Oracle® Communications

Upgrade Procedure

Diamter Signal Routing User Data Repository Software Upgrade Procedure for Release 12.7.0

F55416-01

April 2022

ORACLE

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Chapter 1. Introduction

1.1 Purpose and Scope

This document describes the methods utilized and the procedures performed for a major upgrade from Oracle Communications User Data Repository 12.6.2.0.0, 12.6.3.0.0, and 12.6.3.1.0 to 12.7.0.0.0. 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 perform any Release 12.7.0 or later software upgrade. The Oracle Communications User Data Repository software includes all Oracle Tekelec Platform Distribution (TPD) software. Any TPD upgrade necessary is included automatically as part of the software upgrade. Performing this procedure assumes that the Oracle Communications User Data Repository software load (ISO file, CD-ROM, or other form of media) has been delivered or dowwnoadedto the 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 12.7.0 software loads. Visit the Oracle Software Delivery Cloud here: <u>https://edelivery.oracle.com/osdc/faces/Home.jspx</u>
- Distribution of Oracle Communications User Data Repository software that goes with Oracle Communications DSR product is not covered.
- Initial installation of Oracle Communications User Data Repository 12.7.0 software. Refer [1].
- PM&C upgrade. Refer to [3].
- Firmware upgrade. Use the upgrade procedures and release notes documents contained in the Firmware Upgrade Packs to assess whether a firmware upgrade is necessary. Refer to [3].

1.2 References

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

- 1. Log into the Oracle Technology Network site at <u>http://docs.oracle.com</u>.
- 2. Select Find a product
- 3. Enter User Data Repository

The CGBU Documentation page opens.

- 4. Select User Data Repository followed by version
- 5. Select **platform/Tekelec** for Platform and TVOE documents
- [1] Oracle Communications User Data Repository 12.7.0 Installation and Configuration Guide, E83421-01, latest revision
- [2] TVOE 3.4 Software Upgrade Document, E80324, latest revision
- [3] Oracle Communications PM&C 6.4 Incremental Upgrade Procedure, E82636-01, latest revision.
- [4] Oracle Communications User Data Repository Cloud Installation and Configuration Guide, E83397-01, latest revision

1.3 Acronyms

Table 1: 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
НА	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
МОР	Method of Procedure
MW	Maintenance Window
NE	Network Element
NO	Network OAMP
NOAMP	Network OAMP
OA	HP Onboard Administrator
OAM	Operations, Administration and Maintenance
OAMP	Operations, Administration, Maintenance and Provisioning
PM&C	Platform Management and Configuration
RMS	Rack Mount Server
SPR	Subscriber Profile Repository
TPD	Tekelec Platform Distribution
TVOE	Tekelec Virtualized Operating Environment
UDR	User Data Repository
UI	User Interface

Acronym	Meaning
VIP	Virtual IP
VM	Virtual Machine
VPN	Virtual Private Network
ХМІ	External Management Interface
XSI	External Signaling Interface

1.4 Terminology

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

Table 2: Terminology

Term	Meaning
Upgrade	The process of converting an application from its current release on a system to a new release.
Major Upgrade	An upgrade from a current release to a new major release.
Incremental Upgrade	An upgrade from a current build to a new build in the same major release.
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 new 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 that is performed during an 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. 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. After 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

Term	Meaning
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.
Site	Physical location where one or more network elements reside.
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 do 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 on 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, and so on) that enable a 3rd party entity to install, configuration, and maintain Oracle products for Oracle customers.
NO	Network OAM for Oracle Communications User Data Repository.

1.5 How to use this Document

When using this document, there are a few key points which help to understand the intent of the author. These points are as follows;

- 1. Before beginning a procedure, completely read the instructional text (immediately after the section heading for each procedure) and all associated procedural warnings or notes.
- 2. Before performing a step in a procedure, completely read the left and right columns including any step specific warnings or notes.
- 3. If a procedural step fails to run successfully or fails to receive the required 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 <u>http://www.oracle.com/us/support/contact/index.html</u> for assistance before attempting to continue.

1.5.1 Performing Procedures

Familiarize yourself with the structure and conventions used in these procedures before performing them. Table 1 and the details below provide an example of how procedural steps might be displayed in this document.

Column 1: Step

- Column 1 in Table 1 contains the step number and also a checkbox if the step requires an action.
- Sub-steps in a Step X are referred to as Step X.Y. (See example: Step 1 has sub-steps Steps 1.1 to 1.2).
- Mark checkboxes in as steps are performed to keep track of the progress during the procedure.

Column 2: Procedure

• Column 2 in Table 1 contains a heading which indicates the server/IP being accessed as well as text instructions and/or notes. This column may also describe the operations to be performed or observed during the step.

Column 3: Result

- Column 3 in Table 1 generally displays the results of performing the instructions in column 2.
- The Result column can also display any of the following:
 - o Inputs (commands or responses) required.
 - o Outputs which are displayed on the terminal.
 - o Illustrations or graphic figures related to the step instruction.
 - o Screen captures from the product GUI related to the step instruction.

Table 3: Sample Procedure

Step	Procedure	Result
1.	Active NOAMP VIP: 1. Access the command prompt. 2. Log into the server as the admusr user.	Login as: admusr Using keyboard-interactive authentication. Password: <pre>password></pre> NOTE: The password does note show on the screen as the characters are entered.
2.	Active NOAMP VIP: Output diaplays as the server returns to a command prompt.	<pre>*** TRUNCATED OUTPUT *** 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/awpcommon:/usr/T KLC/comagent-gui:/usr/TKLC/comagent:/usr/TKLC/dpi:/usr/TKLC/capm/prod/plugins PRODPATH=/opt/comcol/prod RUNID=00 [admusr@908070109-NO-A ~]\$</pre>

Step	Procedure	Result	
3.	Active NOAMP VIP: Verify that the correct date and time are displayed in GMT (+/- 4 min.)	date -u Thu Apr 24 17:13:17 UTC 2014 [admusr@908070109-NO-A filemgmt]\$	
	THIS PROCEDURE HAS BEEN COMPLETED		

1.6 Recommendations

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

1.6.1 Frequency of Health Checks

You can run the Perform Health Check or View Logs steps freely or repeat as many times as necessary in between procedures during the upgrade process. It is not recommended to do this in between steps in 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 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 are 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.

Chapter 2. General Description

This document defines the step-by-step actions performed for 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 12.6.2.0.0, 12.6.3.0.0, and 12.6.3.1.0 to 12.7.0.0.0.

2.1 Supported Upgrade Paths

The supported Oracle Communications User Data Repository upgrade paths.

- 12.6.2.0.0 to 12.7.0.0.0
- 12.6.3.0.0 to 12.7.0.0.0
- 12.6.3.1.0 to 12.7.0.0.0

NOTE: Initial installation is not in 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 12.7.0 release. Use the Upgrade Procedures and Release Notes documents contained in the Firmware Upgrade Packs to assess whether a firmware upgrade is necessary. Perform firmware upgrade procedures if required by [3].

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. Refer to [3].

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 used to host several functions, including:

- PM&C
- Oracle Communications User Data Repository NOAMP, applications

TVOE host servers (that is, servers running TVOE and 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 performed days or weeks before the application upgrades (perhaps site-at-a-time)

- Options to Upgrade TVOE and application at the same maintenance window:
 - o Option B: Upgrade TVOE and application, followed by another TVOE and application. Example: for standby NOAMP Upgrade:
 - i. Stop the application
 - ii. Upgrade TVOE
 - iii. Upgrade the application
 - iv. Start the application
 - v. Repeat for the active NOAMP.
 - o 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 applications on the server. Note also that the TVOE virtual hosts may be hosting NOAMP applications.

The procedure for upgrading TVOE environments before the application upgrades (Option A) is documented in 3.3.6.

2.5 Traffic Management during Upgrade

Upgrade of NOAM servers is not expected to affect traffic-handling servers.

2.6 Provisioning during Upgrade

For Oracle Communications User Data Repository 12.7.0, rovisioning (live traffic) continues while the upgrade is being performed. While the standby NOAMP is being upgraded, the active NOAMP receives provisioning requests. After the upgrade is complete, replication is turned on to the standby NOAMP to sync the most recent requests from the active NOAMP. Then the standby NOAMP becomes active to start receiving provisioning requests, while the previous active NOAMP is being upgraded.

2.7 Configurations

2.7.1 Low Capacity Configurations (Fully Virtualized with TVOE)

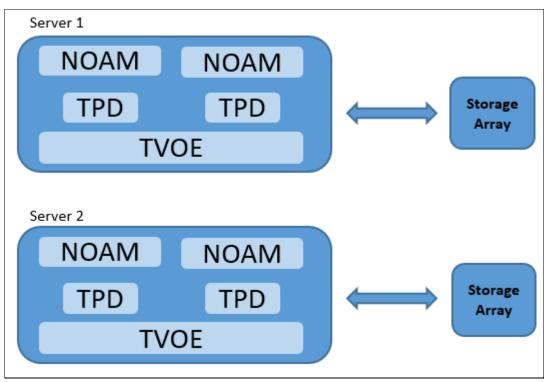
This includes all Oracle Communications User Data Repository software running on a TVOE virtualization environment in each server, resulting in a fully-virtualized, fully-redundant HA configuration. This can be deployed either as a single site or as a geo-redundant deployment, with 2 servers at each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

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

Harware IDs Supported:

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

Figure 1: Low Capacity Single-Site Configuration



2.7.2 Cloud Configurations

This includes all Oracle Communications User Data Repository software running in 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 [4] for full details.

No	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 Sequence of Upgrade

Oracle Communications User Data Repository supports fully virtualized configurations, partially virtualized configurations, and cloud configurations. In fully virtualized configurations PM&C, NOAMPs functions are hosted over TVOE on one server. In cloud configurations, TVOE and PM&C upgrade operations do not apply. The upgrade procedures vary slightly between these configurations.

Oracle Communications User Data Repository Software Upgrade Procedure 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. Use the Upgrade Procedures and Release Notes documents contained in the Firmware Upgrade Packs to assess whether a firmware upgrade is necessary.	Update firmware if required. Refer to Use the Upgrade Procedures and Release Notes documents contained in the Firmware Upgrade Packs to assess whether a firmware upgrade is necessary.	N/A
Upgrade TVOE if required. Refer to [2]	Upgrade PM&C if required. Refer to [3].	N/A
Upgrade PM&C, if required refer [3]	Upgrade TVOE, if required Refer [2].	N/A
Upgrade Oracle Communications User Data Repository application	Upgrade Oracle Communications User Data Repository application	Upgrade Oracle Communications User Data Repository application

Chapter 3. Upgrade Planning and pre-upgrade procedures

This section contains all information necessary to prepare for and perform an upgrade. The materials required to perform an upgrade are described and the pre-upgrade procedures that are run to ensure the system is 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 takes 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 perform any actions on your system. Only the procedures are used when performing upgrade actions, beginning with Procedure 1: Required Materials Check.

3.1 Required Materials

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

- Target-release application ISO image file, or target-release application media.
- GUI access to the Oracle Communications User Data Repository Network OAMP 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 OAMP 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 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 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 (that is, 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 IMI IP address of the server).

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 is in the format:

UDR-12.7.0.0.0_19.3.0-x86_64.iso

NOTE: Actual number values may vary between releases.

When performing this upgrade procedure, it is assumed that the Oracle Communications User Data Repository ISO image file has been delivered to the premises. The ISO image file must reside on the local workstation used to perform the upgrade, and anybody performing the upgrade must have access to the ISO image file. If you are at a remote location, it is assumed the ISO file is available to you before starting the upgrade procedure.

3.1.2 Logins, Passwords and Site Information

Obtain all the information requested in the following table. This ensures that the necessary administration information is available before an upgrade starts. Consider the confidential nature of the information recorded in this table. While all of the information in the table is required to complete the upgrade, there may be security policies in place that require secure disposal after the upgrade completes.

	Description	Recorded Value
Credentials	GUI Admin Username ¹	
	GUI Admin Password	
	Admusr Password ²	
	Root Password ³	
	Blades iLO Admin Username	
	Blades iLO Admin Password	
	PM&C GUI Admin Username	
	PM&C GUI Admin Password	
	PM&C root Password	
	PM&C pmacftpusr password	
	OA GUI Username	
	OA GUI Password	
VPN Access Details	Customer VPN information (if needed)	
NO	Primary NOAMP	
	DR NOAMP	
	XMI VIP address ⁴	
	NO 1 XMI IP Address	
	NO 2 XMI IP Address	
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	

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 activities.

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

² 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 root passwords for the servers must also be recorded; use additional space at the bottom of this table.

³ 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 root passwords for the servers must also be recorded; use additional space at the bottom of this table.

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

- PM&C Upgrade procedure is provided in reference [3].
- 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 in Table 5 do not have an affect on the live system.

Table 5: Pre-Upgrade Overview

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

***NOTE:** ISO transfers to the target systems cannot be estimated because times vary significantly depending on the number of systems and the speed of the network.

The ISO transfers to the target systems must be performed before the scheduled maintenance window. Schedule the required maintenance windows accordingly.

3.3.1 Hardware Upgrade Preparation

Hardware preparation is not necessary when upgrading to release 12.7.0.

3.3.2 Review Release Notes

Before starting the upgrade, review the release notes for the Oracle Communications User Data Repository 12.7.0 release to understand the functional differences and possible traffic impacts of the upgrade.

It is important to check Oracle Communications UDR-PCRF compatibility before performing a major upgrade since all versions are not compatible. Release notes for this and all release are available at <u>https://docs.oracle.com</u>.

3.3.3 Required Materials Check

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

This procedure verifies that all required materials are present.

Check off ($\sqrt{}$) each step as it is completed. Boxes have been provided for this purpose under each step number.

Procedure 1: Required Materials Check

Step	Procedure	Result
1.	Verify all required materials are present.	Materials are listed in Section 3.1. Verify all required materials are present.
2.	Verify all administration data needed during upgrade.	Double-check that all information in Section 3.1.2 is filled-in and accurate.
3.	Contact Oracle CGBU Customer Care Center	Contact the My Oracle Support and inform them of plans to upgrade this system. See Appendix J for these instructions.

3.3.4 Perform Health Check (Upgrade Preparation)

Check off ($\sqrt{}$) each step as it is completed. Boxes have been provided for this purpose under each step number.

Procedure 2: Perform Health Check (Upgrade Preparation)

Step	Procedure
1. 🗌	 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 performed multiple times but must also be performed at least once in 24 to 36 hours before the start of the upgrade procedures. Perform Health Check procedures as specified in Appendix B.

3.3.5 ISO Administration

Check off ($\sqrt{}$) each step as it is completed. Boxes have been provided for this purpose under each step number.

Procedure 3: ISO Administration for Upgrades

Step	Procedure	Result
1.	Using the VIP address, access the primary NOAMP GUI.	Access the primary NOAMP GUI as specified in Appendix A .

