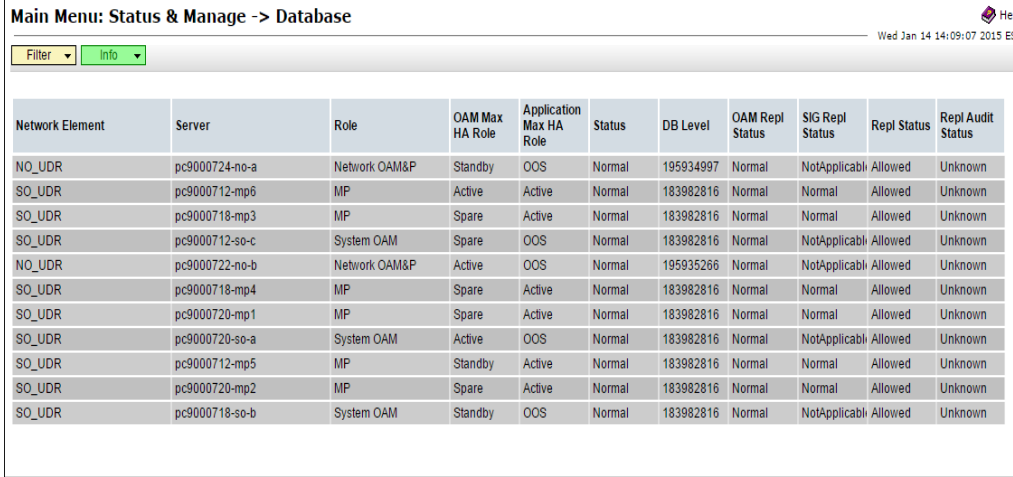
Step	Procedure	Result
5. <input type="checkbox"/>	Active NOAMP VIP: Click on the “GO” dialogue button located on the left bottom of the filter bar.	
6. <input type="checkbox"/>	Active NOAMP VIP: The user should be presented with the list of servers associated with the SOAM NE .	
7. <input type="checkbox"/>	Using the list of servers associated with the SOAM NE shown in the above Step... Record the Server names of the SOAMs associated with the SOAM Network Element .	Identify the SOAM “Server” names and record them in the space provided below: Standby SOAM: _____ Active SOAM: _____
8. <input type="checkbox"/>	Active NOAMP VIP:	Inspect KPI reports to verify traffic is at the expected condition. (There is no congestion and KPIs are consistent). Performance indicators are available on the Active NOAMP under Status & Manage → KPIs
9. <input type="checkbox"/>	Active NOAMP VIP: Upgrade Server for the Standby SOAM Server .	Upgrade Server for the Standby SOAM Server (identified in Step 9 of this Procedure) as specified in Appendix C.1 Upgrade Server
 !! WARNING !! STEP 9 MUST BE COMPLETED BEFORE CONTINUING ON TO STEP 10. *** Verify the Databases are in sync using Appendix E before preparing the upgrade		

Procedure 10: Major Upgrade SOAM NE

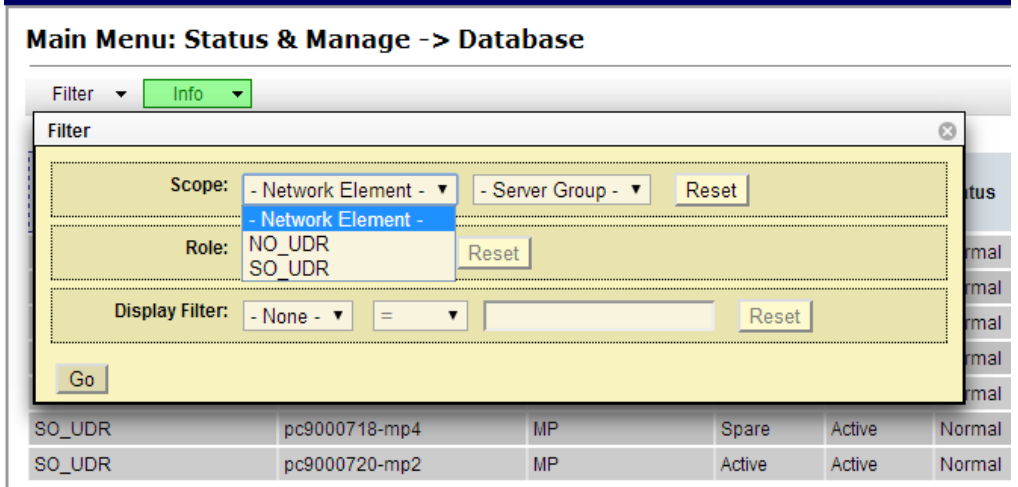
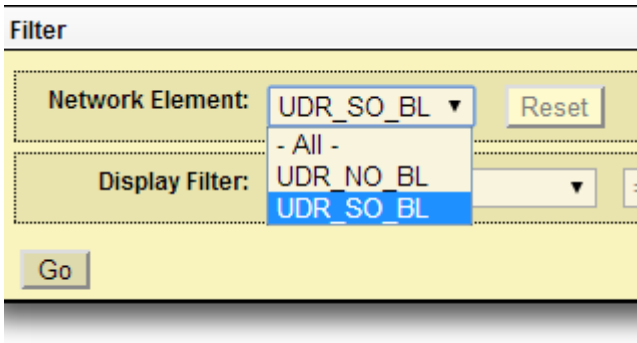
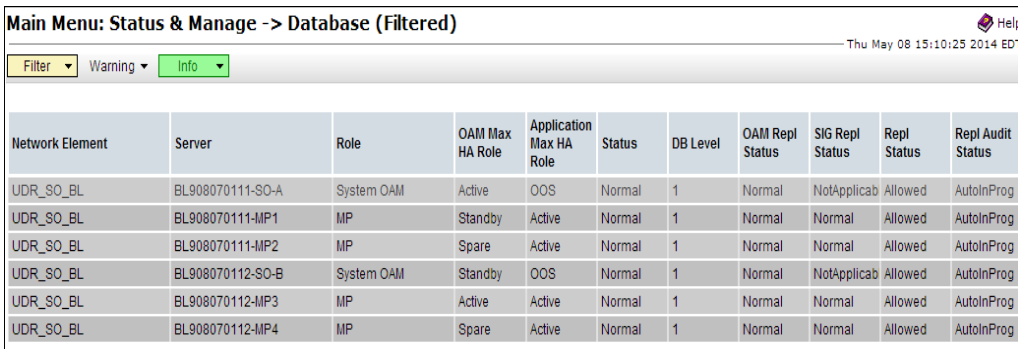
Step	Procedure	Result
10. <input type="checkbox"/>	Active NOAMP VIP: Upgrade Server for the Active SOAM Server .	Upgrade Server for the Active SOAM Server (identified in Step 7 of this Procedure) as specified in Appendix C.1 Upgrade Server
 <p>NOTE: Steps 11 is for upgrading Oracle RMS Low Capacity setup from 10.2 to 12.x releases.</p>		
11. <input type="checkbox"/>	For All SOAM Servers : Change number of VCPU cores from PM&C GUI.	Change number of VCPU cores allocated to all SOAM servers as specified in Appendix J.3: Change Number of VCPU Cores allocated to SOAM Guests . <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the VM. <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B
THIS PROCEDURE HAS BEEN COMPLETED		

5.2.2 Incremental Upgrade SOAM NE


Procedure 11: Incremental Upgrade SOAM NE

Step	Procedure	Result
1. <input type="checkbox"/>	Using the VIP address, access the Primary NOAMP GUI.	Access the Primary NOAMP GUI as specified in Appendix A .
2. <input type="checkbox"/>	Active NOAMP VIP: Select... Main Menu → Status & Manage → Database ...as shown on the right.	 <p>The screenshot shows the 'Main Menu: Status & Manage -> Database' interface. It includes a table with columns: Network Element, Server, Role, OAM Max HA Role, Application Max HA Role, Status, DB Level, OAM Repl Status, SIG Repl Status, Repl Status, and Repl Audit Status. The table lists various network elements like NO_UDR and SO_UDR with their respective roles and statuses.</p>
3. <input type="checkbox"/>	Record the name of the SOAM NE in the space provided to the right.	Using the information provided in Section 3.1.2 (<i>Logins, Passwords and Site Information</i>) record the name of the SOAM Network Element in the space provided below: SOAM Network Element: _____

Procedure 11: Incremental Upgrade SOAM NE

Step	Procedure	Result																																																																													
<p>4.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>From the “Network Element” filter pull-down, select the name for the SOAMNE.</p>	 <table border="1" data-bbox="565 688 1539 751"> <tr> <td>SO_UDR</td> <td>pc9000718-mp4</td> <td>MP</td> <td>Spare</td> <td>Active</td> <td>Normal</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000720-mp2</td> <td>MP</td> <td>Active</td> <td>Active</td> <td>Normal</td> </tr> </table>	SO_UDR	pc9000718-mp4	MP	Spare	Active	Normal	SO_UDR	pc9000720-mp2	MP	Active	Active	Normal																																																																	
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<p>6.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>The user should be presented with the list of servers associated with the SOAM NE.</p>	 <table border="1" data-bbox="537 1276 1549 1507"> <thead> <tr> <th>Network Element</th> <th>Server</th> <th>Role</th> <th>OAM Max HA Role</th> <th>Application Max HA Role</th> <th>Status</th> <th>DB Level</th> <th>OAM Repl Status</th> <th>SIG Repl Status</th> <th>Repl Status</th> <th>Repl Audit Status</th> </tr> </thead> <tbody> <tr> <td>UDR_SO_BL</td> <td>BL908070111-SO-A</td> <td>System OAM</td> <td>Active</td> <td>OOS</td> <td>Normal</td> <td>1</td> <td>Normal</td> <td>NotApplicab</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>UDR_SO_BL</td> <td>BL908070111-MP1</td> <td>MP</td> <td>Standby</td> <td>Active</td> <td>Normal</td> <td>1</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>UDR_SO_BL</td> <td>BL908070111-MP2</td> <td>MP</td> <td>Spare</td> <td>Active</td> <td>Normal</td> <td>1</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>UDR_SO_BL</td> <td>BL908070112-SO-B</td> <td>System OAM</td> <td>Standby</td> <td>OOS</td> <td>Normal</td> <td>1</td> <td>Normal</td> <td>NotApplicab</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>UDR_SO_BL</td> <td>BL908070112-MP3</td> <td>MP</td> <td>Active</td> <td>Active</td> <td>Normal</td> <td>1</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>UDR_SO_BL</td> <td>BL908070112-MP4</td> <td>MP</td> <td>Spare</td> <td>Active</td> <td>Normal</td> <td>1</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInProg</td> </tr> </tbody> </table>	Network Element	Server	Role	OAM Max HA Role	Application Max HA Role	Status	DB Level	OAM Repl Status	SIG Repl Status	Repl Status	Repl Audit Status	UDR_SO_BL	BL908070111-SO-A	System OAM	Active	OOS	Normal	1	Normal	NotApplicab	Allowed	AutoInProg	UDR_SO_BL	BL908070111-MP1	MP	Standby	Active	Normal	1	Normal	Normal	Allowed	AutoInProg	UDR_SO_BL	BL908070111-MP2	MP	Spare	Active	Normal	1	Normal	Normal	Allowed	AutoInProg	UDR_SO_BL	BL908070112-SO-B	System OAM	Standby	OOS	Normal	1	Normal	NotApplicab	Allowed	AutoInProg	UDR_SO_BL	BL908070112-MP3	MP	Active	Active	Normal	1	Normal	Normal	Allowed	AutoInProg	UDR_SO_BL	BL908070112-MP4	MP	Spare	Active	Normal	1	Normal	Normal	Allowed	AutoInProg
Network Element	Server	Role	OAM Max HA Role	Application Max HA Role	Status	DB Level	OAM Repl Status	SIG Repl Status	Repl Status	Repl Audit Status																																																																					
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<p>7.</p> <p><input type="checkbox"/></p>	<p>Using the list of servers associated with the SOAM NE shown in the above Step...</p> <p>Record the Server names of the SOAMs associated with the SOAM Network Element.</p>	<p>Identify the SOAM “Server” names and record them in the space provided below:</p> <p>Standby SOAM: _____</p> <p>Active SOAM: _____</p>																																																																													

Procedure 11: Incremental Upgrade SOAM NE

Step	Procedure	Result
8. <input type="checkbox"/>	Active NOAMP VIP:	Inspect KPI reports to verify traffic is at the expected condition. (There is no congestion and KPIs are consistent). Performance indicators are available on the Active NOAMP under Status & Manage → KPIs
9. <input type="checkbox"/>	Active NOAMP VIP: Upgrade Server for the Standby SOAM Server .	Upgrade Server for the Standby SOAM Server (<i>identified in Step 0 of this Procedure</i>) as specified in Appendix C.1 Upgrade Server
 !! WARNING !! STEP 9 MUST BE COMPLETED BEFORE CONTINUING ON TO STEP 10. *** Verify the Databases are in sync using Appendix E before preparing the upgrade		
10. <input type="checkbox"/>	Active NOAMP VIP: Upgrade Server for the Active SOAM Server .	Upgrade Server for the Active SOAM Server (<i>identified in Step 0 of this Procedure</i>) as specified in Appendix C.1 Upgrade Server
THIS PROCEDURE HAS BEEN COMPLETED		

5.3 MP Upgrade

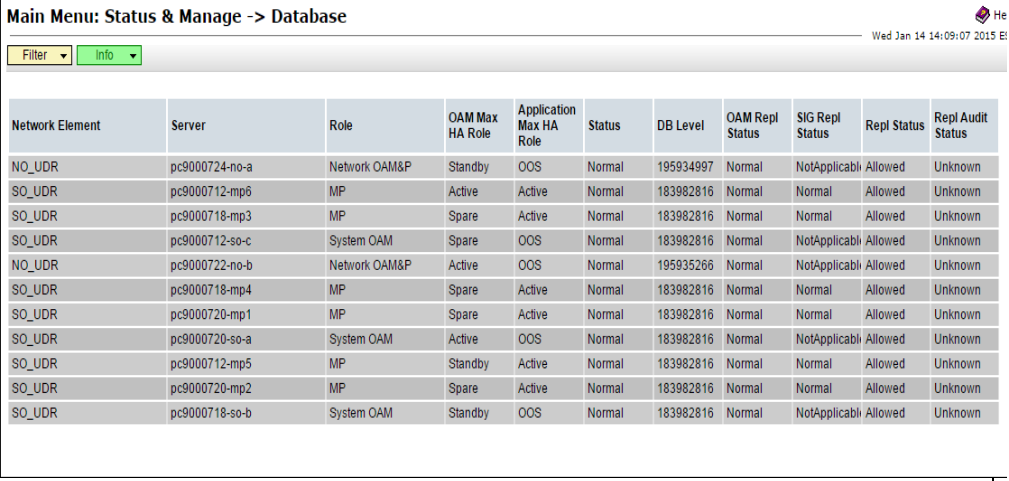
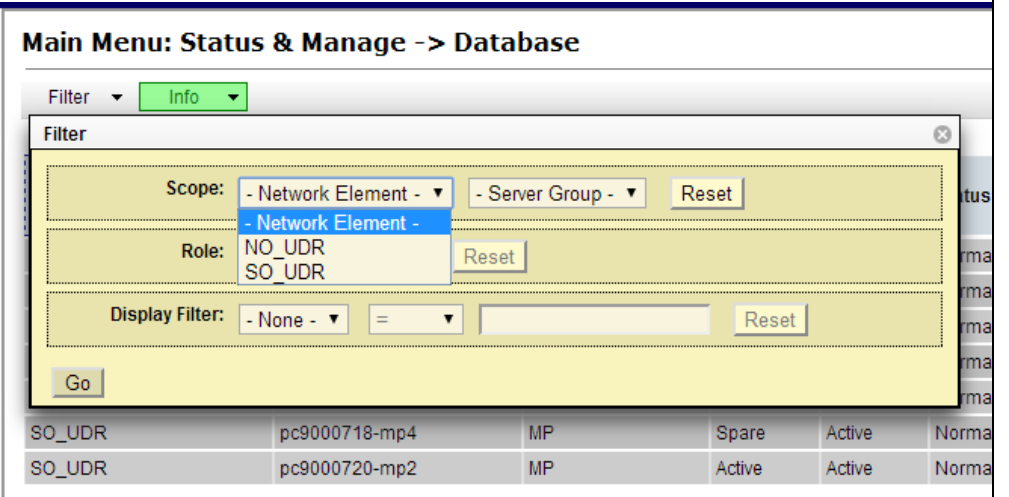
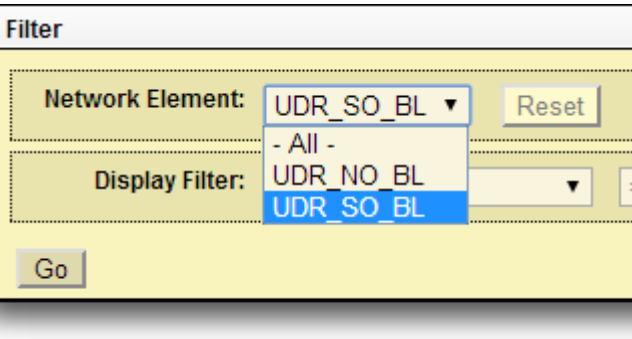
The following procedure details how to upgrade Oracle Communications User Data Repository MPs.

5.3.1 Major Upgrade MP NE

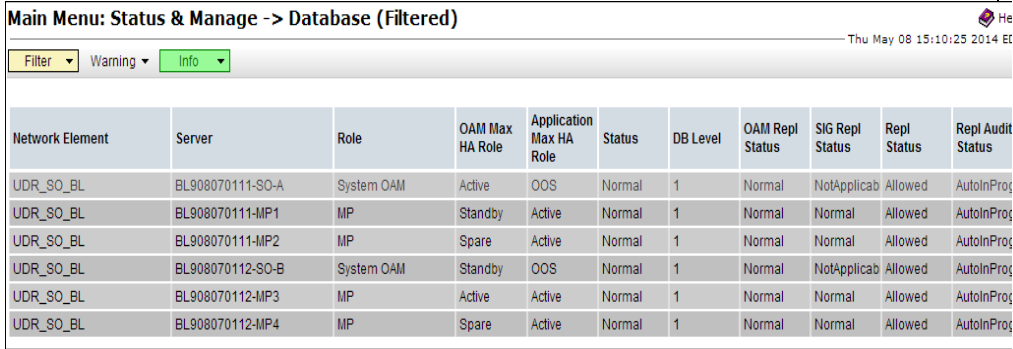
Procedure 12: Major Upgrade MP NE

Step	Procedure	Result
1. <input type="checkbox"/>	Using the VIP address, access the Primary NOAMP GUI.	Access the Primary NOAMP GUI as specified in Appendix A .


Procedure 12: Major Upgrade MP NE

Step	Procedure	Result																																																																																																																																				
2. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu → Status & Manage → Database</p> <p>...as shown on the right.</p>	 <p>Main Menu: Status & Manage -> Database</p> <p>Filter Info</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server</th> <th>Role</th> <th>OAM Max HA Role</th> <th>Application Max HA Role</th> <th>Status</th> <th>DB Level</th> <th>OAM Repl Status</th> <th>SIG Repl Status</th> <th>Repl Status</th> <th>Repl Audit Status</th> </tr> </thead> <tbody> <tr><td>NO_UDR</td><td>pc9000724-no-a</td><td>Network OAM&P</td><td>Standby</td><td>OOS</td><td>Normal</td><td>195934997</td><td>Normal</td><td>NotApplicabl</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>SO_UDR</td><td>pc9000712-mp6</td><td>MP</td><td>Active</td><td>Active</td><td>Normal</td><td>183982816</td><td>Normal</td><td>Normal</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>SO_UDR</td><td>pc9000718-mp3</td><td>MP</td><td>Spare</td><td>Active</td><td>Normal</td><td>183982816</td><td>Normal</td><td>Normal</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>SO_UDR</td><td>pc9000712-so-c</td><td>System OAM</td><td>Spare</td><td>OOS</td><td>Normal</td><td>183982816</td><td>Normal</td><td>NotApplicabl</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>NO_UDR</td><td>pc9000722-no-b</td><td>Network OAM&P</td><td>Active</td><td>OOS</td><td>Normal</td><td>195935266</td><td>Normal</td><td>NotApplicabl</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>SO_UDR</td><td>pc9000718-mp4</td><td>MP</td><td>Spare</td><td>Active</td><td>Normal</td><td>183982816</td><td>Normal</td><td>Normal</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>SO_UDR</td><td>pc9000720-mp1</td><td>MP</td><td>Spare</td><td>Active</td><td>Normal</td><td>183982816</td><td>Normal</td><td>Normal</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>SO_UDR</td><td>pc9000720-so-a</td><td>System OAM</td><td>Active</td><td>OOS</td><td>Normal</td><td>183982816</td><td>Normal</td><td>NotApplicabl</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>SO_UDR</td><td>pc9000712-mp5</td><td>MP</td><td>Standby</td><td>Active</td><td>Normal</td><td>183982816</td><td>Normal</td><td>Normal</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>SO_UDR</td><td>pc9000720-mp2</td><td>MP</td><td>Spare</td><td>Active</td><td>Normal</td><td>183982816</td><td>Normal</td><td>Normal</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>SO_UDR</td><td>pc9000718-so-b</td><td>System OAM</td><td>Standby</td><td>OOS</td><td>Normal</td><td>183982816</td><td>Normal</td><td>NotApplicabl</td><td>Allowed</td><td>Unknown</td></tr> </tbody> </table>	Network Element	Server	Role	OAM Max HA Role	Application Max HA Role	Status	DB Level	OAM Repl Status	SIG Repl Status	Repl Status	Repl Audit Status	NO_UDR	pc9000724-no-a	Network OAM&P	Standby	OOS	Normal	195934997	Normal	NotApplicabl	Allowed	Unknown	SO_UDR	pc9000712-mp6	MP	Active	Active	Normal	183982816	Normal	Normal	Allowed	Unknown	SO_UDR	pc9000718-mp3	MP	Spare	Active	Normal	183982816	Normal	Normal	Allowed	Unknown	SO_UDR	pc9000712-so-c	System OAM	Spare	OOS	Normal	183982816	Normal	NotApplicabl	Allowed	Unknown	NO_UDR	pc9000722-no-b	Network OAM&P	Active	OOS	Normal	195935266	Normal	NotApplicabl	Allowed	Unknown	SO_UDR	pc9000718-mp4	MP	Spare	Active	Normal	183982816	Normal	Normal	Allowed	Unknown	SO_UDR	pc9000720-mp1	MP	Spare	Active	Normal	183982816	Normal	Normal	Allowed	Unknown	SO_UDR	pc9000720-so-a	System OAM	Active	OOS	Normal	183982816	Normal	NotApplicabl	Allowed	Unknown	SO_UDR	pc9000712-mp5	MP	Standby	Active	Normal	183982816	Normal	Normal	Allowed	Unknown	SO_UDR	pc9000720-mp2	MP	Spare	Active	Normal	183982816	Normal	Normal	Allowed	Unknown	SO_UDR	pc9000718-so-b	System OAM	Standby	OOS	Normal	183982816	Normal	NotApplicabl	Allowed	Unknown
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3. <input type="checkbox"/>	<p>Record the name of the SOAM NE in the space provided to the right.</p>	<p>Using the information provided in Section 3.1.2 (<i>Logins, Passwords and Site Information</i>) record the name of the SOAM Network Element in the space provided below:</p> <p>SOAM Network Element: _____</p>																																																																																																																																				
4. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>From the “Network Element” filter pull-down, select the name for the SOAMNE.</p>	 <p>Main Menu: Status & Manage -> Database</p> <p>Filter Info</p> <p>Filter</p> <p>Scope: - Network Element - - Server Group - Reset</p> <p>Role: NO_UDR SO_UDR Reset</p> <p>Display Filter: - None - = Reset</p> <p>Go</p> <table border="1"> <tbody> <tr><td>SO_UDR</td><td>pc9000718-mp4</td><td>MP</td><td>Spare</td><td>Active</td><td>Normal</td></tr> <tr><td>SO_UDR</td><td>pc9000720-mp2</td><td>MP</td><td>Active</td><td>Active</td><td>Normal</td></tr> </tbody> </table>	SO_UDR	pc9000718-mp4	MP	Spare	Active	Normal	SO_UDR	pc9000720-mp2	MP	Active	Active	Normal																																																																																																																								
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5. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Click on the “GO” dialogue button located on the left bottom of the filter bar.</p>	 <p>Filter</p> <p>Network Element: UDR_SO_BL - All - Reset</p> <p>Display Filter: UDR_NO_BL UDR_SO_BL</p> <p>Go</p>																																																																																																																																				



Procedure 12: Major Upgrade MP NE

Step	Procedure	Result																																																																													
<p>6.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>The user should be presented with the list of MP servers associated with the SOAM NE.</p>	 <p>The screenshot shows the 'Main Menu: Status & Manage -> Database (Filtered)' interface. It includes a filter bar with 'Warning' and 'Info' dropdowns. Below is a table with columns: Network Element, Server, Role, OAM Max HA Role, Application Max HA Role, Status, DB Level, OAM Repl Status, SIG Repl Status, Repl Status, and Repl Audit Status. The table lists several MP servers with their respective roles and statuses.</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server</th> <th>Role</th> <th>OAM Max HA Role</th> <th>Application Max HA Role</th> <th>Status</th> <th>DB Level</th> <th>OAM Repl Status</th> <th>SIG Repl Status</th> <th>Repl Status</th> <th>Repl Audit Status</th> </tr> </thead> <tbody> <tr> <td>UDR_SO_BL</td> <td>BL908070111-SO-A</td> <td>System OAM</td> <td>Active</td> <td>OOS</td> <td>Normal</td> <td>1</td> <td>Normal</td> <td>NotApplicab</td> <td>Allowed</td> <td>AutoInPro</td> </tr> <tr> <td>UDR_SO_BL</td> <td>BL908070111-MP1</td> <td>MP</td> <td>Standby</td> <td>Active</td> <td>Normal</td> <td>1</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInPro</td> </tr> <tr> <td>UDR_SO_BL</td> <td>BL908070111-MP2</td> <td>MP</td> <td>Spare</td> <td>Active</td> <td>Normal</td> <td>1</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInPro</td> </tr> <tr> <td>UDR_SO_BL</td> <td>BL908070112-SO-B</td> <td>System OAM</td> <td>Standby</td> <td>OOS</td> <td>Normal</td> <td>1</td> <td>Normal</td> <td>NotApplicab</td> <td>Allowed</td> <td>AutoInPro</td> </tr> <tr> <td>UDR_SO_BL</td> <td>BL908070112-MP3</td> <td>MP</td> <td>Active</td> <td>Active</td> <td>Normal</td> <td>1</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInPro</td> </tr> <tr> <td>UDR_SO_BL</td> <td>BL908070112-MP4</td> <td>MP</td> <td>Spare</td> <td>Active</td> <td>Normal</td> <td>1</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInPro</td> </tr> </tbody> </table>	Network Element	Server	Role	OAM Max HA Role	Application Max HA Role	Status	DB Level	OAM Repl Status	SIG Repl Status	Repl Status	Repl Audit Status	UDR_SO_BL	BL908070111-SO-A	System OAM	Active	OOS	Normal	1	Normal	NotApplicab	Allowed	AutoInPro	UDR_SO_BL	BL908070111-MP1	MP	Standby	Active	Normal	1	Normal	Normal	Allowed	AutoInPro	UDR_SO_BL	BL908070111-MP2	MP	Spare	Active	Normal	1	Normal	Normal	Allowed	AutoInPro	UDR_SO_BL	BL908070112-SO-B	System OAM	Standby	OOS	Normal	1	Normal	NotApplicab	Allowed	AutoInPro	UDR_SO_BL	BL908070112-MP3	MP	Active	Active	Normal	1	Normal	Normal	Allowed	AutoInPro	UDR_SO_BL	BL908070112-MP4	MP	Spare	Active	Normal	1	Normal	Normal	Allowed	AutoInPro
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<p>7.</p> <input type="checkbox"/>	<p>Using the list of servers associated with the SOAM NE shown in the above Step...</p> <p>Record the Server names of the MPs associated with the SOAM Network Element.</p>	<p>Identify the MP "Server" names and record them in the space provided below:</p> <p>MP1: _____ MP3: _____</p> <p>MP2: _____ MP4: _____</p>																																																																													
<p>8.</p> <input type="checkbox"/>	<p>Upgrade MP Servers</p>	<p>In a multi-active MP cluster, all of the MPs are Active; there are no Standby MPs. The effect on the Diameter network traffic must be considered, since any MP being upgraded will not be handling live traffic. Oracle Communications User Data Repository shall support upgrades while the Provisioning and Signaling traffic is running at 20% of the rated TPS.</p>																																																																													
<p>9.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>**For low capacity configurations Only</p> <p>Upgrade server for the first MP server to be upgraded (start with the MP from the standby SOAM group)</p>	<p>Upgrade Server for the MP Servers (identified in Step 0 of this Procedure) as specified in Appendix C.1 Upgrade Server</p> <p>Note – After selecting the "upgrade server" button, the connections for that MP will automatically be taken down and traffic will be diverted to the active MP.</p>																																																																													

Procedure 12: Major Upgrade MP NE

Step	Procedure	Result
<p>10.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>**For Normal Capacity C-Class Configuration Only</p> <p>Upgrade Server for 2 MP Servers (start with MP server from the standby SOAM group)</p>	<p>Upgrade Server for the MP Servers (identified in Step 0 of this Procedure) as specified in Appendix C.1 Upgrade Server</p> <p>Note – After selecting the “upgrade server” button, the connections for the 2 MPs will automatically be taken down and traffic will be diverted to the active MPs.</p>
<p>11.</p> <input type="checkbox"/>	<p>For low capacity Configurations: Record the server name of the MP that was upgraded from the standby SOAM group. Repeat steps 9 -11 for the MP server at the active SOAM group.</p> <p>For Normal Capacity C-Class Configuration, Record the Server names of the 2 MPs that were upgraded from the standby SOAM Group. Repeat steps 10-11 for the MPs.</p>	<p>“Check off” the associated Check Box as Steps 9- 15 are completed for each MP.</p> <p><input type="checkbox"/> MP1: _____</p> <p><input type="checkbox"/> MP2: _____</p> <p><input type="checkbox"/> MP3: _____</p> <p><input type="checkbox"/> MP4: _____</p>
<p> NOTE: Step 12 is <i>**ONLY**</i> for upgrading Oracle RMS Low Capacity setup from 10.2 to 12.x releases.</p>		
<p>12.</p> <input type="checkbox"/>	<p>For All MP Servers:</p> <p>Change number of VCPU cores and RAM allocated from PM&C GUI.</p>	<p>Change number of VCPU cores allocated to all MP servers as specified in Appendix J.2: Change Number of VCPU Cores and RAM allocated to MP Guests.</p> <p>● “Check off” the associated Check Box as this step is completed for each MP.</p> <p><input type="checkbox"/> MP1 <input type="checkbox"/> MP2</p>

Procedure 12: Major Upgrade MP NE

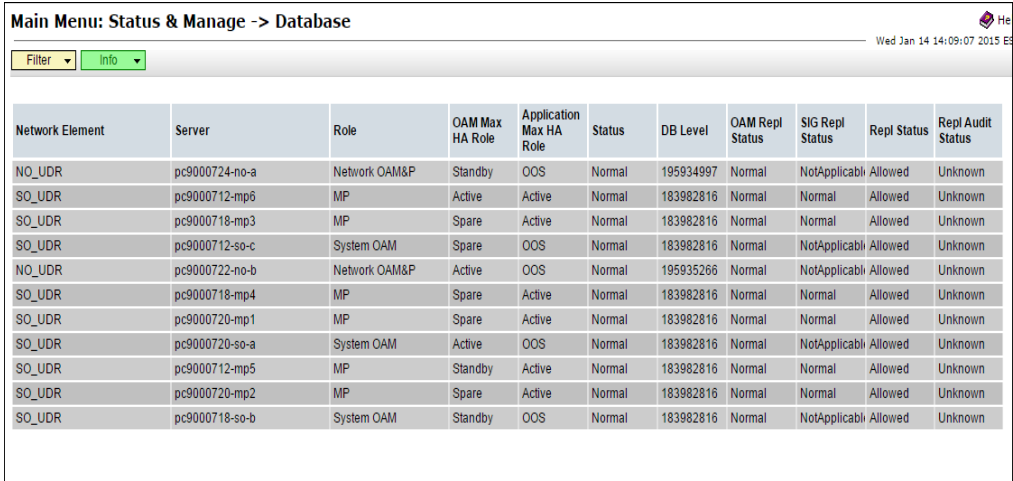
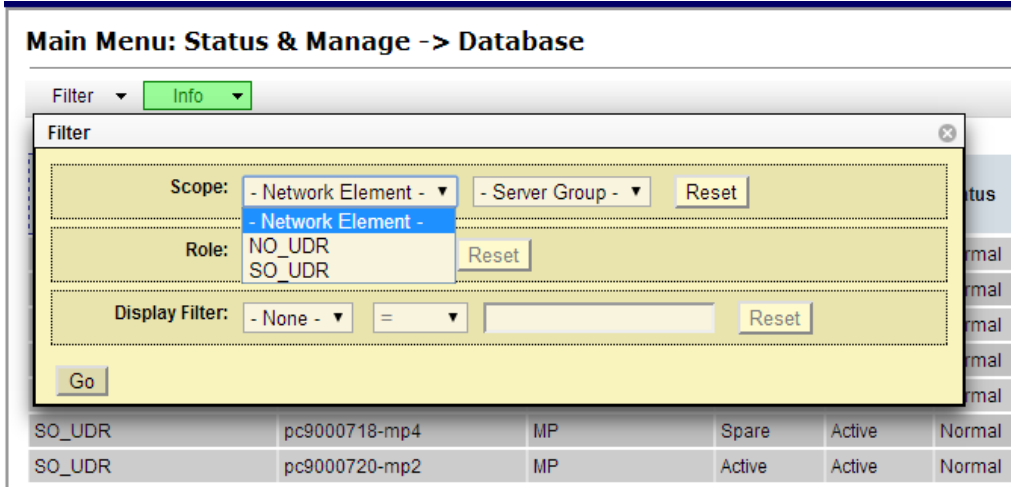
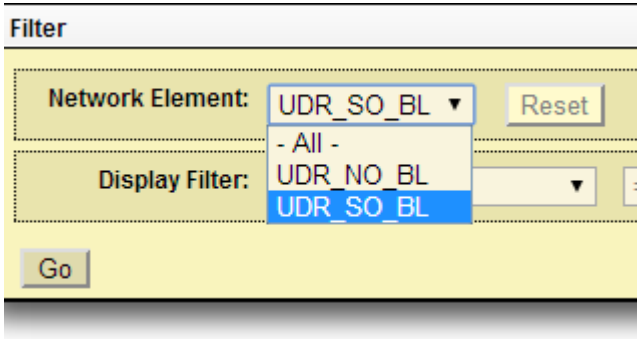
Step	Procedure	Result
 <p>NOTE: Step 13 <i>**ONLY**</i> for upgrading G9 Normal Capacity Configuration to a 12.x release. Not required in case of Gen9 Low Capacity Configuration.</p>		
13. <input type="checkbox"/>	Change number of VCPU cores and RAM allocated from PM&C GUI.	Change number of VCPU cores allocated to all MP servers as specified in Appendix J.2: Change Number of VCPU Cores and RAM allocated to MP Guests .
14. <input type="checkbox"/>	TVOE Server	Execute Procedure 22: TVOE Performance tuning
THIS PROCEDURE HAS BEEN COMPLETED		
 <p>NOTE: For installing additional MPs follow the procedures in the Oracle Communications User Data Repository installation and configuration guide[1]. Adding additional MPs should be done only after this upgrade procedure has been completed in its entirety. For Oracle RMS Low Capacity: Please refer Appendix R of the Oracle Communications User Data Repository Installation and Configuration guide. For Gen 9 Normal Capacity: Please refer Appendix S of the Oracle Communications User Data Repository Installation and Configuration guide</p>		

5.3.2 Incremental Upgrade MP NE

Procedure 13: Incremental Upgrade MP NE

Step	Procedure	Result
1. <input type="checkbox"/>	Using the VIP address, access the Primary NOAMP GUI.	Access the Primary NOAMP GUI as specified in Appendix A .

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2. <input type="checkbox"/>	<p>Active NOAMP VIP: Select... Main Menu → Status & Manage → Database ...as shown on the right.</p>	 <p>Main Menu: Status & Manage -> Database</p> <p>Filter Info</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server</th> <th>Role</th> <th>OAM Max HA Role</th> <th>Application Max HA Role</th> <th>Status</th> <th>DB Level</th> <th>OAM Repl Status</th> <th>SIG Repl Status</th> <th>Repl Status</th> <th>Repl Audit Status</th> </tr> </thead> <tbody> <tr><td>NO_UDR</td><td>pc9000724-no-a</td><td>Network OAM&P</td><td>Standby</td><td>OOS</td><td>Normal</td><td>195934997</td><td>Normal</td><td>NotApplicabl</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>SO_UDR</td><td>pc9000712-mp6</td><td>MP</td><td>Active</td><td>Active</td><td>Normal</td><td>183982816</td><td>Normal</td><td>Normal</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>SO_UDR</td><td>pc9000718-mp3</td><td>MP</td><td>Spare</td><td>Active</td><td>Normal</td><td>183982816</td><td>Normal</td><td>Normal</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>SO_UDR</td><td>pc9000712-so-c</td><td>System OAM</td><td>Spare</td><td>OOS</td><td>Normal</td><td>183982816</td><td>Normal</td><td>NotApplicabl</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>NO_UDR</td><td>pc9000722-no-b</td><td>Network OAM&P</td><td>Active</td><td>OOS</td><td>Normal</td><td>195935266</td><td>Normal</td><td>NotApplicabl</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>SO_UDR</td><td>pc9000718-mp4</td><td>MP</td><td>Spare</td><td>Active</td><td>Normal</td><td>183982816</td><td>Normal</td><td>Normal</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>SO_UDR</td><td>pc9000720-mp1</td><td>MP</td><td>Spare</td><td>Active</td><td>Normal</td><td>183982816</td><td>Normal</td><td>Normal</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>SO_UDR</td><td>pc9000720-so-a</td><td>System OAM</td><td>Active</td><td>OOS</td><td>Normal</td><td>183982816</td><td>Normal</td><td>NotApplicabl</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>SO_UDR</td><td>pc9000712-mp5</td><td>MP</td><td>Standby</td><td>Active</td><td>Normal</td><td>183982816</td><td>Normal</td><td>Normal</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>SO_UDR</td><td>pc9000720-mp2</td><td>MP</td><td>Spare</td><td>Active</td><td>Normal</td><td>183982816</td><td>Normal</td><td>Normal</td><td>Allowed</td><td>Unknown</td></tr> <tr><td>SO_UDR</td><td>pc9000718-so-b</td><td>System OAM</td><td>Standby</td><td>OOS</td><td>Normal</td><td>183982816</td><td>Normal</td><td>NotApplicabl</td><td>Allowed</td><td>Unknown</td></tr> </tbody> </table>	Network Element	Server	Role	OAM Max HA Role	Application Max HA Role	Status	DB Level	OAM Repl Status	SIG Repl Status	Repl Status	Repl Audit Status	NO_UDR	pc9000724-no-a	Network OAM&P	Standby	OOS	Normal	195934997	Normal	NotApplicabl	Allowed	Unknown	SO_UDR	pc9000712-mp6	MP	Active	Active	Normal	183982816	Normal	Normal	Allowed	Unknown	SO_UDR	pc9000718-mp3	MP	Spare	Active	Normal	183982816	Normal	Normal	Allowed	Unknown	SO_UDR	pc9000712-so-c	System OAM	Spare	OOS	Normal	183982816	Normal	NotApplicabl	Allowed	Unknown	NO_UDR	pc9000722-no-b	Network OAM&P	Active	OOS	Normal	195935266	Normal	NotApplicabl	Allowed	Unknown	SO_UDR	pc9000718-mp4	MP	Spare	Active	Normal	183982816	Normal	Normal	Allowed	Unknown	SO_UDR	pc9000720-mp1	MP	Spare	Active	Normal	183982816	Normal	Normal	Allowed	Unknown	SO_UDR	pc9000720-so-a	System OAM	Active	OOS	Normal	183982816	Normal	NotApplicabl	Allowed	Unknown	SO_UDR	pc9000712-mp5	MP	Standby	Active	Normal	183982816	Normal	Normal	Allowed	Unknown	SO_UDR	pc9000720-mp2	MP	Spare	Active	Normal	183982816	Normal	Normal	Allowed	Unknown	SO_UDR	pc9000718-so-b	System OAM	Standby	OOS	Normal	183982816	Normal	NotApplicabl	Allowed	Unknown
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SO_UDR	pc9000720-so-a	System OAM	Active	OOS	Normal	183982816	Normal	NotApplicabl	Allowed	Unknown																																																																																																																												
SO_UDR	pc9000712-mp5	MP	Standby	Active	Normal	183982816	Normal	Normal	Allowed	Unknown																																																																																																																												
SO_UDR	pc9000720-mp2	MP	Spare	Active	Normal	183982816	Normal	Normal	Allowed	Unknown																																																																																																																												
SO_UDR	pc9000718-so-b	System OAM	Standby	OOS	Normal	183982816	Normal	NotApplicabl	Allowed	Unknown																																																																																																																												
3. <input type="checkbox"/>	<p>Record the name of the SOAM NE in the space provided to the right.</p>	<ul style="list-style-type: none"> Using the information provided in Section 3.1.2 (<i>Logins, Passwords and Site Information</i>) record the name of the SOAM Network Element in the space provided below: SOAM Network Element: _____ 																																																																																																																																				
4. <input type="checkbox"/>	<p>Active NOAMP VIP: From the “Network Element” filter pull-down, select the name for the SOAMNE.</p>	 <p>Main Menu: Status & Manage -> Database</p> <p>Filter Info</p> <p>Filter</p> <p>Scope: - Network Element - - Server Group - Reset</p> <p>Role: NO_UDR SO_UDR Reset</p> <p>Display Filter: - None - = Reset</p> <p>Go</p> <table border="1"> <tbody> <tr><td>SO_UDR</td><td>pc9000718-mp4</td><td>MP</td><td>Spare</td><td>Active</td><td>Normal</td></tr> <tr><td>SO_UDR</td><td>pc9000720-mp2</td><td>MP</td><td>Active</td><td>Active</td><td>Normal</td></tr> </tbody> </table>	SO_UDR	pc9000718-mp4	MP	Spare	Active	Normal	SO_UDR	pc9000720-mp2	MP	Active	Active	Normal																																																																																																																								
SO_UDR	pc9000718-mp4	MP	Spare	Active	Normal																																																																																																																																	
SO_UDR	pc9000720-mp2	MP	Active	Active	Normal																																																																																																																																	
5. <input type="checkbox"/>	<p>Active NOAMP VIP: Click on the “GO” dialogue button located on the left bottom of the filter bar.</p>	 <p>Filter</p> <p>Network Element: UDR_SO_BL Reset</p> <p>Display Filter: - All - UDR_NO_BL UDR_SO_BL</p> <p>Go</p>																																																																																																																																				

Procedure 13: Incremental Upgrade MP NE

Step	Procedure	Result																																																																													
6. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>The user should be presented with the list of MP servers associated with the SOAM NE.</p>	<table border="1"> <thead> <tr> <th>Network Element</th> <th>Server</th> <th>Role</th> <th>OAM Max HA Role</th> <th>Application Max HA Role</th> <th>Status</th> <th>DB Level</th> <th>OAM Repl Status</th> <th>SIG Repl Status</th> <th>Repl Status</th> <th>Repl Audit Status</th> </tr> </thead> <tbody> <tr> <td>UDR_SO_BL</td> <td>BL908070111-SO-A</td> <td>System OAM</td> <td>Active</td> <td>OOS</td> <td>Normal</td> <td>1</td> <td>Normal</td> <td>NotApplicab</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>UDR_SO_BL</td> <td>BL908070111-MP1</td> <td>MP</td> <td>Standby</td> <td>Active</td> <td>Normal</td> <td>1</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>UDR_SO_BL</td> <td>BL908070111-MP2</td> <td>MP</td> <td>Spare</td> <td>Active</td> <td>Normal</td> <td>1</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>UDR_SO_BL</td> <td>BL908070112-SO-B</td> <td>System OAM</td> <td>Standby</td> <td>OOS</td> <td>Normal</td> <td>1</td> <td>Normal</td> <td>NotApplicab</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>UDR_SO_BL</td> <td>BL908070112-MP3</td> <td>MP</td> <td>Active</td> <td>Active</td> <td>Normal</td> <td>1</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInProg</td> </tr> <tr> <td>UDR_SO_BL</td> <td>BL908070112-MP4</td> <td>MP</td> <td>Spare</td> <td>Active</td> <td>Normal</td> <td>1</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> <td>AutoInProg</td> </tr> </tbody> </table>	Network Element	Server	Role	OAM Max HA Role	Application Max HA Role	Status	DB Level	OAM Repl Status	SIG Repl Status	Repl Status	Repl Audit Status	UDR_SO_BL	BL908070111-SO-A	System OAM	Active	OOS	Normal	1	Normal	NotApplicab	Allowed	AutoInProg	UDR_SO_BL	BL908070111-MP1	MP	Standby	Active	Normal	1	Normal	Normal	Allowed	AutoInProg	UDR_SO_BL	BL908070111-MP2	MP	Spare	Active	Normal	1	Normal	Normal	Allowed	AutoInProg	UDR_SO_BL	BL908070112-SO-B	System OAM	Standby	OOS	Normal	1	Normal	NotApplicab	Allowed	AutoInProg	UDR_SO_BL	BL908070112-MP3	MP	Active	Active	Normal	1	Normal	Normal	Allowed	AutoInProg	UDR_SO_BL	BL908070112-MP4	MP	Spare	Active	Normal	1	Normal	Normal	Allowed	AutoInProg
Network Element	Server	Role	OAM Max HA Role	Application Max HA Role	Status	DB Level	OAM Repl Status	SIG Repl Status	Repl Status	Repl Audit Status																																																																					
UDR_SO_BL	BL908070111-SO-A	System OAM	Active	OOS	Normal	1	Normal	NotApplicab	Allowed	AutoInProg																																																																					
UDR_SO_BL	BL908070111-MP1	MP	Standby	Active	Normal	1	Normal	Normal	Allowed	AutoInProg																																																																					
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UDR_SO_BL	BL908070112-MP4	MP	Spare	Active	Normal	1	Normal	Normal	Allowed	AutoInProg																																																																					
7. <input type="checkbox"/>	<p>Using the list of servers associated with the SOAM NE shown in the above Step...</p> <p>Record the Server names of the MPs associated with the SOAM Network Element.</p>	<ul style="list-style-type: none"> Identify the MP "Server" names and record them in the space provided below: <p>MP1: _____ MP3: _____</p> <p>MP2: _____ MP4: _____</p>																																																																													
8. <input type="checkbox"/>	<p>Upgrade MP Servers</p>	<p>In a multi-active MP cluster, all of the MPs are Active; there are no Standby MPs. The effect on the Diameter network traffic must be considered, since any MP being upgraded will not be handling live traffic. Oracle Communications User Data Repository shall support upgrades while the Provisioning and Signaling traffic is running at 20% of the rated TPS.</p>																																																																													
9. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>**For low capacity configurations Only</p> <p>Upgrade server for the first MP server to be upgraded (start with the MP from the standby SOAM group)</p>	<ul style="list-style-type: none"> Upgrade Server for the MP Servers(identified in Step 0 of this Procedure) as specified in Appendix C.1 Upgrade Server <p>Note – After selecting the "upgrade server" button, the connections for that MP will automatically be taken down and traffic will be diverted to the active MP.</p>																																																																													
10. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>**For Normal Capacity C-Class Configuration Only</p> <p>Upgrade Server for 2 MP Servers (start with MP server from the standby SOAM group)</p>	<p>Upgrade Server for the MP Servers(identified in Step 0 of this Procedure) as specified in Appendix C.1 Upgrade Server</p> <p>Note – After selecting the "upgrade server" button, the connections for the 3 MPs will automatically be taken down and traffic will be diverted to the active MPs.</p>																																																																													

Procedure 13: Incremental Upgrade MP NE

Step	Procedure	Result
<p>11.</p> <input type="checkbox"/>	<p>3) For low capacity Configurations: Record the server name of the MP that was upgraded from the standby SOAM group. Repeat steps 9 - 12 for the MP server at the active SOAM group.</p> <p>4) For Normal Capacity C-Class Configuration, Record the Server names of the 2 MPs (or 3 MPs) that were upgraded from the standby SOAM Group. Repeat steps 10-12 for the MPs.</p>	<p>● “Check off” the associated Check Box as Steps 9- 15 are completed for each MP.</p> <p><input type="checkbox"/> MP1: _____</p> <p><input type="checkbox"/> MP2: _____</p> <p><input type="checkbox"/> MP3: _____</p> <p><input type="checkbox"/> MP4: _____</p>
<p>12.</p> <input type="checkbox"/>	<p>TVOE Server</p>	<p>Execute procedure 22: TVOE Performance tuning</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

5.4 Perform Health Check (Post SOAM Upgrade)

<input type="checkbox"/>	<p>This procedure is part of Software Upgrade Preparation and is used to determine the health and status of the Oracle Communications User Data Repository network and servers. Execute Health Check procedures as specified in Appendix B.</p>
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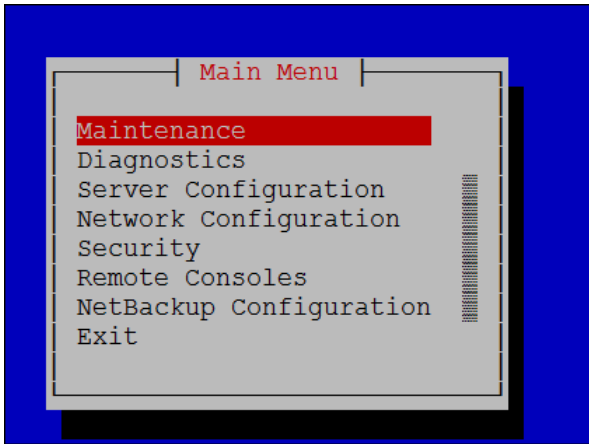
6. SINGLE SERVER UPGRADE

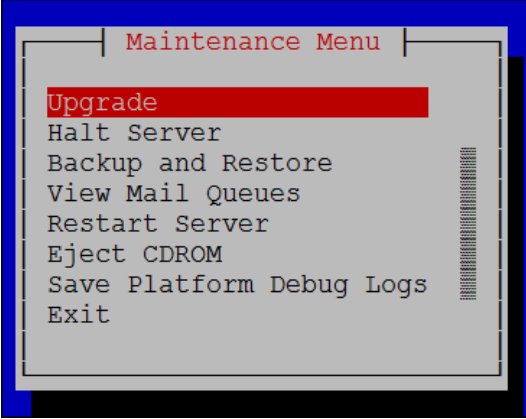
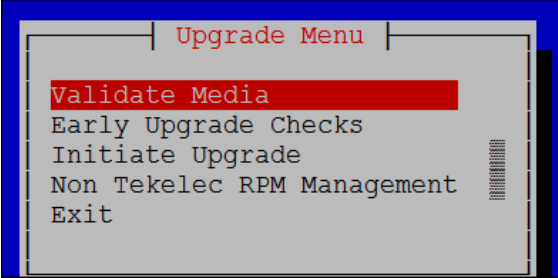
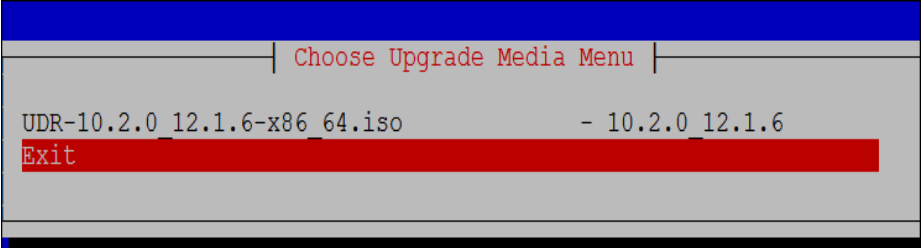
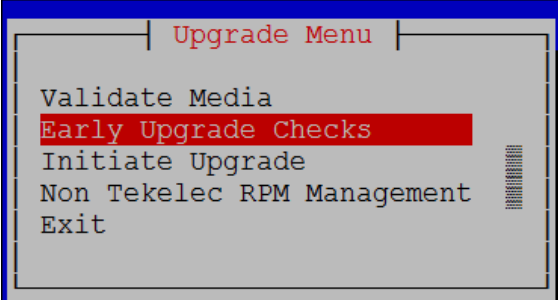
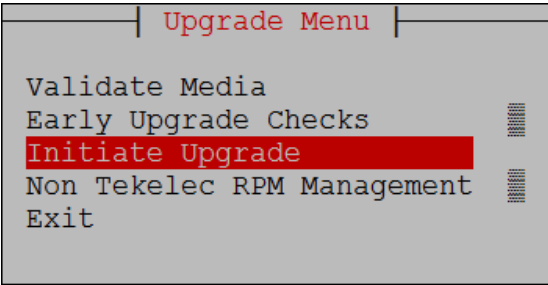
A 1-RMS server configuration is used for customer lab setup and for virtualization demonstration only. This configuration does not support HA and is not intended for production network. This One Server Lab RMS shall support the ability to perform and upgrade which allows all configuration data and database records to be carried forward to the next release.

6.1 Upgrading a Single Server

The following procedure below is ONLY for upgrading a one server Lab RMS.

Procedure 14: Upgrading Single Server

Step	Procedure	Result
1. <input type="checkbox"/>	Identify NOAMP IP Address	Identify IP Address of the Single NOAMP Server to be upgraded.
2. <input type="checkbox"/>	Server IMI IP (SSH): SSH to server and login as root user	Use your SSH client to connect to the server (ex. ssh, putty): <code>ssh<server address></code> login as: <code>admusr</code> password: <code><enter password></code> Switch to root <code>su -</code> password: <code><enter password></code>
3. <input type="checkbox"/>	Execute platcfg tool for running upgrade	<code>su - platcfg</code>
4. <input type="checkbox"/>	Exit /var/TKLC/db/file mgmt directory on server to be upgraded	Make sure there is no user in the /var/TKLC/db/filemgmt directory
5. <input type="checkbox"/>	Select "Maintenance" with <Enter> key	 <p>The screenshot shows a terminal window with a blue background. At the top, it says 'Main Menu'. Below that, a list of options is displayed: 'Maintenance', 'Diagnostics', 'Server Configuration', 'Network Configuration', 'Security', 'Remote Consoles', 'NetBackup Configuration', and 'Exit'. The 'Maintenance' option is highlighted with a red bar.</p>

Step	Procedure	Result
<p>6.</p> <input data-bbox="191 262 240 310" type="checkbox"/>	<p>Select "Upgrade" with <Enter> key</p>	 <p>Maintenance Menu</p> <p>Upgrade Halt Server Backup and Restore View Mail Queues Restart Server Eject CDROM Save Platform Debug Logs Exit</p>
<p>7.</p> <input data-bbox="191 707 240 756" type="checkbox"/>	<p>Validate the Media by selecting "Validate Media" with <Enter> key</p> <p>Select the proper iso for the upgrade</p>	 <p>Upgrade Menu</p> <p>Validate Media Early Upgrade Checks Initiate Upgrade Non Tekelec RPM Management Exit</p>  <p>Choose Upgrade Media Menu</p> <p>UDR-10.2.0_12.1.6-x86_64.iso - 10.2.0_12.1.6 Exit</p>
<p>8.</p> <input data-bbox="191 1291 240 1339" type="checkbox"/>	<p>Perform "Early Upgrade Checks" by selecting this option with the <Enter> key.</p>	 <p>Upgrade Menu</p> <p>Validate Media Early Upgrade Checks Initiate Upgrade Non Tekelec RPM Management Exit</p>
<p>9.</p> <input data-bbox="191 1621 240 1669" type="checkbox"/>	<p>Start the upgrade by selecting "Initiate Upgrade" with the <Enter> key.</p> <p>Wait for Upgrade to complete anywhere from 15 minutes to 1.5 hrs.</p>	 <p>Upgrade Menu</p> <p>Validate Media Early Upgrade Checks Initiate Upgrade Non Tekelec RPM Management Exit</p>

Oracle Communications User Data Repository Software Upgrade Procedure

Step	Procedure	Result
10. <input type="checkbox"/>	Accept the upgrade	Accept upgrade as specified in Procedure 21:Accept Upgrade.
11. <input type="checkbox"/>	Identify SOAM IP Address	Identify IP Address of the Single SOAM Server to be upgraded.
12. <input type="checkbox"/>	Upgrade SOAM Server	Repeat steps 2 through 9 for the SOAM Server
13. <input type="checkbox"/>	Identify MP IP Address	Identify IP Address of the Single MP Server to be upgraded.
14. <input type="checkbox"/>	Upgrade MP Server	Repeat Steps 2 through 9 for the MP Server
THIS PROCEDURE HAS BEEN COMPLETED		

7. UPGRADE ACCEPTANCE

The upgrade needs either to be accepted or rejected before any subsequent upgrades are performed in the future.

The Alarm 32532 (Server Upgrade Pending Accept/Reject) will be displayed for each server until one of these two actions (accept or reject) is performed.

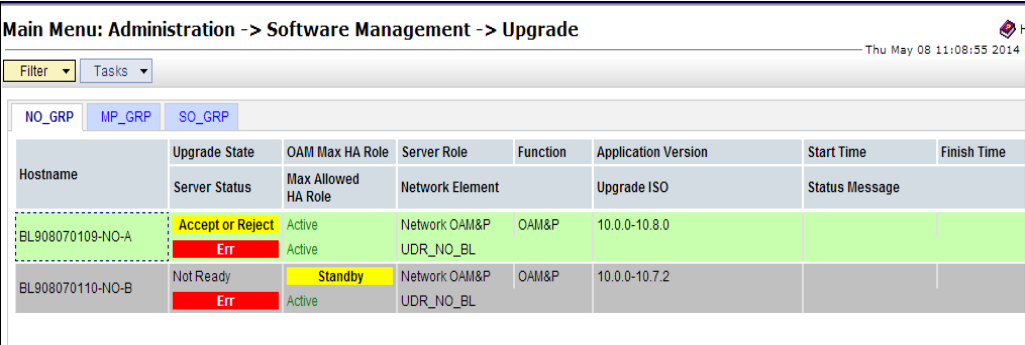
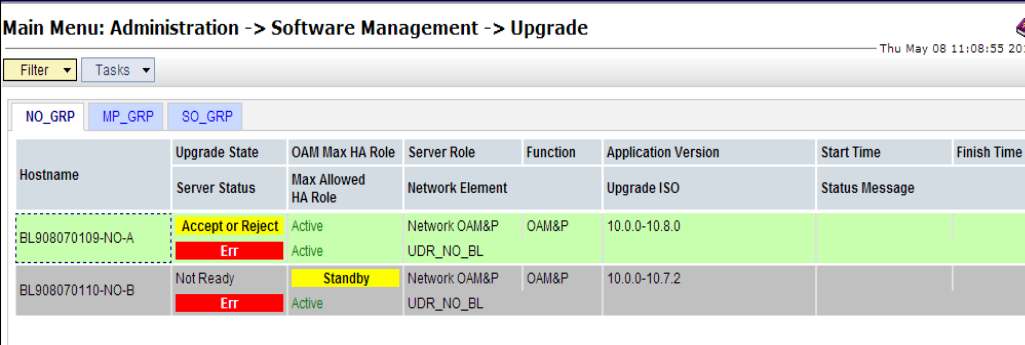
An upgrade should be accepted only after it was determined to be successful as the accept is final. This frees up file storage but prevents a backout from the previous upgrade.

7.1 Accept Upgrade

NOTE: Once the upgrade is accepted for a server, that server will not be allowed to backout to previous release from which the upgrade was done

The following procedure details how to accept a successful upgrade of Oracle Communications User Data Repository system.

Procedure 15: Accept Upgrade

Step	Procedure	Result																																								
<p>1.</p> <input style="width: 30px; height: 30px; margin: 5px 0;" type="checkbox"/>	<p>Using the VIP IP, access the Primary NOAMP GUI.</p>	<p>Access the Primary NOAMP GUI as specified in Appendix A.</p>																																								
<p>2.</p> <input style="width: 30px; height: 30px; margin: 5px 0;" type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu → Administration → Software Management → Upgrade</p> <p>...as shown on the right.</p>	 <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th>NO_GRP</th> <th>MP_GRP</th> <th>SO_GRP</th> <th colspan="5"></th> </tr> <tr style="background-color: #e0e0e0;"> <th>Hostname</th> <th>Upgrade State</th> <th>OAM Max HA Role</th> <th>Server Role</th> <th>Function</th> <th>Application Version</th> <th>Start Time</th> <th>Finish Time</th> </tr> <tr style="background-color: #e0e0e0;"> <th></th> <th>Server Status</th> <th>Max Allowed HA Role</th> <th>Network Element</th> <th></th> <th>Upgrade ISO</th> <th colspan="2">Status Message</th> </tr> </thead> <tbody> <tr style="background-color: #e0ffe0;"> <td>BL908070109-NO-A</td> <td style="background-color: #ffff00;">Accept or Reject Err</td> <td>Active</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.0.0-10.8.0</td> <td></td> <td></td> </tr> <tr style="background-color: #e0ffe0;"> <td>BL908070110-NO-B</td> <td style="background-color: #ffff00;">Not Ready Err</td> <td style="background-color: #ffff00;">Standby</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.0.0-10.7.2</td> <td></td> <td></td> </tr> </tbody> </table>	NO_GRP	MP_GRP	SO_GRP						Hostname	Upgrade State	OAM Max HA Role	Server Role	Function	Application Version	Start Time	Finish Time		Server Status	Max Allowed HA Role	Network Element		Upgrade ISO	Status Message		BL908070109-NO-A	Accept or Reject Err	Active	Network OAM&P	OAM&P	10.0.0-10.8.0			BL908070110-NO-B	Not Ready Err	Standby	Network OAM&P	OAM&P	10.0.0-10.7.2		
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<p>3.</p> <input style="width: 30px; height: 30px; margin: 5px 0;" type="checkbox"/>	<p>Active NOAMP VIP (GUI):</p> <p>Accept upgrade for selected server(s)</p>	<p>Accept upgrade of selected server(s) Select the server on which upgrade is to be accepted. Click the “Accept” button</p>  <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th>NO_GRP</th> <th>MP_GRP</th> <th>SO_GRP</th> <th colspan="5"></th> </tr> <tr style="background-color: #e0e0e0;"> <th>Hostname</th> <th>Upgrade State</th> <th>OAM Max HA Role</th> <th>Server Role</th> <th>Function</th> <th>Application Version</th> <th>Start Time</th> <th>Finish Time</th> </tr> <tr style="background-color: #e0e0e0;"> <th></th> <th>Server Status</th> <th>Max Allowed HA Role</th> <th>Network Element</th> <th></th> <th>Upgrade ISO</th> <th colspan="2">Status Message</th> </tr> </thead> <tbody> <tr style="background-color: #e0ffe0;"> <td>BL908070109-NO-A</td> <td style="background-color: #ffff00;">Accept or Reject Err</td> <td>Active</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.0.0-10.8.0</td> <td></td> <td></td> </tr> <tr style="background-color: #e0ffe0;"> <td>BL908070110-NO-B</td> <td style="background-color: #ffff00;">Not Ready Err</td> <td style="background-color: #ffff00;">Standby</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.0.0-10.7.2</td> <td></td> <td></td> </tr> </tbody> </table>	NO_GRP	MP_GRP	SO_GRP						Hostname	Upgrade State	OAM Max HA Role	Server Role	Function	Application Version	Start Time	Finish Time		Server Status	Max Allowed HA Role	Network Element		Upgrade ISO	Status Message		BL908070109-NO-A	Accept or Reject Err	Active	Network OAM&P	OAM&P	10.0.0-10.8.0			BL908070110-NO-B	Not Ready Err	Standby	Network OAM&P	OAM&P	10.0.0-10.7.2		
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Procedure 15: Accept Upgrade

Step	Procedure	Result																
		<div data-bbox="483 281 1243 373" style="border: 1px solid gray; padding: 5px; margin-bottom: 10px;"> Backup Upgrade Server Accept Report Report All </div> <p>A confirmation dialog will warn that once upgrade is accepted, the servers will not be able to revert back to their previous image states.</p> <div data-bbox="483 495 1195 1008" style="border: 1px solid gray; padding: 10px; margin-bottom: 10px;"> <p>The page at https://10.240.42.20 says:</p> <p>WARNING: Selecting OK will result in the selected server being set to ACCEPT for its upgrade mode. Once accepted, the server will NOT be able to revert back to its previous image state.</p> <p>Accept the upgrade for the following server?</p> <p>BL908070109-NO-A (10.240.56.108)</p> <div style="text-align: right;"> OK Cancel </div> </div> <p>Click "OK" The Upgrade Administration screen re-displays. A pull-down Info message will indicate the server(s) on which upgrade was accepted.</p>																
<p>4.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Accept upgrade of the rest of the system</p>	<p>Accept Upgrade on all remaining servers in the Oracle Communications User Data Repository system:</p> <p>Repeat all sub-steps of step 3 of this procedure on remaining servers until the upgrade of all servers in the Oracle Communications User Data Repository system has been accepted.</p> <p>Note: As upgrade is accepted on each server the corresponding Alarm ID 32532 (Server Upgrade Pending Accept/Reject) should be removed.</p>																
<p>5.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Verify accept</p>	<p>Check that alarms are removed:</p> <p>Navigate to this GUI page Alarms & Events > View Active</p> <div data-bbox="483 1629 1513 1780" style="border: 1px solid gray; padding: 5px; margin-bottom: 10px;"> <p>Main Menu: Alarms & Events -> View Active</p> <p>Filter Tasks</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Seq #</th> <th>Event ID</th> <th>Timestamp</th> <th>Severity</th> <th>Product</th> <th>Process</th> <th>IE</th> <th>Server</th> </tr> </thead> <tbody> <tr> <td></td> <td colspan="2">Alarm Text</td> <td colspan="5">Additional Info</td> </tr> </tbody> </table> </div> <p>Verify that Alarm ID 32532 (Server Upgrade Pending Accept/Reject) is not displayed under active alarms on Oracle Communications User Data Repository system</p>	Seq #	Event ID	Timestamp	Severity	Product	Process	IE	Server		Alarm Text		Additional Info				
Seq #	Event ID	Timestamp	Severity	Product	Process	IE	Server											
	Alarm Text		Additional Info															

Procedure 15: Accept Upgrade

Step	Procedure	Result									
<p>6.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu → Administration → Software Management → Upgrade</p> <p>...as shown on the right.</p>	<p>Verify server status is "Backup Needed".</p> <table border="1"> <thead> <tr> <th>NO_GRP</th> <th>MP_GRP</th> <th>SO_GRP</th> </tr> </thead> <tbody> <tr> <td>BL908070109-NO-A</td> <td>Backup Needed Err</td> <td>Active</td> </tr> <tr> <td>BL908070110-NO-B</td> <td>Not Ready Err</td> <td>Standby Active</td> </tr> </tbody> </table>	NO_GRP	MP_GRP	SO_GRP	BL908070109-NO-A	Backup Needed Err	Active	BL908070110-NO-B	Not Ready Err	Standby Active
NO_GRP	MP_GRP	SO_GRP									
BL908070109-NO-A	Backup Needed Err	Active									
BL908070110-NO-B	Not Ready Err	Standby Active									
<p>7.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Configure services</p>	<p>Run the procedure specified in Appendix J: Configuring Services for Dual Path HA.</p>									
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>											

8. TVOE PERFORMANCE TUNING

This script is necessary since it could be modified by the build. By making this script part of upgrade, it is ensuring that new changes/tuning will be applied after an upgrade is complete.