Step	Procedure	Result			
2. 🗌	Active NOAMP VIP: Upload ISO file to	Main Menu: Status & Manage -> Files			
	the active	OCUDR-A OCUDR-B DR-OCUDR-A DR-OCUDR-B			
	NOAMP server	File Name	Size	Туре	Timestamp
	1. Navigate to	TKLCConfigData.DR-OCUDR-A.sh	6.6 KB	sh	2018-05-09 01:08:40 EDT
	Main Menu >	TKLCConfigData.DR-OCUDR-B.sh	6.6 KB	sh	2018-05-09 01:08:40 EDT
	Status &	TKLCConfigData.OCUDR-A.sh	5.8 KB	sh	2018-05-09 00:53:59 EDT
	Manage →Files	TKLCConfigData.OCUDR-B.sh	6.5 KB	sh	2018-05-09 01:08:40 EDT
	2. Using the	udrInitConfig.sh	43.5 KB	sh	2018-01-24 11:13:33 EST
	cursor, select	ugwrap.log .	1.3 KB	log	2018-01-24 12:13:10 EST
	the active	upgrade.log	980.3 KB	log	2018-01-24 12:15:36 EST
	NOAMP server from the list tabs. 3. Click Upload .	Delete View Upload Download	Deple	oy ISO	Validate ISO

Step	Procedure	pository Software Upgrade Procedure Result
3.	Active NOAMP VIP: 1. Click Browse. 2. Select the Drive and directory location of the ISO file for the target release. Select the ISO file and click Open. 3. Click Upload.	 NOTES: It is recommended to access the ISO file for the target release from a local hard drive partition as opposed to a network or flash drive location. Depending on network conditions, this upload may take an extended period of time (> 60 sacs.). Alternatively, the ISO file can be manually transferred to the /var/TKLC/db/filemgmt directory of the active NOAMP server using SFTP. The ISO in the file management directory must have global read permission or the GUI ISO transfer fails, with a security log indicating the lack of read permission. If you upload the file using the GUI, the ISO has global read permission. If you have 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. When scp files use scp -p command.
		File: Browse This is a backup file Upload Cancel File Upload Cancel File Upload Cancel Search OCUDR ISO Crganize Vew folder Image File Desktop Name Date modified Type Size Image File Image F
		Data (D:) Personal Siddhartha Work BMW-3 Bar Build Serve + File name:
		File: Browse UDR-12.4.0.0.0_16.15.0-x86_64.iso This is a backup file Upload
		Cancel

4. 🗌		Result					
	Active NOAMP VIP:	Main Menu: Status & Manage -> Files					
	Click the	Filter* Tasks					
	Timestamp link located on the top right of the						
		OCUDR-A OCUDR-B DR-OCUDR-A DR-OCUDR					
	right panel.	File Name	Size	Туре	Timestamp		
		TKLCConfigData.DR-OCUDR-A.sh	6.6 KB	sh	2018-05-09 01:08:40 EDT		
	A reverse-sorted	TKLCConfigData.DR-OCUDR-B.sh	6.6 KB	sh	2018-05-09 01:08:40 EDT		
	list of files showing the	TKLCConfigData.OCUDR-A.sh	5.8 KB	sh	2018-05-09 00:53:59 EDT		
	newest files at	TKLCConfigData.OCUDR-B.sh	6.5 KB	sh	2018-05-09 01:08:40 EDT		
	the top displays.	UDR-12.4.0.0.0_16.15.0-x86_64.iso	1 GB	iso	2018-03-28 10:33:53 EDT		
	The ISO file	udrlnitConfig.sh	43.5 KB	sh	2018-01-24 11:13:33 EST		
	uploaded in Step	ugwrap.log	1.3 KB	log	2018-01-24 12:13:10 EST		
	3 of this	upgrade.log	980.3 KB	log	2018-01-24 12:15:36 EST		
	procedure is at						
	the top most						
	position in the	Delete View Upload Downloa	ad Dep	loy ISO	Validate ISO		
	File Name	Delete View Opload Dominor	Dob	ioy 100	Validate 100		
5.	column. Active NOAMP VIP: UNDEPLOY all unneeded ISO	1. Select Status & Manage → Files from t Main Menu: Status & Manage -> Files		enu; the	Files screen displays.		
5.	Active NOAMP VIP: UNDEPLOY all	Main Menu: Status & Manage -> Files	s	enu; the	Files screen displays.		
5.	Active NOAMP VIP: UNDEPLOY all unneeded ISO	Main Menu: Status & Manage -> Files	S DR-B				
5.	Active NOAMP VIP: UNDEPLOY all unneeded ISO	Main Menu: Status & Manage -> Files Filter' Tasks OCUDR-A OCUDR-B DR-OCUDR-A DR-OCUE File Name	S DR-B Size	Туре	Timestamp		
5.	Active NOAMP VIP: UNDEPLOY all unneeded ISO	Main Menu: Status & Manage -> Files Filter* Tasks * OCUDR-A OCUDR-B DR-OCUDR-A DR-OCUE File Name TKLCConfigData.DR-OCUDR-A.sh	S DR-B Size 6.6 KB	Type sh	Timestamp 2018-05-09 01:08:40 EDT		
5.	Active NOAMP VIP: UNDEPLOY all unneeded ISO	Main Menu: Status & Manage -> Files Filter* Tasks OCUDR-A OCUDR-B DR-OCUDR-A DR-OCUD File Name TKLCConfigData.DR-OCUDR-A.sh TKLCConfigData.DR-OCUDR-B.sh	S DR-B Size 6.6 KB 6.6 KB	Type sh sh	Timestamp 2018-05-09 01:08:40 EDT 2018-05-09 01:08:40 EDT		
5.	Active NOAMP VIP: UNDEPLOY all unneeded ISO	Main Menu: Status & Manage -> Files Filter* Tasks OCUDR-A OCUDR-B DR-OCUDR-A DR-OCUDR File Name TKLCConfigData.DR-OCUDR-A.sh TKLCConfigData.DR-OCUDR-B.sh TKLCConfigData.OCUDR-A.sh	S DR-B Size 6.6 KB	Type sh	Timestamp 2018-05-09 01:08:40 EDT 2018-05-09 01:08:40 EDT 2018-05-09 00:53:59 EDT		
5.	Active NOAMP VIP: UNDEPLOY all unneeded ISO	Main Menu: Status & Manage -> Files Filter Tasks T OCUDR-A OCUDR-B DR-OCUDR-A DR-OCUE File Name TKLCConfigData.DR-OCUDR-A.sh TKLCConfigData.OCUDR-B.sh TKLCConfigData.OCUDR-B.sh	S DR-B Size 6.6 KB 6.6 KB 5.8 KB 6.5 KB	Type sh sh sh sh sh sh	Timestamp 2018-05-09 01:08:40 EDT 2018-05-09 01:08:40 EDT 2018-05-09 00:53:59 EDT 2018-05-09 01:08:40 EDT		
5.	Active NOAMP VIP: UNDEPLOY all unneeded ISO	Main Menu: Status & Manage -> Files Filter* Tasks * OCUDR-A OCUDR-B DR-OCUDR-A DR-OCUE File Name TKLCConfigData.DR-OCUDR-A.sh TKLCConfigData.OR-OCUDR-B.sh TKLCConfigData.OCUDR-A.sh TKLCConfigData.OCUDR-A.sh TKLCConfigData.OCUDR-B.sh UDR-12.4.0.0_16.15.0-x86_64.iso	S DR-B Size 6.6 KB 6.6 KB 5.8 KB 6.5 KB 1 GB	Type sh sh sh sh sh sh sh	Timestamp 2018-05-09 01:08:40 EDT 2018-05-09 01:08:40 EDT 2018-05-09 00:53:59 EDT 2018-05-09 01:08:40 EDT 2018-05-09 01:08:40 EDT 2018-05-09 01:08:40 EDT 2018-05-09 01:08:40 EDT		
5.	Active NOAMP VIP: UNDEPLOY all unneeded ISO	Main Menu: Status & Manage -> Files Filter* Tasks * OCUDR-A OCUDR-B DR-OCUDR-A DR-OCUDR File Name TKLCConfigData.DR-OCUDR-A.sh TKLCConfigData.OR-OCUDR-B.sh TKLCConfigData.OCUDR-A.sh TKLCConfigData.OCUDR-A.sh TKLCConfigData.OCUDR-A.sh TKLCConfigData.OCUDR-B.sh UDR-12.4.0.0_16.15.0-x86_64.iso udrinitConfig.sh	S DR-B Size 6.6 KB 6.6 KB 5.8 KB 6.5 KB 1 GB 43.5 KB	Type sh sh sh sh ish sh sh	Timestamp 2018-05-09 01:08:40 EDT 2018-05-28 10:33:53 EDT 2018-01-24 11:13:33 EST		
5.	Active NOAMP VIP: UNDEPLOY all unneeded ISO	Main Menu: Status & Manage -> Files Filter* Tasks * OCUDR-A OCUDR-B DR-OCUDR-A DR-OCUDR File Name TKLCConfigData.DR-OCUDR-A.sh TKLCConfigData.OR-OCUDR-B.sh TKLCConfigData.OCUDR-A.sh TKLCConfigData.OCUDR-A.sh TKLCConfigData.OCUDR-A.sh TKLCConfigData.OCUDR-B.sh UDR-12.4.0.0_16.15.0-x86_64.iso udrinitConfig.sh	S DR-B Size 6.6 KB 6.6 KB 5.8 KB 6.5 KB 1 GB 43.5 KB	Type sh sh sh sh ish sh sh	Timestamp 2018-05-09 01:08:40 EE 2018-05-09 01:08:40 EE 2018-05-09 00:53:59 EE 2018-05-09 01:08:40 EE 2018-05-09 01:08:40 EE 2018-03-28 10:33:53 EE 2018-01-24 11:13:33 ES		
5.	Active NOAMP VIP: UNDEPLOY all unneeded ISO	Main Menu: Status & Manage -> Files Filter* Tasks * OCUDR-A OCUDR-B DR-OCUDR-A DR-OCUE File Name TKLCConfigData.DR-OCUDR-A.sh TKLCConfigData.OR-OCUDR-B.sh TKLCConfigData.OCUDR-A.sh TKLCConfigData.OCUDR-A.sh TKLCConfigData.OCUDR-B.sh UDR-12.4.0.0_16.15.0-x86_64.iso	S DR-B Size 6.6 KB 6.6 KB 5.8 KB 6.5 KB 1 GB	Type sh sh sh sh sh sh sh	Timestamp 2018-05-09 01:08:40 ED 2018-05-09 01:08:40 ED		

Step	Procedure	R	lesult			
6.	Active NOAMP VIP (GUI): Transfer ISO to all remaining servers via the GUI session. Select the < <i>ISO</i> <i>filename></i> and then click Deploy ISO.	Main Menu: Status & Manage > Files Filer Tasks • BL908050101-no-a BL908050103-no-b BL908050101-no-a BL908050103-no-b BackupEackup udr.BL908050103-no-b Configuration. NETWORK_OAMP20180211_021512.AUT backupEackup udr.BL908050103-no-b Configuration. NETWORK_OAMP20180212_021512.AUT backupEackup udr.BL908050103-no-b Provisioning.NETWORK_OAMP20180212_031513.AUTC buckupEackup udr.BL908050103-no-b Provisioning.NETWORK_OAMP20180212_031513.AUTC buckupEackup udr.BL908050103-no-b Provisioning.NETWORK_OAMP20180212_031513.AUTC buckupEackup udr.BL908050103-no-b Provisioning.NETWORK_OAMP20180212_031513.AUTC buckupEackup udr.BL908050103-no-b Provisioning NETWORK_OAMP20180212_031513.AUTC buckupEackup udr.BL908050103-no-b Provisioning NETWORK_OAMP20180212_031513.AUTC buckupEackup udr.BL908050103-no-b Provisioning NETWORK_OAMP20180212_031513.AUTC udminConfig.s h upgrade.log upgrade.log upgrade.log	10.tar D.tar	Siz 2.9 2.9 19: 19: 10: 43: 1.3	e Type MB tar MB tar 5.8 MB tar 5.8 MB tar	2018-02-21 02-51 05-mp-4 2018-02-21 02-51 03-55 7 2018-02-12 02-151 03-55 7 2018-02-12 02-151 03-55 7 2018-02-21 03-15-17 EST 2018-02-21 03-15-17 EST 2018-01-02 18-26-38 EST 2018-01-02 07-16-13 EST 2018-01-02 07-16-13 EST
	Click OK .	Delete View ISO Deployment Report	Upload Download	Deplo	y ISO	Validate ISO
	This moves the ISO file to the isos directory and starts the	Filter* Tasks* OCUDR-A OCUDR-B DR-OCUDR-A DR-OCU File Name	JDR-B Size	Туре	Time	stamp
	secure copy of	isos/UDR-12.4.0.0.0_16.15.0-x86_64.iso	1 GB	iso		-03-28 10:33:53 EDT
	the ISO to each	TKLCConfigData.DR-OCUDR-A.sh	6.6 KB	sh		-05-09 01:08:40 EDT
	server in the	TKLCConfigData.DR-OCUDR-B.sh	6.6 KB	sh		-05-09 01:08:40 EDT
	system. A status window opens as	-	5.8 KB	sh		-05-09 00:53:59 EDT
	well.	TKLCConfigData.OCUDR-A.sh	6.5 KB			
	-	TKLCConfigData.OCUDR-B.sh		sh		-05-09 01:08:40 EDT
		udrinitConfig.sh	43.5 KB	sh		-01-24 11:13:33 EST
		ugwrap.log	1.3 KB	log		-01-24 12:13:10 EST
		upgrade.log	980.3 KB	log	2018	-01-24 12:15:36 EST
		Status • ISO d	leployment sta	⊗ rted.		

Step	Procedure	Result						
8.	Active NOAMP VIP (GUI): To view the status	Main Menu: Status & Manage -> Files						
	of the deployed ISO, select the file	OCUDR-A OCUDR-B DR-OCUDR-A DR-OCUDR-B						
	isos/ <iso< th=""><th>File Name</th><th>Size</th><th>Туре</th><th>Timestamp</th></iso<>	File Name	Size	Туре	Timestamp			
	<i>filename></i> and then click View	isos/UDR-12.4.0.0.0_16.15.0-x86_64.iso	1 GB	iso	2018-03-28 10:33:53 EDT			
	ISO Deployment	TKLCConfigData.DR-OCUDR-A.sh	6.6 KB	sh	2018-05-09 01:08:40 EDT			
	Report or click	TKLCConfigData.DR-OCUDR-B.sh	6.6 KB	sh	2018-05-09 01:08:40 EDT			
	the Tasks	TKLCConfigData.OCUDR-A.sh	5.8 KB	sh	2018-05-09 00:53:59 EDT			
	dropdown.	TKLCConfigData.OCUDR-B.sh	6.5 KB	sh	2018-05-09 01:08:40 EDT			
	NOTE: This button	udrInitConfig.sh	43.5 KB	sh	2018-01-24 11:13:33 EST			
	displays when a	ugwrap.log	1.3 KB	log	2018-01-24 12:13:10 EST			
	deployed ISO is	upgrade.log	980.3 KB	log	2018-01-24 12:15:36 EST			
	selected. All other							
	times, it is the View button.							
	view button.							
	To view the isos	Delete View ISO Deployment Report U	pload Download	Deplo	oy ISO Validate ISO			
	directory on each				-			
	server that is deployed, select	Main Menu: Status & Manage ->	Files [Vie	w]				
	the server tabs		-	-				
	near the top of							
	the menu.				e -> Files [View]			
	As an optional		Mon May 14	04:49:4	8 2018 EDT			
	check (after the	Deployment report for UDR-12.4.0.0	0.0_16.15.0	-x86_64.	iso:			
	ISO is deployed),	Deployed on 4/4 servers.						
	can click Validate							
	ISO to ensure it is	OCUDR-A: Deployed OCUDR-B: Deployed						
	valid.	DR-OCUDR-A: Deployed						
		DR-OCUDR-B: Deployed						
9. 🗌	Active NOAMP	Use your SSH client to connect to the serve	er (For examp	ole: ssh o	r putty):			
	terminal	<pre>ssh<server address=""></server></pre>						
	Log on to the active NOAMP	login as: admusr						
	terminal using the	<pre>password: <enter password=""></enter></pre>						
	credentials							
	provided							
10.	Active NOAMP	Mount the ISO image that is used for upgra	ade					
	terminal:			isos/ II	DR-			
	Mount the ISO	<pre>\$ sudo mount -o loop /var/TKLC/db/filemgmt/isos/ UDR- 12.7.0.0.0 19.3.0-x86 64.iso/mnt/upgrade</pre>						
	image.							

Step	Procedure	Result				
11.	Active NOAMP terminal: Extract and copy the script to /var/tmp	Copy the file to /var/tmp for execution. \$ cp /mnt/upgrade/upgrade/bin/changeLinksToFiles.php /var/tmp				
12.	Active NOAMP terminal: Unmount the ISO image	<pre>\$ sudo umount /mnt/upgrade</pre>				
13.	Active NOAMP terminal: Verify that the script copied is executable	<pre>\$ chmod +x /var/tmp/changeLinksToFiles.php</pre>				
14.	Active NOAMP terminal: Run the script	<pre>\$ /var/tmp/changeLinksToFiles.php</pre>				
	THIS PROCEDURE HAS BEEN COMPLETED					

3.3.6 Upgrade TVOE Hosts at a Site (before application upgrade MW)

This procedure applies if the TVOE hosts at a site (primary or DR) are upgraded before the start of the Oracle Communications User Data Repository 12.7.0 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	Perform Health Check (Upgrade Preparation)	
Refer to [2]	30 min per TVOE host (see note)	0:01- 3:05	Upgrade TVOE Hosts at a Site (before application upgrade MW)	Oracle Communications User Data Repository servers running as virtual guests on the TVOE host is 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, it is possible to perform multiple TVOE upgrades in parallel.

Check off ($\sqrt{}$) each step as it is completed. Boxes have been provided for this purpose under each step number.

Step	Procedure	Result
1.	Record site	Record Site to be upgraded
2.	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 typically lists the TVOE hosts at a site, and their versions.
3.	Upgrade the TVOE hosting the standby servers	Upgrade the TVOE host of a standby server: Perform Appendix G,Upgrade TVOE Platform
4.	Upgrade the TVOE hosting the active servers	Upgrade TVOE of the active server Perform Appendix G,Upgrade TVOE Platform NOTE: This causes a failover of the Oracle Communications User Data Repository on the TVOE.
5.	Repeat for TVOE hosts at a Site	Repeat steps 3 and 4 for multiple TVOE hosts at a site, as time permits.