Note: This procedure does not apply to Oracle Communications User Data Repository Cloud based systems.

Procedure 16: TVOE Performance Tuning

Step	Procedure	Result
1. <input type="checkbox"/>	NOAMP: <i>Transfer file to TVOE Host</i>	Login to NOAMP and transfer file to TVOE HOST # <code>scp /var/TKLC/db/filemgmt/udrInitConfig.sh \admusr@<tvoe_host_name>:/var/tmp</code> admusr@<tvoe_host_name>'s password:<admusr_password>
2. <input type="checkbox"/>	<i>Login to TVOE Host:</i> 1) SSH to server. 2) Log into the server as the "admusr" user.	# <code>ssh admusr@<tvoe_host_name></code> admusr@<tvoe_host_name>'s password:<admusr_password>
3. <input type="checkbox"/>	TVOE host: Switch to root user.	[admusr@hostname1326744539 ~]\$ <code>su -</code> password: <root_password>
4. <input type="checkbox"/>	TVOE host: Change directory.	# <code>cd /var/tmp</code>
5. <input type="checkbox"/>	TVOE host: Update script permissions.	# <code>chmod 555 udrInitConfig.sh</code>
6. <input type="checkbox"/>	TVOE host: Run configuration script as root	# <code>./udrInitConfig.sh</code> Verify no failures are reported. A trace to display the settings for all VM Guests on this server should be shown in output. In case of failures, save the log file /var/TKLC/log/udrVMCfg/udrInitConfig.log and contact My Oracle Support (Appendix F) for assistance.
7. <input type="checkbox"/>	TVOE host: Reboot the server.	# <code>init 6</code> Note: Rebooting the TVOE host will bring down the Oracle Communications User Data Repository servers running there. Be advised that this operation can affect traffic processing and HA status of related Oracle Communications User Data Repository servers in the network.
THIS PROCEDURE HAS BEEN COMPLETED		

9. RECOVERY PROCEDURES

Upgrade procedure recovery issues should be directed to the My Oracle Support (Appendix F). Persons performing the upgrade should be familiar with these documents.

Recovery procedures are covered under the Disaster Recovery Guide. Execute this section only if there is a problem and it is desired to revert back to the pre-upgrade version of the software.



!! WARNING !! Do not attempt to perform these backout procedures without first contacting the My Oracle Support. Refer to Appendix F.



!! WARNING !! Backout procedures will cause traffic loss!



NOTES:

These recovery procedures are provided for the Backout of an Upgrade ONLY! (i.e., for the Backout from a failed target release to the previously installed release).

Backout of an initial installation is not supported!

9.1 Order of Backout

The following list displays the order to backout the Servers (Primary and DR sites):

1. Site 1 MPs
2. Site 2 MPs (DR site)
3. Site 1 SOAMs (Active/Standby)
4. Site 2 SOAMs (DR site)
5. DR NOAMPs (Spares)
6. Primary Standby NOAMP
7. Primary Active NOAMP
8. TVOE and/or PM&C (if necessary, if upgraded as part of this procedure)

9.2 Backout Setup

Identify IP addresses of all servers that need to be backed out.

1. Select **Administration → Software Management → Upgrade**
2. Based on the “Application Version” Column, Identify all the hostnames that need to be backed out.
3. Select **Configuration → Servers**
4. Identify the IMI IP addresses of all the hostnames identified in step 2.
These are required to access the server when performing the backout.

The reason to execute a backout has a direct impact on any additional backout preparation that must be done. The Backout procedure will cause traffic loss.

NOTE: Verify that the two backup archive files created using the procedure in 4.2.2 Full Database Backup (All Network Elements, All Servers) are present on every server that is to be backed-out.

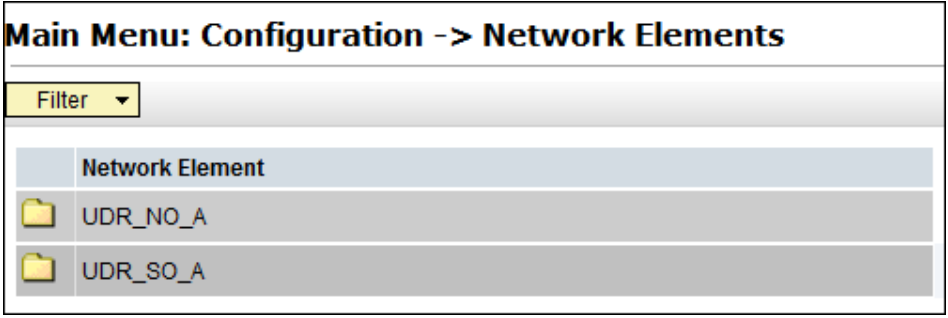
These archive files are located in the `/var/TKLC/db/filemgmt` directory and have different filenames than other database backup files.

The filenames will have the format:

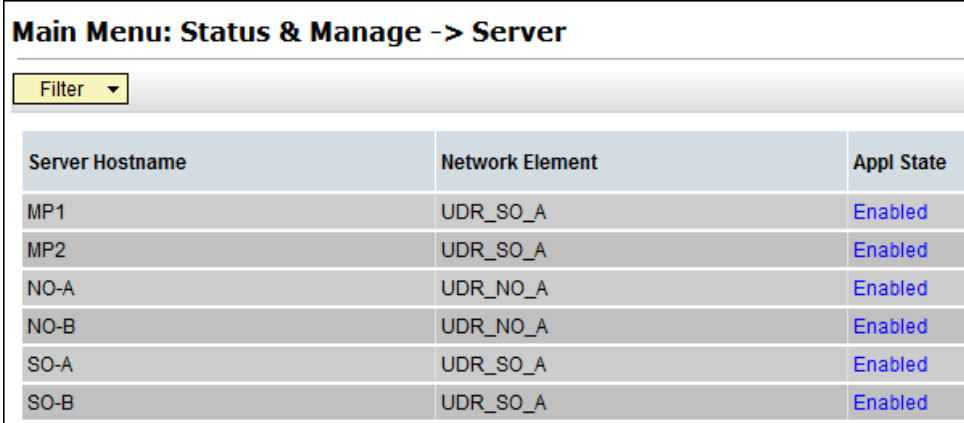
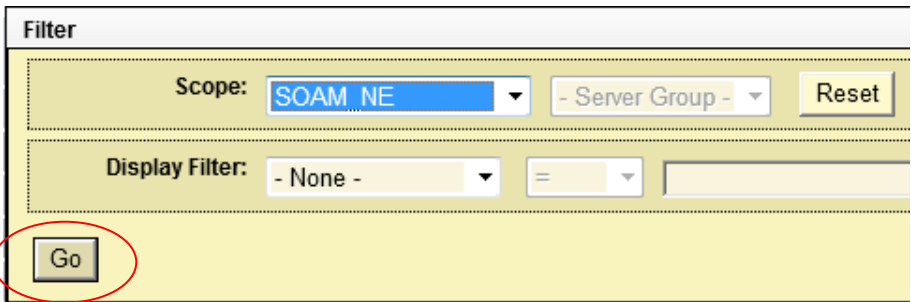
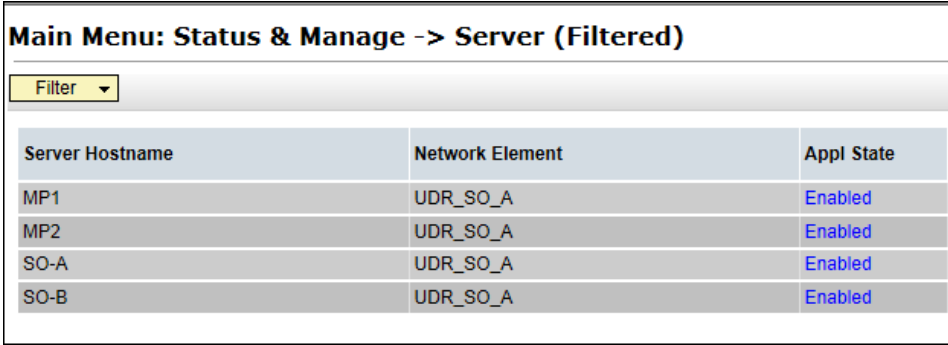
- Backup.<application>.<server>.FullDBParts.<role>.<date_time>.UPG.tar.bz2
- Backup.<application>.<server>.FullRunEnv.<role>.<date_time>.UPG.tar.bz2

9.3 Backout of SOAM / MP

Procedure 17: Backout of SOAM / MP

Step	Procedure	Result
1. <input type="checkbox"/>	Using the VIP address, access the Primary NOAMP GUI.	Access the Primary NOAMP GUI as specified in Appendix A .
2. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu → Status & Manage → Network Elements</p> <p>...as shown on the right.</p>	
3. <input type="checkbox"/>	Record the name of the SOAM Network Element to be downgraded (backed out)	<p>Record the name of the SOAM Network Element which will be “backed out”</p> <p>SOAM Network Element: _____</p>

Procedure 17: Backout of SOAM / MP

Step	Procedure	Result																					
<p>4.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu → Status & Manage → Server</p> <p>...as shown on the right.</p>	 <table border="1"> <thead> <tr> <th>Server Hostname</th> <th>Network Element</th> <th>Appl State</th> </tr> </thead> <tbody> <tr> <td>MP1</td> <td>UDR_SO_A</td> <td>Enabled</td> </tr> <tr> <td>MP2</td> <td>UDR_SO_A</td> <td>Enabled</td> </tr> <tr> <td>NO-A</td> <td>UDR_NO_A</td> <td>Enabled</td> </tr> <tr> <td>NO-B</td> <td>UDR_NO_A</td> <td>Enabled</td> </tr> <tr> <td>SO-A</td> <td>UDR_SO_A</td> <td>Enabled</td> </tr> <tr> <td>SO-B</td> <td>UDR_SO_A</td> <td>Enabled</td> </tr> </tbody> </table>	Server Hostname	Network Element	Appl State	MP1	UDR_SO_A	Enabled	MP2	UDR_SO_A	Enabled	NO-A	UDR_NO_A	Enabled	NO-B	UDR_NO_A	Enabled	SO-A	UDR_SO_A	Enabled	SO-B	UDR_SO_A	Enabled
Server Hostname	Network Element	Appl State																					
MP1	UDR_SO_A	Enabled																					
MP2	UDR_SO_A	Enabled																					
NO-A	UDR_NO_A	Enabled																					
NO-B	UDR_NO_A	Enabled																					
SO-A	UDR_SO_A	Enabled																					
SO-B	UDR_SO_A	Enabled																					
<p>5.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>1) From the Status & Manage→ Server filter pull-down, select the name for the SOAM NE.</p> <p>2) Click on the “GO” dialogue button located on the right end of the filter bar</p>																						
<p>6.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>The user should be presented with the list of servers associated with the SOAM NE.</p> <p>Identify each “Server Hostname” and its associated “Reporting Status” and “Appl State”.</p>	 <table border="1"> <thead> <tr> <th>Server Hostname</th> <th>Network Element</th> <th>Appl State</th> </tr> </thead> <tbody> <tr> <td>MP1</td> <td>UDR_SO_A</td> <td>Enabled</td> </tr> <tr> <td>MP2</td> <td>UDR_SO_A</td> <td>Enabled</td> </tr> <tr> <td>SO-A</td> <td>UDR_SO_A</td> <td>Enabled</td> </tr> <tr> <td>SO-B</td> <td>UDR_SO_A</td> <td>Enabled</td> </tr> </tbody> </table>	Server Hostname	Network Element	Appl State	MP1	UDR_SO_A	Enabled	MP2	UDR_SO_A	Enabled	SO-A	UDR_SO_A	Enabled	SO-B	UDR_SO_A	Enabled						
Server Hostname	Network Element	Appl State																					
MP1	UDR_SO_A	Enabled																					
MP2	UDR_SO_A	Enabled																					
SO-A	UDR_SO_A	Enabled																					
SO-B	UDR_SO_A	Enabled																					
<p>7.</p> <p><input type="checkbox"/></p>	<p>Using the list of servers associated with the SOAMNE shown in the above Step...</p> <p>Record the Server names of the MPs associated with the SOAM NE.</p>	<p>Identify the SOAM “Server” names and record them in the space provided below:</p> <p>Standby SOAM: _____</p> <p>Active SOAM: _____</p> <p>MP1: _____ MP3: _____</p> <p>MP2: _____ MP4: _____</p>																					

Procedure 17: Backout of SOAM / MP

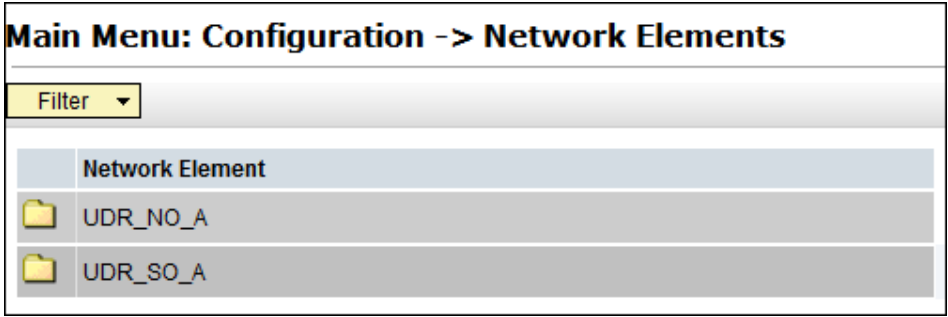
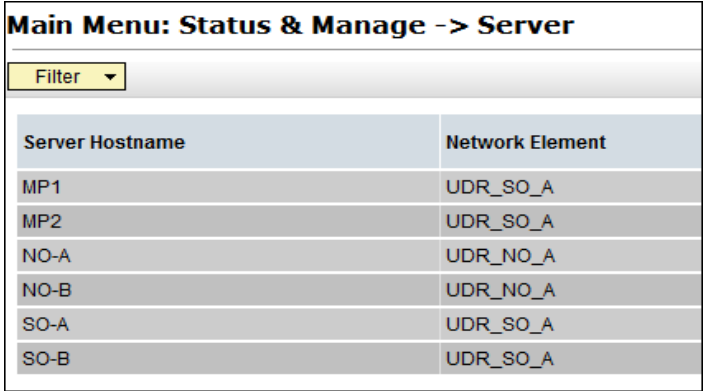
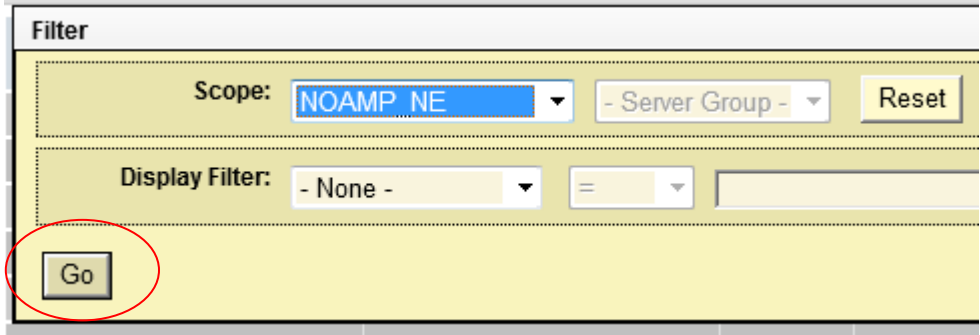
Step	Procedure	Result
8. <input type="checkbox"/>	Active NOAMP VIP: Referencing the list of servers recorded in Step7 , execute Appendix D for the MP1 Server .	Backout the target release for the MP1 Server as specified in Appendix D (<i>Backout of a Server</i>).
9. <input type="checkbox"/>	1)Record the Server names of the MPs associated with the SOAM NE . 2) Beginning with MP2 , execute Appendix D for each MP Server associated with SOAM NE 3)" Check off " each Check Box as Appendix D is completed for the MP Server listed to its right.	Record the Server name of each MP to be " Backed Out " in the space provided below: " Check off " the associated Check Box as Appendix D is completed for each MP . <input type="checkbox"/> MP1: _____ <input type="checkbox"/> MP3: _____ <input type="checkbox"/> MP2: _____ <input type="checkbox"/> MP4: _____
10. <input type="checkbox"/>	Active NOAMP VIP: Execute Appendix D for the Standby SOAM Server .	Backout the target release for the Standby SOAM Server as specified in Appendix D (<i>Backout of a Server</i>).
11. <input type="checkbox"/>	Active NOAMP VIP: Execute Appendix D for the Active SOAM Server .	Backout the target release for the Active SOAM Server as specified in Appendix D (<i>Backout of a Server</i>).
12. <input type="checkbox"/>	Active NOAMP VIP: Execute Health Check at this time only if no other servers require back Out. Otherwise, proceed with the next Backout.	Execute Health Check procedures (Post Backout) as specified in Appendix B , if Backout procedures have been completed for all required servers.
THIS PROCEDURE HAS BEEN COMPLETED		

9.4 Backout of DR NOAMP NE

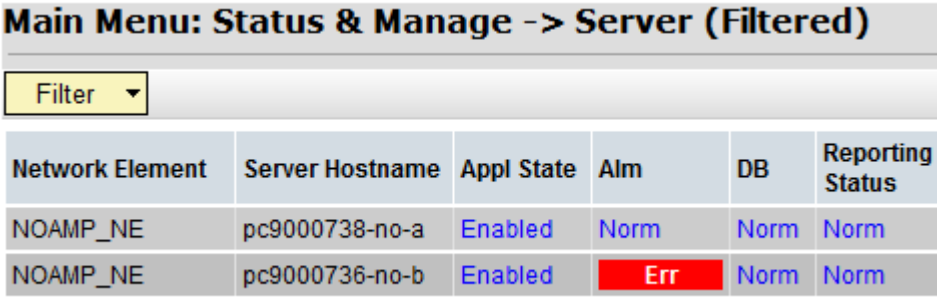
Procedure 18: Backout of DR NOAMP NE

Step	Procedure	Result
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Procedure 18: Backout of DR NOAMP NE

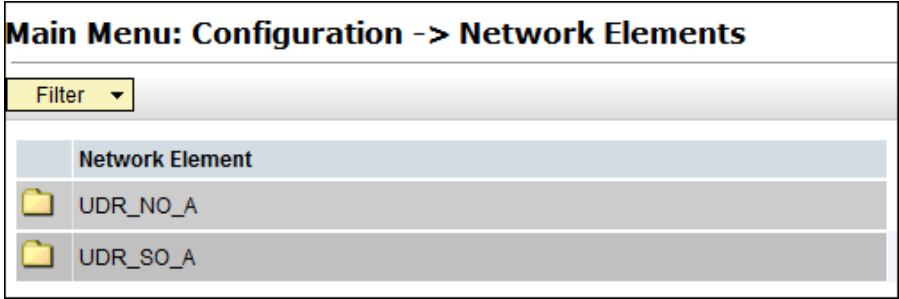
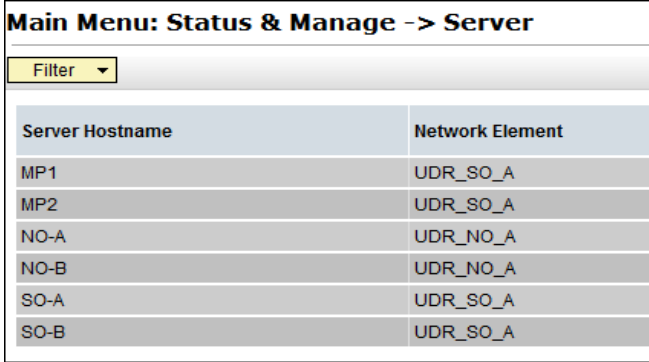
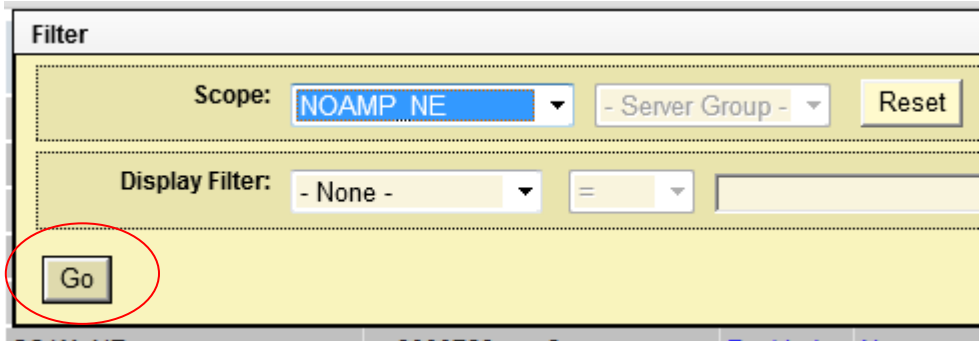
Step	Procedure	Result														
1. <input type="checkbox"/>	Using the VIP address, access the Primary NOAMP GUI.	Access the Primary NOAMP GUI as specified in Appendix A .														
2. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu → Status & Manage → Network Elements</p> <p>...as shown on the right.</p>															
3. <input type="checkbox"/>	Record the name of the DR NOAMP NE to be downgraded (backed out) in the space provided to the right.	Record the name of the DR NOAMP NE which will be " Backed out ". DR NOAMP NE: _____														
4. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu → Status & Manage → Server</p> <p>...as shown on the right.</p>	 <table border="1"> <thead> <tr> <th>Server Hostname</th> <th>Network Element</th> </tr> </thead> <tbody> <tr> <td>MP1</td> <td>UDR_SO_A</td> </tr> <tr> <td>MP2</td> <td>UDR_SO_A</td> </tr> <tr> <td>NO-A</td> <td>UDR_NO_A</td> </tr> <tr> <td>NO-B</td> <td>UDR_NO_A</td> </tr> <tr> <td>SO-A</td> <td>UDR_SO_A</td> </tr> <tr> <td>SO-B</td> <td>UDR_SO_A</td> </tr> </tbody> </table>	Server Hostname	Network Element	MP1	UDR_SO_A	MP2	UDR_SO_A	NO-A	UDR_NO_A	NO-B	UDR_NO_A	SO-A	UDR_SO_A	SO-B	UDR_SO_A
Server Hostname	Network Element															
MP1	UDR_SO_A															
MP2	UDR_SO_A															
NO-A	UDR_NO_A															
NO-B	UDR_NO_A															
SO-A	UDR_SO_A															
SO-B	UDR_SO_A															
5. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>1) From the Status & Manage→ Server filter pull-down, select the name for the DR NOAMP NE.</p> <p>2) Click on the "GO" dialogue button located on the right end of the filter bar</p>															

Procedure 18: Backout of DR NOAMP NE

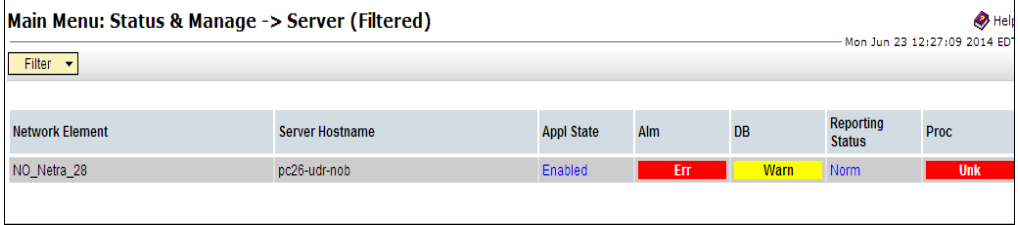
Step	Procedure	Result																		
<p>6.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>The user should be presented with the list of servers associated with the DR NOAMP NE.</p> <p>Identify each “Server Hostname” and its associated “Reporting Status” and “Appl State”.</p>	 <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server Hostname</th> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> </tr> </thead> <tbody> <tr> <td>NOAMP_NE</td> <td>pc9000738-no-a</td> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>NOAMP_NE</td> <td>pc9000736-no-b</td> <td>Enabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> </tr> </tbody> </table>	Network Element	Server Hostname	Appl State	Alm	DB	Reporting Status	NOAMP_NE	pc9000738-no-a	Enabled	Norm	Norm	Norm	NOAMP_NE	pc9000736-no-b	Enabled	Err	Norm	Norm
Network Element	Server Hostname	Appl State	Alm	DB	Reporting Status															
NOAMP_NE	pc9000738-no-a	Enabled	Norm	Norm	Norm															
NOAMP_NE	pc9000736-no-b	Enabled	Err	Norm	Norm															
<p>7.</p> <input type="checkbox"/>	<p>Using the list of servers associated with the DR NOAMP NE shown in the above Step, record the Server names associated with the DR NOAMP NE.</p>	<p>Identify the DR NOAMP “Server” names and record them in the space provided below:</p> <p>Standby DR NOAMP: _____</p> <p>Active DR NOAMP: _____</p>																		
<p>8.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Execute Appendix D for the first Spare - DR NOAMP Server</p>	<p>Backout the target release for the Spare DR NOAMP Server as specified in Appendix D (<i>Backout of a Single Server</i>).</p>																		
<p>9.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Execute Appendix D for the second Spare - DR NOAMP Server.</p>	<p>Backout the target release for the Spare DR NOAMP Server as specified in Appendix D (<i>Backout of a Single Server</i>).</p>																		
<p>10.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Execute Health Check at this time only if no other servers require back Out. Otherwise, proceed with the next Backout</p>	<p>Execute Health Check procedures (Post Backout) as specified in Appendix B, if Backout procedures have been completed for all required servers.</p>																		
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>																				

9.5 Backout of Primary NOAMP NE

Procedure 19: Backout of Primary NOAMP NE

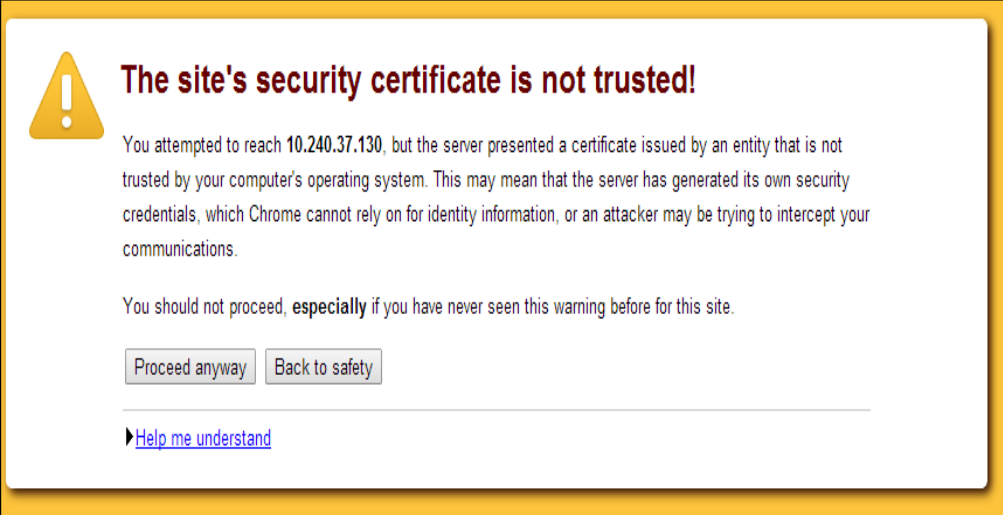

Step	Procedure	Result														
<p>1.</p> <input type="checkbox"/>	<p>Using the VIP address, access the Primary NOAMP GUI.</p>	<p>Access the Primary NOAMP GUI as specified in Appendix A.</p>														
<p>2.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu → Status & Manage → Network Elements</p> <p>...as shown on the right.</p>	 <p>Main Menu: Configuration -> Network Elements</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th colspan="2">Network Element</th> </tr> </thead> <tbody> <tr> <td>UDR_NO_A</td> <td></td> </tr> <tr> <td>UDR_SO_A</td> <td></td> </tr> </tbody> </table>	Network Element		UDR_NO_A		UDR_SO_A									
Network Element																
UDR_NO_A																
UDR_SO_A																
<p>3.</p> <input type="checkbox"/>	<p>Record the name of the NOAMP NE to be downgraded (Backed out) in the space provided to the right.</p>	<p>Record the name of the Primary NOAMP NE which will be “Backed out”.</p> <p>Primary NOAMP NE: _____</p>														
<p>4.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu → Status & Manage → Server</p> <p>...as shown on the right.</p>	 <p>Main Menu: Status & Manage -> Server</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th>Server Hostname</th> <th>Network Element</th> </tr> </thead> <tbody> <tr> <td>MP1</td> <td>UDR_SO_A</td> </tr> <tr> <td>MP2</td> <td>UDR_SO_A</td> </tr> <tr> <td>NO-A</td> <td>UDR_NO_A</td> </tr> <tr> <td>NO-B</td> <td>UDR_NO_A</td> </tr> <tr> <td>SO-A</td> <td>UDR_SO_A</td> </tr> <tr> <td>SO-B</td> <td>UDR_SO_A</td> </tr> </tbody> </table>	Server Hostname	Network Element	MP1	UDR_SO_A	MP2	UDR_SO_A	NO-A	UDR_NO_A	NO-B	UDR_NO_A	SO-A	UDR_SO_A	SO-B	UDR_SO_A
Server Hostname	Network Element															
MP1	UDR_SO_A															
MP2	UDR_SO_A															
NO-A	UDR_NO_A															
NO-B	UDR_NO_A															
SO-A	UDR_SO_A															
SO-B	UDR_SO_A															
<p>5.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>1) From the Status & Manage/Server filter pull-down, select the name for the Primary NOAMP NE.</p> <p>2) Click on the “GO” dialogue button located on the right end of the filter bar</p>	 <p>Filter</p> <p>Scope: NOAMP NE ▾ - Server Group - ▾ Reset</p> <p>Display Filter: - None - ▾ = ▾</p> <p>Go</p>														

Procedure 19: Backout of Primary NOAMP NE

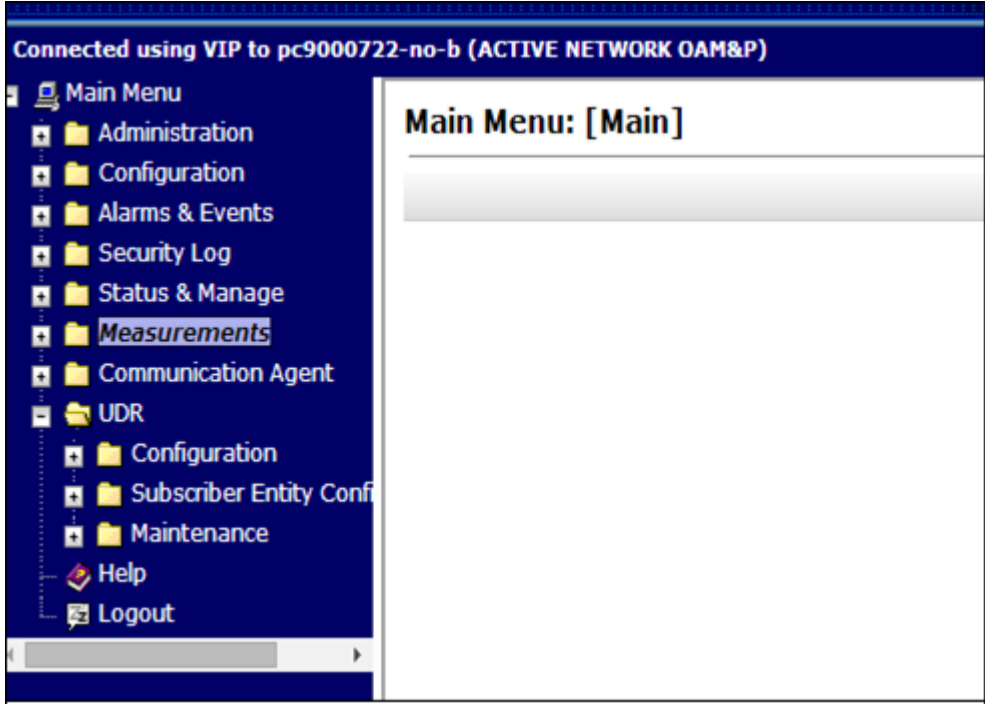
Step	Procedure	Result
<p>6.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>The user should be presented with the list of servers associated with the Primary NOAMP NE.</p> <p>Identify each “Server Hostname” and its associated “Reporting Status” and “Appl State”.</p>	
<p>7.</p> <input type="checkbox"/>	<p>Using the list of servers associated with the Primary NOAMP NE shown in the above Step...</p> <p>Record the Server names associated with the Primary NOAMP NE.</p>	<p>Identify the Primary NOAMP “Server” names and record them in the space provided below:</p> <p>Standby Primary NOAMP: _____</p> <p>Active Primary NOAMP: _____</p>
<p>8.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Execute Appendix D for the Standby Primary NOAMP Server</p>	<p>Backout the target release for the Standby Primary NOAMP Server as specified in Appendix D (Backout of a Single Server).</p>
<p>9.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Execute Appendix D for the Active Primary NOAMP Server.</p>	<p>Backout the target release for the Active Primary NOAMP Server as specified in Appendix D (Backout of a Single Server).</p>
<p>10.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Execute Health Check at this time only if no other servers require backout.</p>	<p>Execute Health Check procedures (Post Backout) as specified in Appendix B, if Backout procedures have been completed for all required servers.</p>
<p>11.</p> <input checked="" type="checkbox"/>	<p>Execute backout procedures for TVOE and/or PM&C if necessary</p>	<p>Refer to the recovery procedures in TVOE 3.0 Upgrade document[3] if a TVOE backout is desired.</p> <p>Refer to the recovery procedures in PM&C Incremental Upgrade Procedure [5] if a PM&C backout is desired.</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

APPENDIX A. ACCESSING THE OAM SERVER GUI (NOAMP / SOAM)

Appendix A: Accessing the OAM Server GUI (NOAMP / SOAM)

Step	Procedure	Result
<p>1.</p> <input type="checkbox"/>	<p>Active OAM VIP:</p> <p>1) Launch Internet Explorer or other and connect to the XMI Virtual IP address (VIP) assigned to Active OAM site</p> <p>2) If a Certificate Error is received, click on the box which states...</p> <p>“Proceed anyway.”</p>	 <p>The site's security certificate is not trusted!</p> <p>You attempted to reach 10.240.37.130, but the server presented a certificate issued by an entity that is not trusted by your computer's operating system. This may mean that the server has generated its own security credentials, which Chrome cannot rely on for identity information, or an attacker may be trying to intercept your communications.</p> <p>You should not proceed, especially if you have never seen this warning before for this site.</p> <p><input type="button" value="Proceed anyway"/> <input type="button" value="Back to safety"/></p> <p>Help me understand</p>
<p>2.</p> <input type="checkbox"/>	<p>Active OAM VIP:</p> <p>The user should be presented the login screen shown on the right.</p> <p>Login to the GUI using the default user and password.</p>	 <p>ORACLE®</p> <p>Oracle System Login Fri Dec 13 15:44:38 2013 EST</p> <div style="border: 1px solid gray; padding: 10px; width: fit-content; margin: 0 auto;"> <p style="text-align: center;">Log In</p> <p style="text-align: center;">Enter your username and password to log in</p> <p style="text-align: center;">Session timed out at 3:44:37 pm.</p> <p style="text-align: center;">Username: <input type="text"/></p> <p style="text-align: center;">Password: <input type="password"/></p> <p style="text-align: center;"><input type="checkbox"/> Change password</p> <p style="text-align: center;"><input type="button" value="Log In"/></p> </div> <p style="text-align: center;">Welcome to the Oracle System Login.</p> <p style="text-align: center; font-size: small;">Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 7.0, 8.0, or 9.0 with support for JavaScript and cookies.</p> <p style="text-align: center; font-size: x-small;">Oracle and logo are registered service marks of Oracle Corporation. Copyright © 2013 Oracle Corporation All Rights Reserved.</p>

Appendix A: Accessing the OAM Server GUI (NOAMP / SOAM)

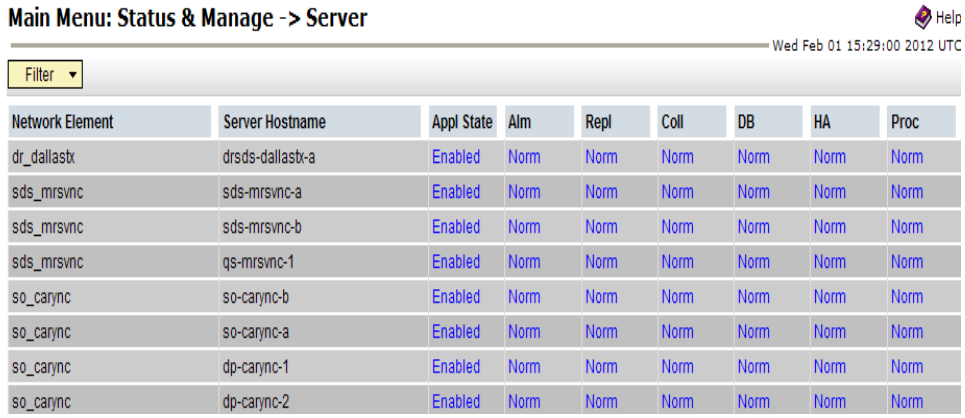
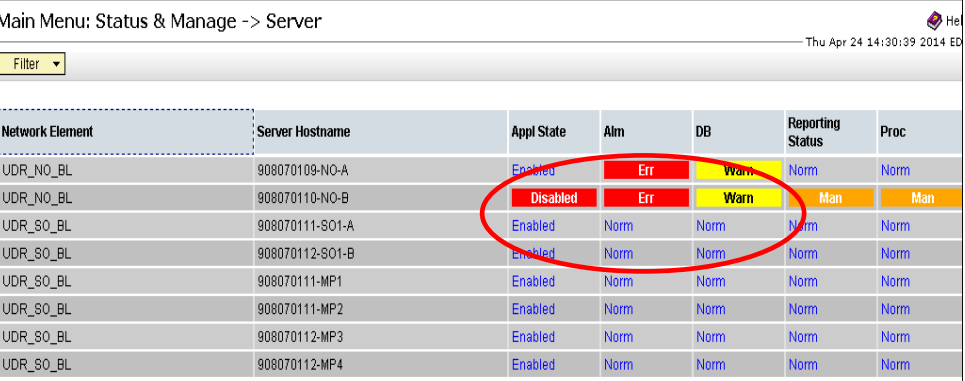
Step	Procedure	Result
<p>3.</p> <p><input type="checkbox"/></p>	<p>Active OAM VIP:</p> <p>1) The user should be presented the Main Menu as shown on the right.</p> <p>2) Verify that the message shown across the top of the right panel indicates that the browser is using the “VIP” connected to the Active OAM server.</p>	 <p>NOTE: The message may show connection to either a “ACTIVE NETWORK OAM&P” or a “SYSTEM OAM” depending on the selected NE.</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

APPENDIX B. HEALTH CHECK PROCEDURES

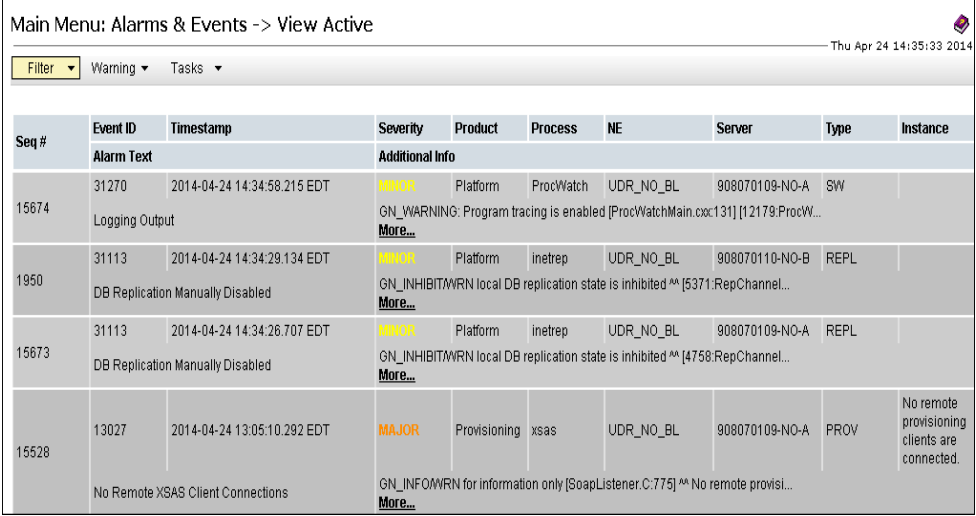
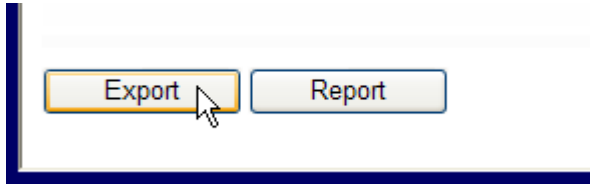
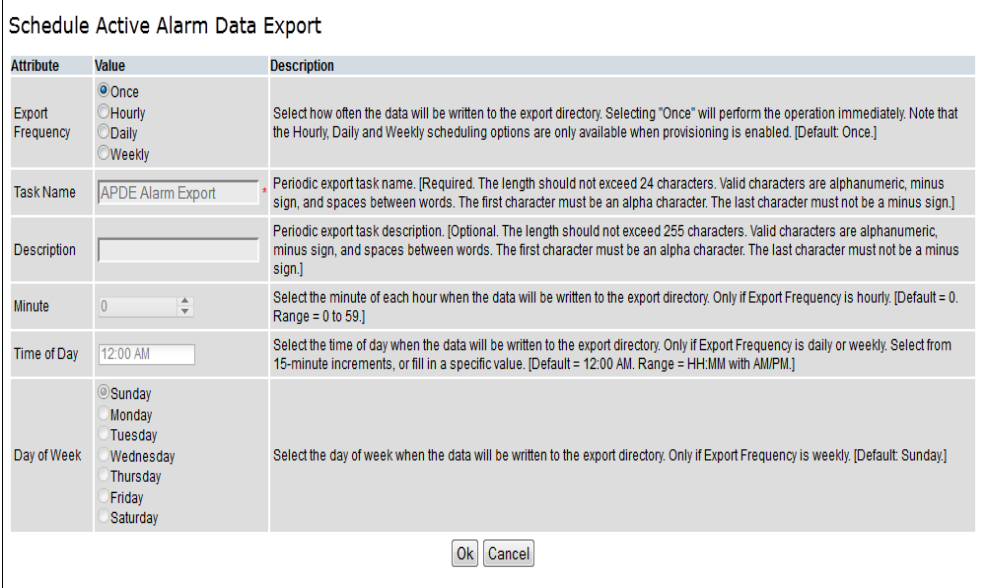
This procedure is part of Software Upgrade Preparation and is used to determine the health and status of the Oracle Communications User Data Repository network and servers.

Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.

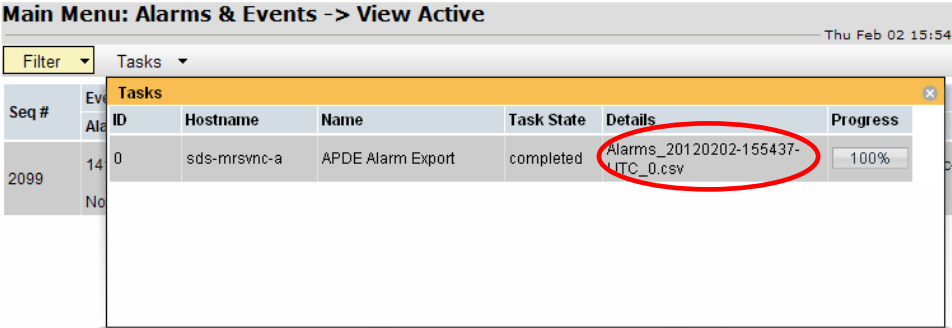
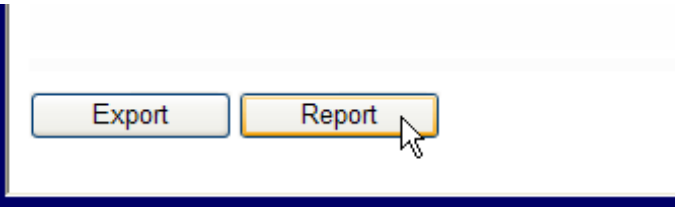
Appendix B: Health Check Procedures

Step	Procedure	Result																																																																																	
1. <input type="checkbox"/>	Using the VIP address, access the Primary NOAMP GUI.	Access the Primary NOAMP GUI as specified in Appendix A .																																																																																	
2. <input type="checkbox"/>	<p>Active NOAMP VIP: Select...</p> <p>Main Menu → Status & Manage → Server</p> <p>...as shown on the right.</p>	 <p>Main Menu: Status & Manage -> Server</p> <p>Filter</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server Hostname</th> <th>Appl State</th> <th>Alm</th> <th>Repl</th> <th>Coll</th> <th>DB</th> <th>HA</th> <th>Proc</th> </tr> </thead> <tbody> <tr><td>dr_dallastr</td><td>drds-dallastr-a</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>sds_mrsvnc</td><td>sds-mrsvnc-a</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>sds_mrsvnc</td><td>sds-mrsvnc-b</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>sds_mrsvnc</td><td>qs-mrsvnc-1</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>so_carync</td><td>so-carync-b</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>so_carync</td><td>so-carync-a</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>so_carync</td><td>dp-carync-1</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>so_carync</td><td>dp-carync-2</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> </tbody> </table> <p>Verify that all server statuses show “Norm” as shown above.</p>	Network Element	Server Hostname	Appl State	Alm	Repl	Coll	DB	HA	Proc	dr_dallastr	drds-dallastr-a	Enabled	Norm	Norm	Norm	Norm	Norm	Norm	sds_mrsvnc	sds-mrsvnc-a	Enabled	Norm	Norm	Norm	Norm	Norm	Norm	sds_mrsvnc	sds-mrsvnc-b	Enabled	Norm	Norm	Norm	Norm	Norm	Norm	sds_mrsvnc	qs-mrsvnc-1	Enabled	Norm	Norm	Norm	Norm	Norm	Norm	so_carync	so-carync-b	Enabled	Norm	Norm	Norm	Norm	Norm	Norm	so_carync	so-carync-a	Enabled	Norm	Norm	Norm	Norm	Norm	Norm	so_carync	dp-carync-1	Enabled	Norm	Norm	Norm	Norm	Norm	Norm	so_carync	dp-carync-2	Enabled	Norm	Norm	Norm	Norm	Norm	Norm
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sds_mrsvnc	sds-mrsvnc-a	Enabled	Norm	Norm	Norm	Norm	Norm	Norm																																																																											
sds_mrsvnc	sds-mrsvnc-b	Enabled	Norm	Norm	Norm	Norm	Norm	Norm																																																																											
sds_mrsvnc	qs-mrsvnc-1	Enabled	Norm	Norm	Norm	Norm	Norm	Norm																																																																											
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3. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>If any other server statuses are present, they will appear in a colored box as shown on the right.</p> <p>NOTE: Other server states include “Err, Warn, Man, Unk and Disabled”.</p>	 <p>Main Menu: Status & Manage -> Server</p> <p>Filter</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server Hostname</th> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr><td>UDR_NO_BL</td><td>908070109-NO-A</td><td>Enabled</td><td>Err</td><td>Warn</td><td>Norm</td><td>Norm</td></tr> <tr><td>UDR_NO_BL</td><td>908070110-NO-B</td><td>Disabled</td><td>Err</td><td>Warn</td><td>Man</td><td>Man</td></tr> <tr><td>UDR_SO_BL</td><td>908070111-SO1-A</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>UDR_SO_BL</td><td>908070112-SO1-B</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>UDR_SO_BL</td><td>908070111-MP1</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>UDR_SO_BL</td><td>908070111-MP2</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>UDR_SO_BL</td><td>908070112-MP3</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>UDR_SO_BL</td><td>908070112-MP4</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> </tbody> </table> <p>If server state is any value besides NORM, follow Appendix F to contact Oracle Support.</p>	Network Element	Server Hostname	Appl State	Alm	DB	Reporting Status	Proc	UDR_NO_BL	908070109-NO-A	Enabled	Err	Warn	Norm	Norm	UDR_NO_BL	908070110-NO-B	Disabled	Err	Warn	Man	Man	UDR_SO_BL	908070111-SO1-A	Enabled	Norm	Norm	Norm	Norm	UDR_SO_BL	908070112-SO1-B	Enabled	Norm	Norm	Norm	Norm	UDR_SO_BL	908070111-MP1	Enabled	Norm	Norm	Norm	Norm	UDR_SO_BL	908070111-MP2	Enabled	Norm	Norm	Norm	Norm	UDR_SO_BL	908070112-MP3	Enabled	Norm	Norm	Norm	Norm	UDR_SO_BL	908070112-MP4	Enabled	Norm	Norm	Norm	Norm																		
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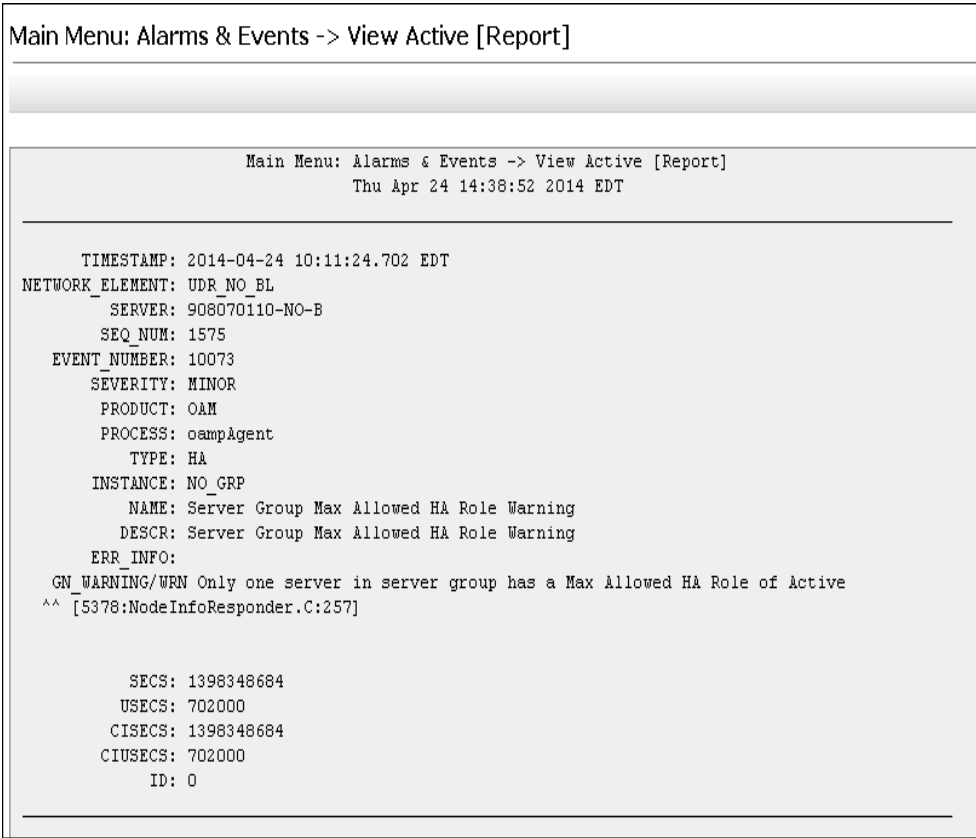

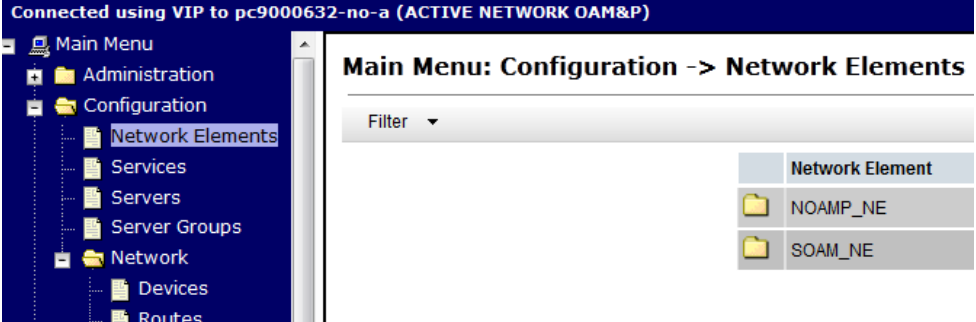
Appendix B: Health Check Procedures

Step	Procedure	Result
<p>4.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP: Select...</p> <p>Main Menu → Alarm & Events → View Active</p> <p>...as shown on the right.</p>	
<p>5.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>Select the “Export” dialogue button from the bottom left corner of the screen.</p>	 <p>Note: This step cannot be performed if global provisioning is disabled. The “export” button will be greyed out in that scenario.</p>
<p>6.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>Click the “Ok” button at the bottom of the screen.</p> <p>Default values are fine.</p>	

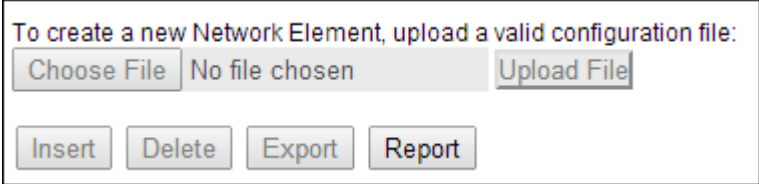
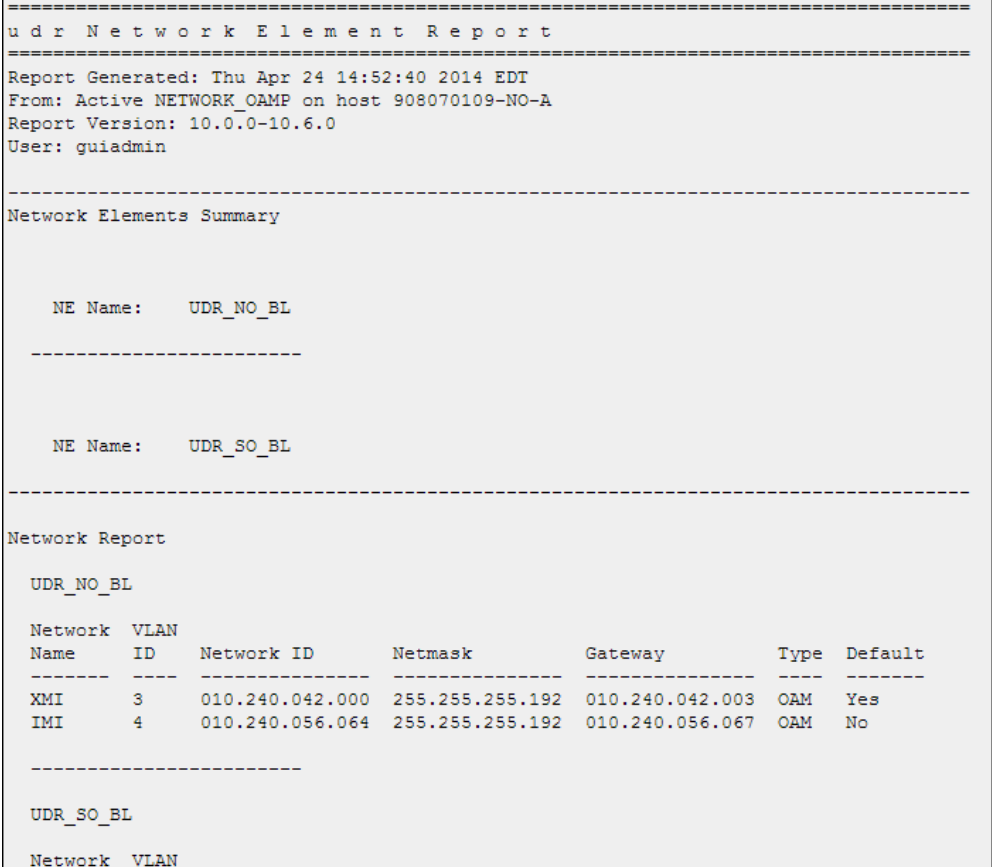
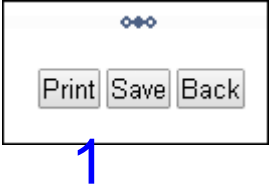
Appendix B: Health Check Procedures

Step	Procedure	Result
<p>7.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Click the Tasks dropdown.</p> <p>The name of the exported Alarms CSV file will appear in the banner at the top of the right panel.</p>	
<p>8.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Record the filename of Alarms CSV file generated in the space provided to the right.</p>	<p>Example: <i>Alarms<yyyymmdd>_<hhmmss>.csv</i></p> <p>Alarms _____ .CSV</p>
<p>9.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Select the “Report” dialogue button from the bottom left corner of the screen.</p>	

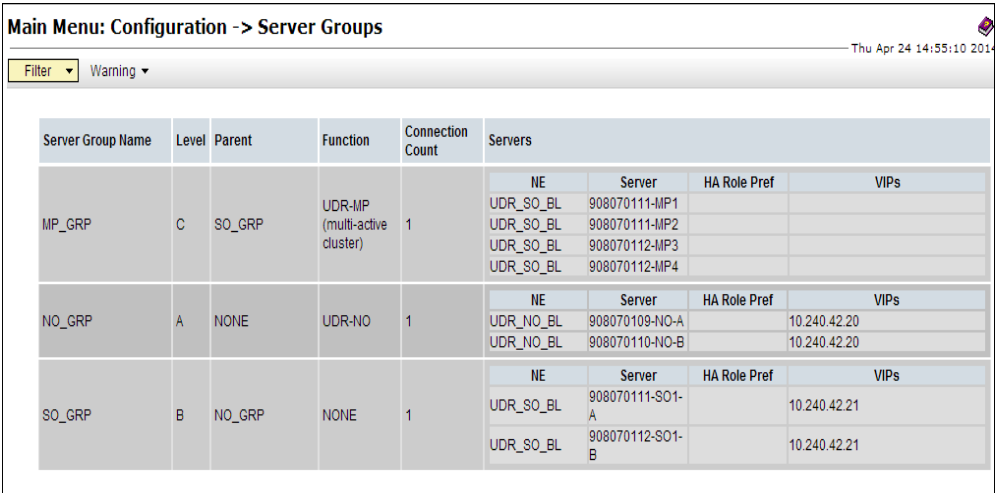
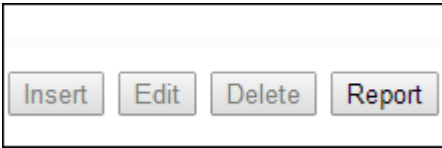
Appendix B: Health Check Procedures

Step	Procedure	Result			
<p>10.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>Active “Alarms & Events” Report will be generated and displayed in the right panel.</p>	 <p>Main Menu: Alarms & Events -> View Active [Report]</p> <hr/> <p>Main Menu: Alarms & Events -> View Active [Report] Thu Apr 24 14:38:52 2014 EDT</p> <hr/> <p>TIMESTAMP: 2014-04-24 10:11:24.702 EDT NETWORK_ELEMENT: UDR_NO_BL SERVER: 908070110-NO-B SEQ_NUM: 1575 EVENT_NUMBER: 10073 SEVERITY: MINOR PRODUCT: OAM PROCESS: oampAgent TYPE: HA INSTANCE: NO_GRP NAME: Server Group Max Allowed HA Role Warning DESCR: Server Group Max Allowed HA Role Warning ERR_INFO: GN_WARNING/WRN Only one server in server group has a Max Allowed HA Role of Active ^^ [5378:NodeInfoResponder.C:257]</p> <p>SECS: 1398348684 USECS: 702000 CISECS: 1398348684 CIUSECS: 702000 ID: 0</p>			
<p>11.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>1) Select the “Save” dialogue button from the bottom/middle of the right panel.</p> <p>2) Click the “Save” dialogue and save to a directory.</p>	 <p>Print Save Back</p>			
<p>12.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu → Configuration → Network Elements</p> <p>...as shown on the right.</p>	 <p>Connected using VIP to pc9000632-no-a (ACTIVE NETWORK OAM&P)</p> <p>Main Menu</p> <ul style="list-style-type: none"> Administration Configuration <ul style="list-style-type: none"> Network Elements Services Servers Server Groups Network <ul style="list-style-type: none"> Devices Routes <p>Main Menu: Configuration -> Network Elements</p> <p>Filter</p> <table border="1"> <thead> <tr> <th>Network Element</th> </tr> </thead> <tbody> <tr> <td>NOAMP_NE</td> </tr> <tr> <td>SOAM_NE</td> </tr> </tbody> </table>	Network Element	NOAMP_NE	SOAM_NE
Network Element					
NOAMP_NE					
SOAM_NE					