Procedure 4: Upgrade TVOE Hosts at a Site (before application upgrade MW)

3.4 Order of Application Upgrade

The following list displays the order to upgrade the servers (primary and DR sites):

- 4. Site 2 NOAMPs (DR spares)
- 5. Primary standby NOAMP
- 6. Primary active NOAMP

3.5 Upgrade Execution Overview for Normal Capacity C-Class Configuration

3.5.1 Primary NOAMP/DR NOAMP Execution Overview

The times in Table 6 and Table 7 are the estimated times for upgrading 2 NOAMPs and 2 DR NOAMPs. The DR NOAMPs are upgraded first, followed by the primary NOAMPs.

Table 6: DR NOAMP Upgrade Procedures for Normal	Capacity C-Class Configurations
---	--

Procedure	Drocodure Title	Elapsed Time (Hours:Minutes)		
Number	Procedure Title	This Step	Cumulative	
4	Remove Additional GUI Sessions	00:05	00:05	
5	Full Database Backup	00:30	00:35	
6 or 7	Major Upgrade DR NOAMP NE or Incremental Upgrade DR NOAMP NE	03:30	04:05	

Table 7: Primary NOAMP Upgrade Procedures for Normal Capacity C-Class Configurations

Procedure	Procedure Title	Elapsed Time (Hours:Minutes)		
Number	Procedure Inte	This Step	Cumulative	
8 or 9	Major Upgrade Primary NOAMP NE or Incremental Upgrade Primary NOAMP NE	03:30	03:30	

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

3.6 Upgrade Execution Overview for Low Capacity Configurations

3.6.1 Primary NOAMP/DR NOAMP Execution Overview

The times in Table 8 and Table 9 are the estimated times for upgrading 2 NOAMPs and 2 DR NOAMPs. The primary NOAMPs are upgraded first, followed by the DR NOAMPs.

Table 8: DR NOAMP Upgrade Procedures for Low Capacity Configurations

Procedure Number		Elapsed Time (Hours:Minutes)		
	Procedure Title	This Step	Cumulative	
4	Remove Additional GUI Sessions	00:05	00:05	
5	Full Database Backup	00:30	00:35	
6 or 7	Major Upgrade DR NOAMP NE or Incremental Upgrade DR NOAMP NE	01:00	01:35	

Table 9: Primary NOAMP Upgrade Procedures for Low Capacity Configurations

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

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

3.7 Upgrade Acceptance Overview

 Table 10: Upgrade Acceptance overview

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

Chapter 4. Primary NOAMP/DR NOAMP Upgrade Execution

Open A Service Ticket at My Oracle Support (Appendix J) and inform them of your plans to upgrade this system before performing this upgrade.

Before upgrade, 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 the Normal state, put these servers into the Normal or the Application Disabled state before the upgrade process is started.

The sequence of upgrade is designed so that servers providing support services to other servers are upgraded first.

**** WARNING *****

Read the following notes on this procedure:

Procedure completion times listed in this document 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 is 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 checkbox.

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

Retention of captured data is required for future support references.

4.1 Perform Health Check (Pre Upgrade)

Procedure 5: Health Check (Pre Upgrade)

1.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 performed multiple
times but must also be performed at least once 24 to 36 hours before the start of a maintenance window.
Perform Health Check procedures as specified in **Appendix B**.

4.2 Primary NOAMP/DR NOAMP Upgrade

This procedures detail how to perform upgrades for primary NOAMP and DR NOAMP servers.

4.2.1 Remove Additional GUI Sessions

Check off ($\sqrt{}$) each step as it is completed. Boxes have been provided for this purpose under each step number.

Procedure 6: Remove Additional GUI Sessions

Step	Procedure		Result				
1.	Using the VIP address, access the primary NOAMP GUI.	Access the primary NOAMP GUI as specified in Appendix A .					
2.	Active NOAMP VIP: Navigate to Main Menu → Administration → Access Control → Sessions	Main Menu: Ad	ministration -> Access Control -> Expiration Time Wed Mar 01 17:32:38 2017 EST	Sessions Login Time Wed Mar 01 14:25:14 2017 EST	User guiadmin	Group admin	Wed Mar 01 15 Remote IP 10.75:10.242
3.	Active NOAMP VIP: In the right panel, the list of active GUI sessions connected to the active NOAMP server displays.	Main Menu: Ad	ministration → Access Control → Expiration Time Wed Mar 01 17:32:38 2017 EST	Sessions Login Time Wed Mar 01 14:25:14 2017 EST	User guiadmin	Group admin	Wed Mar 01 15 Remote IP 10.75.10.242

Step	Procedure	Result				
4.	Active NOAMP VIP: The User ID and Remote IP address of each session are displayed as seen	Main Menu: Admini Sess ID 19	stration -> Access Control -> Sessi Expiration Time Wed Mar 01 17:32:38 2017 EST	ONS Login Time Wed Mar 01 14:25:14 2017 EST	User guladmin	Group Remote IP admin 10.75.10.242
	on the right. Every attempt is made to contact users not engaged in this Upgrade activity and request that they discontinue GUI access until the upgrade activity has completed.					
5.	Active NOAMP VIP: If unable to identify or contact the session owners, sessions not related to the upgrade activity may be selected and deleted as follows: 1. Select the session for deletion with the cursor. 2. In the bottom left of the right panel, click Delete. 3. Click OK.	Sess ID 19	dministration -> Access C Expiration Time Wed Mar 01 17:32:38 2017 Ued Mar 01 17:32:38 2017 Delete User Session (s): 193 Prevent this page from Prevent this page from ession screen prevents o do so by accident, a m	n creating additional c	dialogs.	

Step	Procedure	Result					
6.	Active NOAMP VIP: A confirmation message displays in the Info tab indicating the session ID which was deleted.	Main Menu: Administration -> Session Info Login Info Login Info Ved Info Ved					
7.	Active NOAMP VIP: Delete any additional GUI sessions as needed.	Repeat Steps Error! Reference source not found. and Error! Reference source not found. of th is Procedure for each additional GUI session to be deleted.					
	THIS PROCEDURE HAS BEEN COMPLETED						

4.2.2 Full Database Backup (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. This backup is used in the event of a backout or rollback of the software release.

Procedure 7: Full Database Backup

Step	Procedure	Result										
1. 🗌	Using the VIP address, access the primary NOAMP GUI.	Access the primary NOAMP GUI as specified in Appendix A .										
2. 🗌	Active NOAMP VIP: Navigate to Main	Main Menu: Status & Manage -> Database										
	Menu → Status & Manage →	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
	Database	Site2_NE_DR_NO	DR-OCUDR-B	Network OAM&P	Spare	N/A	Normal	0	Normal	NotApplicable	Allowed	NotApplicable
	Database	Site1_NE_NO	OCUDR-A	Network OAM&P	Active	N/A	Normal	0	Normal	NotApplicable	Allowed	NotApplicable
		Site1_NE_NO	OCUDR-B	Network OAM&P	Standby	N/A	Normal	0	Normal	NotApplicable	Allowed	NotApplicable
		Site2_NE_DR_NO	DR-OCUDR-A	Network OAM&P	Spare	N/A	Normal	0	Normal	NotApplicable	Allowed	NotApplicable
3.	Active NOAMP VIP: Record the names of all servers.	Using the in the names additional NOTE: The	of all serv pages if no	ers to the ecessary t	Servers o accom	Worksh modate	eet in your n	Appendix iumber o	k C.2 (pri f Netwo	nt or pho rk Eleme	otocopy	n) record

tep	Procedure	Result										
	Active NOAMP VIP:	Main Menu: Administration -> Software Management -> Upgrade										
	Navigate to Main											
	Menu →	Filter' Tasks T										
	Administration → Software	DR_NO_SG NO_SG										
	Management → Upgrade		Upgrade State	OAM HA Role	Server Role	Function	Application Version	Start Time	Finish Tim			
		Hostname	Server Status	Appl HA Role	Network Element		Upgrade ISO	Status Message	•			
l		OCUDR-A	Backup Neede	ed Active	Network OAM&P	OAM&P	12.4.0.0.0-16.14.0					
	Backup the COMCOL run		Err	N/A	Site1_NE_NO							
	nvironment	OCUDR-B	Backup Neede		Network OAM&P	OAM&P	12.4.0.0.0-16.14.0					
			Err	N/A	Site1_NE_NO							
	Active NOAMP VIP: Click Backup All at	Main Menu	: Administr	ration -> Softv	ware Manageme	ent -> Upgr	rade					
	left bottom of the screen; the full	Filter* 🔻	Tasks 🔻									
	backups begin.	DR_NO_SG	NO_SG									
	After clicking	Hostname	Upgrade Stat	e OAM HA Role	e Server Role	Function	Application Version	Start Time	Finish Tim			
	kup, an	Hostname	Server Status	s Appl HA Role	Network Eleme	nt	Upgrade ISO	Status Message				
	cional screen	OCUDR-A	Backup Nee	ded Active	Network OAM&P	OAM&P	12.4.0.0.0-16.14.0					
opens				N/A	Site1_NE_NO							
•	is to ovelude	OCUDR-B	Backup Nee			OAM&P	12.4.0.0.0-16.14.0		l			
	ult is to exclude latabase parts.		: Err	N/A	¦ Site1_NE_NO							
	the database parts											
are	included, then	Backup	Backup A	ll Checkup	Checkup All	Upgrade S	Server Accept	Report R	Report All			
	backup takes	Buonup	Buchup A	Checkup	onconup An	opgrado t	Accopt	Roport				
	onger and produce arger backup files in											
/var/TKLC/db/file mgmt. They are not	Network eler	ment	Action	Server(s) in the r	oroner state t	for backup						
	Network element		Action	Server(s) in the p	erver(s) in the proper state for backup							
	required for a full	Site1 NE NO		Back up	OCUDR-A OCUD	OCUDR-A OCUDR-B						
ba	ickup.				v							
	Click OK to begin											
th	e backup.	Site2_NE_DR	_NO	Back up	DR-OCUDR-A DR-OCUDR-B							
		Full backup	options									
					Select "Exclude" to perform a full backup of the COMCOL run e				, excluding !			
		Database par	rts exclusion	Exclude	Select "Do not exclude" to perform a full backup of the COMCOL run environment with /db/filemgmt.							
				Do not exclude								
			Advincingini.									
		Ok Car	ncel									

Step	Procedure	Result											
6.	Active NOAMP VIP: The Server Status indicates Backup in	Main Menu: Administration -> Software Management -> Upgrade											
	Progress The progress of the full backups can be viewed in the Tasks	DR_NO_SG NO_SG Hostname		Upgrade State Server Status Backup In Progress	Appl HA Role	Server Role Network Elem	ment	Application Version Upgrade ISO 12.4.0.0.0-16.14.0	Start Time Status Message	Finish Tir			
	box, as well as from the Status & Manage->Tasks- >Active Tasks	OCUDR-B Err N/A Site1_NE_NO OCUDR-B Backup in Progress Standby Network OAM&P OAM&P 12.4.0.0.0-16.14.0 Image: Comparison of the comparison of t											
ļ	screen. As each full backun	Tasks	Tasks										
ļ	As each full backup completes, its task	ID	ID Hostnar		Name		Task State	Details		Progress			
ļ	updates to indicate its success or failure.	47	OCUDR-B		Pre-upgrade full	backup	running	Full backup on	OCUDR-B	10%			
ļ	When all full backup	75	DR-OCUDR-A		Pre-upgrade full I	oackup	completed	Full backup on	DR-OCUDR-A	100%			
ļ	tasks finish	47	DR-OCUDR-B		Pre-upgrade full I	backup	completed	Full backup on DR-OCUDR-B		100%			
ļ	successfully, this procedure is	0	0 OCUDR-A		Pre-upgrade full	Pre-upgrade full backup		Full backup on	OCUDR-A	100%			
7. 🗌	Active NOAMP VIP: Navigate to Main Menu → Administration →	Main Menu: Status & Manage -> Tasks -> Active Tasks Mon May 14 05:26:32 2018 Priter OcubeRa DR-OCUDRA DR-OCUDRA Progress 0 Pre-upgrade full backup completed 2018-05-14 05 24 38 EDT 0 Full backup on OCUDRA 100% Mon May 14 05:26:32 2018 Mon May 14 05:26:32 2018 0 Pre-upgrade full backup completed 2018-05-14 05 24 38 EDT 0 Full backup on OCUDRA 100% Mon May 14 05:26:32 2018 Mon May 14 05:26:32 2018 <											
	Software Management → Upgrade Click Tasks dropdown.	0 Pre-upgrade full backup completed 2018-05-14 05 24 21 EDT 2018-05-14 05 24 38 EDT 0 Full backup on OCUDR-A											
8. 🗌	Mark the backup of the server as complete.	Reference the Servers Worksheet in Appendix C.2 and check off the server which just completed backup.											
+					URE HAS BEEN								

4.2.3 Major Upgrade DR NOAMP NE

This procedure details how to perform major upgrades for DR NOAMP server to various possible upgrade paths.

NOTE: Ensure you are on latest patch before upgrading from UDR 12.6.2.0.0, 12.6.3.0.0, and 12.6.3.1.0 to 12.7.0.0.0.

Procedure 8: Major Upgrade DR NOAMP NE

Step	Procedure					Resu	lt					
1.	Using the VIP address, access the primary NOAMP GUI.	Access the p	ccess the primary NOAMP GUI as specified in Appendix A .									
2. 🗌	Active NOAMP VIP:	Main Menu: Sta		e -> Database								
	Navigate to Main Menu →	Network Element	Server	Role	OAM Max HA Role	Application Max HA Role	Status	DB Level	OAM Repl Status	SIG Repi Status	Repl Status	Repl Audit Status
	Status &	Site2_NE_DR_NO	DR-OCUDR-B	Network OAM&P	Spare	N/A	Normal	0	Normal	NotApplicable	Allowed	NotApplicable
		Site1_NE_NO	OCUDR-A	Network OAM&P	Active	N/A	Normal	0	Normal	NotApplicable	Allowed	NotApplicable
	Manage →	Site1_NE_NO	OCUDR-B	Network OAM&P	Standby	N/A	Normal	0	Normal	NotApplicable	Allowed	NotApplicable
	Database	Site2_NE_DR_NO	DR-OCUDR-A	Network OAM&P	Spare	N/A	Normal	0	Normal	NotApplicable	Allowed	NotApplicable
3.	Record the name of the DR NOAMP Network Element in the space provided to the right.	Using the inf the name of DR NOAMP I	the DRNC	AMP Netw	ork Elem	-	-			-	ormatior	י) record

Step	Procedure	Result
4.	Active NOAMP VIP: From the Network Element filter list, select the NE name for the DR NOAMP.	Main Menu: Status & Manage -> Database Fitter * Info* * Tasks * Fitter Scope: Network Element * Server Group * Reset Normal Normal Normal Normal Normal Normal Normal Normal Obsplay Filter: None * = * Reset
5.	Active NOAMP VIP: Click Go.	Display Filter: - None - V = V
6.	Active NOAMP VIP: The list of servers associated with DR NOAMP Network Element displays.	Main Menu: Status & Manage -> Database (Filtered) Filter Infor Tasks T Network Element Server Role OAM Max HA Application Max HA Role Status Bl Level OAM Repi SiG Repi Repi Status Repi Audit Site2_NE_DR_NO DR-OCUDR-A Network OAM&P Spare NA Normal 0 Normal NotApplicable Allowed NotApplicable Site2_NE_DR_NO DR-OCUDR-B Network OAM&P Spare NA Normal 0 Normal NotApplicable Allowed NotApplicable Site2_NE_DR_NO DR-OCUDR-B Network OAM&P Spare NA Normal 0 Normal NotApplicable NotApplicable NotApplicable Identify each server and its associated Role and HA Role. Allowed NotApplicable Allowed NotApplicable
7.	Active NOAMP VIP: Record the server names appropriately in the space provided to the right.	Identify the DR NOAMP server names and record them in the space provided below: Spare NOAMP Server: Spare NOAMP Server:

Step	Procedure	Result
		rocedure, select one spare DR NOAMP. are in sync using Appendix E before upgrading each spare server.
8.	Active NOAMP VIP: Upgrade server for the first spare DR NOAMP server.	Upgrade server for the first spare DR NOAMP server(identified in Step <i>Error! Reference source n ot found.</i> of this Procedure) as specified in Appendix C.1 Upgrade Server
9.	Active NOAMP VIP: Upgrade server for the second spare DR NOAMP server.	Upgrade server for the second spare DR NOAMP server(identified in Step <i>Error! Reference s</i> ource not found. of this Procedure) as specified in Appendix C.1 Upgrade Server
		THIS PROCEDURE HAS BEEN COMPLETED

4.2.4 Incremental Upgrade DR NOAMP NE

Procedure 9: Incremental Upgrade DR NOAMP NE

Step	Procedure					Resu	lt					
1.	Using the VIP address, access the primary NOAMP GUI.	Access the p	Access the primary NOAMP GUI as specified in Appendix A .									
2.	Active NOAMP VIP: Navigate to Main		Main Menu: Status & Manage -> Database									
	Menu → Status &	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
	Manage →	Site2_NE_DR_NO	DR-OCUDR-B	Network OAM&P	Spare	N/A	Normal	0	Normal	NotApplicable	Allowed	NotApplicable
	Database	Site1_NE_NO	OCUDR-A	Network OAM&P	Active	N/A	Normal	0	Normal	NotApplicable	Allowed	NotApplicable
		Site1_NE_NO	OCUDR-B	Network OAM&P	Standby	N/A	Normal	0	Normal	NotApplicable	Allowed	NotApplicable
		Site2_NE_DR_NO	DR-OCUDR-A	Network OAM&P	Spare	N/A	Normal	0	Normal	NotApplicable	Allowed	NotApplicable
3.	Record the name of the DR NOAMP Network Element in the space provided to the right.	Using the in record the n DR NOAMP	ame of th	e DRNOAI	MP Netw	ork Elen	-				-	ion)

Step	Procedure	Result
4.	Active NOAMP VIP: From the Network Element filter list, select the NE name for the DR NOAMP.	Main Menu: Status & Manage -> Database Filter • Info* • Tasks • Filter Filter Scope: Network Element • Server Group • Reset Role: All • Reset Display Filter: None • = • Reset Go
5.	Active NOAMP VIP: Click Go.	SO_UDR Display Filter: Go
6.	Active NOAMP VIP: The list of servers associated with DR NOAMP Network Element displays.	Main Menu: Status & Manage -> Database (Filtered) Filter Infor Tasks Infor Tasks Information Network Element Server Role OAM Max HA Application Max HA Role SiteNO OAM Max HA Application Max HA Role SiteNO OAM Max HA Application Max HA Role SiteNE_DR_NO DR-OCUDR-A Network OAMAP Spare NA Normal OAM Max HA Application Max HA Role SiteNE_DR_NO DR-OCUDR-A Network OAMAP Spare NA Normal 0 Normal NotApplicable Allowed NotApplicable NotApplicable Allowed NotApplicable Allowed
7.	Active NOAMP VIP: Record the server names appropriately in the space provided to the right.	Identify the DR NOAMP server names and record them in the space provided below: Spare NOAMP Server: Spare NOAMP Server:
		ce source not found. of this Procedure, select one spare DR NOAMP.

Step	Procedure	Result
8.	Active NOAMP VIP: Upgrade server for the first spare DR NOAMP server.	Upgrade server for the first spare DR NOAMP server (identified in Step <i>Error! Reference s ource not found.</i> of this Procedure) as specified in Appendix C.1 Upgrade Server
9.	Active NOAMP VIP: Upgrade server for the second spare DR NOAMP server.	Upgrade server for the second spare DR NOAMP server (identified in Step <i>Error! Reference s</i> <i>ource not found.</i> of this Procedure) as specified in Appendix C.1 Upgrade Server
		THIS PROCEDURE HAS BEEN COMPLETED

4.2.5 Major Upgrade Primary NOAMP NE

This procedure details how to perform major upgrades for primary NOAMP server to various possible upgrade paths.

NOTE: Ensure you are on latest patch before upgrading from UDR 12.6.2.0.0, 12.6.3.0.0, and 12.6.3.1.0 to 12.7.0.0.0.

Procedure 10: Major Upgrade Primary NOAMP NE

Step	Procedure					Resu	lt					
1.	Using the VIP address, access the primary NOAMP GUI.	Access the primary NOAMP GUI as specified in Appendix A .										
2.	Active NOAMP VIP: Navigate to Main Menu → Status & Manage → Database	Main Menu: Sta Filter Filter Info [®] Network Element Site2_NE_DR_NO Site1_NE_NO Site1_NE_NO Site2_NE_DR_NO	_	e -> Database	OAM Max HA Role Spare Active Standby Spare	Application Max HA Role N/A N/A N/A N/A	Status Normal Normal Normal	DB Level 0 0 0 0	OAM Repl Status Normal Normal Normal Normal	SIG Repi Status NotApplicable NotApplicable NotApplicable	Repl Status Allowed Allowed Allowed Allowed	Repl Audit Status NotApplicable NotApplicable NotApplicable
3.	Record the name of the primary NOAMP Network Element in the space provided to the right.	Using the in Information provided be Primary NO) record low:	the name	of the p	orimary		-				pace

Step	Procedure	Result
4.	Active NOAMP VIP: From the Network Element filter list, select the Network Element name for the primary NOAMP.	Main Menu: Status & Manage -> Database Filter Info Filter Normal Obsplay Filter: None Image: Im
5.	Active NOAMP VIP: Click Go located on the right end of the filter bar.	Display Filte Go
6.	Active NOAMP VIP: The list of servers associated with the primary NOAMP Network Element displays. Identify each server and the associated.Role and HA Role.	Main Menu: Status & Manage -> Database (Filtered) Filter* Infor Tasks * Network Element Server Role OAM Max HA Application Max HA Role Status DB Level OAM Repl Status Repl Audit Status Site1_NE_NO OCUDR-A Network OAM&P Active N/A Normal 0 Normal NotApplicable Allowed NotApplicable Site1_NE_NO OCUDR-B Network OAM&P Standby N/A Normal 0 Normal NotApplicable Allowed NotApplicable
7.	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: Active NOAMP: Log t be performed on an active NOAMP if upgrade is being done from 12.6.2.0.0, 12.6.3.0.0,

Step	Procedure	Result
8.	Active NOAMP Server: Access the command prompt and login into the active NOAMP server as admusr user	<pre>login as: admusr root@10.250.xx.yy's password:<admusr_password> Last login: Mon Jul 30 10:33:19 2012 from 10.250.80.199 [root@pc9040833-no-a ~]#</admusr_password></pre>
9.	Active NOAMP Server: Switch to root user.	[admusr@ pc9040833-no-a ~]\$ su - password: < <i>root_password</i> >
10.	Active NOAMP Server: NOTE: Subscription Flags are set to a random value before upgrade, you must manually reset the flags.	<pre>Run the iset command using the console for the active NOAMP. # iset -fflags=0 Subscription where "1=1"</pre>
11.	Active NOAMP Server: Performing workarounds for known bugs	Refer to the Oracle Communications UDR 12.7.0 Release Notes document for known customer bugs, evaluate for applicability and perform the workarounds as documented.
NOTE: Ste	p 12 is for the STANE	DBY NOAMP ONLY.
12.	Active NOAMP VIP: Upgrade server for the standby NOAMP server.	Upgrade server for the standby NOAMP server (identified in Step Error! Reference s ource not found. of this Procedure) as specified in Appendix C.1 Upgrade Server
0		TEP 12 MUST BE COMPLETED BEFORE CONTINUING ON TO STEP 13. Patabases are in sync using Appendix E before upgrading the active server
13.	Active NOAMP VIP: Upgrade server for the active NOAMP server.	Upgrade server for the active NOAMP server (identified in Step Error! Reference source n ot found. of this Procedure) as specified in Appendix C.1 Upgrade Server.

Step	Procedure	Result	
		THIS PROCEDURE HAS BEEN COMPLETED	

4.2.6 Incremental Upgrade Primary NOAMP NE

Procedure 11: Incremental Upgrade Primary NOAMP NE

Step	Procedure	Result								
1.	Using the VIP address, access the primary NOAMP GUI.	Access the primary NOAMP GUI as specified in Appendix A .								
2.	Active NOAMP VIP: Navigate to Main Menu → Status & Manage → Database	Main Menu: Status & Manage -> Database Filter Toto Tasks > Network Element Server Role OAM Max HA Application Site2_NE_DR_NO DR-OCUDR-B Network OAM&P Spare N/A Normal O Normal NotApplicable Allowed NotApplicable Site1_NE_NO OCUDR-A Network OAM&P Active N/A Normal 0 Normal NotApplicable Allowed NotApplicable Site2_NE_DR_NO OCUDR-A Network OAM&P Standby N/A Normal 0 Normal NotApplicable Allowed NotApplicable Site2_NE_DR_NO DR-OCUDR-A Network OAM&P Standby N/A Normal 0 NotApplicable Allowed NotApplicable								
3.	Record the name of the primary NOAMP Network Element 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 primary NOAMP Network Element in the space provided below: Primary NOAMP Network Element:								
4.	Active NOAMP VIP: From the Network Element filter list, select the Network Element name for the primary NOAMP.	Main Menu: Status & Manage -> Database Filter Info Filter Scope: Network Element Server Group Role: All Role: Display Filter: Normal Normal Normal								

Step	Procedure					Res	ult					
5.	Active NOAMP VIP: Click Go located on the right end of the filter bar.		Display Filte Go									
6.	Active NOAMP VIP:	Main Menu: St	atus & Ma	nage -> Data	base (Filter	ed)						
	The list of servers	Filter* ▼ Info*				,						
	associated with the	Network Element			OAM Max HA	Application		DB Level	OAM Repl	SIG Repl	David Otativa	Repl Audit
	primary NOAMP Network Element	Site1_NE_NO	Server OCUDR-A	Role Network OAM&P	Role Active	Max HA Role	Status	0	Status	Status NotApplicable	Repl Status	Status NotApplicable
	displays.	Site1_NE_NO	OCUDR-B	Network OAM&P	Standby	N/A	Normal	0	Normal	NotApplicable	Allowed	NotApplicable
	Identify each server and its associated Role and HA Role.											
7.	Active NOAMP VIP: Record the server names appropriately in the space provided to the right.	Standby NC	Identify the primary NOAMP server names and record them in the space provided below: Standby NOAMP: Active NOAMP:									
NOTE: S	Step 8 is for the STAND	BY NOAMP OI	NLY.									
8.	Active NOAMP VIP: Upgrade server for the standby NOAMP server.	Upgrade se <i>ound.</i> of thi			•				-	-	ence soi	urce not f
	<pre>!! WARNING !! \$ *** Verify the D</pre>										er	
9. 🗌	Active NOAMP VIP: Upgrade server for the active NOAMP server.		Upgrade server for the active NOAMP server (identified in Step <i>Error! Reference source not f ound</i> . of this Procedure) as specified in Appendix C.1 Upgrade Server.									
		ТІ	HIS PRO	CEDURE H	AS BEEN	COMPLE	TED					

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

Procedure 12: Health Check (Post Primary NOAMP/DR NOAMP Upgrade)

1.	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.
	Perform Health Check procedures as specified in Appendix B.

Chapter 5. Single server upgrade

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

5.1 Upgrading a Single Server

This procedure is for upgrading a one server Lab RMS only.

Procedure 13: Upgrade Single Server

Step	Procedure	Result
1. 🗌	Identify NOAMP IP Address	Identify IP Address of the single NOAMP server to be upgraded.
2.	Server IMI IP (SSH): SSH to server and login as root user	Use your SSH client to connect to the server (ex. ssh, putty): <pre>ssh<server address=""> login as: admusr password: <enter password=""> Switch to root su - password: <enter password=""></enter></enter></server></pre>
3. 🗌	Open the platcfg tool	su – platcfg
4.	Exit /var/TKLC/db/fil emgmt directory on server to be upgraded	Verify that there is not a user in the /var/TKLC/db/filemgmt directory
5.	Select Maintenance and press Enter	Main MenuMaintenanceDiagnosticsServer ConfigurationNetwork ConfigurationSecurityRemote ConsolesNetBackup ConfigurationExit

Step	Procedure	Result
6.	Select Upgrade and press Enter	Maintenance Menu Upgrade Halt Server Backup and Restore View Mail Queues Restart Server Eject CDROM Save Platform Debug Logs Exit
7.	Validate the Media by selecting Validate Media and presssing Enter Select the proper iso for the upgrade	Upgrade Menu Validate Media Early Upgrade Checks Initiate Upgrade Non Tekelec RPM Management Exit Iqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqq
8.	Select Early Upgrade Checks and press Enter.	Upgrade Menu Validate Media Early Upgrade Checks Initiate Upgrade Non Tekelec RPM Management Exit
9.	Start the upgrade by selecting Initiate Upgrade and pressing Enter . Wait for Upgrade to complete anywhere from 15 minutes to 1.5 hrs.	Upgrade Menu Validate Media Early Upgrade Checks Initiate Upgrade Non Tekelec RPM Management Exit

Step	Procedure	Result					
10.	Accept the upgrade	Accept upgrade as specified in Procedure 15:Accept Upgrade.					
	THIS PROCEDURE HAS BEEN COMPLETED						

Chapter 6. Upgrade Acceptance

The upgrade must be accepted or rejected before any subsequent upgrades are performed.

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

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

6.1 Accept Upgrade

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

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

Step	Procedure	Result							
1.	Using the VIP IP, access the primary NOAMP GUI.	Access the primary NOAMP GUI as specified in Appendix A.							
2. 🗌	Active NOAMP VIP: Navigate to Main Menu →	Main Menu: Admi Filter* • Tasks* • No_SG SO_SG	nistration -> So	ftware Mana	gement -> Upg	rade			
	Administratio	Hostname	Upgrade State	OAM HA Role	Server Role	Function	Application Version	Start Time	Finish Time
		nosulanc	Server Status	Appl HA Role	Network Element		Upgrade ISO	Status Message	
	n → Software	BL908050101-no-a	Accept or Reject	Active	Network OAM&P	OAM&P	12.4.0.0.0-16.14.0	2018-02-13 04:40:45 EST	2018-02-13 04:55:05 EST
	Management	2200000 I III U	Err	N/A	NO		UDR-12.4.0.0.0_16.14.0-x86_64.iso	Success: Server upgrade is	complete
	-	BL908050103-no-b	Accept or Reject	Standby	Network OAM&P	OAM&P	12.4.0.0.0-16.14.0	2018-02-13 05:04:10 EST	2018-02-13 05:21:02 EST
	→ Upgrade	5200000100-10-0	Err	N/A	NO		UDR-12.4.0.0.0_16.14.0-x86_64.iso	Success: Server upgrade is	complete

Step	Procedure	Result
3.	Active NOAMP VIP (GUI): Accept upgrade for selected servers	Accept upgrade of selected servers 1. Select the server. 2. Click the Accept Main Menu: Administration -> Software Management -> Upgrade Filter* Tasks* * NO_SG_ SO_SG
		Hostname Upgrade State OAM HA Role Server Role Function Application Version Start Time Finish Time BL908050101-no-a Cecept or Reject Active Network CoHLAR OAMARP OAMARP OAMARP OAMARP Status Message BL908050101-no-a Cecept or Reject Active Network CoHLAR OAMARP OAMARP
		Backup Backup All Checkup Checkup All Auto Upgrade Accept Report Report All
		A confirmation dialog warns that afer the upgrade is accepted, the servers cannot be reverted back to their previous image states. 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. Accept the upgrade for the following server? BL908050101-no-a (169.254.0.2)
		3. Click OK The Upgrade Administration screen displays. An informational message indicates the servers where the upgrade was accepted.
4.	Active NOAMP VIP: Accept upgrade of the rest of the system	Accept Upgrade on all remaining servers in the Oracle Communications User Data Repository system: 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. NOTE: As the upgrade is accepted on each server the corresponding Alarm ID 32532 (Server Upgrade Pending Accept/Reject) is removed.
5.	Active NOAMP VIP: Verify accept	Check that alarms are removed: Navigate to Alarms & Events → View Active Main Menu: Alarms & Events -> View Active Filter ▼ Tasks ▼ Seq # Event ID Timestamp Severify Additional Info
		Verify that Alarm ID 32532 (Server Upgrade Pending Accept/Reject) is not displayed under active alarms on Oracle Communications User Data Repository system

Step	Procedure		Result						
6.	Active NOAMP VIP: Navigate to Main Menu → Administratio	VIP: Main Menu: Administration -> Software Management -> Upgrade Main Menu → Filter* • Tasks •							
	n → Software		Upgrade State	OAM HA Role	Server Role	Function	Application Version	Start Time	Finish Time
	Management	Hostname	Server Status	Appl HA Role	Network Element		Upgrade ISO	Status Message	
	→ Upgrade	BL908050101-no-a	Backup Needed	Active	Network OAM&P	OAM&P	12.4.0.0.0-16.14.0		
	10		Err	N/A	NO				
	Active NOAMP VIP: Configure services	BL908050103-no-b	Backup Needed	Standby	Network OAM&P	OAM&P	12.4.0.0.0-16.14.0		
7.		Run the proce	dure specifi	ed in App	endix I: Cor	nfigurin	g Services for Du	ial Path HA.	
		Т	HIS PROCED	OURE HAS	BEEN COM	IPLETED)		

Chapter 7. TVOE Performance tuning

This script is necessary because it can be modified by the build. By making this script part of the upgrade, it is ensuring that new changes and tuning are applied after the upgrade is complete.