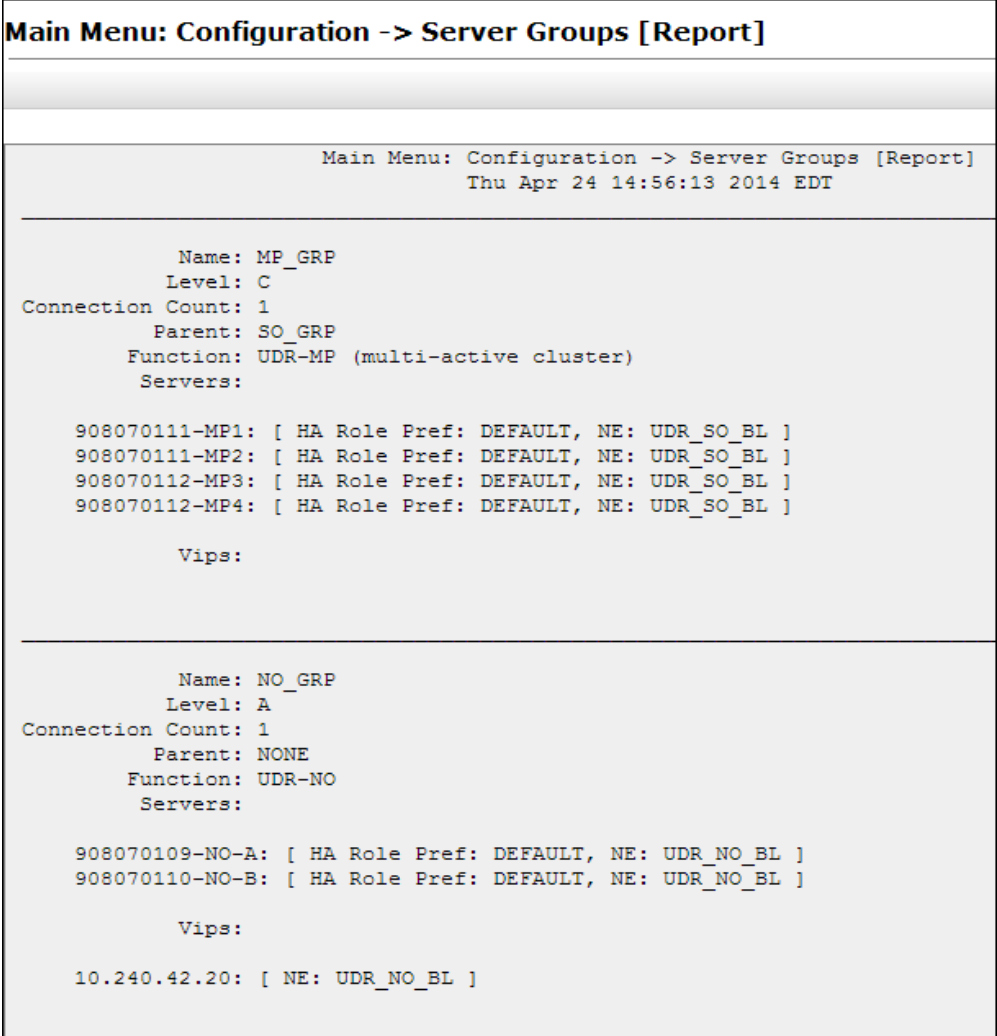
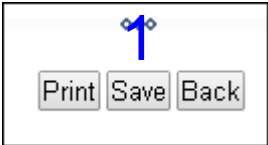
Appendix B: Health Check Procedures

Step	Procedure	Result
<p>13.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Select the “Report” dialogue button from the bottom left corner of the screen.</p>	
<p>14.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>A “Network Element Report” will be generated and displayed in the right panel.</p>	 <pre> ===== u d r N e t w o r k E l e m e n t R e p o r t ===== Report Generated: Thu Apr 24 14:52:40 2014 EDT From: Active NETWORK_OAMP on host 908070109-NO-A Report Version: 10.0.0-10.6.0 User: guiadmin ----- Network Elements Summary NE Name: UDR_NO_BL ----- NE Name: UDR_SO_BL ----- Network Report UDR_NO_BL Network VLAN Name ID Network ID Netmask Gateway Type Default ----- XMI 3 010.240.042.000 255.255.255.192 010.240.042.003 OAM Yes IMI 4 010.240.056.064 255.255.255.192 010.240.056.067 OAM No ----- UDR_SO_BL Network VLAN </pre>
<p>15.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>1) Select the “Save” dialogue button from the bottom/middle of the right panel.</p> <p>2) Click the “Save” dialogue and save to a directory.</p>	

Appendix B: Health Check Procedures

Step	Procedure	Result																																																															
<p>16.</p> <input data-bbox="191 304 240 346" type="checkbox"/>	<p>Active NOAMP VIP: Select...</p> <p>Main Menu → Configuration → Server Groups</p> <p>...as shown on the right.</p>	 <p>Main Menu: Configuration -> Server Groups</p> <p>Filter Warning</p> <table border="1"> <thead> <tr> <th>Server Group Name</th> <th>Level</th> <th>Parent</th> <th>Function</th> <th>Connection Count</th> <th>Servers</th> </tr> </thead> <tbody> <tr> <td rowspan="4">MP_GRP</td> <td rowspan="4">C</td> <td rowspan="4">SO_GRP</td> <td rowspan="4">UDR-MP (multi-active cluster)</td> <td rowspan="4">1</td> <td>NE</td> </tr> <tr> <td>Server</td> </tr> <tr> <td>HA Role Pref</td> </tr> <tr> <td>VIPs</td> </tr> <tr> <td>UDR_SO_BL</td> <td>908070111-MP1</td> <td></td> <td></td> </tr> <tr> <td>UDR_SO_BL</td> <td>908070111-MP2</td> <td></td> <td></td> </tr> <tr> <td>UDR_SO_BL</td> <td>908070112-MP3</td> <td></td> <td></td> </tr> <tr> <td>UDR_SO_BL</td> <td>908070112-MP4</td> <td></td> <td></td> </tr> <tr> <td rowspan="3">NO_GRP</td> <td rowspan="3">A</td> <td rowspan="3">NONE</td> <td rowspan="3">UDR-NO</td> <td rowspan="3">1</td> <td>NE</td> </tr> <tr> <td>Server</td> </tr> <tr> <td>HA Role Pref</td> </tr> <tr> <td>UDR_NO_BL</td> <td>908070109-NO-A</td> <td></td> <td>10.240.42.20</td> </tr> <tr> <td>UDR_NO_BL</td> <td>908070110-NO-B</td> <td></td> <td>10.240.42.20</td> </tr> <tr> <td rowspan="3">SO_GRP</td> <td rowspan="3">B</td> <td rowspan="3">NO_GRP</td> <td rowspan="3">NONE</td> <td rowspan="3">1</td> <td>NE</td> </tr> <tr> <td>Server</td> </tr> <tr> <td>HA Role Pref</td> </tr> <tr> <td>UDR_SO_BL</td> <td>908070111-SO1-A</td> <td></td> <td>10.240.42.21</td> </tr> <tr> <td>UDR_SO_BL</td> <td>908070112-SO1-B</td> <td></td> <td>10.240.42.21</td> </tr> </tbody> </table>	Server Group Name	Level	Parent	Function	Connection Count	Servers	MP_GRP	C	SO_GRP	UDR-MP (multi-active cluster)	1	NE	Server	HA Role Pref	VIPs	UDR_SO_BL	908070111-MP1			UDR_SO_BL	908070111-MP2			UDR_SO_BL	908070112-MP3			UDR_SO_BL	908070112-MP4			NO_GRP	A	NONE	UDR-NO	1	NE	Server	HA Role Pref	UDR_NO_BL	908070109-NO-A		10.240.42.20	UDR_NO_BL	908070110-NO-B		10.240.42.20	SO_GRP	B	NO_GRP	NONE	1	NE	Server	HA Role Pref	UDR_SO_BL	908070111-SO1-A		10.240.42.21	UDR_SO_BL	908070112-SO1-B		10.240.42.21
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UDR_SO_BL	908070112-SO1-B		10.240.42.21																																																														
<p>17.</p> <input data-bbox="191 823 240 865" type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Select the “Report” dialogue button from the bottom left corner of the screen.</p>	 <p>Insert Edit Delete Report</p>																																																															

Appendix B: Health Check Procedures

Step	Procedure	Result
<p>18.</p> <input data-bbox="191 300 240 342" type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>A “Server Group Report” will be generated and displayed in the right panel.</p>	
<p>19.</p> <input data-bbox="191 1365 240 1407" type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>1) Select the “Save” dialogue button from the bottom/middle of the right panel.</p> <p>2) Click the “Save” dialogue and save to a directory.</p>	
<p>20.</p> <input data-bbox="191 1680 240 1722" type="checkbox"/>	<p>Provide the saved files to the Customer Care Center for Health Check Analysis.</p>	<p>If executing this procedure as a pre or post Upgrade Health Check (HC1/HC2/HC3), provide the following saved files to the Customer Care Center for proper Health Check Analysis:</p> <p>Active “Alarms & Events” Report [Appendix B, Step 11] Network Elements Report [Appendix B, Step 15] Server Group Report [Appendix B, Step 19]</p>

Appendix B: Health Check Procedures

Step	Procedure	Result																																																																								
21. <input type="checkbox"/>	<p>Active NOAMP VIP: Select...</p> <p>Main Menu → Status & Manage → HA</p> <p>...as shown on the right.</p>	<table border="1"> <thead> <tr> <th>Hostname</th> <th>OAM Max HA Role</th> <th>Application Max HA Role</th> <th>Max Allowed HA Role</th> <th>Mate Hostname List</th> <th>Network Element</th> <th>Server Role</th> <th>Active VIPs</th> </tr> </thead> <tbody> <tr> <td>908070109-NO-A</td> <td>Active</td> <td>OOS</td> <td>Active</td> <td>908070110-NO-B</td> <td>UDR_NO_BL</td> <td>Network OAM&P</td> <td>10.240.42.20</td> </tr> <tr> <td>908070110-NO-B</td> <td>Standby</td> <td>OOS</td> <td>Standby</td> <td>908070109-NO-A</td> <td>UDR_NO_BL</td> <td>Network OAM&P</td> <td></td> </tr> <tr> <td>908070111-SO1-A</td> <td>Active</td> <td>OOS</td> <td>Active</td> <td>908070112-SO1-B</td> <td>UDR_SO_BL</td> <td>System OAM</td> <td>10.240.42.21</td> </tr> <tr> <td>908070112-SO1-B</td> <td>Standby</td> <td>OOS</td> <td>Active</td> <td>908070111-SO1-A</td> <td>UDR_SO_BL</td> <td>System OAM</td> <td></td> </tr> <tr> <td>908070111-MP1</td> <td>Active</td> <td>Active</td> <td>Active</td> <td>908070111-MP2 908070112-MP3 908070112-MP4</td> <td>UDR_SO_BL</td> <td>MP</td> <td></td> </tr> <tr> <td>908070111-MP2</td> <td>Spare</td> <td>Active</td> <td>Active</td> <td>908070111-MP1 908070112-MP3 908070112-MP4</td> <td>UDR_SO_BL</td> <td>MP</td> <td></td> </tr> <tr> <td>908070112-MP3</td> <td>Standby</td> <td>Active</td> <td>Active</td> <td>908070111-MP1 908070111-MP2 908070112-MP4</td> <td>UDR_SO_BL</td> <td>MP</td> <td></td> </tr> <tr> <td>908070112-MP4</td> <td>Spare</td> <td>Active</td> <td>Active</td> <td>908070111-MP1 908070111-MP2 908070112-MP3</td> <td>UDR_SO_BL</td> <td>MP</td> <td></td> </tr> </tbody> </table>	Hostname	OAM Max HA Role	Application Max HA Role	Max Allowed HA Role	Mate Hostname List	Network Element	Server Role	Active VIPs	908070109-NO-A	Active	OOS	Active	908070110-NO-B	UDR_NO_BL	Network OAM&P	10.240.42.20	908070110-NO-B	Standby	OOS	Standby	908070109-NO-A	UDR_NO_BL	Network OAM&P		908070111-SO1-A	Active	OOS	Active	908070112-SO1-B	UDR_SO_BL	System OAM	10.240.42.21	908070112-SO1-B	Standby	OOS	Active	908070111-SO1-A	UDR_SO_BL	System OAM		908070111-MP1	Active	Active	Active	908070111-MP2 908070112-MP3 908070112-MP4	UDR_SO_BL	MP		908070111-MP2	Spare	Active	Active	908070111-MP1 908070112-MP3 908070112-MP4	UDR_SO_BL	MP		908070112-MP3	Standby	Active	Active	908070111-MP1 908070111-MP2 908070112-MP4	UDR_SO_BL	MP		908070112-MP4	Spare	Active	Active	908070111-MP1 908070111-MP2 908070112-MP3	UDR_SO_BL	MP	
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23. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Repeat Step 23 of this procedure until the last page of the [Main Menu: Status & Manage → HA] screen is reached.</p>	<p>Verify the “HA Status” for each page of the [Main Menu: Status & Manage → HA] screen, and click “Next” to reach the next page.</p>																																																																								

STEPS 25-27 ARE PRE-UPGRADE ONLY

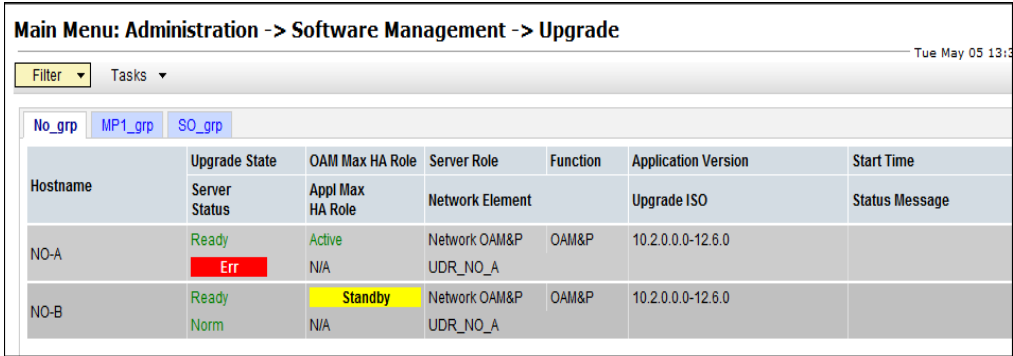
Appendix B: Health Check Procedures

Step	Procedure	Result
<p>24.</p> <input type="checkbox"/>	<p>Check if a new Firmware Release may be required for the system.</p>	<p>Contact the Oracle CGBU Customer Care Center by referring to Appendix F of this document to determine the minimum supported firmware release required for the target Oracle Communications User Data Repository release. Target Firmware Rev: _____ Example: FW rev 2.2.9</p> <p>Consult MOS (Appendix F) whether firmware upgrade is needed. If an upgrade is required, acquire the Firmware release package and follow procedures suggested by MOS.</p> <p>Plan for Firmware Upgrade Maintenance windows, if needed, since this activity is typically performed before the Oracle Communications User Data Repository Upgrade.</p>
<p>25.</p> <input type="checkbox"/>	<p>Check the existing PM&C version and identify if PM&C upgrade is required, before starting with upgrade(applies to servers that are already running PM&C)</p>	<p>Determine the PM&C version installed by logging into PM&C GUI. For incremental upgrades, follow reference [5].</p>
<p>26.</p> <input type="checkbox"/>	<p>Check the TVOE Host server software version</p>	<p>Find the target Oracle Communications User Data Repository release. Contact the My Oracle Support by referring to Appendix F of this document to determine the minimum supported TVOE OS version required for the target release. Required TVOE Release: _____ Example: 872-2525-101-2.5.0_82.22.0-TVOE-x86_64.iso Follow Appendix G for the procedure to check the current TVOE HOST OS version, for all TVOE Hosts. IMPORTANT: If TVOE Hosts are not on the correct release, refer to Section3.3.5 to plan for TVOE Host upgrades.</p>
<p>STEP28 IS POST-UPGRADE ONLY</p>		
<p>27.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Determine if any errors were reported.</p>	<p>Use an SSH client to connect to the recently upgraded server(s) (e.g. ssh, putty):</p> <p>ssh< server IMI IP address></p> <p>login as: admusr password: <enter password></p> <p>Switch to root su – password: <enter password></p> <p># verifyUpgrade</p> <p>Examine the output of the above command to determine if any errors were reported. Contact the Oracle CGBU Customer Care Center in case of errors.</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

APPENDIX C. UPGRADE OF A SERVER

C.1 Upgrade Server

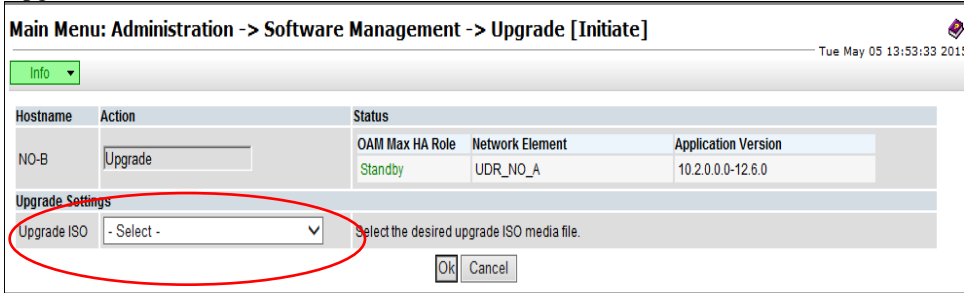
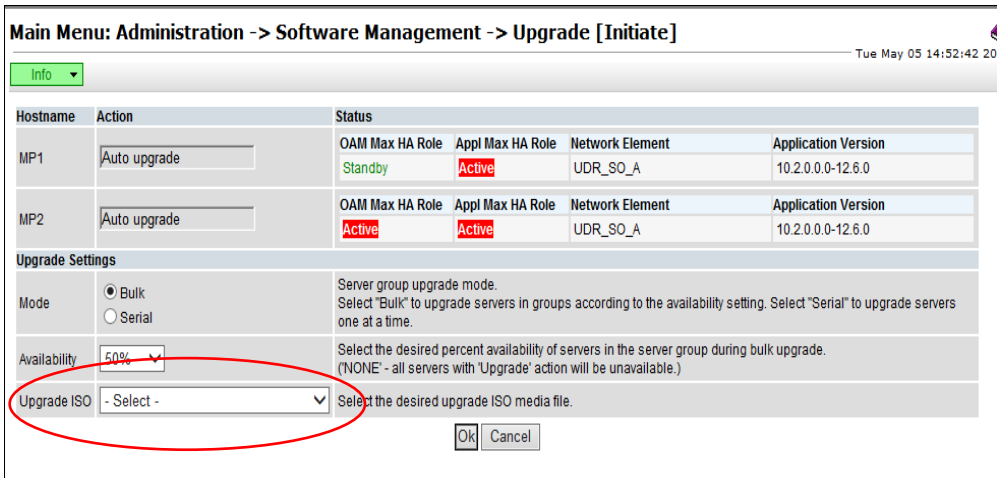
Appendix C.1: Initiate Upgrade Server

Step	Procedure	Result																																										
<p>1.</p> <input type="checkbox"/>	<p>Using the VIP address, access the Primary NOAMP GUI.</p>	<p>Access the Primary NOAMP GUI as specified in Appendix A.</p> <p>NOTE: Please ensure there are no users under /var/TKLC/db/filemgmt directory on server to be upgraded.</p>																																										
<p>2.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>1) Select...</p> <p>Main Menu → Administration → Software Management → Upgrade</p> <p>2) Select server group tab for server(s) to be upgraded.</p> <p>3) Verify that the Upgrade State shows “Ready” for certain server(s)</p> <p>4) Verify the Application Version value for server(s) is the source software release version</p>	 <table border="1" data-bbox="537 510 1544 863"> <thead> <tr> <th>Hostname</th> <th>Upgrade State</th> <th>OAM Max HA Role</th> <th>Server Role</th> <th>Function</th> <th>Application Version</th> <th>Start Time</th> </tr> </thead> <tbody> <tr> <td></td> <td>Server Status</td> <td>Appl Max HA Role</td> <td>Network Element</td> <td></td> <td>Upgrade ISO</td> <td>Status Message</td> </tr> <tr> <td>NO-A</td> <td>Ready</td> <td>Active</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.2.0.0-12.6.0</td> <td></td> </tr> <tr> <td></td> <td>Err</td> <td>N/A</td> <td>UDR_NO_A</td> <td></td> <td></td> <td></td> </tr> <tr> <td>NO-B</td> <td>Ready</td> <td>Standby</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.2.0.0-12.6.0</td> <td></td> </tr> <tr> <td></td> <td>Norm</td> <td>N/A</td> <td>UDR_NO_A</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Hostname	Upgrade State	OAM Max HA Role	Server Role	Function	Application Version	Start Time		Server Status	Appl Max HA Role	Network Element		Upgrade ISO	Status Message	NO-A	Ready	Active	Network OAM&P	OAM&P	10.2.0.0-12.6.0			Err	N/A	UDR_NO_A				NO-B	Ready	Standby	Network OAM&P	OAM&P	10.2.0.0-12.6.0			Norm	N/A	UDR_NO_A			
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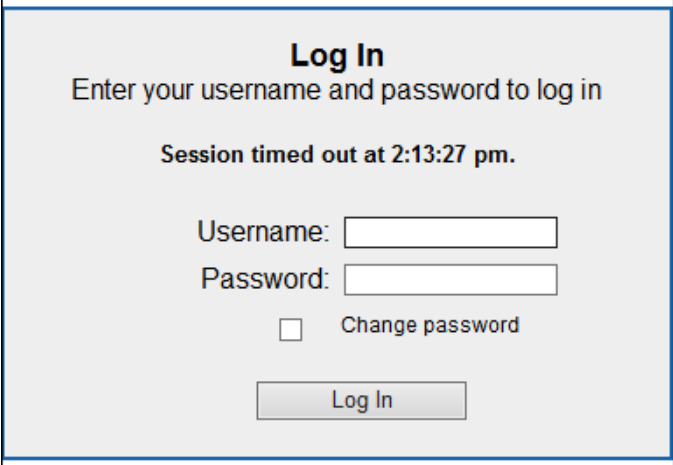
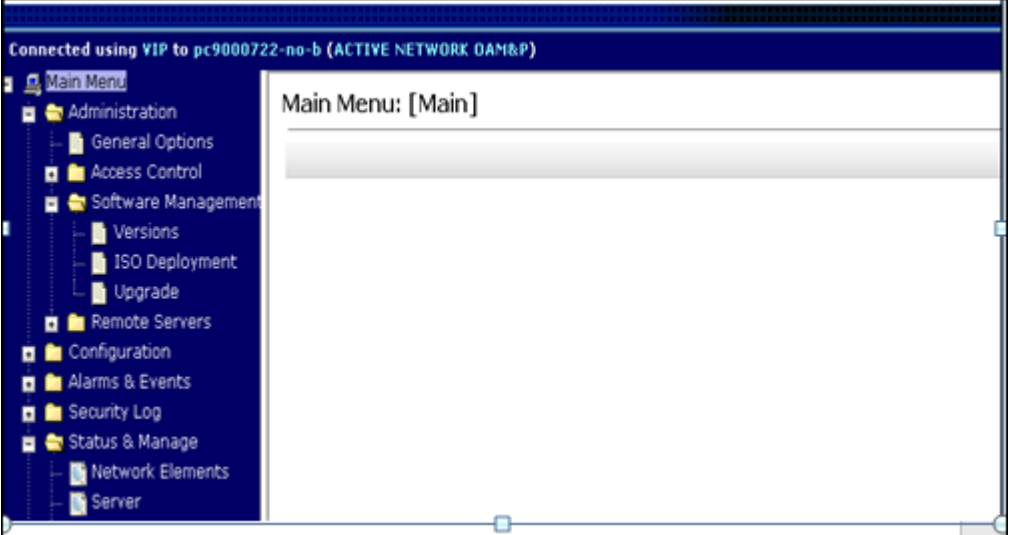
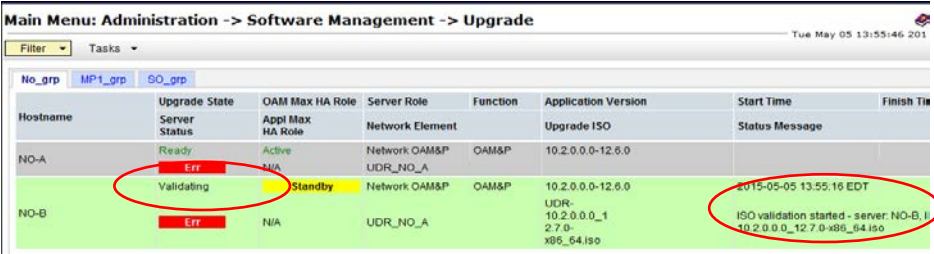
Appendix C.1: Initiate Upgrade Server

Step	Procedure	Result																																																								
<p>3.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>1) Select desired server (for one server at a time) or select no servers (for group-based auto upgrade)</p> <p>2) Ensure the “Upgrade Server” or “Auto Upgrade” button is enabled.</p> <p>3) Click the “Auto Upgrade” or “Upgrade Server” button</p> <p>4) Note: Auto Upgrade will not update the active NOAMP server.</p>	<div data-bbox="540 260 1544 646"> <p>Main Menu: Administration -> Software Management -> Upgrade</p> <p>Filter Tasks</p> <p>No_grp MP1_grp SO_grp</p> <table border="1"> <thead> <tr> <th>Hostname</th> <th>Upgrade State</th> <th>OAM Max HA Role</th> <th>Server Role</th> <th>Function</th> <th>Application Version</th> <th>Start Time</th> </tr> <tr> <th></th> <th>Server Status</th> <th>Appl Max HA Role</th> <th>Network Element</th> <th></th> <th>Upgrade ISO</th> <th>Status Message</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>Ready Err</td> <td>Active N/A</td> <td>Network OAM&P UDR_NO_A</td> <td>OAM&P</td> <td>10.2.0.0.0-12.6.0</td> <td></td> </tr> <tr> <td>NO-B</td> <td>Ready Norm</td> <td>Standby N/A</td> <td>Network OAM&P UDR_NO_A</td> <td>OAM&P</td> <td>10.2.0.0.0-12.6.0</td> <td></td> </tr> </tbody> </table> </div> <div data-bbox="540 646 1352 751"> <p>Backup Upgrade Server Accept Report Report All</p> </div> <p>-OR-</p> <p>Group Based</p> <div data-bbox="540 898 1479 1350"> <p>Main Menu: Administration -> Software Management -> Upgrade</p> <p>Filter Tasks</p> <p>MP1_grp No_grp SO_grp</p> <table border="1"> <thead> <tr> <th>Hostname</th> <th>Upgrade State</th> <th>OAM Max HA Role</th> <th>Server Role</th> <th>Function</th> <th>Application Version</th> <th>Start Time</th> </tr> <tr> <th></th> <th>Server Status</th> <th>Appl Max HA Role</th> <th>Network Element</th> <th></th> <th>Upgrade ISO</th> <th>Status Message</th> </tr> </thead> <tbody> <tr> <td>MP1</td> <td>Ready Norm</td> <td>Standby Active</td> <td>MP UDR_SO_A</td> <td>UDR-MP (multi-active cluster)</td> <td>10.2.0.0.0-12.6.0</td> <td></td> </tr> <tr> <td>MP2</td> <td>Ready Norm</td> <td>Active Active</td> <td>MP UDR_SO_A</td> <td>UDR-MP (multi-active cluster)</td> <td>10.2.0.0.0-12.6.0</td> <td></td> </tr> </tbody> </table> </div> <div data-bbox="540 1350 1167 1451"> <p>Backup Auto Upgrade Accept Report Report All</p> </div>	Hostname	Upgrade State	OAM Max HA Role	Server Role	Function	Application Version	Start Time		Server Status	Appl Max HA Role	Network Element		Upgrade ISO	Status Message	NO-A	Ready Err	Active N/A	Network OAM&P UDR_NO_A	OAM&P	10.2.0.0.0-12.6.0		NO-B	Ready Norm	Standby N/A	Network OAM&P UDR_NO_A	OAM&P	10.2.0.0.0-12.6.0		Hostname	Upgrade State	OAM Max HA Role	Server Role	Function	Application Version	Start Time		Server Status	Appl Max HA Role	Network Element		Upgrade ISO	Status Message	MP1	Ready Norm	Standby Active	MP UDR_SO_A	UDR-MP (multi-active cluster)	10.2.0.0.0-12.6.0		MP2	Ready Norm	Active Active	MP UDR_SO_A	UDR-MP (multi-active cluster)	10.2.0.0.0-12.6.0	
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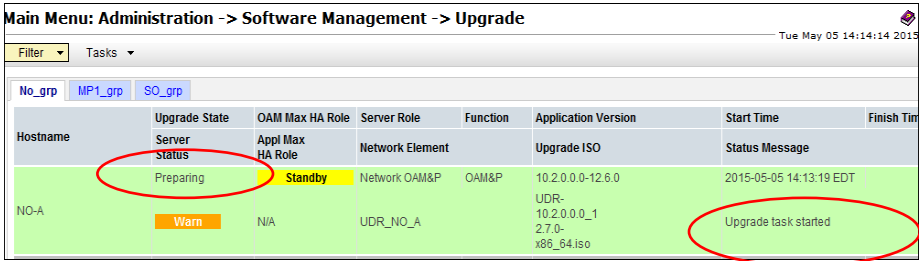
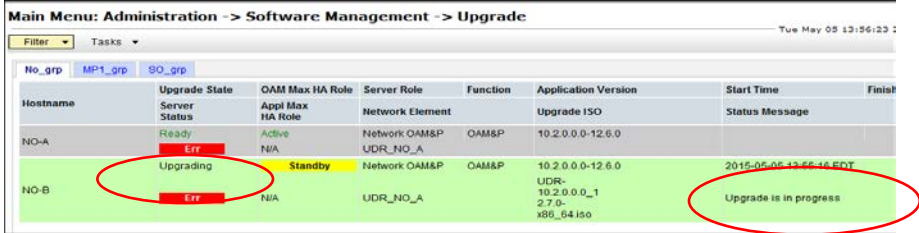
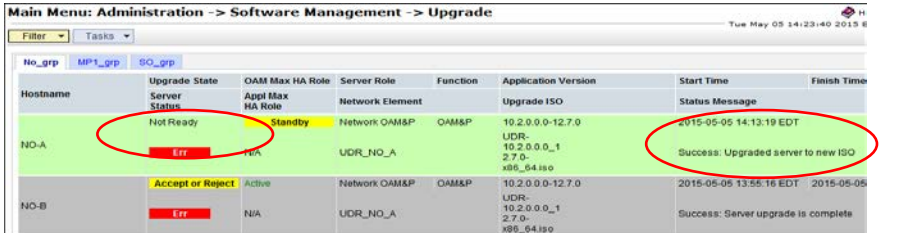
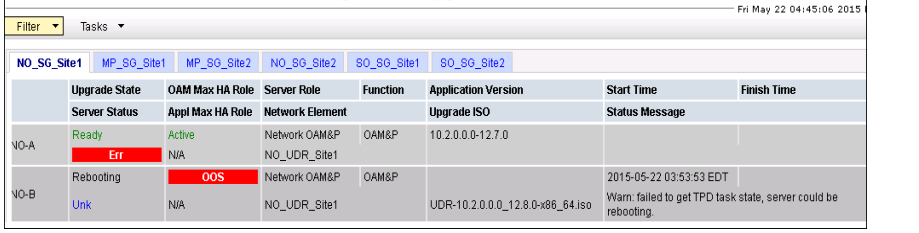
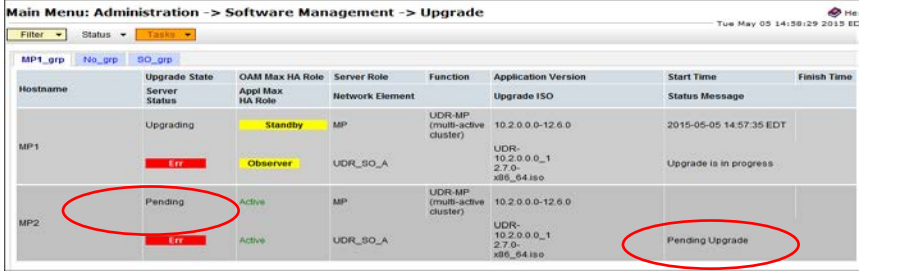
Appendix C.1: Initiate Upgrade Server

Step	Procedure	Result
<p>4.</p>	<p>Active NOAMP VIP:</p> <p>1) The user should be presented with the Upgrade[Initiate] screen</p> <p>2) Select the ISO to use in the server upgrade</p> <p>3) If “Auto Upgrade” option was selected for group-based upgrade:</p> <p>NO/SO: “Bulk” upgrades servers in groups according to the availability setting.</p> <p>MP: “Serial” upgrades servers one at a time starting with “standby server”</p> <p>4)Note: For MPs, you can select desired percent availability. (recommended to have at least 50% available)</p> <p>5)Click the “Ok” button to start the upgrade</p>	<p>Upgrade Server:</p>  <p>Auto Upgrade:</p>  <p>NOTE: During the upgrade you might see the following expected alarms. Not all servers have all alarms:</p> <ul style="list-style-type: none"> Alarm ID = 31101(DB Replication to a slave DB has failed) Alarm ID = 31106(DB Merging to a parent Merge Node has failed) Alarm ID = 31107(DB Merging from a child source Node has failed) Alarm ID = 31114 (DB Replication of configuration data via ...) Alarm ID = 13071 No northbound Provisioning Connections) Alarm ID = 10073 (Server Group Max Allowed HA Role Warning) Alarm ID = 10075 (Application processes have been manually stopped) Alarm ID = 32515 (Server HA Failover Inhibited) Alarm ID = 31283 (HA Highly available server failed to receive) Alarm ID = 31226 (The High Availability Status is degraded)