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

Procedure	15: TVOE	Performance	Tuning

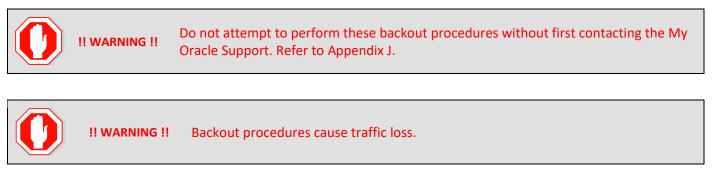
Step	Procedure	Result
1.	NOAMP: Transfer file to TVOE host	Login to NOAMP and transfer file to TVOE HOST # scp /var/TKLC/db/filemgmt/udrInitConfig.sh \ admusr@ <tvoe_host_name>:/var/tmp admusr@<tvoe_host_name>'s password:<admusr_password> If an error message such as scp: /var/tmp/udrInitConfig.sh: Permission denied displays, delete the old file from TVOE or copy the old file with a new name such as udrInitConfig_1.sh and attempt the transfer again.</admusr_password></tvoe_host_name></tvoe_host_name>
2.	Login to TVOE host: 1.SSH to server. 2.Log into the server as the admusr user.	<pre># ssh admusr@<tvoe_host_name> admusr@<tvoe_host_name>'s password:<admusr_password></admusr_password></tvoe_host_name></tvoe_host_name></pre>
3.	TVOE host: Switch to root user.	[admusr@hostname1326744539 ~]\$ su - password: <root_password></root_password>
4.	TVOE host: Change directory.	# cd /var/tmp
5.	TVOE host: Update script permissions.	<pre># chmod 555 udrInitConfig.sh</pre>
6.	TVOE host: Run configuration script as root	<pre># ./udrInitConfig.sh Verify that failures are not reported. A trace to display the settings for all VM Guests on this server are listed in the output. If a failure occurrs, save the log file /var/TKLC/log/udrVMCfg/udrInitConfig.log and contact My Oracle Support (Appendix J) for assistance.</pre>

Step	Procedure	Result					
7.	TVOE host: Reboot the server.	# init 6 NOTE: Rebooting the TVOE host brings 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						

Chapter 8. Recovery Procedures

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

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



NOTES:These recovery procedures are provided for the backout of an upgrade only. (that is, for the backout
from a failed target release to the previously installed release).
Backout of an initial installation is not supported.

8.1 Order of Backout

The following list displays the order to backout the servers (primary and DR sites):

- 1. DR NOAMPs (spares)
- 2. Primary standby NOAMP
- 3. Primary active NOAMP
- 4. TVOE and/or PM&C (if necessary, if upgraded as part of this procedure)

8.2 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 addresses are required to access the server when performing the backout.

The reason to perform a backout has a direct impact on any additional backout preparation that must be done. The backout procedure causes traffic loss.

NOTE: Verify that the two backup archive files created using the procedure in 4.2.2Full Database Backup (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 have the format:

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

8.3 Backout of DR NOAMP NE

Procedure 16: Backout of DR NOAMP NE

Step	Procedure	Result								
1. 🗌	Using the VIP address, access the primary NOAMP GUI.	Access the primary NOAMP GUI as specified in Appendix A.								
2.	Active NOAMP VIP: Navigate to Main Menu → Status & Manage →	Main Mei Filter* 🔻	nu: Status	s & Mar	nage -> N	letwo	rk Eleme	nts		
	Network Elements	Network El	ement Name		Custo	mer Rou	iter Monitorir	ng		
		Site1_NE_N	0		Disable	ed				
		Site2_NE_D	Site2_NE_DR_NO Disabled							
3.	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 to be backed out. DR NOAMP NE:								
4. 🗌	Active NOAMP VIP:	Main Menu: Sta	Main Menu: Status & Manage -> Server							
	Navigate to Main Menu → Status	Filter* ▼	Filter* *							
	& Manage →	Server Hostname	Network Element	Appl State	Alm	DB	Reporting Status	Proc		
	Server	DR-OCUDR-A	Site2_NE_DR_NO	Enabled	Err	Norm	Norm	Norm		
		DR-OCUDR-B	Site1_NE_NO	Enabled	Err	Norm	Norm	Norm		
		OCUDR-A OCUDR-B	Site1_NE_NO Site1_NE_NO	Enabled	Err	Norm Norm	Norm	Norm		

Step	Procedure	Result
5. 🗌	Active NOAMP	Filter
	 VIP: 3. From the Status & Manage → Server filter list, select the name for the DR NOAMP NE. 4. Click Go. 	Scope: Site2_NE_DR_NO Server Group Reset Display Filter: None = Reset Go
6.	Active NOAMP VIP: The list of servers associated with the DR NOAMP NE displays. Identify each server hostname and its associated Reporting Status and Appl State.	Main Menu: Status & Manage -> Server (Filtered) Filter • Server Hostname Network Element Appl State Alm DB Reporting Status Proc DR-OCUDR-A Site2_NE_DR_NO Enabled Err Norm Norm Norm DR-OCUDR-B Site2_NE_DR_NO Enabled Err Norm Norm Norm
7.	Using the list of servers associated with the DR NOAMP NE in Step 6, record the server names associated with the DR NOAMP NE.	Identify the DR NOAMP server names and record them in the space provided below: Standby DR NOAMP:Active DR NOAMP:
8.	Active NOAMP VIP: Perform Appendix D for the first spare–DR NOAMP server	Backout the target release for the spare DR NOAMP server as specified in Appendix D (Backout of a Server).

Step	Procedure	Result
9. 🗌	Active NOAMP VIP: Perform Appendix D for the second spare—DR NOAMP server.	Backout the target release for the spare DR NOAMP Server as specified in Appendix D (Backout of a Server).
10.	Active NOAMP VIP: Perform Health Check at this time only if all servers are backed out. Otherwise, proceed with the next backout	Perform 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

8.4 Backout of Primary NOAMP NE

Procedure 17: Backout of Primary NOAMP NE

Step	Procedure	Res	ılt					
1.	Using the VIP address, access the primary NOAMP GUI.	Access the primary NOAMP GUI as specified in Appendix A.						
2.	Active NOAMP VIP: Navigate to Main Menu → Status & Manage →	Main Menu: Status & Mana	ge -> Network Elements					
	Network Elements	Network Element Name	Customer Router Monitoring					
		Site1_NE_NO	Disabled					
		Site2_NE_DR_NO	Disabled					
3.	Record the name of the NOAMP NE to be downgraded (backed out) in the space provided to the right.	Record the name of the primary NOAMP NE wh Primary NOAMP NE:	ich is backed out.					

Step	Procedure	Result								
4. 🗌	Active NOAMP	Main Menu: Status & Manage -> Server								
	VIP: Navigate to Main Menu → Status & Manage → Server	Filter* 🔻								
		Server Hostname	Server Hostname Network Element		Appi State Alm		Reporting Status	Proc		
	Manage → Server	DR-OCUDR-A	Site2_NE_DR_NO	Enabled	Err	Norm	Norm	Norm		
		DR-OCUDR-B	Site2_NE_DR_NO	Enabled	Err	Norm	Norm	Norm		
		OCUDR-A	Site1_NE_NO	Enabled	Err	Norm	Norm	Norm		
		OCUDR-B	Site1_NE_NO	Enabled	Err	Norm	Norm	Norm		
5.	Active NOAMP VIP:	Filter								
	1. From the Status & Manage/	Scope:								
	Server filter list, select the name for the primary	Site1_NE	_NO •	Server G	roup 🝷	Reset				
	NOAMP NE. 2. Click Go	Display Filt	ter:							
		None	-	=	-		R	eset		
		Go								
6. 🗌	Active NOAMP									
	VIP:	Main Menu: St	atus & Manag	e -> Server (F	·litered)					
	A list of servers	Filter* ▼								
	associated with the primary	Server Hostname	Network Element	Appl State	Alm	DB	Reporting Status	Proc		
	NOAMP NE	OCUDR-A	Site1_NE_NO	Enabled	Err	Norm	Norm	Norm		
	displays.	OCUDR-B	Site1_NE_NO	Enabled	Err	Norm	Norm	Norm		
	Identify each									
	server hostname									
	and its associated									
	Reporting Status									
	and Appl State.									
	Lician the list of	lalamatifi taha muti								
7. 🗌	Using the list of servers associated	Identify the prin				n in the spa	ace provided be	iow:		
	with the primary	Standby Primar	y NOAMP:							
	NOAMP NE record	Active Primary	NOAMP:							
	the server names									
	associated with									
	the primary NOAMP NE.									

Step	Procedure	Result
8. 🗌	Active NOAMP VIP: Perform Appendix D for the standby primary NOAMP server	Backout the target release for the standby primary NOAMP server as specified in Appendix D (Backout of a Server).
9.	Active NOAMP VIP: Perform Appendix D for the active primary NOAMP server.	Backout the target release for the active primary NOAMP server as specified in Appendix D (Backout of a Server).
10.	Active NOAMP VIP: Perform Health Check at this time only if all servers are backed out.	Perform Health Check procedures (Post Backout) as specified in Appendix B , if Backout procedures have been completed for all required servers.
11.	Perform backout procedures for TVOE and/or PM&C if necessary	 Refer to the recovery procedures in TVOE 3.4 Upgrade document [2] if a TVOE backout is required. Refer to the recovery procedures in PM&C Incremental Upgrade Procedure [3] if a PM&C backout is required.
		THIS PROCEDURE HAS BEEN COMPLETED

Appendix A. Accessing the OAM Server GUI (NOAMP)

Procedure 18: Accessing the OAM Server GUI (NOAMP)

Step	Procedure	Result
1.	Active OAM VIP: 1. Launch Internet Explorer or other and connect to the XMI Virtual IP address (VIP) assigned to active OAM site 2. If a certificate error is received, click Proceed anyway.	 There's a problem with this website's security certificate This might mean that someone's trying to fool you or steal any info you send to the server. You should close this site immediately. Go to my homepage instead Continue to this webpage (not recommended)
2.	Active OAM VIP: The login screen displays. Login to the GUI using the default user and password.	

Step	Procedure	Result						
3.	Active OAM VIP: The Main Menu displays. Verify that the message across the top of the right panel indicates that the browser is using the VIP connected to the active OAM server.	Main Menu: [Main] Administration Configuration Remote Servers Configuration Status & Manage Network Elements Server HA Database Files Main Menu: [Main] Main Menu: [Main] Main Menu: [Main] Main Menu: [Main] Main Menu: [Main] This is the user-define It can be modified using the 'General Op Login Nat Last Login Time: Last Login Time:						
	•	THIS PROCEDURE HAS BEEN COMPLETED						

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 ($\sqrt{}$) each step as it is completed. Boxes have been provided for this purpose under each step number.

Procedure 19: Health Check Procedures

Step	Procedure		Result									
1.	Using the VIP address, access the primary NOAMP GUI.	Access the prir	Access the primary NOAMP GUI as specified in Appendix A.									
2.	Active NOAMP VIP:	Main Menu: St	tatus & Manage	e -> Server								
	Navigate to Main	Filter* 🔻										
	Menu → Status &	Server Hostname	Network Element	Appl State	Alm	DB	Reporting Status	Proc				
	Manage →Server	DR-OCUDR-A	Site2_NE_DR_NO	Enabled	Err	Norm	Norm	Norm				
		DR-OCUDR-B	Site2_NE_DR_NO	Enabled	Err	Norm	Norm	Norm				
		OCUDR-A	Site1_NE_NO	Enabled	Err	Norm	Norm	Norm				
		OCUDR-B	Site1_NE_NO	Enabled	Err	Norm	Norm	Norm				
3.	Active NOAMP VIP:	Main Menu: Status & Manage -> Server										
	If any other server	Filter* 🔻										
	statuses are	Server Hostname	Network Element	Appl State	Alm	DB	Reporting Status	Proc				
	present, they are	DR-OCUDR-A	Site2_NE_DR_NO	Enabled	Err	Norm	Norm	Norm				
	listed in a colored	DR-OCUDR-B	Site2_NE_DR_NO	Enabled	Err	Norm	Norm	Norm				
	box.	OCUDR-A	Site1_NE_NO	Enabled	Err	Norm	Norm	Norm				
	NOTE: Other	OCUDR-B	Site1_NE_NO	Enabled	Err	Norm	Norm	Norm				
	server states include Err, Warn, Man, Unk and Disabled.	If server state i	is any value be	sides NORM	1, follow Appe	endix J to cont	act My Oracle Supp	oort.				

Step	Procedure					Result					
4. 🗌	Active NOAMP VIP: Navigate to Main	Main Menu: Alarms & Events -> View Active								— Thu Apr	Ø 24 14:35:33 2014
	Menu → Alarm &		_		_		_		_		
	Events → View	Seq #	Event ID Alarm Text	Timestamp	Severity Additional I	Product	Process	NE	Server	Туре	Instance
	Active		31270	2014-04-24 14:34:58.215 EDT	MINOR	Platform	ProcWatch	UDR_NO_BL	908070109-NO-A	SW	
		15674	Logging Out		GN_WARNI <u>More</u>				cxx:131] [12179:ProcW.		
		1950	31113 DB Replicat	2014-04-24 14:34:29:134 EDT ion Manually Disabled		Platform WRN local DB	inetrep replication st	UDR_NO_BL ate is inhibited ^^ [53		REPL	
			31113	2014-04-24 14:34:26.707 EDT	More	Platform	inetrep	UDR_NO_BL	908070109-NO-A	DEDI	
		15673		ion Manually Disabled	GN_INHIBI More			ate is inhibited ^^ [4]		KEFL	
			13027	2014-04-24 13:05:10.292 EDT	MAJOR	Provisioning	xsas	UDR_NO_BL	908070109-NO-A	PROV	No remote provisioning clients are
		15528	No Remote	XSAS Client Connections	GN_INFOM <u>More</u>	/RN for informa	tion only (Soa;	oListener.C:775] ^^ 1	No remote provisi		connected.
					<u>wore</u>						
	VIP: Click Export.		-	cannot be perform at scenario.	1/5		eport ovisioni	ng is disal	bled. The Ex	xport	button is
6. 🗌	Active NOAMP VIP:	Main Menu	: Alarms & E	vents -> View Active [Export]							Wed Mar 01 16:05:38 20
	Click Ok at the	Attribute	Value	Description							
	bottom of the screen.	Export Frequen	Once Fifteen Minu Hourly Daily Weekly	Select how of	ten the data will be w Juling options are only				e operation immediately. Note	e that the Fiftee	en Minute, Hourly, Daily and
	Default values are fine.	Task Name *	APDE Alarm						ters are alphanumeric, minu: umber.] [A value is required.]	s sign, and spa	aces between words. The
		Description							characters are alphanumeric, Ipha character or a number.]		nderscore, and spaces
		Filename Prefix		Export filenar	ne prefix. Characters	o prepend the gen	erated export filer	ame. [Optional. The len	gth should not exceed 8 char	racters. Valid cl	haracters are alphanumeric.]
		Minute Time of Day	0	minutes, trans	sfers occur four times	per hour, and this f a will be written to	ield displays the r the export directo	ninute of the first transfe	rt Frequency is hourly or fifte r. [Default = 0. Range = 0 to : ncy is daily or weekly. Select	59.]	
		Day of Week	 Sunday Monday Tuesday Wednesday Thursday Friday 	Select the da	y of week when the da	ata will be written to	the export direct	ory. Only if Export Frequ	ency is weekly. [Default: Sun	day.]	