Appendix C.1: Initiate Upgrade Server

Step	Procedure	Result																																										
<p>5.</p>	<p>Active NOAMP VIP:</p> <p>** For Active NOAMP only – Once the User completes Step 4, the session will automatically terminate and the user will be logged out of the GUI.</p> <p>The screen shown to the right will appear as the Standby NOAMP&P Server goes through HA switchover and becomes the “Active” server.</p> <p>Login to the GUI using the default user and password.</p>																																											
<p>6.</p>	<p>Active NOAMP VIP:</p> <p>** For Active NOAMP only</p> <p>The user should be presented the Main Menu as shown on the right.</p> <p>Verify that the message shown across the top of the right panel indicates that the browser is using the “VIP” connected to the Active Network OAM&P server.</p>																																											
<p>7.</p>	<p>Active NOAMP VIP:</p> <p>View in-progress status</p> <p>1) Select Main Menu → Administration → Software Management → Upgrade</p> <p>2) Observe the “Upgrade State” of the servers of interest</p>	 <table border="1"> <thead> <tr> <th>No_grp</th> <th>MP1_grp</th> <th>SO_grp</th> <th>Upgrade State</th> <th>Server Status</th> <th>Appli Max HA Role</th> <th>OAM Max HA Role</th> <th>Server Role</th> <th>Network Element</th> <th>Function</th> <th>Application Version</th> <th>Upgrade ISO</th> <th>Start Time</th> <th>Finish Time</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td></td> <td></td> <td>Ready</td> <td>Err</td> <td>Active</td> <td>N/A</td> <td>Network_OAM&P</td> <td>UDR_NO_A</td> <td>OAM&P</td> <td>10.2.0.0-12.6.0</td> <td></td> <td></td> <td></td> </tr> <tr> <td>NO-B</td> <td></td> <td></td> <td>Validating</td> <td>Err</td> <td>Standby</td> <td>N/A</td> <td>Network_OAM&P</td> <td>UDR_NO_A</td> <td>OAM&P</td> <td>10.2.0.0-12.6.0</td> <td>UDR-10.2.0.0_12.7.0-x86_64.iso</td> <td>2015-05-05 13:55:16 EDT</td> <td>ISO validation started - server: NO-B, I 10.2.0.0_12.7.0-x86_64.iso</td> </tr> </tbody> </table>	No_grp	MP1_grp	SO_grp	Upgrade State	Server Status	Appli Max HA Role	OAM Max HA Role	Server Role	Network Element	Function	Application Version	Upgrade ISO	Start Time	Finish Time	NO-A			Ready	Err	Active	N/A	Network_OAM&P	UDR_NO_A	OAM&P	10.2.0.0-12.6.0				NO-B			Validating	Err	Standby	N/A	Network_OAM&P	UDR_NO_A	OAM&P	10.2.0.0-12.6.0	UDR-10.2.0.0_12.7.0-x86_64.iso	2015-05-05 13:55:16 EDT	ISO validation started - server: NO-B, I 10.2.0.0_12.7.0-x86_64.iso
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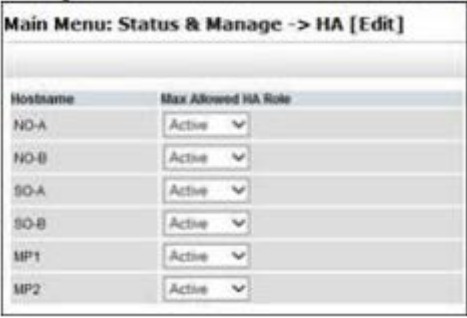
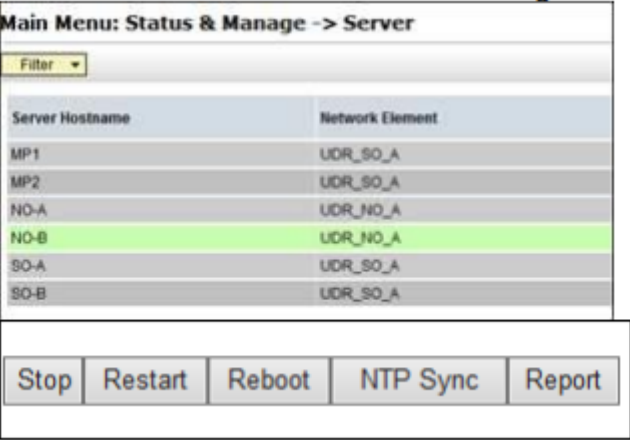
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Step	Procedure	Result																																																																																																																																																																																																																																	
	<p>throughout the upgrade.</p> <p>3) "Status Message" contains additional upgrade details which allow upgrades in progress to be monitored. The following screen shots are examples of what to expect during upgrade.</p> <p>4) Wait for each upgrade to report Success before proceeding to the next step.</p>	 <p>Main Menu: Administration -> Software Management -> Upgrade</p> <table border="1"> <thead> <tr> <th>No_grp</th> <th>MP1_grp</th> <th>SO_grp</th> <th>Upgrade State</th> <th>OAM Max HA Role</th> <th>Server Role</th> <th>Function</th> <th>Application Version</th> <th>Start Time</th> <th>Finish Time</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td></td> <td></td> <td>Preparing</td> <td>Standby</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.2.0.0.0-12.6.0</td> <td>2015-05-05 14:13:19 EDT</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>Warn</td> <td>N/A</td> <td>UDR_NO_A</td> <td></td> <td>UDR-10.2.0.0.0_1 2.7.0-x86_64.iso</td> <td></td> <td>Upgrade task started</td> </tr> </tbody> </table>  <p>Main Menu: Administration -> Software Management -> Upgrade</p> <table border="1"> <thead> <tr> <th>No_grp</th> 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Appendix C.1: Initiate Upgrade Server

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<p>8.</p>	<p>Active NOAMP VIP:</p> <p>1) Select the appropriate tab (NO_SG, MP_SG or SO_SG) and select the row containing the hostname of the server that was upgraded.</p> <p>2) Verify that the Status Message shows “Success” and “Upgrade State” is “Accept or Reject”</p>	<div data-bbox="537 247 1552 625"> <p>Main Menu: Administration -> Software Management -> Upgrade</p> <p>Filter Tasks</p> <p>Tue May 05 14:08:27 2015</p> <table border="1"> <thead> <tr> <th>No_grp</th> <th>MP1_grp</th> <th>SO_grp</th> </tr> </thead> <tbody> <tr> <th>Hostname</th> <th>Upgrade State</th> <th>OAM Max HA Role</th> <th>Server Role</th> <th>Function</th> <th>Application Version</th> <th>Start Time</th> <th>Finish Time</th> </tr> <tr> <th>Server Status</th> <th>Appl Max HA Role</th> <th>Network Element</th> <th>Upgrade ISO</th> <th>Status Message</th> <td colspan="3"></td> </tr> <tr> <td>NO-A</td> <td>Ready Err</td> <td>Active N/A</td> <td>Network OAM&P UDR_NO_A</td> <td>OAM&P 10.2.0.0-12.6.0</td> <td colspan="3"></td> </tr> <tr> <td></td> <td>Accept or Reject</td> <td>Standby</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.2.0.0-12.7.0</td> <td>2015-05-05 13:55:16 EDT</td> <td>2015-05-05</td> </tr> <tr> <td>NO-B</td> <td>Warn</td> <td>N/A</td> <td>UDR_NO_A</td> <td>UDR-10.2.0.0_1 2.7.0-x86_64.iso</td> <td colspan="3">Success: Server upgrade is complete</td> </tr> </tbody> </table> </div> <p>Note: If the upgrade status indicates “Server could not restart the application to complete the upgrade” and alarm 10134 –Server Upgrade Failed” appears; ensure replication is up for (use irepstat command on active server and verify status is “active”): The Status to change to “Success” Alarm 10134 to clear</p> <div data-bbox="537 850 1552 1094"> <p>Main Menu: Administration -> Software Management -> Upgrade</p> <p>Filter Tasks</p> <p>Fri Jul 10 23:22:18 2015</p> <table border="1"> <thead> <tr> <th>NO_SG_Site1</th> <th>MP_SG_Site1</th> <th>MP_SG_Site2</th> <th>NO_SG_Site2</th> <th>SO_SG_Site1</th> <th>SO_SG_Site2</th> </tr> </thead> <tbody> <tr> <th>Upgrade State</th> <th>OAM Max HA Role</th> <th>Server Role</th> <th>Function</th> <th>Application Version</th> <th>Start Time</th> <th>Finish Time</th> </tr> <tr> <th>Server Status</th> <th>Appl Max HA Role</th> <th>Network Element</th> <th>Upgrade ISO</th> <th>Status Message</th> <td colspan="2"></td> </tr> <tr> <td>Not Ready</td> <td>Standby</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.2.0.0-12.11.1</td> <td>2015-07-10 17:46:43 EDT</td> <td>2015-07-10 19:11:04 EDT</td> </tr> <tr> <td>NO-B</td> <td>Warn</td> <td>N/A</td> <td>NO_UDR_Site1</td> <td>UDR-10.2.0.0_1 2.11.1-x86_64.iso</td> <td colspan="2">Server could not restart the application to complete the upgrade.</td> </tr> </tbody> </table> </div>	No_grp	MP1_grp	SO_grp	Hostname	Upgrade State	OAM Max HA Role	Server Role	Function	Application Version	Start Time	Finish Time	Server Status	Appl Max HA Role	Network Element	Upgrade ISO	Status Message				NO-A	Ready Err	Active N/A	Network OAM&P UDR_NO_A	OAM&P 10.2.0.0-12.6.0					Accept or Reject	Standby	Network OAM&P	OAM&P	10.2.0.0-12.7.0	2015-05-05 13:55:16 EDT	2015-05-05	NO-B	Warn	N/A	UDR_NO_A	UDR-10.2.0.0_1 2.7.0-x86_64.iso	Success: Server upgrade is complete			NO_SG_Site1	MP_SG_Site1	MP_SG_Site2	NO_SG_Site2	SO_SG_Site1	SO_SG_Site2	Upgrade State	OAM Max HA Role	Server Role	Function	Application Version	Start Time	Finish Time	Server Status	Appl Max HA Role	Network Element	Upgrade ISO	Status Message			Not Ready	Standby	Network OAM&P	OAM&P	10.2.0.0-12.11.1	2015-07-10 17:46:43 EDT	2015-07-10 19:11:04 EDT	NO-B	Warn	N/A	NO_UDR_Site1	UDR-10.2.0.0_1 2.11.1-x86_64.iso	Server could not restart the application to complete the upgrade.	
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<p>9.</p>	<p>1) If upgrade status still indicates that “Server could not restart the application to complete the upgrade, restart the server by clicking the “Restart” button.</p> <p>2) Verify that the Status Message shows “Success” and “Upgrade State” is “Accept or Reject”</p>	<p>Restart Server that is being upgraded from Main Menu->Status & Manage -> Server screen</p> <div data-bbox="537 1186 1172 1625"> <p>Main Menu: Status & Manage -> Server</p> <p>Filter</p> <table border="1"> <thead> <tr> <th>Server Hostname</th> <th>Network Element</th> </tr> </thead> <tbody> <tr> <td>MP1</td> <td>UDR_SO_A</td> </tr> <tr> <td>MP2</td> <td>UDR_SO_A</td> </tr> <tr> <td>NO-A</td> <td>UDR_NO_A</td> </tr> <tr> <td>NO-B</td> <td>UDR_NO_A</td> </tr> <tr> <td>SO-A</td> <td>UDR_SO_A</td> </tr> <tr> <td>SO-B</td> <td>UDR_SO_A</td> </tr> </tbody> </table> <p>Stop Restart Reboot NTP Sync Report</p> </div>	Server Hostname	Network Element	MP1	UDR_SO_A	MP2	UDR_SO_A	NO-A	UDR_NO_A	NO-B	UDR_NO_A	SO-A	UDR_SO_A	SO-B	UDR_SO_A																																																															
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Appendix C.1: Initiate Upgrade Server

Step	Procedure	Result
<p>10.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu → Status & Manage → HA [Edit]</p>	<p>NOTE: Only execute the following step if “Upgrade State” is “DEGRADED”.</p> <p>Change “Max Allowed HA Role” for server (Server that was already upgraded) to Active</p>  <p>Restart Server from Main Menu->Status & Manage -> Server screen</p> 
<p>11.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>View post-upgrade status</p>	<p>View post-upgrade status of the server(s): (The following alarms may be present)</p> <p>Active NO server will have the following expected alarms: Alarm ID = 13071 (No Northbound Provisioning Connections)</p> <p>You may also see the alarm: Alarm ID = 32532 (Server Upgrade Pending Accept/Reject)</p> <p>You may also see this alarm due to DRNO servers <i>Max Allowed HA Role being set to standby</i> in Procedure 7. Alarm ID =10073 (Server Group Max Allowed HA Role Warning)</p>
<p>12.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>Clear browser cache</p>	<p>JavaScript libraries, images and other objects are often modified in the upgrade. Browsers can sometimes cause GUI problems by holding on to the old objects in the built-in cache. To prevent these problems always clear the browser cache before logging in to an NO or SO which has been upgraded:</p> <p>Simultaneously hold down the Ctrl, Shift and Delete keys.</p> <p>Select the appropriate type of objects and delete from the cache via the pop-up dialog. For Internet Explorer the relevant object type is “Temporary Internet Files”. Other browsers may label these objects differently.</p>

Appendix C.1: Initiate Upgrade Server

Step	Procedure	Result
THIS PROCEDURE HAS BEEN COMPLETED		

C.2 Server Worksheet

Select the worksheet that matches the site configuration.

RMS Site Configuration (Low Capacity):

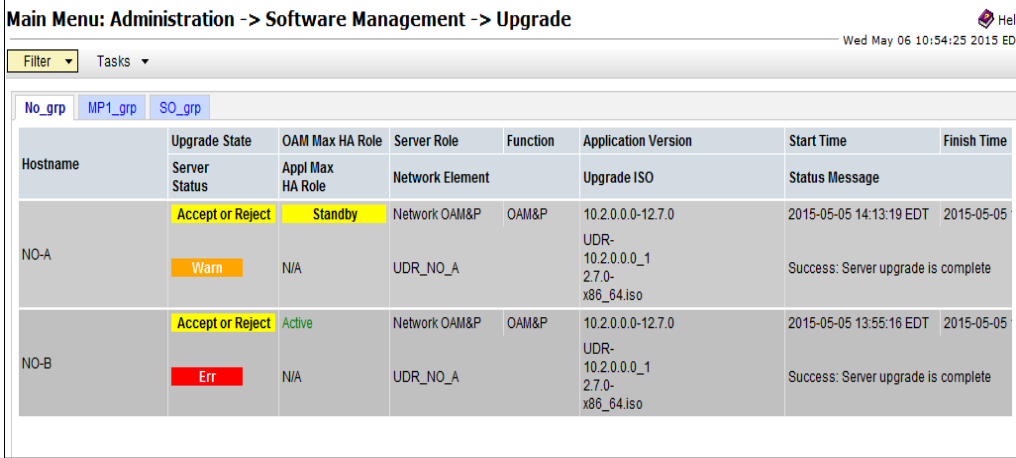
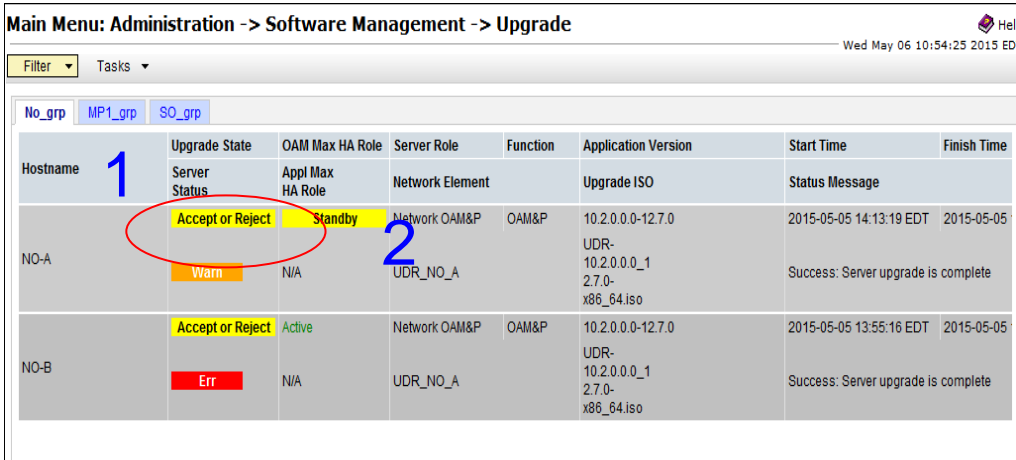
ACTIVE SITE	DR SITE
<input type="checkbox"/> Active NOAMP: _____ <input type="checkbox"/> Active SOAM: _____ <input type="checkbox"/> MP1: _____	<input type="checkbox"/> Active DR NOAMP: _____ <input type="checkbox"/> Active SOAM: _____ <input type="checkbox"/> MP1: _____
<input type="checkbox"/> Standby NOAMP: _____ <input type="checkbox"/> Standby SOAM: _____ <input type="checkbox"/> MP2: _____	<input type="checkbox"/> Standby DR NOAMP: _____ <input type="checkbox"/> Standby SOAM: _____ <input type="checkbox"/> MP2: _____

C-Class Site Configuration (Normal Configuration):

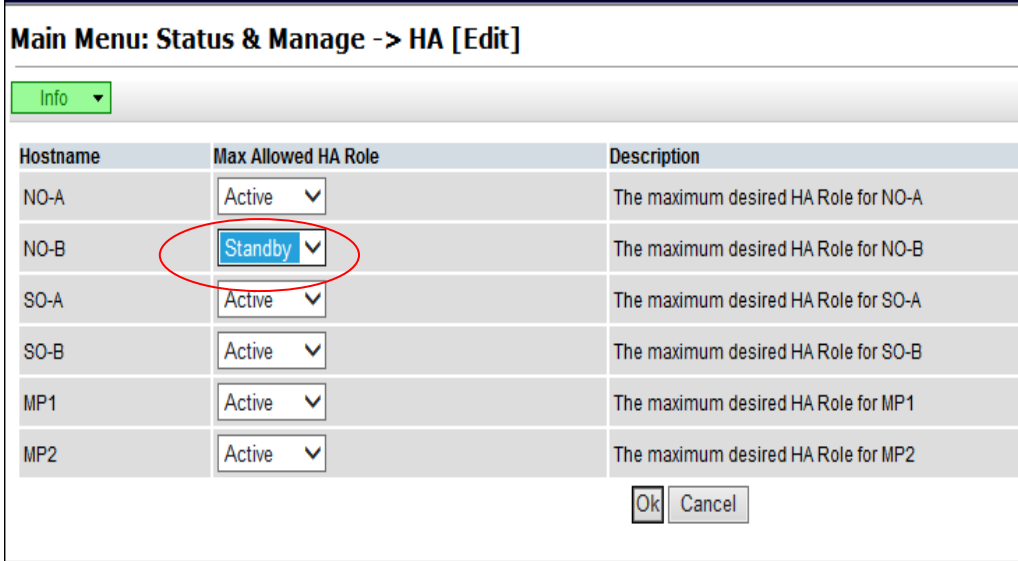
ACTIVE SITE	DR SITE
<input type="checkbox"/> Active Primary NOAMP: _____ <input type="checkbox"/> Standby Primary NOAMP: _____	<input type="checkbox"/> Active DR NOAMP: _____ <input type="checkbox"/> Standby DR NOAMP: _____
<input type="checkbox"/> Active SOAM: _____ <input type="checkbox"/> MP1: _____ <input type="checkbox"/> MP2: _____	<input type="checkbox"/> Active SOAM: _____ <input type="checkbox"/> MP1: _____ <input type="checkbox"/> MP2: _____
<input type="checkbox"/> Standby SOAM: _____ <input type="checkbox"/> MP3: _____ <input type="checkbox"/> MP4: _____	<input type="checkbox"/> Standby SOAM: _____ <input type="checkbox"/> MP3: _____ <input type="checkbox"/> MP4: _____

APPENDIX D. BACKOUT OF A SERVER


Appendix D: Backout of a Server

Step	Procedure	Result																																												
1. <input type="checkbox"/>	Using the VIP address, access the Primary NOAMP GUI.	Access the Primary NOAMP GUI as specified in Appendix A .																																												
2. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu → Administration → Software Management → Upgrade</p> <p>...as shown on the right.</p>	 <table border="1"> <thead> <tr> <th>No_grp</th> <th>MP1_grp</th> <th>SO_grp</th> <th>Hostname</th> <th>Upgrade State</th> <th>OAM Max HA Role</th> <th>Server Role</th> <th>Function</th> <th>Application Version</th> <th>Start Time</th> <th>Finish Time</th> </tr> <tr> <th></th> <th></th> <th></th> <th></th> <th>Server Status</th> <th>Appl Max HA Role</th> <th>Network Element</th> <th></th> <th>Upgrade ISO</th> <th>Status Message</th> <th></th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td>NO-A</td> <td>Accept or Reject Warn</td> <td>Standby</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.2.0.0-12.7.0 UDR-10.2.0.0_1 2.7.0-x86_64.iso</td> <td>2015-05-05 14:13:19 EDT</td> <td>2015-05-05</td> </tr> <tr> <td></td> <td></td> <td></td> <td>NO-B</td> <td>Accept or Reject Err</td> <td>Active</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.2.0.0-12.7.0 UDR-10.2.0.0_1 2.7.0-x86_64.iso</td> <td>2015-05-05 13:55:16 EDT</td> <td>2015-05-05</td> </tr> </tbody> </table>	No_grp	MP1_grp	SO_grp	Hostname	Upgrade State	OAM Max HA Role	Server Role	Function	Application Version	Start Time	Finish Time					Server Status	Appl Max HA Role	Network Element		Upgrade ISO	Status Message					NO-A	Accept or Reject Warn	Standby	Network OAM&P	OAM&P	10.2.0.0-12.7.0 UDR-10.2.0.0_1 2.7.0-x86_64.iso	2015-05-05 14:13:19 EDT	2015-05-05				NO-B	Accept or Reject Err	Active	Network OAM&P	OAM&P	10.2.0.0-12.7.0 UDR-10.2.0.0_1 2.7.0-x86_64.iso	2015-05-05 13:55:16 EDT	2015-05-05
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3. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>1) Select the tab containing the server to be downgraded.</p> <p>2) Scroll to the row containing the hostname of the server to be backed-out.</p> <p>3) Verify that the Upgrade State shows “Accept or Reject”.</p>	 <table border="1"> <thead> <tr> <th>No_grp</th> <th>MP1_grp</th> <th>SO_grp</th> <th>Hostname</th> <th>Upgrade State</th> <th>OAM Max HA Role</th> <th>Server Role</th> <th>Function</th> <th>Application Version</th> <th>Start Time</th> <th>Finish Time</th> </tr> <tr> <th></th> <th></th> <th></th> <th></th> <th>Server Status</th> <th>Appl Max HA Role</th> <th>Network Element</th> <th></th> <th>Upgrade ISO</th> <th>Status Message</th> <th></th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td>NO-A</td> <td>Accept or Reject Warn</td> <td>Standby</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.2.0.0-12.7.0 UDR-10.2.0.0_1 2.7.0-x86_64.iso</td> <td>2015-05-05 14:13:19 EDT</td> <td>2015-05-05</td> </tr> <tr> <td></td> <td></td> <td></td> <td>NO-B</td> <td>Accept or Reject Err</td> <td>Active</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.2.0.0-12.7.0 UDR-10.2.0.0_1 2.7.0-x86_64.iso</td> <td>2015-05-05 13:55:16 EDT</td> <td>2015-05-05</td> </tr> </tbody> </table>	No_grp	MP1_grp	SO_grp	Hostname	Upgrade State	OAM Max HA Role	Server Role	Function	Application Version	Start Time	Finish Time					Server Status	Appl Max HA Role	Network Element		Upgrade ISO	Status Message					NO-A	Accept or Reject Warn	Standby	Network OAM&P	OAM&P	10.2.0.0-12.7.0 UDR-10.2.0.0_1 2.7.0-x86_64.iso	2015-05-05 14:13:19 EDT	2015-05-05				NO-B	Accept or Reject Err	Active	Network OAM&P	OAM&P	10.2.0.0-12.7.0 UDR-10.2.0.0_1 2.7.0-x86_64.iso	2015-05-05 13:55:16 EDT	2015-05-05
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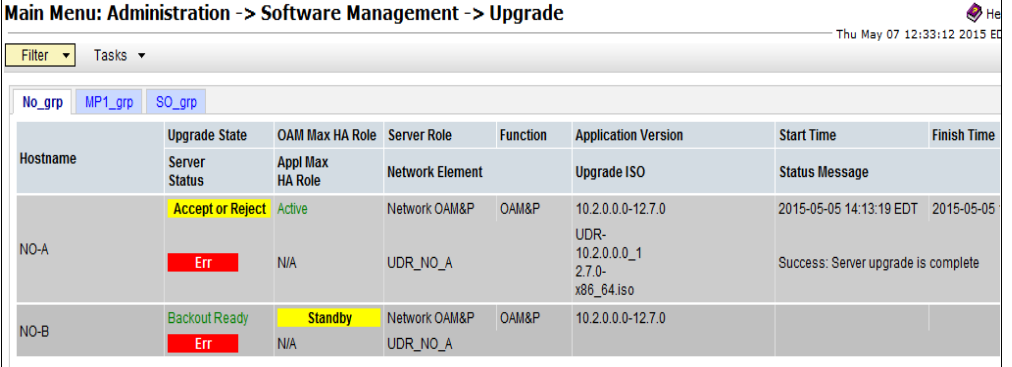
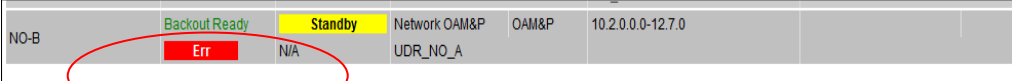
Appendix D: Backout of a Server

Step	Procedure	Result																					
<p>4.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>Make the server ready for downgrade:</p> <p>Select...</p> <p>Main Menu →Status & Manage→HA</p> <p>1) Press the Edit button</p> <p>2) Select the server to be downgraded and choose a "Max Allowed Role" value of Standby or Spare for DR servers.</p> <p>3) Press OK button</p> <p>4) ** For Active NOAMP only, the user will be logged out after this step due to HA switchover, will need to log back in to continue. The active server will be "standby"</p>	 <table border="1"> <thead> <tr> <th>Hostname</th> <th>Max Allowed HA Role</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>Active</td> <td>The maximum desired HA Role for NO-A</td> </tr> <tr> <td>NO-B</td> <td>Standby</td> <td>The maximum desired HA Role for NO-B</td> </tr> <tr> <td>SO-A</td> <td>Active</td> <td>The maximum desired HA Role for SO-A</td> </tr> <tr> <td>SO-B</td> <td>Active</td> <td>The maximum desired HA Role for SO-B</td> </tr> <tr> <td>MP1</td> <td>Active</td> <td>The maximum desired HA Role for MP1</td> </tr> <tr> <td>MP2</td> <td>Active</td> <td>The maximum desired HA Role for MP2</td> </tr> </tbody> </table>	Hostname	Max Allowed HA Role	Description	NO-A	Active	The maximum desired HA Role for NO-A	NO-B	Standby	The maximum desired HA Role for NO-B	SO-A	Active	The maximum desired HA Role for SO-A	SO-B	Active	The maximum desired HA Role for SO-B	MP1	Active	The maximum desired HA Role for MP1	MP2	Active	The maximum desired HA Role for MP2
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Appendix D: Backout of a Server

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<p>5.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu →Status & Manage→ Server</p> <p>1) Select the server to be downgraded and press STOP</p> <p>2) Click OK to confirm the operation, then ensure the Appl State updates to Disabled.</p>	<div data-bbox="540 289 1544 630"> <p>Main Menu: Status & Manage -> Server Help</p> <p style="text-align: right;">Wed May 06 11:39:38 2015 EDT</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th>Server Hostname</th> <th>Network Element</th> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>MP1</td> <td>UDR_SO_A</td> <td>Enabled</td> <td>Err</td> <td>Norm</td> <td>Man</td> <td>Norm</td> </tr> <tr> <td>MP2</td> <td>UDR_SO_A</td> <td>Enabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>NO-A</td> <td>UDR_NO_A</td> <td>Enabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr style="background-color: #e0ffe0;"> <td>NO-B</td> <td>UDR_NO_A</td> <td>Enabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>SO-A</td> <td>UDR_SO_A</td> <td>Enabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>SO-B</td> <td>UDR_SO_A</td> <td>Enabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> </tbody> </table> </div> <div data-bbox="540 655 1166 779"> <p>Stop Restart Reboot NTP Sync Report</p> </div> <div data-bbox="540 804 1297 1176"> <p>Message from webpage X</p> <p style="text-align: center;">  Are you sure you wish to stop application software on the following server(s)? NO-B </p> <p style="text-align: center;"> <input type="button" value="OK"/> <input type="button" value="Cancel"/> </p> </div> <div data-bbox="540 1201 1520 1535"> <p>Main Menu: Status & Manage -> Server Help</p> <p style="text-align: right;">Wed May 06 15:20:02 2015 EDT</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th>Server Hostname</th> <th>Network Element</th> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>MP1</td> <td>UDR_SO_A</td> <td>Enabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>MP2</td> <td>UDR_SO_A</td> <td>Enabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>NO-A</td> <td>UDR_NO_A</td> <td>Enabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr style="background-color: #e0ffe0;"> <td>NO-B</td> <td>UDR_NO_A</td> <td>Disabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Man</td> </tr> <tr> <td>SO-B</td> <td>UDR_SO_A</td> <td>Enabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> </tbody> </table> </div>	Server Hostname	Network Element	Appl State	Alm	DB	Reporting Status	Proc	MP1	UDR_SO_A	Enabled	Err	Norm	Man	Norm	MP2	UDR_SO_A	Enabled	Err	Norm	Norm	Norm	NO-A	UDR_NO_A	Enabled	Err	Norm	Norm	Norm	NO-B	UDR_NO_A	Enabled	Err	Norm	Norm	Norm	SO-A	UDR_SO_A	Enabled	Warn	Norm	Norm	Norm	SO-B	UDR_SO_A	Enabled	Warn	Norm	Norm	Norm	Server Hostname	Network Element	Appl State	Alm	DB	Reporting Status	Proc	MP1	UDR_SO_A	Enabled	Warn	Norm	Norm	Norm	MP2	UDR_SO_A	Enabled	Warn	Norm	Norm	Norm	NO-A	UDR_NO_A	Enabled	Err	Norm	Norm	Norm	NO-B	UDR_NO_A	Disabled	Err	Norm	Norm	Man	SO-B	UDR_SO_A	Enabled	Err	Norm	Norm	Norm
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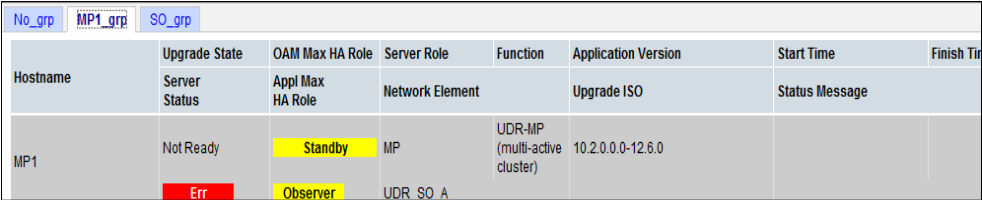
Appendix D: Backout of a Server