Step	Procedure	Result						
7. 🗆	Active NOAMP VIP: Click Tasks. The name of the exported Alarms CSV file displays in the banner at the top of the right panel.	Main Menu: Alarms & Events -> View Active Filter* Tasks* Graph* Task State Details Progress NO_grp Hostname Name Task State Details Progress 9 NO-B APDE Alarm Export completed Alarms 20170301-160625- EST 9. CSV.02 100% 56872 1458 Server Core File Detected GN_WARNING/WRN Platform detected an error condition [cmplatalarm.cox More						
8.	Active NOAMP VIP: Record the filename of Alarms CSV file generated in the space provided to the right.	Example: Alarms< <i>yyyymmdd>_<hhmmss></hhmmss></i> .csv Alarmscsv						
9.	Active NOAMP VIP: Click Report.	Export Report						

Oracle Comn Step	Procedure	Result						
10. 🗌	Active NOAMP VIP:	Main Menu: Alarms & Events -> View Active [Re	eport]					
	Active Alarms &							
	Events Report is generated and	Main Menu: Alarms & Events Tue May 15 07:30						
	displayed in the right panel.	Tue May 15 07:30:21 2018 EDT TIMESTAMP: 2018-05-15 06:46:56.350 EDT NETWORR_ELEMENT: Site1_NE_NO SERVER: OCUDR-A SEQ_NUM. 32758 EVENT_NUMBER: 13075 SEVERITY: CRITICAL PRODUCT: Provisioning PROCESS: udrprov TYPE: PROV INSTANCE: NAME: Provisioning Interfaces Disabled DESCR: Provisioning Interfaces Disabled DESCR: Provisioning Interfaces are disabled ERR_INFO: (GN_NOTENAB/WAN SOAP and REST interfaces are disabled ^^^ [30479:ProvController.C:164] NSECS: 1638939351337559701 ID: 0 TIMESTAMP: 2018-05-15 06:29:14.812 EDT NETWORR_ELEMENT: Site1_NE_NO SERVER: OCUDR-A SEQ_NIM: 32743 EVENTY NUMBER: 32532 SEVERITY: MINOR PRODUCT: TPD PROCESS: cmplatalarm TYPE: FLAT INSTANCE: NAME: Server Upgrade Pending Accept/Reject ERR_INFO:						
11.	Active NOAMP VIP: 1. Click Save. 2. Click Save and save to a directory.	Print Save Back						
12.	Active NOAMP VIP: Navigate to Main	Main Menu: Status & Manag	je -> Network Elements					
	Menu \rightarrow Configuration \rightarrow	Filter* ▼						
	Network Elements	Network Element Name	Customer Router Monitoring					
		Site1_NE_NO	Disabled					
		Disabled						

Step	Procedure					Result						
13. 🗌	Active NOAMP	Main Menu: Config	Nain Menu: Configuration -> Server Groups									
	VIP:	Filter •										
	Navigate to Main Menu →	Server Group Name	Level	Parent	Function	Connection Count	Servers					
	Configuration ->						Network Element: Site2_NE_DR_NO N					
	Server Groups	DR_NO_SG	Α	NONE	UDR-NO	8	Server Node HA Pref DR-OCUDR-A SPARE	VIPs 10.10.1.39				
							DR-OCUDR-B SPARE	10.10.1.39				
							Network Element: Site1_NE_NO NE HA	Pref: DEFAULT				
		NO_SG	A	NONE	UDR-NO	8	OCUDR-A	10.10.1.6				
							OCUDR-B	10.10.1.6				
14.	Active NOAMP											
	VIP:											
	Click Report .			Ins	ert Edit	Delete	Report					
				1113		Delete	Report					
	Active NOAMP											
15.	VIP:	Main Menu:	Configu	uration ->	Server Grou	ıps [Report]						
	A Server Group											
	Report is	Main Menu: Configuration -> Server Groups [Report]										
	generated and	Tue May 15 07:27:17 2018 EDT										
	displayed in the	Name: DR_NO_SG										
	right panel.	Connection C										
		Func	rent: NOM tion: UDH vers:									
							E HA Pref: SPARE] E HA Pref: SPARE]					
			Vips:									
		10.10.1.	39: [NE	: Site2_NE_	_DR_NO]							
			Name: NO Level: A	_SG								
		Connection C Pa	Count: 8 Arent: NOM	NE								
			tion: UDH	R-NO								
						ite1_NE_NO, NE HA						
		OCUDR-B:	[HA Ro]	le Pref: DE	FAULT, NE: Si	ite1_NE_NO, NE HA	Pref: DEFAULT]					
			Vips:									
		10.10.1.	6: [NE:	Site1_NE_N	10]							
16.	Active NOAMP						٦					
	VIP:					000						
	1. Click Save											
	2. Click Save.				Print	Save Back						
							J					
1	1	1										

17. 🗌	Provide the saved			Result							
	files to the Customer Care	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: • Active Alarms & Events Report [<i>Appendix B</i> , Step Error! Reference source not found.]									
	Center for Health Check Analysis.	Network I	Elements R	eport [<i>App</i>	endix B, S	Step Error! Re Error! Referen	ference sou	irce not foun			
18. 🗌	Active NOAMP VIP:	Main Menu: Status & Manage -> HA									
	Navigate to Main	Filter* *									
	Menu → Status & Manage → HA	Hostname	OAM HA Role	Application HA Role	Max Allowed HA Role	Mate Hostname List	Network Element	Server Role	Active VIPs		
	Manage 7 HA	OCUDR-A	Active	N/A	Active	OCUDR-B	Site1_NE_NO	Network OAM&P	10.10.1.6		
		OCUDR-B	Standby	N/A	Active	OCUDR-A	Site1_NE_NO	Network OAM&P			
		DR-OCUDR-A	Spare	N/A	Active	DR-OCUDR-B	Site2_NE_DR_NO	Network OAM&P	10.10.1.39		
		DR-OCUDR-B	Spare	N/A	Active	DR-OCUDR-A	Site2_NE_DR_NO	Network OAM&P			
19.	Active NOAMP	Main Menu: S	Status & Mar	ade -> HA							
	VIP:			lugo - Int							
	Verify that the HA	Filter* ▼									
	Status for all	Hostname	OAM HA Role	Application HA Role	Max Allowed HA Role	Mate Hostname List	Network Element	Server Role	Active VIPs		
	servers shows	OCUDR-A	Active	N/A	Active	OCUDR-B	Site1_NE_NO	Network OAM&P	10.10.1.6		
	either Active or	OCUDR-B	Standby	N/A	Active	OCUDR-A	Site1_NE_NO	Network OAM&P			
	Standby.	DR-OCUDR-A	Spare	N/A	Active	DR-OCUDR-B	Site2_NE_DR_NO	Network OAM&P	10.10.1.39		
		DR-OCUDR-B	Spare	N/A	Active	DR-OCUDR-A	Site2_NE_DR_NO	Network OAM&P			
20.	Active NOAMP VIP: Repeat Step 19 of this procedure until the last page of the [Main Menu: Status & Manage →HA] screen is reached.	click Next .				Main Menu: St	atus & Man	age →HA] scr	een, and		
		S	teps 21 to	23 are for	pre-upgr	ade only					
21.	Check if a new firmware release is required for the system.	 Contact the Oracle CGBU Customer Care Center by referring to Appendix J of this document to determine the minimum supported firmware release required for the target Oracle Communications User Data Repository release. Target Firmware Rev:									

Step	Procedure	Result
22.	Check the existing PM&C version and identify if PM&C upgrade is required, before starting with upgrade(applies to servers that are running PM&C)	Determine the PM&C version installed by logging into PM&C GUI. For incremental upgrades, follow reference [3].
23.	Check the TVOE host server software version	 Find the target Oracle Communications User Data Repository release. Contact the My Oracle Support by referring to (Appendix J) of this document to determine the minimum supported TVOE OS version required for the target release. Required TVOE Release:
		STEP 24 IS POST-UPGRADE ONLY
24.	Active NOAMP VIP: Determine if any errors were reported.	Use an SSH client to connect to the recently upgraded servers (for example: ssh or putty): ssh <server address="" imi="" ip=""> login as: admusr password: <enter password=""> Switch to root su - password: <enter password=""> # verifyUpgrade Examine the output of the command to determine if any errors were reported. Contact the Oracle CGBU Customer Care Center if errors occur.</enter></enter></server>
		THIS PROCEDURE HAS BEEN COMPLETED

Appendix C. Upgrade of a Server

C.1 UPGRADE SERVER

Procedure 20: Initiate Upgrade Server

Step	Procedure		Result							
1. 🗌	Using the VIP address, access the primary NOAMP GUI.	Access the primary NOAMP GUI as specified in Appendix A. NOTE: Ensure that there are no users in the <pre>/var/TKLC/db/filemgmt</pre> directory on server to be upgraded								
2.	Active NOAMP	Main Menu: Administration -> Software Management -> Upgrade								
	VIP:		asks 💌							
	1. Navigate to Main Menu →	DR NO SG	NO SG							
	Administration → Software Management → Upgrade		Upgrade State	OAM HA Role	Server Role	Function	Application Version	Start Time	Finish Time	
		Hostname	Server Status	Appl HA Role	Network Element			Status Message		
		OCUDR-A	Ready	Active	Network OAM&P	OAM&P	12.4.0.0.0-16.14.0			
			Err	N/A	Site1_NE_NO					
	2. Select server	OCUDR-B	Ready	Standby	Network OAM&P Site1_NE_NO	OAM&P	12.4.0.0.0-16.14.0			
	 group tab for servers to be upgraded. 3. Verify that the Upgrade State shows Ready for the servers to be upgraded. 4. Verify the Application Version value for servers is the source software release version 									

Step	Procedure	Result							
3.	Active NOAMP	Single Server							
	VIP:	Main Menu: Administration -> Software Management -> Upgrade							
	1. Select the server	Filter* •	Tasks 🔻						
	(for one server at a time) or	DR NO SC	110,00						
	select no servers	DR_NO_SG NO_SG							
	(for group-based auto upgrade)	Hostname	Upgrade State Server Status	OAM HA Role	Server Role	Function	Application Version	Start Time Status Message	Finish Time
			Ready	Active	Network OAM&P	OAM&P	12.4.0.0.0-16.14.0	outus message	
	2. Ensure the	OCUDR-A	Err	N/A	Site1_NE_NO				
	Upgrade Server	OCUDR-B	Ready	Standby	Network OAM&P	OAM&P	12.4.0.0.0-16.14.0		
	or Auto Upgrade	COODICD	Err	N/A	Site1_NE_NO				
	button is								
	enabled.					11 de	0		
	3. Click Auto	Backup	Backup All	Checkup	Checkup All	Upgrade	Server Acc	ept Report	Report All
	Upgrade or								
	Upgrade Server	Group Ba	sed						
	NOTE: Auto	Main Mon	u: Administratio	o Managomon	t > Upgra	de Unitiatel			
	Upgrade does not		u. Auministratio	JII -> SUILWAI	e managemen	t -> Opyra	de [initiate]		
	update the active NOAMP server.	Info* ▼							
		Hostname	Action		Status				
		OCUDR-A	No upgrade		OAM HA Role	Network E Site1_NE_N		Application Ver 12.4.0.0.0-16.14	
	OCI Up				(This server is the active NOAMP, it cannot upgrade itself in a server group upgrade)				
					OAM HA Role	Network E	lement	Application Ver	rsion
		OCUDR-B	Upgrade		Standby	Site1_NE_N		12.4.0.0.0-16.14	
		Upgrade Sett	ings						
					Server group upgrad	de mode.			
					Select "Bulk" to upgrade all non-active OAM servers together in bulk.				
		Mode	 Bulk Serial 		Select "Serial" to upgrade servers one at a time in HA role order. Select "Grouped Bulk" to upgrade all non-active OAM servers together in bulk by HA groups.				
			Grouped Bulk						
					HA groups are created according to the "OAM HA Role" of the server. The non-active HA role order is spare, observer and standby.				
		Upgrade ISO	- Select -		 Select the desired u 	pgrade ISO med	lia file.		
		Backup	Backup All	Checkup	Checkup All	Auto Up	ograde Acce	ept Report	Report All

Step	Procedure	Result								
4. 🗌	Active NOAMP	Upgrade Server:								
	VIP: 1.The	Main Menu: Administration -> Software Management -> Upgrade [Initiate]								
	Upgrade[Initiate]	Info* ▼								
	screen displays 2. Select the ISO to use in the server		Action	Status						
	upgrade	OCUDR-B	Upgrade	OAM HA R	Site1_NE_NO	Application Version 12.4.0.0.0-16.14.0				
	If Auto Upgrade									
	option was	Upgrade Settings								
	selected for group- based upgrade:	Upgrade ISC	Upgrade ISO - Select - Select the desired upgrade ISO media file.							
	 NO/SO: Bulk upgrades servers 	Ok Ca	ncel							
	in groups according to the	Auto Upg	Auto Upgrade:							
	availability	Main Men	u: Administration -> Software	Management	-> Upgrade [Initiate]					
	setting.MP: Serial	Info* ▼								
	upgrades servers	Hostname	Action	Status						
	one at a time			OAM HA Role	Network Element	Application Version				
	starting with standby server	OCUDR-A	No upgrade	Active	Site1_NE_NO	12.4.0.0.0-16.14.0				
	NOTE: For MPs,			(This server is the active NOAMP, it cannot upgrade itself in a server group upgrade)						
	you can select the			OAM HA Role	Network Element	Application Version				
	required percent	OCUDR-B	Upgrade	Standby	Site1_NE_NO	12.4.0.0.0-16.14.0				
	availability. (recommended to	Upgrade Settings								
	have at least 50%		-	Server group upgrad	le mode					
	available)	rt _{Mode}	⊙ Dull	Server group upgrade mode. Select "Bulk" to upgrade all non-active OAM servers together in bulk.						
	3. Click Ok to start		 Bulk Serial 	Select "Serial" to upgrade servers one at a time in HA role order. Select "Grouped Bulk" to upgrade all non-active OAM servers together in bulk by HA groups.						
	the upgrade		Grouped Bulk	HA groups are created according to the "OAM HA Role" of the server.						
				The non-active HA role order is spare, observer and standby.						
		Upgrade ISO	- Select -	Select the desired up	ograde ISO media file.					
		all alarms 3110 3110	 NOTE: During the upgrade you might see the following expected alarms. Not all servers have all alarms: 31101(DB Replication to a slave DB has failed) 31106(DB Merging to a parent Merge Node has failed) 31107(DB Merging from a child source Node has failed) 							
		3111 1307 1007 1007 3251 3128	7(DB Merging from a chil 4 (DB Replication of confi 1 No northbound Provisio 3 (Server Group Max Allo 5 (Application processes 5 (Server HA Failover Inhi 3 (HA Highly available ser 6 (The High Availability St	guration dat oning Connec wed HA Role have been m bited) ver failed to	a via) ctions) e Warning) aanually stopped) receive)					
				5						

Step	Procedure	Result
5.	Active NOAMP VIP: ** For active NOAMP only: After Step 4 completes, the session automatically terminates and you are logged out of the GUI.	Log In Enter your username and password to log in Session timed out at 2:13:27 pm. Username: Password: Change password
	The Log In screen displays as the standby NOAMP server goes through HA switchover and becomes the active server. Login to the GUI using the default user and password.	Log In
6.	Active NOAM VIP: ** For active NOAMP only The Main Menu displays. Verify that the message across the top of the right panel indicates that the browser is using the VIP connected to the active NOAMP server.	Main Menu: [Main] Administration Configuration Software Management Version Access Control Software Management Version Access Control Software Management Software Management Configuration Alarms & Events Software & Manage Configuration Configuratio

7. C VII Vie sta 1.: 2.1	ew in-progress atus Select Main Menu → Administration → Software Management → Upgrade Observe the Upgrade State of the servers of interest throughout the upgrade. Status Message contains additional upgrade details which allow upgrades in progress to be monitored. The following screen	Filter	Status Tasks No_SG Upgra Serve Ready Pendir Status Tasks* Read Upgra Uu: Administrati Uugra Uu	e Status Frr G Err de Status G Err ade State er Status y Err adding	OAM HA Role Appi HA Role Active N/A Standby N/A Cofftware Mana Appi HA Role Appi HA Role Appi HA Role Appi HA Role N/A N/A N/A N/A	gement -> Upg Network Element Network CAM&P Site1_NE_NO Network OAM&P Site1_NE_NO Site1_NE_NO Network Element Network CAM&P Site1_NE_NO Network CAM&P Site1_NE_NO Network CAM&P Site1_NE_NO Network CAM&P Site1_NE_NO	Function OAM&P OAM&P Table CAM&P OAM&P OAM&P	Upgrad 12.4.0.0 UDR-12 Applic Upgra 12.4.0.	0.0-16.14.0	Start Time Status Message Image: Status Message <	Finish Time
	ew in-progress atus Select Main Menu → Administration → Software Management → Upgrade Observe the Upgrade State of the servers of interest throughout the upgrade. Status Message contains additional upgrade details which allow upgrades in progress to be monitored. The following screen	Filter	Status Tasks No_SG Upgra Status Tasks Tasks Tasks Tasks Upgra	de State r Status err de r Status de r Status de r Status v er Status v er Status v er Status v er Status	OAM HA Role Appi HA Role Active N/A Standby N/A Coftware Manag	Server Role Network CAM&P Site1_NE_NO Network OAM&P Site1_NE_NO Site1_NE_NO Site1_NE_NO Site1_NE_NO Network Element Network CAM&P Site1_NE_NO Network CAM&P Site1_NE_NO Network CAM&P Site1_NE_NO Network CAM&P Site1_NE_NO	Function OAM&P OAM&P Table CAM&P OAM&P OAM&P	Upgrad 12.4.0.0 UDR-12 Applic Upgra 12.4.0.	e ISO 0.0-16.14.0 0.0-16.14.0 .4.0.0.0_16.15.0-x86_64.Iso .4.0.0.0_16.15.0-x86_64.Iso .4.0.0.0_16.15.0-x86_64.Iso .4.0.0.0_16.15.0-x86_64.Iso .4.0.0.0_16.14.0 .4.0.0.0_16.14.0 .4.0.0.0_16.14.0	Status Message Status Message Upgrade task started Status Message	Finish Tim
sta 1.: 2.:	atus Select Main Menu → Administration → Software Management → Upgrade Observe the Upgrade State of the servers of interest throughout the upgrade. Status Message contains additional upgrade details which allow upgrades in progress to be monitored. The following screen	DR_NO_SG Hostname OCUDR-A OCUDR-B Main Mer Filter ~ OCUDR-B OCUDR-B OCUDR-B	NO_SG Upgra Serve Ready Pendir Status * Tasks* NO_SG Upgra Read Upgra Unk Upgra	de State r Status g Err tion -> S ade State er Status y Err er Status y err	Appi HA Role Active N/A Standby N/A Coftware Mana Appi HA Role Appi HA Role Active N/A OOS N/A	Network Element Network OAM&P Site1_NE_NO Network OAM&P Site1_NE_NO Server Role Network Element Network Element Network CAM&P Site1_NE_NO Network OAM&P Site1_NE_NO Network OAM&P Site1_NE_NO	CAM&P	Upgrad 12.4.0.0 UDR-12 Applic Upgra 12.4.0.	e ISO 0.0-16.14.0 0.0-16.14.0 .4.0.0.0_16.15.0-x86_64.Iso .4.0.0.0_16.15.0-x86_64.Iso .4.0.0.0_16.15.0-x86_64.Iso .4.0.0.0_16.15.0-x86_64.Iso .4.0.0.0_16.14.0 .4.0.0.0_16.14.0 .4.0.0.0_16.14.0	Status Message Status Message Upgrade task started Status Message	Finish Tin
	Select Main Menu → Administration → Software Management → Upgrade Observe the Upgrade State of the servers of interest throughout the upgrade. Status Message contains additional upgrade details which allow upgrades in progress to be monitored. The following screen	Hostname oCUDR-A oCUDR-B Main Mer Filter V DR_NO_SG Moin Men Filter V CUDR-B	UU: Administrati	r Status Frr ade State er Status y Err ading	Appi HA Role Active N/A Standby N/A Coftware Mana Appi HA Role Appi HA Role Active N/A OOS N/A	Network Element Network OAM&P Site1_NE_NO Network OAM&P Site1_NE_NO Server Role Network Element Network Element Network CAM&P Site1_NE_NO Network OAM&P Site1_NE_NO Network OAM&P Site1_NE_NO	CAM&P	Upgrad 12.4.0.0 UDR-12 Applic Upgra 12.4.0.	e ISO 0.0-16.14.0 0.0-16.14.0 .4.0.0.0_16.15.0-x86_64.Iso .4.0.0.0_16.15.0-x86_64.Iso .4.0.0.0_16.15.0-x86_64.Iso .4.0.0.0_16.15.0-x86_64.Iso .4.0.0.0_16.14.0 .4.0.0.0_16.14.0 .4.0.0.0_16.14.0	Status Message Status Message Upgrade task started Status Message	Finish Tin
2.	Menu → Administration → Software Management → Upgrade Observe the Upgrade State of the servers of interest throughout the upgrade. Status Message contains additional upgrade details which allow upgrades in progress to be monitored. The following screen	OCUDR-A OCUDR-B Main Mer Filter V DR_NO_SC OCUDR-A OCUDR-B Main Men Filter V DR_NO_SG	Inu: Administrati	r Status Frr ade State er Status y Err ading	Appi HA Role Active N/A Standby N/A Coftware Mana Appi HA Role Appi HA Role Active N/A OOS N/A	Network Element Network OAM&P Site1_NE_NO Network OAM&P Site1_NE_NO Server Role Network Element Network Element Network CAM&P Site1_NE_NO Network OAM&P Site1_NE_NO Network OAM&P Site1_NE_NO	CAM&P	Upgrad 12.4.0.0 UDR-12 Applic Upgra 12.4.0.	e ISO 0.0-16.14.0 0.0-16.14.0 .4.0.0.0_16.15.0-x86_64.Iso .4.0.0.0_16.15.0-x86_64.Iso .4.0.0.0_16.15.0-x86_64.Iso .4.0.0.0_16.15.0-x86_64.Iso .4.0.0.0_16.14.0 .4.0.0.0_16.14.0 .4.0.0.0_16.14.0	Status Message Status Message Upgrade task started Status Message	Finish Tin
2.	Menu → Administration → Software Management → Upgrade Observe the Upgrade State of the servers of interest throughout the upgrade. Status Message contains additional upgrade details which allow upgrades in progress to be monitored. The following screen	OCUDR-B Main Mer Filter • DR_NO_SG Hostname OCUDR-A OCUDR-B Main Men Filter • CR_NO_SG	Au: Administrati	Err ade State er Status y Err adding	Active Active N/A Standby N/A Coftware Mana Active Appl HA Role Active N/A Cos N/A Cos	Network OAM&P Site1_NE_NO Network OAM&P Site1_NE_NO Server Role Network Element Network OAM&P Site1_NE_NO Site1_NE_NO Network OAM&P Site1_NE_NO Network OAM&P	OAM&P	12.4.0.0 12.4.0.0 UDR-12 Applic Upgra 12.4.0.	0.0-16.14.0 0.0-16.14.0 .4.0.0.0_16.15.0-x86_64.iso de iso 0.0-16.14.0	Upgrade task started	
2.	Administration → Software Management → Upgrade Observe the Upgrade State of the servers of interest throughout the upgrade. Status Message contains additional upgrade details which allow upgrades in progress to be monitored. The following screen	OCUDR-B Main Mer Filter • DR_NO_SG Hostname OCUDR-A OCUDR-B Main Men Filter • CR_NO_SG	Pendir Pendir Status Tasks' NO_SG Upgr Read Upgra	Err ade State er Status y Err adding on -> Sc	V/A Standby N/A CoAM HA Role Appl HA Role Active N/A OOS N/A	Site1_NE_NO Network QAM&P Site1_NE_NO Site1_NE_NO Site1_NE_NO Site1_NE_NO Site1_NE_NO Network Clement Network OAM&P Site1_NE_NO Network QAM&P Site1_NE_NO	OAM&P	Applic Upgra 12.4.0.0 UDR-12	ation Version de ISO 0.0-16.14.0	Start Time Status Message 2018-05-15 05:57:49 E	
2.	 → Software Management → Upgrade Observe the Upgrade State of the servers of interest throughout the upgrade. Status Message contains additional upgrade details which allow upgrades in progress to be monitored. The following screen 	Main Mer Filter DR_N0_SG Hostname OCUDR-A OCUDR-B Main Men Filter DR_N0_SG	u: Administrati	Err tion -> S ade State er Status y Err ading	OAM HA Role Appi HA Role Active N/A OOS N/A	Site1_NE_NO Site1_NE_NO Server Role Network Element Network OAM&P Site1_NE_NO Network OAM&P Site1_NE_NO	Function OAM&P OAM&P	Applic Upgra 12.4.0.	4.0.0.0_16.15.0-x86_64.iso ation Version de ISO 0.0.0-16.14.0	Start Time Status Message 2018-05-15 05:57:49 E	
2.	Management → Upgrade Observe the Upgrade State of the servers of interest throughout the upgrade. Status Message contains additional upgrade details which allow upgrades in progress to be monitored. The following screen	Main Mer Filter DR_N0_SG Hostname OCUDR-A OCUDR-B Main Men Filter DR_N0_SG	Status V Tasks' NO_SG Upgr Serv Read Upgra Uuk Uuk Usaks' V NO_SG Upgra	ade State er Status y Err ading	Coam Ha Role Appi Ha Role Active N/A OOS N/A	Server Role Network Element Network OAM&P Sile1_NE_NO Sile1_NE_NO	Function OAM&P OAM&P	Applic Upgra 12.4.0	ation Version de ISO 0.0-16.14.0	Start Time Status Message 2018-05-15 05:57:49 E	
2.	Upgrade Observe the Upgrade State of the servers of interest throughout the upgrade. Status Message contains additional upgrade details which allow upgrades in progress to be monitored. The following screen	Filter V DR_NO_SG Hostname OCUDR-A OCUDR-B Main Men Filter V DR_NO_SG	Status V Tasks' NO_SG Upgr Serv Read Upgra Uuk Uuk Usaks' V NO_SG Upgra	ade State er Status y Err ading	OAM HA Role Appi HA Role Active N/A OOS N/A	Server Role Network Element Network OAM&P Sile1_NE_NO Network OAM&P Sile1_NE_NO	Function OAM&P OAM&P	Upgra 12.4.0.	de ISO 0.0-16.14.0	Status Message	
	Observe the Upgrade State of the servers of interest throughout the upgrade. Status Message contains additional upgrade details which allow upgrades in progress to be monitored. The following screen	Filter V DR_NO_SG Hostname OCUDR-A OCUDR-B Main Men Filter V DR_NO_SG	Status V Tasks' NO_SG Upgr Serv Read Upgra Uuk Uuk Usaks' V NO_SG Upgra	ade State er Status y Err ading	OAM HA Role Appi HA Role Active N/A OOS N/A	Server Role Network Element Network OAM&P Sile1_NE_NO Network OAM&P Sile1_NE_NO	Function OAM&P OAM&P	Upgra 12.4.0.	de ISO 0.0-16.14.0	Status Message	
	Upgrade State of the servers of interest throughout the upgrade. Status Message contains additional upgrade details which allow upgrades in progress to be monitored. The following screen	Filter V DR_NO_SG Hostname OCUDR-A OCUDR-B Main Men Filter V DR_NO_SG	Status V Tasks' NO_SG Upgr Serv Read Upgra Uuk Uuk Usaks' V NO_SG Upgra	ade State er Status y Err ading	OAM HA Role Appi HA Role Active N/A OOS N/A	Server Role Network Element Network OAM&P Sile1_NE_NO Network OAM&P Sile1_NE_NO	Function OAM&P OAM&P	Upgra 12.4.0.	de ISO 0.0-16.14.0	Status Message	
	the servers of interest throughout the upgrade. Status Message contains additional upgrade details which allow upgrades in progress to be monitored. The following screen	DR_NO_SG Hostname OCUDR-A OCUDR-B Filter v DR_NO_SG	Upgra	ade State er Status y Err idling on -> Sc	Appi HA Role Active N/A N/A N/A	Network Element Network OAM&P Site1_NE_NO Network OAM&P Site1_NE_NO	OAM&P	Upgra 12.4.0.	de ISO 0.0-16.14.0	Status Message	
	interest throughout the upgrade. Status Message contains additional upgrade details which allow upgrades in progress to be monitored. The following screen	Hostname OCUDR-A OCUDR-B Main Men Fitter • (DR_NO_SG	Upgra Serv Read Upgra Unk u: Administrati Tasks' ▼ No_SG	er Status y err ading on -> Sc	Appi HA Role Active N/A N/A N/A	Network Element Network OAM&P Site1_NE_NO Network OAM&P Site1_NE_NO	OAM&P	Upgra 12.4.0.	de ISO 0.0-16.14.0	Status Message	
	throughout the upgrade. Status Message contains additional upgrade details which allow upgrades in progress to be monitored. The following screen	Hostname OCUDR-A OCUDR-B Main Men Fitter • (DR_NO_SG	Upgra Serv Read Upgra Unk u: Administrati Tasks' ▼ No_SG	er Status y err ading on -> Sc	Appi HA Role Active N/A N/A N/A	Network Element Network OAM&P Site1_NE_NO Network OAM&P Site1_NE_NO	OAM&P	Upgra 12.4.0.	de ISO 0.0-16.14.0	Status Message	
	upgrade. Status Message contains additional upgrade details which allow upgrades in progress to be monitored. The following screen	OCUDR-A OCUDR-B Main Men Filter • (DR_NO_SG	Upgrav vu: Administrati	er Status y err ading on -> Sc	Appi HA Role Active N/A N/A N/A	Network Element Network OAM&P Site1_NE_NO Network OAM&P Site1_NE_NO	OAM&P	Upgra 12.4.0.	de ISO 0.0-16.14.0	Status Message	
	upgrade. Status Message contains additional upgrade details which allow upgrades in progress to be monitored. The following screen	OCUDR-8 Main Men Filter • (DR_NO_SG	Read Upgrav u: Administrati Tasks* ~ Vo_SG	y Err adding on -> Sc	Active NA OOS NA	Network OAM&P	OAM&P	12.4.0	0.0-16.14.0	2018-05-15 05:57:49 E	DT
	Status Message contains additional upgrade details which allow upgrades in progress to be monitored. The following screen	OCUDR-8 Main Men Filter • (DR_NO_SG	Unk u: Administrati Tasks' > No_SG Upgrav	on -> So	oos N/A	Network OAM&P Site1_NE_NO		UDR-1	2 4 0 0 0_16 15 0-x86_64 iso		DT
	contains additional upgrade details which allow upgrades in progress to be monitored. The following screen	Main Men Filter	Unk u: Administrati Tasks' > No_SG Upgrav	on -> Sc	NA	Site1_NE_NO		UDR-1	2.4.0.0.0_16.15.0-x86_64.lso		DT
	additional upgrade details which allow upgrades in progress to be monitored. The following screen	Main Men Filter	u: Administrati Tasks' V NO_SG Upgrad		oftware Manag		ade	UDR-1	2.4.0.0.0_16.15.0-x86_64.iso	Upgrade is in progress	
	upgrade details which allow upgrades in progress to be monitored. The following screen	Filter*	Tasks' NO_SG Upgrad		-	ement -> Upgra	ade				
-	shots are examples of what to expect during upgrade. The Progress can be viewed on the Task list Wait for each	Filter* V	Tasks' V	_	Active N/A N/A Oftware Mana	Site1_NE_NO	OAM&P		16.15.0 2	1018-05-15 05:57:49 EDT Vam: failed to get TPD task : ebooting.	state, server could
	upgrade to	Hostname	Serve	r Status	Appl HA Role	Network Element		Upgra	de ISO	Status Message	
	report Success	OCUDR-A	Ready		Active	Network OAM&P	OAM&P	12.4.0	.0.0-16.14.0		
	before		Not Re	Err	N/A Standby	Site1_NE_NO Network OAM&P	OAM&P	12.4 0	.0.0-16.15.0	2018-05-15 05:57:49	EDT
	proceeding to	OCUDR-B		Err	N/A	Site1_NE_NO			2.4.0.0.0_16.15.0-x86_64.isc		
1	the next step.										
		Tasks									
		ID	Hostname		Name		Task Sta	ate	Details	F	rogress
		3	OCUDR-A		OCUDR-B S	erver Upgrade	running		Upgrade is in prog	jress	28%
		2	OCUDR-A		DR-OCUDR- Upgrade	A Server	complete	ed	Server upgrade ex complete.	xecution	100%
	1	1	OCUDR-A		DR-OCUDR- Upgrade	B Server	complete	ed	Server upgrade ex complete.	xecution	100%
			DR-OCUDR-	^	Pre-upgrade	full backup	complete	ed		R-OCUDR-A	100%

Step	Procedure					Resu	t				
8. 🗌	Active NOAMP VIP: 1.Select the	Main Menu: Administration -> Software Management -> Upgrade									
	appropriate tab (NO_SG, MP_SG or SO_SG) and select the row containing the hostname of the server that was upgraded. 2. Verify that the Status Message shows Success and Upgrade State is Accept or Reject	NOTE: If the up	upgrade a p. Use ir hanges to I to clear	nd alarm repstat Success	10134 (Se command	erver L on act	Application Version Upgrade ISO 124.00.0-16.15.0 UDR-124.00.0_16.15.0+86_64.Iso 124.00.0-16.15.0 UDR-124.00.0_16.15.0+86_64.Iso rver could not ress Upgrade Failed) di tive server and ve	splays; ensur	2018-05-15 06: complete	17:01 EDT	
9. 🗌		OCUDR-A	Upgrade State Server Status Accept or Reject Err that is be	OAM HA Role Appi HA Role Active N/A	Server Role Network Element Network OAM&P Sile1_NE_NO	Function OAM&P	Application Version Upgrade ISO 12.40.00.16.15.0 UDR-12.40.00_16.15.0×86_64 iso Menu → Status 8	Start Time Status Message 2018-05-15 06 20:58 EDT Success: Server upgrade is & Manage→ S			
	still indicates that server could	Main Menu: Status & Manage -> Server									
	not restart the application to complete the	Filter* 🔻	Network Ele		opl State	Alm	DB		ng Status	Proc	
	upgrade, restart the server by clicking the	DR-OCUDR-A DR-OCUDR-B OCUDR-A	Site2_NE_DR Site2_NE_DR Site1_NE_NC	_NO Er	abled abled abled		Err Norm Err Norm Err Norm	Norm Norm Norm		Norm Norm	
	Restart. 2. Verify that the Status Message shows Success and Upgrade State is Accept or Reject	OCUDR-B	Site1_NE_NC		Restart R	leboot	Err Norm	port		Norm	