Step	Procedure	Result																																
<p>6.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>Select ...</p> <p>Main Menu → Administration → Software Management → Upgrade</p> <p>...as shown on the right.</p>	 <table border="1" data-bbox="540 388 1546 625"> <thead> <tr> <th>Hostname</th> <th>Upgrade State</th> <th>OAM Max HA Role</th> <th>Server Role</th> <th>Function</th> <th>Application Version</th> <th>Start Time</th> <th>Finish Time</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>Accept or Reject Err</td> <td>Active</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.2.0.0-12.7.0</td> <td>2015-05-05 14:13:19 EDT</td> <td>2015-05-05</td> </tr> <tr> <td>NO-B</td> <td>Backout Ready Err</td> <td>N/A</td> <td>UDR_NO_A</td> <td></td> <td>UDR-10.2.0.0_12.7.0-x86_64.iso</td> <td></td> <td></td> </tr> <tr> <td>NO-C</td> <td>Standby</td> <td>N/A</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.2.0.0-12.7.0</td> <td></td> <td></td> </tr> </tbody> </table>	Hostname	Upgrade State	OAM Max HA Role	Server Role	Function	Application Version	Start Time	Finish Time	NO-A	Accept or Reject Err	Active	Network OAM&P	OAM&P	10.2.0.0-12.7.0	2015-05-05 14:13:19 EDT	2015-05-05	NO-B	Backout Ready Err	N/A	UDR_NO_A		UDR-10.2.0.0_12.7.0-x86_64.iso			NO-C	Standby	N/A	Network OAM&P	OAM&P	10.2.0.0-12.7.0		
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<p>7.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>1) Select the tab containing the server to be downgraded.</p> <p>2) Scroll to the row containing the hostname of the server to be backed-out.</p> <p>3) Verify that the Upgrade State shows “Backout Ready”. (It may take a few moments to change status)</p>																																	
<p>8.</p> <p><input type="checkbox"/></p>	<p>Server XMI IP (SSH):</p> <p>SSH to server</p>	<p>Use your SSH client to connect to the server (ex. ssh, putty):</p> <p><code>ssh<server address></code></p>																																
<p>9.</p> <p><input type="checkbox"/></p>	<p>Server XMI IP (SSH):</p> <p>Login as admusr user</p>	<p>Login as “admusr”:</p> <p>login as: <code>admusr</code> Password: <code><enter password></code></p> <p>Switch to root <code>su -</code> password: <code><enter password></code></p>																																

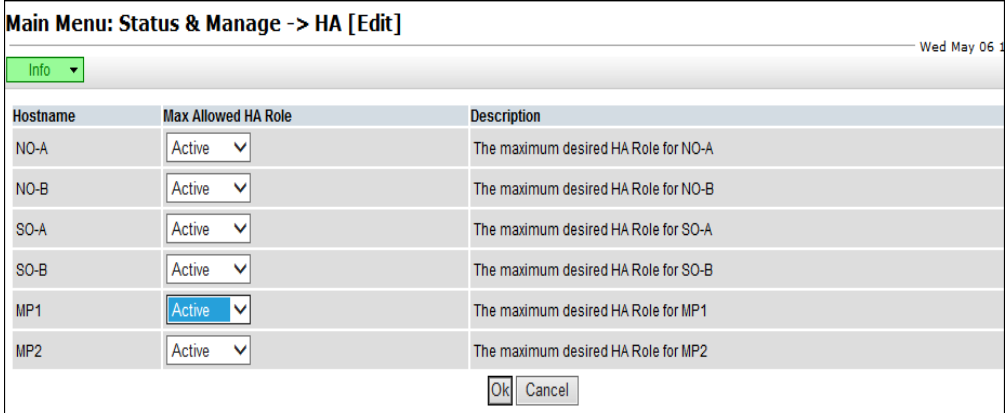
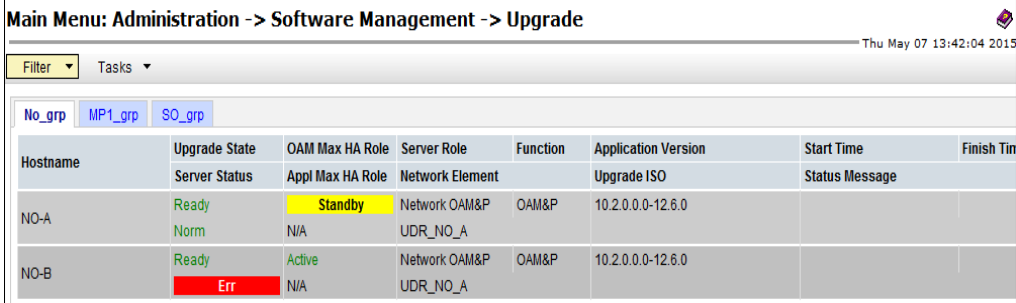
Appendix D: Backout of a Server

Step	Procedure	Result
<p>10.</p> <input type="checkbox"/>	<p>Server XMI IP (SSH): Execute the backout</p>	<p>1. Find out the state of the server which is going to be backed out. Server shall be in Standby/Spare. Execute following command to find the HA state:</p> <pre># ha.mystate</pre> <p>NOTE: If the state of the server is Active then follow these steps to move to standby.</p> <p>Go to Main Menu: Status & Manage -> HA Click edit Switch Max Allowed HA role to "standby"</p> <p>2. Execute the backout using the reject script:</p> <pre># screen # /var/TKLC/backout/reject</pre> <p>NOTE: If backout asks if you would like to continue backout, answer "y".</p>
<p>11.</p> <input type="checkbox"/>	<p>Server XMI IP (SSH): Backout proceeds</p>	<p>Many informational messages will come across the terminal screen as the backout proceeds.</p> <p>Finally, after backout is complete, the server will automatically reboot.</p>
<p>12.</p> <input type="checkbox"/>	<p>Server XMI IP (SSH): SSH to server and login as root user</p>	<p>Use your SSH client to connect to the server (ex. ssh, putty):</p> <pre>ssh<server address></pre> <p>login as: admusr password: <enter password></p> <p>Switch to root su - password: <enter password></p>
<p>13.</p> <input type="checkbox"/>	<p>Server XMI IP (SSH):</p>	<p>Execute the backout_restore utility to restore the full database run environment:</p> <pre>#!/usr/TKLC/appworks/sbin/backout_restore</pre> <p>NOTE: If asked if you would like to proceed, answer "y".</p> <p>If the restore was successful, the following will be displayed:</p> <pre>Success: Full restore of COMCOL run env has completed. Return to the backout procedure document for further instruction.</pre>
<p>14.</p> <input type="checkbox"/>		<p>Enter the following command to reboot the server. If logged in as admusr, it is necessary to use sudo.</p> <pre># init 6</pre> <p>This step can take several minutes and will terminate the SSH session.</p>

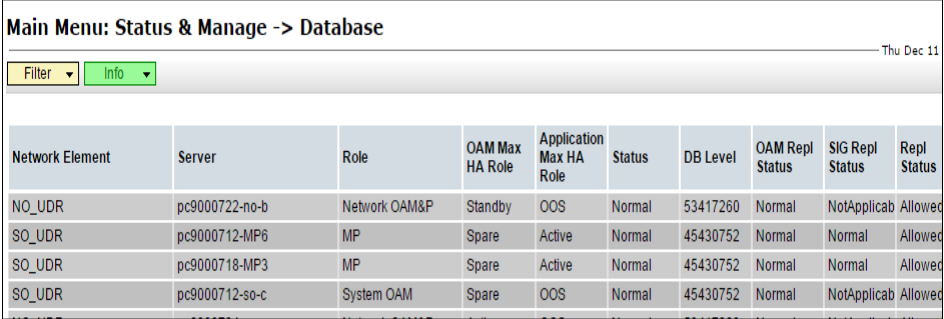
Appendix D: Backout of a Server

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15. <input type="checkbox"/>	<p>Server XMI IP (SSH):</p> <p>SSH to backed-out server and login as root user</p>	<p>Use your SSH client to connect to the server (ex. ssh, putty):</p> <pre>ssh<server address></pre> <p>login as: <code>admusr</code> password: <code><enter password></code></p> <p>Switch to root <code>su -</code> password: <code><enter password></code></p>																																								
16. <input type="checkbox"/>	<p>Server XMI IP (SSH):</p> <p>Verify services restart</p>	<p>If this is an NOAMP or SOAM server, verify httpd service is running. Execute the command: # <code>service httpd status</code></p> <p>Verify expected output displays httpd is running (the process IDs are variable so the list of numbers can be ignored): httpd<process IDs will be listed here> is running...</p> <p>If httpd is still not running after ~3 minutes, then services have failed to restart.</p> <p>Exit from the command line of backed-out server. # <code>exit</code></p>																																								
17. <input type="checkbox"/>	<p>Using the VIP address, access the Primary NOAMP GUI.</p>	<p>Access the Primary NOAMP GUI as specified in Appendix A.</p>																																								
18. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Verify server states:</p> <p>Select...</p> <p>Main Menu → Administration → Software Management → Upgrade</p> <p>...as shown on the right.</p>	 <table border="1"> <thead> <tr> <th>No_grp</th> <th>MP1_grp</th> <th>SO_grp</th> <th colspan="5"></th> </tr> <tr> <th>Hostname</th> <th>Upgrade State</th> <th>OAM Max HA Role</th> <th>Server Role</th> <th>Function</th> <th>Application Version</th> <th>Start Time</th> <th>Finish Time</th> </tr> <tr> <th></th> <th>Server Status</th> <th>Appl Max HA Role</th> <th>Network Element</th> <th>Upgrade ISO</th> <th>Status Message</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>MP1</td> <td>Not Ready</td> <td>Standby</td> <td>MP</td> <td>UDR-MP (multi-active cluster)</td> <td>10.2.0.0-12.6.0</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Err</td> <td>Observer</td> <td>UDR_SO_A</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>If the state is Ready, you are finished with procedure.</p> <p>If the state is “Not Ready”, continue to next step.</p>	No_grp	MP1_grp	SO_grp						Hostname	Upgrade State	OAM Max HA Role	Server Role	Function	Application Version	Start Time	Finish Time		Server Status	Appl Max HA Role	Network Element	Upgrade ISO	Status Message			MP1	Not Ready	Standby	MP	UDR-MP (multi-active cluster)	10.2.0.0-12.6.0				Err	Observer	UDR_SO_A				
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<p>19.</p>	<p>Active NOAMP VIP:</p> <p>Correct Upgrade State on downgraded server</p> <p>Select...</p> <p>Main Menu Status & Manage→HA[Edit]</p> <p>Select the downgraded server and choose a Max Allowed HA Role value of Active (Press the Ok button). Verify the Max Allowed HA Role is set to the desired value for the server.</p>	<p>Due to backout being initiated from the command line instead of through the GUI, you will have to modify the downgraded server so its Upgrade State moves to Ready.</p>  <p>Main Menu: Status & Manage -> HA [Edit]</p> <table border="1"> <thead> <tr> <th>Hostname</th> <th>Max Allowed HA Role</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>Active</td> <td>The maximum desired HA Role for NO-A</td> </tr> <tr> <td>NO-B</td> <td>Active</td> <td>The maximum desired HA Role for NO-B</td> </tr> <tr> <td>SO-A</td> <td>Active</td> <td>The maximum desired HA Role for SO-A</td> </tr> <tr> <td>SO-B</td> <td>Active</td> <td>The maximum desired HA Role for SO-B</td> </tr> <tr> <td>MP1</td> <td>Active</td> <td>The maximum desired HA Role for MP1</td> </tr> <tr> <td>MP2</td> <td>Active</td> <td>The maximum desired HA Role for MP2</td> </tr> </tbody> </table>	Hostname	Max Allowed HA Role	Description	NO-A	Active	The maximum desired HA Role for NO-A	NO-B	Active	The maximum desired HA Role for NO-B	SO-A	Active	The maximum desired HA Role for SO-A	SO-B	Active	The maximum desired HA Role for SO-B	MP1	Active	The maximum desired HA Role for MP1	MP2	Active	The maximum desired HA Role for MP2																		
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<p>20.</p>	<p>Active NOAMP VIP:</p> <p>Select Main Menu Administration→Software Management→Upgrade;</p> <p>Select the tab of the server group containing the server to be downgraded. Verify its Upgrade State is now Ready. (It might take a couple minutes for the grid to update.)</p>	 <p>Main Menu: Administration -> Software Management -> Upgrade</p> <table border="1"> <thead> <tr> <th rowspan="2">Hostname</th> <th>Upgrade State</th> <th>OAM Max HA Role</th> <th>Server Role</th> <th>Function</th> <th>Application Version</th> <th>Start Time</th> <th>Finish Time</th> </tr> <tr> <th>Server Status</th> <th>Appl Max HA Role</th> <th>Network Element</th> <th>Upgrade ISO</th> <th>Status Message</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>Ready</td> <td>Standby</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.2.0.0.0-12.6.0</td> <td></td> <td></td> </tr> <tr> <td>NO-B</td> <td>Ready</td> <td>Active</td> <td>Network OAM&P</td> <td>OAM&P</td> <td>10.2.0.0.0-12.6.0</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Err</td> <td>N/A</td> <td>UDR_NO_A</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Hostname	Upgrade State	OAM Max HA Role	Server Role	Function	Application Version	Start Time	Finish Time	Server Status	Appl Max HA Role	Network Element	Upgrade ISO	Status Message			NO-A	Ready	Standby	Network OAM&P	OAM&P	10.2.0.0.0-12.6.0			NO-B	Ready	Active	Network OAM&P	OAM&P	10.2.0.0.0-12.6.0				Err	N/A	UDR_NO_A				
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<p>21.</p>	<p>Verify application version</p>	<p>Verify the Application Version value for this server has been downgraded to the original release version.</p>																																							
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>																																									

APPENDIX E. VERIFYING SERVERS ARE SYNCHRONIZED

Step	Procedure	Result																																																		
1. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Confirm Servers are in sync prior to upgrading the next server</p> <p>Main Menu → Status & Manage → Database</p> <p>1) Repl Status should be "allowed" 2) The DB Levels should be the same or close in numbers.</p>	 <p>The screenshot shows the 'Main Menu: Status & Manage -> Database' interface. It includes a table with the following data:</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server</th> <th>Role</th> <th>OAM Max HA Role</th> <th>Application Max HA Role</th> <th>Status</th> <th>DB Level</th> <th>OAM Repl Status</th> <th>SIG Repl Status</th> <th>Repl Status</th> </tr> </thead> <tbody> <tr> <td>NO_UDR</td> <td>pc9000722-no-b</td> <td>Network OAM&P</td> <td>Standby</td> <td>OOS</td> <td>Normal</td> <td>53417260</td> <td>Normal</td> <td>NotApplicab</td> <td>Allowed</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000712-MP6</td> <td>MP</td> <td>Spare</td> <td>Active</td> <td>Normal</td> <td>45430752</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000718-MP3</td> <td>MP</td> <td>Spare</td> <td>Active</td> <td>Normal</td> <td>45430752</td> <td>Normal</td> <td>Normal</td> <td>Allowed</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000712-so-c</td> <td>System OAM</td> <td>Spare</td> <td>OOS</td> <td>Normal</td> <td>45430752</td> <td>Normal</td> <td>NotApplicab</td> <td>Allowed</td> </tr> </tbody> </table>	Network Element	Server	Role	OAM Max HA Role	Application Max HA Role	Status	DB Level	OAM Repl Status	SIG Repl Status	Repl Status	NO_UDR	pc9000722-no-b	Network OAM&P	Standby	OOS	Normal	53417260	Normal	NotApplicab	Allowed	SO_UDR	pc9000712-MP6	MP	Spare	Active	Normal	45430752	Normal	Normal	Allowed	SO_UDR	pc9000718-MP3	MP	Spare	Active	Normal	45430752	Normal	Normal	Allowed	SO_UDR	pc9000712-so-c	System OAM	Spare	OOS	Normal	45430752	Normal	NotApplicab	Allowed
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SO_UDR	pc9000712-so-c	System OAM	Spare	OOS	Normal	45430752	Normal	NotApplicab	Allowed																																											

APPENDIX F. ACCESSING MY ORACLE SUPPORT

MOS (<https://support.oracle.com>) is your initial point of contact for all product support and training needs. A representative at Customer Access Support (CAS) can assist you with MOS registration.

Call the CAS main number at 1-800-223-1711 (toll-free in the US), or call the Oracle Support hotline for your local country from the list at <http://www.oracle.com/us/support/contact/index.html>. When calling, make the selections in the sequence shown below on the Support telephone menu:

1. Select 2 for New Service Request
2. Select 3 for Hardware, Networking and Solaris Operating System Support
3. Select 2 for Non-technical issue

You will be connected to a live agent who can assist you with MOS registration and provide Support Identifiers. Simply mention you are a Tekelec Customer new to MOS.

MOS is available 24 hours a day, 7 days a week, 365 days a year.

APPENDIX G. DETERMINE IF TVOE UPGRADE IS REQUIRED

When upgrading a server that exists as a virtual guest on a TVOE Host, it is first necessary to determine whether the TVOE Host (i.e. the “bare-metal”) server must first be upgraded to a newer release of TVOE.

NOAM and SOAM servers are often implemented as TVOE guests in C-class deployments, so the TVOE upgrade check is necessary. MPs are often deployed as guests on the same TVOE Host as the OAM server(s), and so by the time the MP servers are being upgraded, TVOE has already been upgraded and there is no need to do so again.

Note: This procedure does not apply to Oracle Communications User Data Repository Cloud based systems.

Step	This procedure checks if TVOE upgrade is required. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.	
1. <input type="checkbox"/>	Determine the version of TVOE already running on the server that hosts the virtual guest currently being upgraded.	Log into the host server on which TVOE is installed. Execute the following command to get the current TVOE installed version : <pre>[root@udrTVOEblade2 ~]# appRev Install Time: Tue Aug 7 08:17:52 2012 Product Name: TVOE Product Release: 2.0.0_80.16.0 Part Number ISO: 872-2290-104 Part Number USB: 872-2290-104 Base Distro Product: TPD Base Distro Release: 6.0.0_80.16.0 Base Distro ISO: TPD.install-6.0.0_80.16.0-CentOS6.2-x86_64.iso OS: CentOS 6.2</pre>
2. <input type="checkbox"/>	Check the TVOE release version required for target release	Contact My Oracle Support referring to Appendix F of this document to determine the appropriate release version.
3. <input type="checkbox"/>	If the release in Step 1 is less than what is required in Step 2 then upgrade of TVOE is required	The procedure to upgrade TVOE on the host server is in Appendix H.

APPENDIX H. UPGRADE TVOE PLATFORM

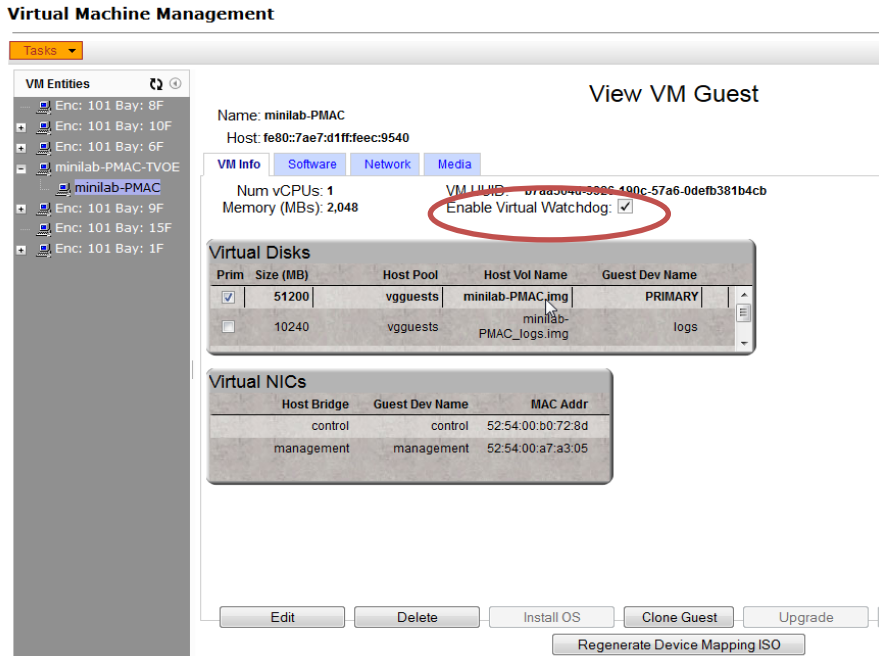
This appendix provides the procedure for upgrading TVOE on a host server that supports one or more Oracle Communications User Data Repository virtual guests.

If upgrading an Oracle Communications User Data Repository server that is deployed as a virtual guest on a bare-metal server running the TVOE host software, then TVOE itself may have to be upgraded first. Refer to Appendix G to determine if a TVOE upgrade is required.

Note: If you are upgrading an server that is not virtualized by TVOE, then this Appendix does not apply.

Note: This procedure does not apply to Oracle Communications User Data Repository Cloud based systems.

Step	This procedure verifies that all required materials are present. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.	
<p>1.</p> <input type="checkbox"/>	<p>Disable all the applications running on current TVOE.</p>	<p>Access the Primary NOAMP GUI as specified in Appendix A Select Status & Manage > Server The Server Status screen is displayed Identify the SO or MP (virtual) servers that are running on the TVOE environment to be upgraded, and select these Click the 'Stop' button Confirm the operation by clicking Ok in the popup dialog box Verify that the 'Appl State' for all the selected servers is changed to 'Disabled'</p>
<p>2.</p> <input type="checkbox"/>	<p>Find out the guests running on TVOE host.</p>	<p>List the guests running on the TVOE Host by using following command :</p> <pre># ssh admusr@<TVOE IP> login as: admusr password: <enter password></pre> <p>Switch to root su - password: <enter password></p> <pre># virsh list --all</pre> <p>Note: the output of above command will list all the guests running on current TVOE host.</p>
<p>3.</p> <input type="checkbox"/>	<p>Shutdown each guest running on TVOE host.</p>	<p>Execute the following command for each guest identified in Step 2 :</p> <pre># virsh shutdown <guestname></pre> <p>Note: Alternatively, can use "Manage software inventory" screen on PM&C to shutdown the guests.</p> <p>Note: Server will not appear on the Status & Manage screen after being shutdown from the TVOE host.</p>

<p>4.</p> <input type="checkbox"/>	<p>Upgrade TVOE</p>	<p>Periodically execute the following command until the command displays no entries. This means that all VMs have been properly shut down :</p> <pre># virsh list</pre> <p>Once all VMs have been properly shut down:</p> <p>Upgrade TVOE using “PM&C Aided TVOE Upgrade Procedure” from Reference <i>TVOE 2.7 upgrade Document</i> or <i>TVOE 3.0 Software upgrade Document</i>, E53018, latest revision</p> <p>[If the “PM&C Aided TVOE Upgrade” procedure is not possible, it is also possible to upgrade TVOE using the alternate procedure provided in Reference [2].</p> <p>Note: If Active NO is hosted on the TVOE which is being upgraded, then VIP may be lost until TVOE is successfully upgraded.</p>																								
<p>5.</p> <input type="checkbox"/>	<p>After completed ...</p>	<p>After the TVOE upgrade is completed on the Host Server, the Application(s) may not be started automatically.</p> <p>Proceed with the next step to restore service.</p>																								
<p>6.</p> <input type="checkbox"/>	<p>Verify Enable Virtual Guest Watchdog is set for VM</p>	<p>From the PM&C VM Management form, verify that the “Enable Virtual Watchdog” is checked.</p>  <p>Virtual Machine Management</p> <p>Tasks</p> <p>VM Entities</p> <ul style="list-style-type: none"> Enc: 101 Bay: 6F Enc: 101 Bay: 10F Enc: 101 Bay: 6F minilab-PMAC-TVOE minilab-PMAC Enc: 101 Bay: 9F Enc: 101 Bay: 15F Enc: 101 Bay: 1F <p>View VM Guest</p> <p>Name: minilab-PMAC Host: fe80::7ae7:d1ff:feec:9540</p> <p>VM Info Software Network Media</p> <p>Num vCPUs: 1 Memory (MBs): 2,048 VM UUID: 67aa3648-508c-490c-57a6-0defb381b4cb Enable Virtual Watchdog: <input checked="" type="checkbox"/></p> <table border="1"> <caption>Virtual Disks</caption> <thead> <tr> <th>Prim</th> <th>Size (MB)</th> <th>Host Pool</th> <th>Host Vol Name</th> <th>Guest Dev Name</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/></td> <td>51200</td> <td>vguests</td> <td>minilab-PMAC.img</td> <td>PRIMARY</td> </tr> <tr> <td><input type="checkbox"/></td> <td>10240</td> <td>vguests</td> <td>minilab-PMAC_logs.img</td> <td>logs</td> </tr> </tbody> </table> <table border="1"> <caption>Virtual NICs</caption> <thead> <tr> <th>Host Bridge</th> <th>Guest Dev Name</th> <th>MAC Addr</th> </tr> </thead> <tbody> <tr> <td>control</td> <td>control</td> <td>52:54:00:b0:72:8d</td> </tr> <tr> <td>management</td> <td>management</td> <td>52:54:00:a7:a3:05</td> </tr> </tbody> </table> <p>Edit Delete Install OS Clone Guest Upgrade Regenerate Device Mapping ISO</p>	Prim	Size (MB)	Host Pool	Host Vol Name	Guest Dev Name	<input checked="" type="checkbox"/>	51200	vguests	minilab-PMAC.img	PRIMARY	<input type="checkbox"/>	10240	vguests	minilab-PMAC_logs.img	logs	Host Bridge	Guest Dev Name	MAC Addr	control	control	52:54:00:b0:72:8d	management	management	52:54:00:a7:a3:05
Prim	Size (MB)	Host Pool	Host Vol Name	Guest Dev Name																						
<input checked="" type="checkbox"/>	51200	vguests	minilab-PMAC.img	PRIMARY																						
<input type="checkbox"/>	10240	vguests	minilab-PMAC_logs.img	logs																						
Host Bridge	Guest Dev Name	MAC Addr																								
control	control	52:54:00:b0:72:8d																								
management	management	52:54:00:a7:a3:05																								

<p>7.</p> <input type="checkbox"/>	<p>Enable all the applications disabled in step1</p>	<p>Enable all applications running on current TVOE: Log into the NOAM VIP GUI Select Status & Manage > Server. The Server Status screen is displayed Select all the applications (NO(s)/SO(s)) running on current TVOE, excluding the server which is in upgrade 'Ready' state. The Upgrade State can be verified from the Administration->Upgrade screen. Click the 'Restart' button. Confirm the operation by clicking Ok in the popup dialog box. Verify that the 'Appl State' for all the selected servers is changed to 'Enabled'.</p>
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APPENDIX I. CHANGE RESOURCES ALLOCATED TO VM GUESTS

I.1 Change VCPU Cores and RAM Allocated To NOAMP Guests

This Appendix provides the procedure for changing VCPU cores and RAM allocated to NOAMP virtual guests.

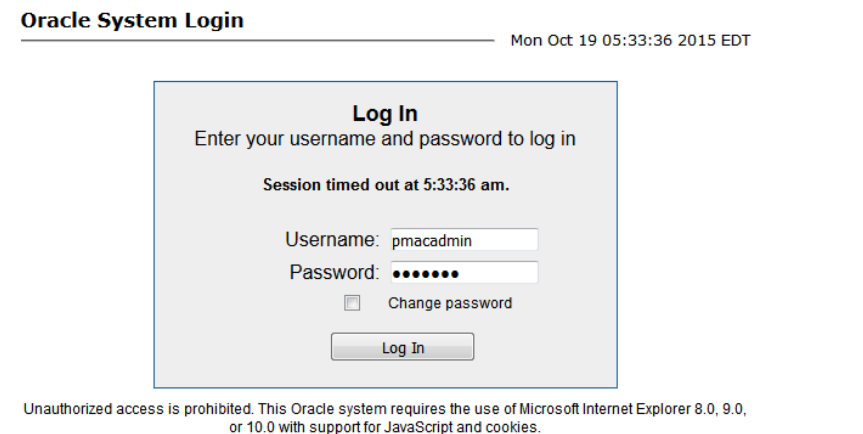
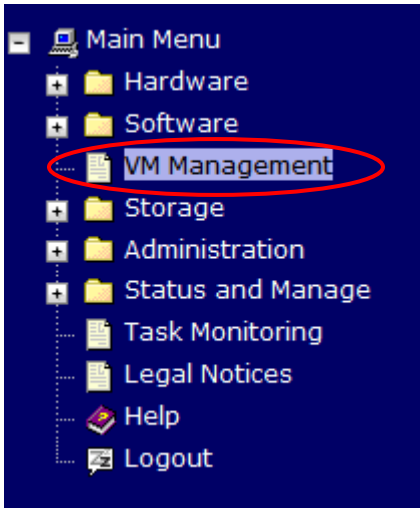
This needs PM&C GUI screen.

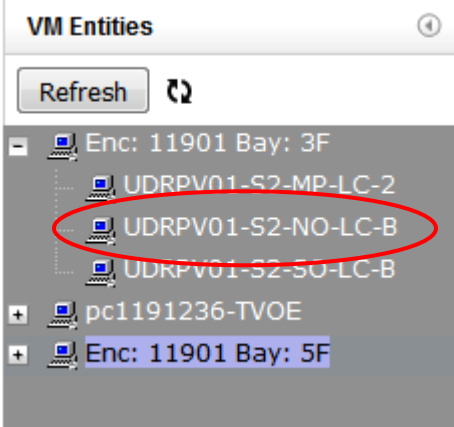
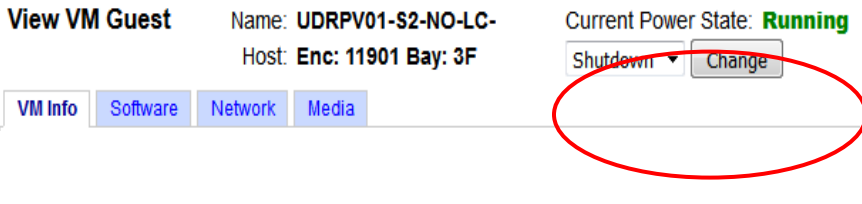
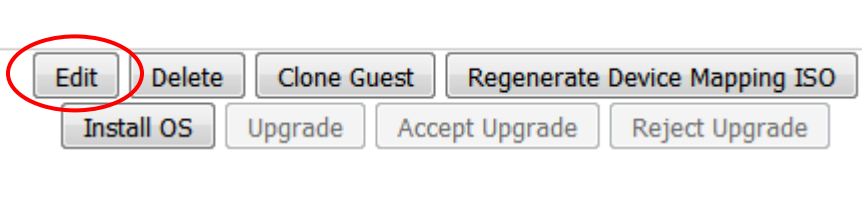
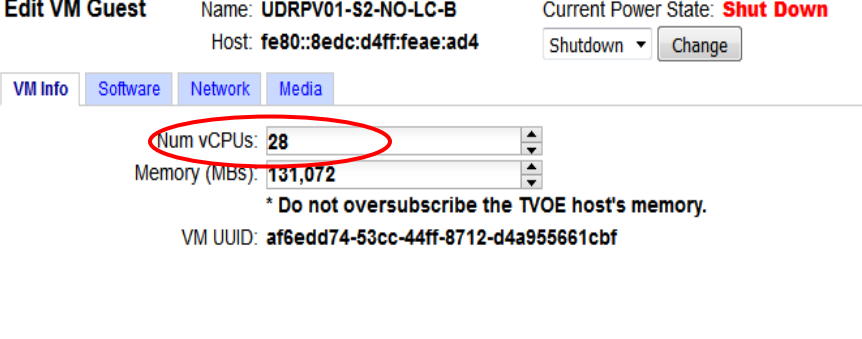
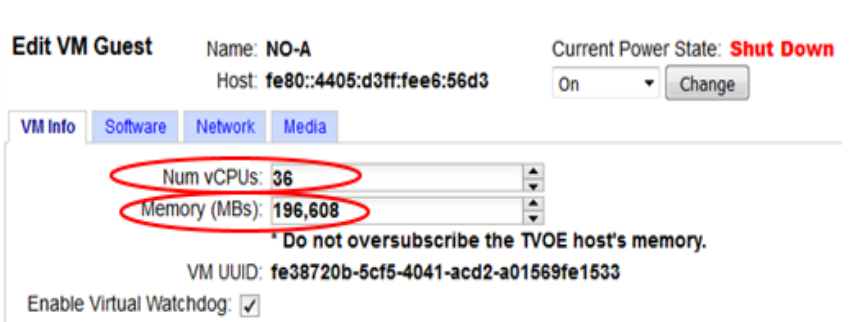
This procedure has to be followed only if it is being done for either of the following cases:

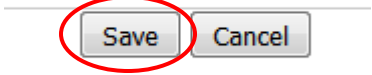

- a) upgrade is being done from G8 profile to G9 profile;
- b) upgrade is being done from Oracle Communications User Data Repository 10.2.x Oracle RMS low capacity setup;

Note: If you are upgrading to a G8 profile then this appendix does not apply.

Note: This procedure does not apply to Oracle Communications User Data Repository Cloud based systems.

Step	This procedure verifies that all required materials are present. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.	
1. <input type="checkbox"/>	Login to PM&C GUI screen.	
2. <input type="checkbox"/>	Navigate to Main Menu->VM Management	

<p>3.</p> <p><input type="checkbox"/></p>	<p>Select the TVOE that contains NO server from VM Entities list</p>	 <p>The screenshot shows a 'VM Entities' window with a 'Refresh' button and a list of VMs. The VM 'UDRPV01-S2-NO-LC-B' is highlighted with a red circle. Other VMs include UDRPV01-S2-MP-LC-2, UDRPV01-S2-SO-LC-B, pc1191236-TVOE, and Enc: 11901 Bay: 5F.</p>
<p>4.</p> <p><input type="checkbox"/></p>	<p>Change "Current Power State" to Shutdown</p>	 <p>The screenshot shows the 'View VM Guest' page for VM 'UDRPV01-S2-NO-LC-B' on host 'Enc: 11901 Bay: 3F'. The 'Current Power State' is 'Running'. The 'Shutdown' button is circled in red.</p>
<p>5.</p> <p><input type="checkbox"/></p>	<p>Click on "Edit" button.</p>	 <p>The screenshot shows a row of buttons: 'Edit', 'Delete', 'Clone Guest', 'Regenerate Device Mapping ISO', 'Install OS', 'Upgrade', 'Accept Upgrade', and 'Reject Upgrade'. The 'Edit' button is circled in red.</p>
<p>6.</p> <p><input type="checkbox"/></p>	<p>For Gen9 upgrade only: Change "Num vCPUs" to 28</p>	 <p>The screenshot shows the 'Edit VM Guest' page for VM 'UDRPV01-S2-NO-LC-B' on host 'fe80::8edc:d4ff:feae:ad4'. The 'Current Power State' is 'Shut Down'. The 'Num vCPUs' field is set to 28 and is circled in red. The 'Memory (MBS)' field is 131,072. A warning message states: '* Do not oversubscribe the TVOE host's memory.' The VM UUID is 'af6edd74-53cc-44ff-8712-d4a955661cbf'.</p>
<p>7.</p> <p><input type="checkbox"/></p>	<p>For Oracle RMS upgrade only: Change "Num vCPUs" to 36 and "Memory (MBS)" to 196608</p>	 <p>The screenshot shows the 'Edit VM Guest' page for VM 'NO-A' on host 'fe80::4405:d3ff:fee6:56d3'. The 'Current Power State' is 'Shut Down'. The 'Num vCPUs' field is set to 36 and the 'Memory (MBS)' field is set to 196,608. Both fields are circled in red. A warning message states: '* Do not oversubscribe the TVOE host's memory.' The VM UUID is 'fe38720b-5cf5-4041-acd2-a01569fe1533'. The 'Enable Virtual Watchdog' checkbox is checked.</p> <p>If an error appears in the GUI and it forbids allocating 36 vCPU cores to NOAMP, please ensure the PM&C has been upgraded to version 6.0.1.0.1-60.22.0 or higher.</p>

<p>8.</p> <input type="checkbox"/>	<p>Click “Save” button.</p>	
<p>9.</p>	<p>Change “Current Power State” to On</p>	<p>Current Power State: Shut Down</p>  <p>NOTE: Power-up procedure takes a while.</p>
<p>10.</p>	<p>When the Power is ON, the current power state should show running.</p>	<p>View VM Guest Name: UDRPV01-S1-MP-1 Current Power State: Running Host: Enc: 11902 Bay: 5F Shutdown ▾ Change</p> <p>VM Info Software Network Media</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

I.2 Change VCPU Cores and RAM Allocated To MP Guests

This Appendix provides the procedure for changing VCPU cores and RAM allocated to MP virtual guests.

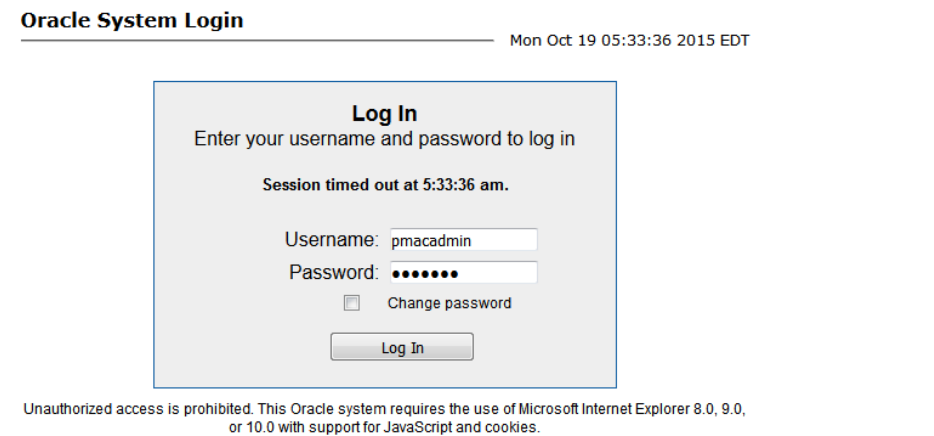
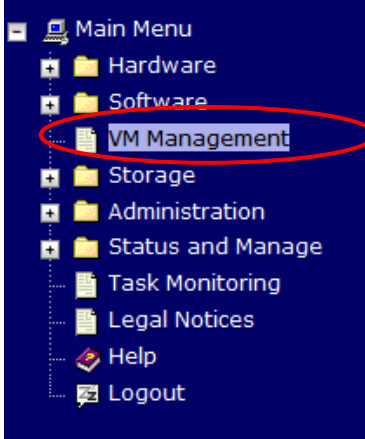
This needs PM&C GUI screen.

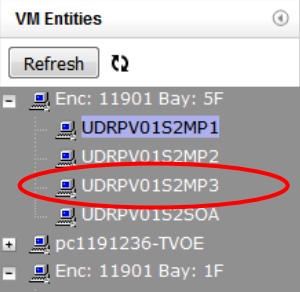

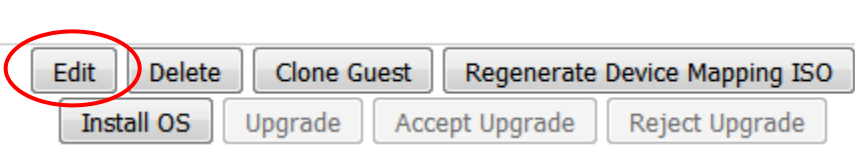
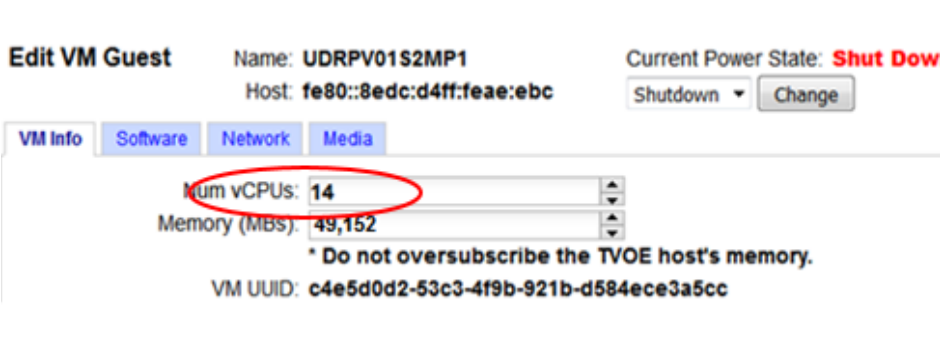
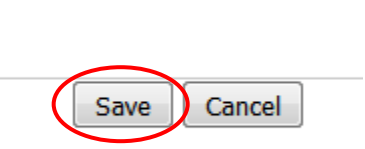
This procedure has to be followed only if:

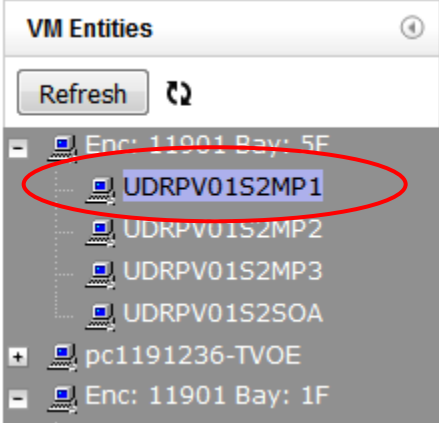
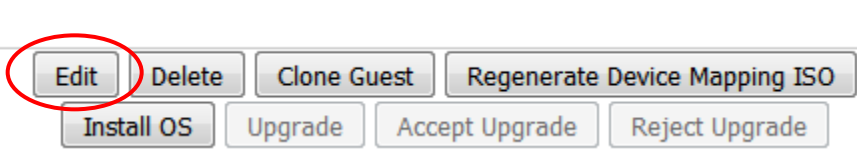
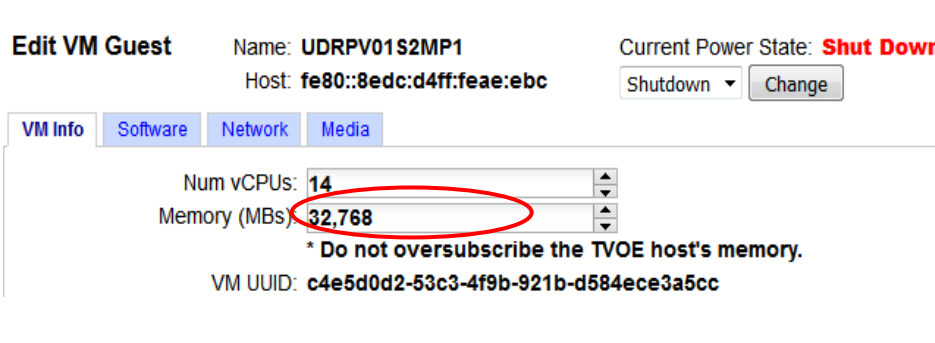
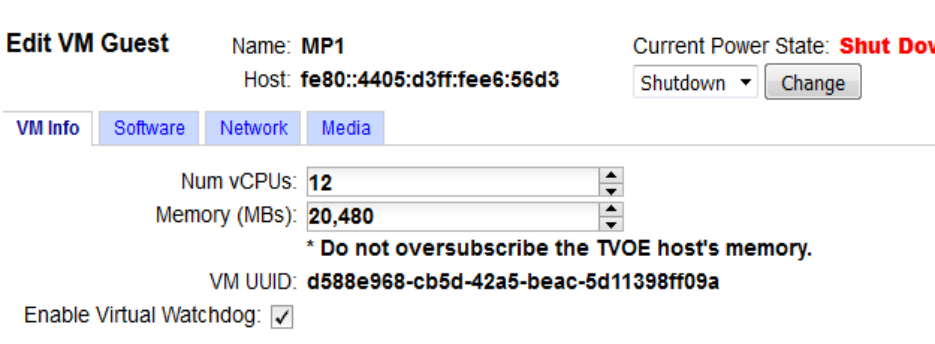
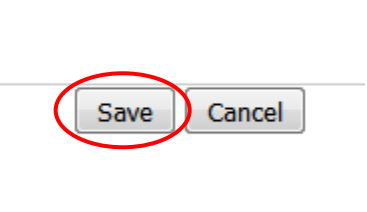
- a) upgrade is being done from G8 profile to G9 profile with a 12.x release;
- b) upgrade is being done from Oracle RMS low capacity setup from 10.2.x release;

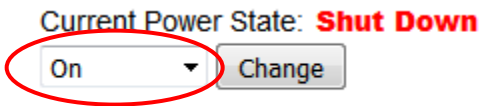

Note: If you are upgrading to a G8 profile then this appendix does not apply.

Note: This procedure does not apply to Oracle Communications User Data Repository Cloud based systems.

Step	This procedure verifies that all required materials are present. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.	
<p>1.</p> <input data-bbox="191 772 240 825" type="checkbox"/>	<p>Login to PM&C GUI screen.</p>	
<p>2.</p> <input data-bbox="191 1234 240 1287" type="checkbox"/>	<p>Navigate to <i>Main Menu->VM Management</i></p>	

<p>3.</p> <input type="checkbox"/>	<p>Select the TVOE that contains NO server from VM Entities list</p>	 <p>The screenshot shows a 'VM Entities' window with a 'Refresh' button and a tree view. Under 'Enc: 11901 Bay: 5F', the item 'UDRPV01S2MP3' is circled in red. Other items include UDRPV01S2MP1, UDRPV01S2MP2, UDRPV01S2SOA, pc1191236-TVOE, and Enc: 11901 Bay: 1F.</p>
<p>4.</p> <input type="checkbox"/>	<p>Change "Current Power State" to Shutdown</p>	 <p>The screenshot shows the 'View VM Guest' page for 'Name: UDRPV01-S1-MP-1' on 'Host: Enc: 11902 Bay: 5F'. The 'Current Power State' is 'Running' and is circled in red. There is a 'Shutdown' dropdown menu and a 'Change' button next to it.</p>
<p>5.</p> <input type="checkbox"/>	<p>For Gen9 only: Click on "Edit" button.</p>	 <p>The screenshot shows a row of buttons: 'Edit', 'Delete', 'Clone Guest', and 'Regenerate Device Mapping ISO'. The 'Edit' button is circled in red. Below these are 'Install OS', 'Upgrade', 'Accept Upgrade', and 'Reject Upgrade' buttons.</p>
<p>6.</p> <input type="checkbox"/>	<p>For Gen9 only: Change "Num vCPUs" from 12 to 14</p>	 <p>The screenshot shows the 'Edit VM Guest' page for 'Name: UDRPV01S2MP1' on 'Host: fe80::8edc:d4ff:feae:ebc'. The 'Current Power State' is 'Shut Down'. The 'Num vCPUs' field is set to '14' and is circled in red. The 'Memory (MBS)' is '49,152'. A warning message states: '* Do not oversubscribe the TVOE host's memory.' The VM UUID is 'c4e5d0d2-53c3-4f9b-921b-d584ece3a5cc'.</p>
<p>7.</p> <input type="checkbox"/>	<p>For Gen9 only: Click "Save" button.</p>	 <p>The screenshot shows two buttons: 'Save' and 'Cancel'. The 'Save' button is circled in red.</p>

<p>8.</p> <p><input type="checkbox"/></p>	<p>Select the TVOE that contains NO server from VM Entities list</p>	 <p>The screenshot shows a 'VM Entities' window with a 'Refresh' button and a list of VMs. The VM 'UDRPV01S2MP1' is highlighted with a red oval. Other VMs in the list include UDRPV01S2MP2, UDRPV01S2MP3, UDRPV01S2SOA, pc1191236-TVOE, and Enc: 11901 Bay: 1F.</p>
<p>9.</p> <p><input type="checkbox"/></p>	<p>Click on “Edit” button.</p>	 <p>The screenshot shows a set of buttons for VM management: Edit, Delete, Clone Guest, Regenerate Device Mapping ISO, Install OS, Upgrade, Accept Upgrade, and Reject Upgrade. The 'Edit' button is highlighted with a red oval.</p>
<p>10.</p> <p><input type="checkbox"/></p>	<p>For Gen9 only: Change “Memory (MBs) to “32768”</p>	 <p>The screenshot shows the 'Edit VM Guest' dialog for VM 'UDRPV01S2MP1'. The 'Memory (MBs)' field is set to 32,768 and is highlighted with a red oval. Other fields include Num vCPUs: 14, VM UUID: c4e5d0d2-53c3-4f9b-921b-d584ece3a5cc, and Current Power State: Shut Down.</p>
<p>11.</p> <p><input type="checkbox"/></p>	<p>For Oracle RMS only: Change “Memory (MBs) to “20480”</p>	 <p>The screenshot shows the 'Edit VM Guest' dialog for VM 'MP1'. The 'Memory (MBs)' field is set to 20,480 and is highlighted with a red oval. Other fields include Num vCPUs: 12, VM UUID: d588e968-cb5d-42a5-beac-5d11398ff09a, and Enable Virtual Watchdog: checked.</p>
<p>12.</p> <p><input type="checkbox"/></p>	<p>Click “Save” button.</p>	 <p>The screenshot shows two buttons: 'Save' and 'Cancel'. The 'Save' button is highlighted with a red oval.</p>

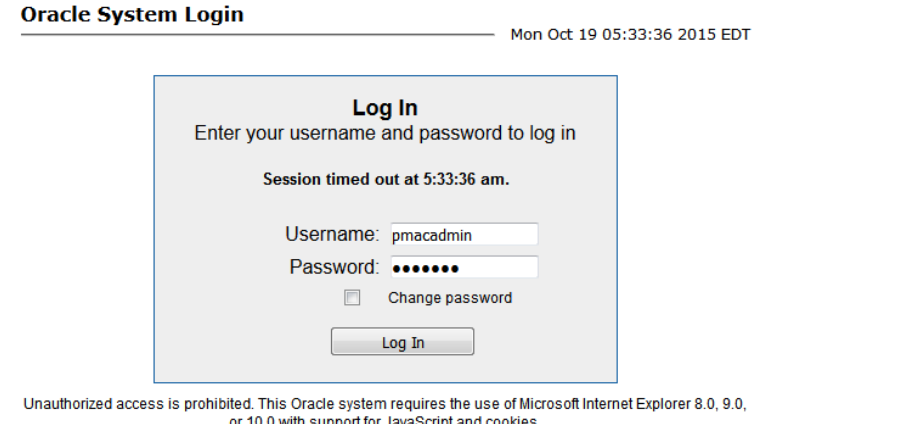
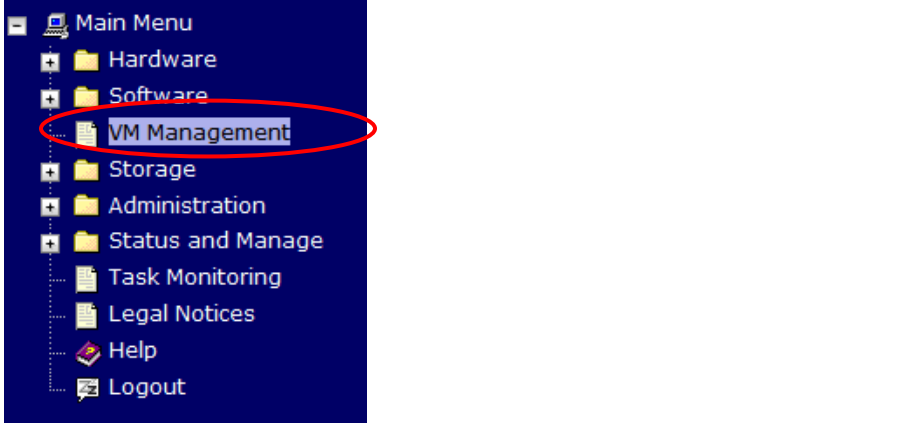
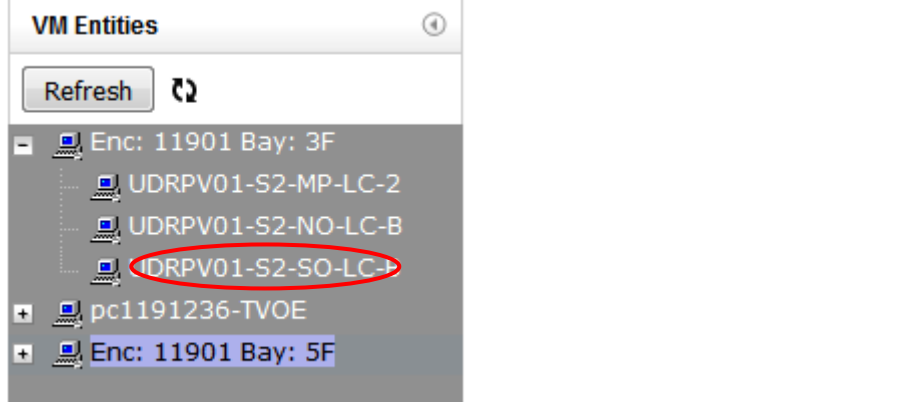
13.	Change "Current Power State" to On	
14.	When the Power is ON, the current power state should show running.	
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

I.3 Change VCPU Cores Allocated To SOAM Servers

This Appendix provides the procedure for changing VCPU cores allocated to SOAM virtual guests from 2 to 4 if upgrading Oracle Communications User Data Repository Oracle RMS low capacity setup from 10.2.xrelease.

This needs PM&C GUI screen.

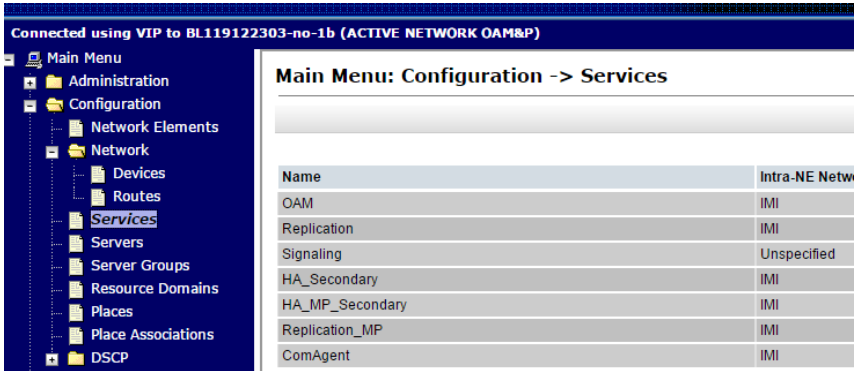
Note: This procedure does not apply to Oracle Communications User Data Repository Cloud based systems.

Step	This procedure verifies that all required materials are present. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.	
<p>1.</p> <input type="checkbox"/>	<p>Login to PM&C GUI screen.</p>	
<p>2.</p> <input type="checkbox"/>	<p>Navigate to Main Menu->VM Management</p>	
<p>3.</p> <input type="checkbox"/>	<p>Select the TVOE that contains NO server from VM Entities list</p>	

<p>4.</p> <input type="checkbox"/>	<p>Change "Current Power State" to Shutdown</p>	<p>View VM Guest Name: UDRPV01-S1-MP-1 Current Power State: Run Host: Enc: 11902 Bay: 5F</p> <p>Shutdown ▾ Change</p> <p>VM Info Software Network Media</p>
<p>5.</p> <input type="checkbox"/>	<p>Click on "Edit" button.</p>	<p>Edit Delete Clone Guest Regenerate Device Mapping ISO</p> <p>Install OS Upgrade Accept Upgrade Reject Upgrade</p>
<p>6.</p> <input type="checkbox"/>	<p>Change "Num vCPUs" from 2 to 4.</p>	<p>Edit VM Guest Name: SO-B Current Power State: Shut Down Host: fe80::34c8:5aff:fe71:5cee</p> <p>Shutdown ▾ Change</p> <p>VM Info Software Network Media</p> <p>Num vCPUs: 4 Memory (MBs): 16,384</p> <p>* Do not oversubscribe the TVOE host's memory.</p> <p>VM UUID: e9168a11-c88e-4d9d-b786-68577521e5f3</p> <p>Enable Virtual Watchdog: <input checked="" type="checkbox"/></p>
<p>7.</p> <input type="checkbox"/>	<p>Click "Save" button.</p>	<p>Save Cancel</p>
<p>8.</p> <input type="checkbox"/>	<p>Change "Current Power State" to On</p>	<p>Current Power State: Shut Down</p> <p>On ▾ Change</p>
<p>9.</p> <input type="checkbox"/>	<p>When the Power gets turned on, the current Power State must be "running"</p>	<p>View VM Guest Name: UDRPV01-S1-MP-1 Current Power State: Running Host: Enc: 11902 Bay: 5F</p> <p>Shutdown ▾ Change</p> <p>VM Info Software Network Media</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

APPENDIX J. CONFIGURING SERVICES FOR DUAL PATH HA

This Appendix provides the procedure for updating Oracle Communications User Data Repository Services for the Dual Path HA feature. This applies to all configurations that make use of a Secondary/DR Site.

Step	This procedure verifies that all required materials are present. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.																	
<p>1.</p> <input data-bbox="191 506 240 554" type="checkbox"/>	<p>Using the VIP address, access the Primary NOAMP GUI.</p>	<p>Access the Primary NOAMP GUI as specified in Appendix A.</p>																
<p>2.</p> <input data-bbox="191 695 240 743" type="checkbox"/>	<p>Active NOAMP VIP: Select...</p> <p>Main Menu → Configuration → Services</p> <p>...as shown on the right.</p>	 <p>The screenshot shows the NOAMP GUI interface. The title bar reads "Connected using VIP to BL119122303-no-1b (ACTIVE NETWORK OAM&P)". On the left is a tree view of the "Main Menu" with the following structure:</p> <ul style="list-style-type: none"> Administration Configuration <ul style="list-style-type: none"> Network Elements Network <ul style="list-style-type: none"> Devices Routes Services (highlighted) Servers Server Groups Resource Domains Places Place Associations DSCP <p>On the right, the "Main Menu: Configuration -> Services" page is displayed, showing a table of services:</p> <table border="1" data-bbox="824 810 1403 1014"> <thead> <tr> <th>Name</th> <th>Intra-NE Netw</th> </tr> </thead> <tbody> <tr> <td>OAM</td> <td>IMI</td> </tr> <tr> <td>Replication</td> <td>IMI</td> </tr> <tr> <td>Signaling</td> <td>Unspecified</td> </tr> <tr> <td>HA_Secondary</td> <td>IMI</td> </tr> <tr> <td>HA_MP_Secondary</td> <td>IMI</td> </tr> <tr> <td>Replication_MP</td> <td>IMI</td> </tr> <tr> <td>ComAgent</td> <td>IMI</td> </tr> </tbody> </table>	Name	Intra-NE Netw	OAM	IMI	Replication	IMI	Signaling	Unspecified	HA_Secondary	IMI	HA_MP_Secondary	IMI	Replication_MP	IMI	ComAgent	IMI
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HA_Secondary	IMI																	
HA_MP_Secondary	IMI																	
Replication_MP	IMI																	
ComAgent	IMI																	

3.

Active NOAMP VIP:
1) Change Service value as shown below:

**Inter-NE
HA_Secondary →
XSI1**

2) Select the “Apply” dialogue button.

3) Select the “OK” dialogue button in the popup window.

Name	Intra-NE Network	Inter-NE Network
OAM	IMI	XMI
Replication	IMI	XMI
Signaling	Unspecified	Unspecified
HA_Secondary	IMI	XSI1
HA_MP_Secondary	IMI	XMI
Replication_MP	IMI	XMI
ComAgent	IMI	XSI1

Services

Name	Intra-NE Network	Inter-NE Network
OAM	IMI	XMI
Replication	IMI	XMI
Signaling	Unspecified	Unspecified
HA_Secondary	IMI	XMI
HA_MP_Secondary	IMI	XMI
Replication_MP	IMI	XMI
ComAgent	IMI	XSI1

OK Apply Cancel

You must restart all Servers to apply any services changes, ComAgent

OK Cancel

NOAMP and MP Servers need to be restarted.

<p>4.</p> <input style="width: 20px; height: 20px;" type="checkbox"/>	<p>Active NOAMP VIP: The user will be presented with the “Services” configuration screen as shown on the right</p>	<table border="1" style="width: 100%; border-collapse: collapse; background-color: #f2f2f2;"> <thead> <tr> <th style="text-align: left;">Name</th> <th style="text-align: left;">Intra-NE Network</th> <th style="text-align: left;">Inter-NE Network</th> </tr> </thead> <tbody> <tr><td>OAM</td><td>IMI</td><td>XMI</td></tr> <tr><td>Replication</td><td>IMI</td><td>XMI</td></tr> <tr><td>Signaling</td><td>Unspecified</td><td>Unspecified</td></tr> <tr><td>HA_Secondary</td><td>IMI</td><td>XSI1</td></tr> <tr><td>HA_MP_Secondary</td><td>IMI</td><td>XMI</td></tr> <tr><td>Replication_MP</td><td>IMI</td><td>XMI</td></tr> <tr><td>ComAgent</td><td>IMI</td><td>XSI1</td></tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse; background-color: #f2f2f2;"> <thead> <tr> <th style="text-align: left;">Name</th> <th style="text-align: left;">Intra-NE Network</th> <th style="text-align: left;">Inter-NE Network</th> </tr> </thead> <tbody> <tr><td>OAM</td><td>IMI</td><td>XMI</td></tr> <tr><td>Replication</td><td>IMI</td><td>XMI</td></tr> <tr><td>Signaling</td><td>Unspecified</td><td>Unspecified</td></tr> <tr><td>HA_Secondary</td><td>IMI</td><td>XMI</td></tr> <tr><td>HA_MP_Secondary</td><td>IMI</td><td>XMI</td></tr> <tr><td>Replication_MP</td><td>IMI</td><td>XMI</td></tr> <tr><td>ComAgent</td><td>IMI</td><td>XSI1</td></tr> </tbody> </table>	Name	Intra-NE Network	Inter-NE Network	OAM	IMI	XMI	Replication	IMI	XMI	Signaling	Unspecified	Unspecified	HA_Secondary	IMI	XSI1	HA_MP_Secondary	IMI	XMI	Replication_MP	IMI	XMI	ComAgent	IMI	XSI1	Name	Intra-NE Network	Inter-NE Network	OAM	IMI	XMI	Replication	IMI	XMI	Signaling	Unspecified	Unspecified	HA_Secondary	IMI	XMI	HA_MP_Secondary	IMI	XMI	Replication_MP	IMI	XMI	ComAgent	IMI	XSI1															
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<p>5.</p> <input style="width: 20px; height: 20px;" type="checkbox"/>	<p>Restart Reboot all NOAMP and MP Servers</p>	<p>Reboot all NOAMP and MP servers either by the Active NOAMP GUI’s Status & Manage -> Server screen with the Reboot button:</p> <p>Main Menu: Status & Manage -> Server</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 5px 0;"> <div style="text-align: right; font-size: small;">Fri Feb 19 18:07:46 201</div> <div style="margin-bottom: 5px;">Filter ▾</div> <table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th>Server Hostname</th> <th>Network Element</th> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reportin g Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr><td>drmp1</td><td>DRSO_UDR_NE</td><td>Enabled</td><td>Warn</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>drno-a</td><td>DRNO_UDR_NE</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>drno-b</td><td>DRNO_UDR_NE</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>drso-a</td><td>DRSO_UDR_NE</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>mp1</td><td>SO_UDR_NE</td><td>Enabled</td><td>Warn</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>no-a</td><td>NO_UDR_NE</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr style="background-color: #e0ffe0;"><td>no-b</td><td>NO_UDR_NE</td><td>Enabled</td><td>Err</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>so-a</td><td>SO_UDR_NE</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> </tbody> </table> <div style="margin-top: 5px;"> <input type="button" value="Stop"/> <input type="button" value="Restart"/> <input style="background-color: #add8e6;" type="button" value="Reboot"/> <input type="button" value="NTP Sync"/> <input type="button" value="Report"/> <input type="checkbox"/> Pause upd </div> </div> <p>Or on the terminal of each server with the reboot command:</p> <pre>\$ sudo reboot</pre> <p>Note: This should be executed on all NOAMPs and MPs.</p>	Server Hostname	Network Element	Appl State	Alm	DB	Reportin g Status	Proc	drmp1	DRSO_UDR_NE	Enabled	Warn	Norm	Norm	Norm	drno-a	DRNO_UDR_NE	Enabled	Norm	Norm	Norm	Norm	drno-b	DRNO_UDR_NE	Enabled	Norm	Norm	Norm	Norm	drso-a	DRSO_UDR_NE	Enabled	Norm	Norm	Norm	Norm	mp1	SO_UDR_NE	Enabled	Warn	Norm	Norm	Norm	no-a	NO_UDR_NE	Enabled	Norm	Norm	Norm	Norm	no-b	NO_UDR_NE	Enabled	Err	Norm	Norm	Norm	so-a	SO_UDR_NE	Enabled	Norm	Norm	Norm	Norm
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<p>THIS PROCEDURE HAS BEEN COMPLETED</p>																																																																	

APPENDIX K. MY ORACLE SUPPORT (MOS)

MOS (<https://support.oracle.com>) is your initial point of contact for all product support and training needs. A representative at Customer Access Support (CAS) can assist you with MOS registration.

Call the CAS main number at **1-800-223-1711** (toll-free in the US), or call the Oracle Support hotline for your local country from the list at <http://www.oracle.com/us/support/contact/index.html>.

When calling, make the selections in the sequence shown below on the Support telephone menu:

Select **2** for New Service Request

Select **3** for Hardware, Networking and Solaris Operating System Support

Select **2** for Non-technical issue

You will be connected to a live agent who can assist you with MOS registration and provide Support

Identifiers. Simply mention you are a Tekelec Customer new to MOS.

MOS is available 24 hours a day, 7 days a week, 365 days a year.