Step	Procedure		Result									
10.	Active NOAMP	NOTE: Only perf	orm the follo	wing step if U	pgrade State is	s DEGRADED.						
	VIP:	Change Max Allo	wed HA Role	for server (se	erver that was	upgraded) to	Active					
	Navigate to Main Menu → Status & Manage → HA	Main Men	u: Statu	s & Man	age -> HA	A [Edit]						
	[Edit]											
		Modifying	g HA attri	butes								
		Hostname	Max Allow	ed HA Role	Description							
		OCUDR-A	Active	•	The maximum	I desired HA F	Role for OCUDR-/	4				
		OCUDR-B	Active	Active The maximum desired		desired HA F	ired HA Role for OCUDR-B					
		DR-OCUDR-A	Active	•	The maximum	desired HA F	Role for DR-OCU	DR-A				
		DR-OCUDR-E	Active	•	The maximum	I desired HA F	Role for DR-OCU	DR-B				
		Restart server from Main Menu->Status & Manage -> Server screen Main Menu: Status & Manage -> Server										
		Filter* 🔻										
		Server Hostname	Network Element	Appl State	Alm	DB	Reporting Status	Proc				
			Site2_NE_DR_NO	Enabled	Err	Norm	Norm	Norm				
			Site2_NE_DR_NO Site1_NE_NO	Enabled Enabled	Err	Norm Norm	Norm Norm	Norm				
		L	Site1_NE_NO	Enabled	Err	Norm	Norm	Norm				
			Stop	o Restart R	eboot NTP Syr	nc Report						

Step	Procedure	Result
11. 🗌	Active NOAMP	View post-upgrade status of the servers. The following alarms may be present.
	VIP: View post-upgrade	Active NO server has the following expected alarm:
	status	Alarm ID is 13071 (No Northbound Provisioning Connections)
		You may also see the alarm:
		Alarm ID is 32532 (Server Upgrade Pending Accept/Reject)
		You may also see this alarm due to DRNO servers Max Allowed HA Role being set to standby in Procedure 7.
		Alarm ID is10073 (Server Group Max Allowed HA Role Warning)
12.	Active NOAMP VIP: Clear browser cache	JavaScript libraries, images and other objects are often modified in the upgrade. Browsers can 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:
		Simultaneously hold down Ctrl-Shift-Delete.
		Select the appropriate type of objects and delete from the cache. For Internet Explorer the relevant object type is Temporary Internet Files. Other browsers may label these objects differently.
		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
Active NOAMP:	Active DR NOAMP:
Standby NOAMP:	Standby DR NOAMP:

C-Class Site Configuration (Normal Configuration):

Appendix D. Backout of a Server

Procedure 21: Backout of a Server

Step	Procedure		Result									
1.	Using the VIP address, access the primary NOAMP GUI.	Access th	Access the primary NOAMP GUI as specified in Appendix A.									
2.	Active NOAMP	Main Monu:	Main Menu: Administration -> Software Management -> Upgrade									
2.	VIP:		sks T	-> Sonware	management -	- Opyrau						
	Navigate to Main	Filter* Ta										
	Menu →	DR_NO_SG	DR_NO_SG NO_SG									
	Administration ->	Hostname	Upgrade State	OAM HA Role	Server Role	Function	Application Version	Start Time	Finish Time			
	Software		Server Status	Appl HA Role	Network Element		Upgrade ISO	Status Message				
		OCUDR-A	Accept or Reject		Network OAM&P	OAM&P	12.4.0.0.0-16.15.0	2018-05-15 06:20:58 EDT	2018-05-15 06:32:09 EDT			
	Management >		Err	N/A	Site1_NE_NO		UDR-12.4.0.0.0_16.15.0-x86_64.iso	Success: Server upgrade is				
	Upgrade	OCUDR-B	Accept or Reject	Standby N/A	Network OAM&P Site1_NE_NO	OAM&P	12.4.0.0.0-16.15.0 UDR-12.4.0.0.0_16.15.0-x86_64.iso	2018-05-15 05:57:49 EDT Success: Server upgrade is	2018-05-15 06:17:01 EDT			
			<u>= </u>		Sile1_NL_NO		0DR-12.4.0.0.0_10.13.0-x00_04.130	Success. Server upgrade is	complete			
3.	VIP: 1. Select the tab	Filter* 🔻 Ta	Administration	Continuity		opgrau						
	containing the	DK_NO_30	_									
	server to be	Hostname	Upgrade State Server Status	OAM HA Role	Server Role	Function	Application Version Upgrade ISO	Start Time Status Message	Finish Time			
	downgraded.		Accept or Reject		Network OAM&P	OAM&P	12.4.0.0.0-16.15.0	2018-05-15 06:20:58 EDT	2018-05-15 06:32:09 EDT			
	2. Scroll to the row	OCUDR-A	Err	N/A	Site1_NE_NO		UDR-12.4.0.0.0_16.15.0-x86_64.iso	Success: Server upgrade is	complete			
	containing the	OCUDR-B	Accept or Reject	Standby	Network OAM&P	OAM&P	12.4.0.0.0-16.15.0	2018-05-15 05:57:49 EDT	2018-05-15 06:17:01 EDT			
	hostname of the	OCODIC-D	Err	N/A	Site1_NE_NO		UDR-12.4.0.0.0_16.15.0-x86_64.iso	Success: Server upgrade is	complete			
	hostname of the server to be backed-out. 3. Verify that the Upgrade State shows Accept or Reject.											

Step	Procedure			Result				
4.	Active NOAMP VIP: Make the server ready for downgrade.	Main Menu: Status & Manage -> HA [Edit]						
	1. Navigate to Main Menu → Status &	Modifying	HA attributes					
	Manage → HA 2. Click Edit	Hostname	Description					
	3. Select the server to be downgraded and select a Max Allowed Role value of Standby or spare for DR	OCUDR-A	Active -	The maximum desired HA Role for OCUDR-A				
		OCUDR-B	Standby -	The maximum desired HA Role for OCUDR-B				
	servers. 4. Click OK	DR-OCUDR-A	Active •	The maximum desired HA Role for DR-OCUDR-A				
	NOTE: For active NOAMP only, you are logged out after this step because of the HA switchover. You	DR-OCUDR-B	Active -	The maximum desired HA Role for DR-OCUDR-B				
	switchover. You must log back in to continue.	Ok Can	cel					
	The active server is standby							

	Procedure	Result									
5.	Active NOAMP	Main Menu: Status & Manage -> Server									
	VIP:										
	Navigate to Main			4		22	DB Reporting Status				
	Menu →Status &	Server Hostname	Network Element Site2_NE_DR_NO	Appl State Enabled	Alm	Err Norm	Reporting Status	Proc			
	Manage → Server	DR-OCUDR-B	Site2_NE_DR_NO	Enabled		Err Norm	Norm	Norm			
	1. Select the server	OCUDR-A	Site1_NE_NO	Enabled		Err Norm	Norm	Norm			
	to be	OCUDR-B	Site1_NE_NO	Enabled		Err Norm	Man	Norm			
	downgraded and	L	1	1		'					
	click STOP										
	2. Click OK to										
	confirm the		Stop	Restart	Reboot	NTP Sync F	Report				
	operation, then										
	ensure the Appl										
	State updates to		Are vo		ich to i	stop application s	offware				
	Disabled.			following se			Ultware				
				DR-B	iver(5)	/:					
			000	DICD							
					_						
						OK Can	icel				
		Main Manue St	Main Menu: Status & Manage -> Server								
		Filter* ▼ Info*	•								
		Filter* Info* Server Hostname	Network Element	Appl State	Alm	DB	Reporting Status	Proc			
		Server Hostname DR-OCUDR-A	Network Element Site2_NE_DR_NO	Enabled		Err Norm	Norm	Norm			
		Server Hostname DR-OCUDR-A DR-OCUDR-B	Network Element Site2_NE_DR_NO Site2_NE_DR_NO	Enabled Enabled		Err Norm Err Norm	Norm	Norm Norm			
		Server Hostname DR-OCUDR-A DR-OCUDR-B OCUDR-A	Network Element Site2_NE_DR_NO Site2_NE_DR_NO Site1_NE_NO	Enabled Enabled		Err Norm Err Norm Err Norm	Norm Norm Norm	Norm Norm Norm			
		Server Hostname DR-OCUDR-A DR-OCUDR-B	Network Element Site2_NE_DR_NO Site2_NE_DR_NO	Enabled Enabled		Err Norm Err Norm	Norm	Norm Norm			
		Server Hostname DR-OCUDR-A DR-OCUDR-B OCUDR-A	Network Element Site2_NE_DR_NO Site2_NE_DR_NO Site1_NE_NO	Enabled Enabled		Err Norm Err Norm Err Norm	Norm Norm Norm	Norm Norm Norm			
<u>с П</u>	Active NOAMP	Server Hostname DR-OCUDR-A DR-OCUDR-B OCUDR-B OCUDR-B	Network Element Site2_NE_DR_NO Site2_NE_DR_NO Site1_NE_NO Site1_NE_NO Site1_NE_NO	Enabled Enabled Enabled Disabled		Err Norm Err Norm Err Norm Err Norm	Norm Norm Norm	Norm Norm Norm			
6.	Active NOAMP VIP:	Server Hostname DR-OCUDR-A DR-OCUDR-B OCUDR-B OCUDR-B	Network Element Site2_NE_DR_NO Site2_NE_DR_NO Site1_NE_NO	Enabled Enabled Enabled Disabled		Err Norm Err Norm Err Norm Err Norm	Norm Norm Norm	Norm Norm Norm			
6.	VIP:	Server Hostname DR-OCUDR-A DR-OCUDR-B OCUDR-B OCUDR-B	Network Element Site2_NE_DR_NO Site2_NE_DR_NO Site1_NE_NO Site1_NE_NO Site1_NE_NO	Enabled Enabled Enabled Disabled		Err Norm Err Norm Err Norm Err Norm	Norm Norm Norm	Norm Norm Norm			
6.	VIP: Navigate to Main	Server Hostname DR-OCUDR-A DR-OCUDR-B OCUDR-B OCUDR-B	Network Element Site2_NE_DR_NO Site2_NE_DR_NO Site1_NE_NO Site1_NE_NO Site1_NE_NO	Enabled Enabled Enabled Disabled		Err Norm Err Norm Err Norm Err Norm	Norm Norm Norm	Norm Norm Norm			
6.	VIP: Navigate to Main Menu →	Server Hostname DR-OCUDR-A DR-OCUDR-B OCUDR-B OCUDR-B Main Menu: Admin Filter • Tasks • DR_NO_SG NO_SG Upgrac	Network Element Site2_NE_DR_NO Site2_NE_DR_NO Site1_NE_NO Site1_NE_NO	Enabled Enabled Enabled Disabled		Err Norm Err Norm Err Norm Err Norm	Norm Norm Norm	Norm Norm Norm			
6.	VIP: Navigate to Main Menu → Administration →	Server Hostname DR-OCUDR-A DR-OCUDR-B OCUDR-B OCUDR-B Main Menu: Admin Filter Tasks T DR_NO_SG NO_SG	Network Element Site2_NE_DR_NO Site2_NE_DR_NO Site1_NE_NO Site1_NE_NO	Enabled Enabled Enabled Disabled	> Upgrad	Err Norm Err Norm Err Norm Err Norm	Norm Norm Norm Man	Norm Norm Man			
6.	VIP: Navigate to Main Menu → Administration → Software	Server Hostname DR-OCUDR-A DR-OCUDR-B OCUDR-B OCUDR-B Main Menu: Admin Filter Tasks T DR_NO_SG NO_SG Hostname Upgrac Server	Network Element Site2_NE_DR_NO Site2_NE_DR_NO Site1_NE_NO Site1_NE_NO Site1_NE_NO	Enabled Enabled Enabled Disabled are Management Server Role Network Element Network CAM&P	> Upgrad	Err Norm Err Norm Err Norm Crr No	Norm Norm Norm Man Start Time Starts Message 2018-05-15 06 20:58 EDT	Norm Norm Norm Finish Time 2018-05-15 06:32 09 EDT			
6.	VIP: Navigate to Main Menu → Administration → Software Management →	Server Hostname DR-OCUDR-A DR-OCUDR-B OCUDR-B OCUDR-B Main Menu: Admin Filter Tasks DR_NO_SG NO_SG Hostname Upgrad Server OCUDR-A	Network Element Site2_NE_DR_NO Site1_NE_NO Site1_NE_NO Site1_NE_NO		> Upgrad	Application Version Application Version Upgrade ISO 124.0.0.0-16.15.0 UDR-12.4.0.0_0_16.15.0-386_64.lso	Norm Norm Norm Man Start Time Starts Message	Norm Norm Norm Finish Time 2018-05-15 06:32 09 EDT			
6.	VIP: Navigate to Main Menu → Administration → Software	Server Hostname DR-OCUDR-A DR-OCUDR-B OCUDR-B OCUDR-B Main Menu: Admin Filter Tasks DR_NO_SG NO_SG Hostname Upgrad Server OCUDR-A Accep OCUDR-A Backou	Network Element Site2_NE_DR_NO Site1_NE_NO Site1_NE_NO Site1_NE_NO	Enabled Enabled Enabled Disabled are Management Server Role Network Element Network CAM&P	> Upgrad	Err Norm Err Norm Err Norm Crr No	Norm Norm Norm Man Start Time Starts Message 2018-05-15 06 20:58 EDT	Norm Norm Norm Finish Time 2018-05-15 06:32 09 EDT			

Step	Procedure	Result									
7.	Active NOAMP VIP: 1. Select the tab containing the server to be downgraded. 2. Scroll to the row containing the hostname of the server to be backed-out. 3. Verify that the Upgrade State shows Backout Ready. (It may take a few moments to change status)	Hostname OCUDR-B	Upgrade State Server Status Backout Ready Err	OAM HA Role Appi HA Role Standby N/A	Server Role Network Element Network OAM&P Site1_NE_NO	Function OAM&P	Application Version Upgrade ISO 12.4.0.0.0-16.15.0	Start Time Status Message	Finish Time		
8.	Server XMI IP (SSH): SSH to server	-	Use your SSH client to connect to the server (ex. ssh, putty): <pre>ssh<server address=""></server></pre>								
9.	Server XMI IP (SSH): Login as admusr user	Passwc Switch	musr: as: admuss ord: <ente: a to root s ord: <ente:< td=""><td>r passwor su -</td><td></td><td></td><td></td><td></td><td></td></ente:<></ente: 	r passwor su -							
10.	Server XMI IP (SSH): Perform the backout	Spare. Ru # ha.m NOTE: If f 2. Go to MA 3. Click Edit 4. Switch M 5. Perform t # scre # /var	In the follow hystate the state of NIN MENU: ax Allowed the backout een :/TKLC/back	ving comm the server STATUS & HA role to using the cout/reje	nand to find is Active, t MANAGE - standby reject scrip	l the HA hen pe → HA t:	A state:	Server is in Stan ps to move to st er y.			
11.	Server XMI IP (SSH): Backout proceeds	Informatior After backo	•					ckout proceeds			

Step	Procedure	Result
12.	Server XMI IP (SSH):	Use your SSH client to connect to the server (ex. ssh, putty):
	SSH to server and login as root user	login as: admusr password: <enter password=""></enter>
		Switch to root su - password: < <i>enter password</i> >
13.	Server XMI IP	Perform the backout_restore utility to restore the full database run environment:
	(SSH):	#/usr/TKLC/appworks/sbin/backout_restore
		NOTE: If asked if you would like to proceed, answer y.
		If the restore was successful, the following message is displayed:
		Success: Full restore of COMCOL run env has completed.
		Return to the backout procedure document for further instruction.
14. 🗌		Enter the following command to reboot the server. If logged in as admusr, it is necessary to use sudo.
		# init 6
		This step takes several minutes and terminates the SSH session.
15.	Server XMI IP (SSH):	Use your SSH client to connect to the server (ex. ssh, putty):
	SSH to backed-out server and login as root user	<pre>ssh<server address=""> login as: admusr password: <enter password=""> Switch to root su - password: <enter password=""></enter></enter></server></pre>
16.	Server XMI IP	If this is an NOAMP server, verify httpd service is running. Run the command:
	(SSH): Verify services	# service httpd status
	restart	Verify expected output displays httpd is running (the process IDs are variable so the list of numbers can be ignored):
		httpd <process are="" here="" ids="" listed=""> is running</process>
		If httpd is still not running after approximately 3 minutes, then services have failed to restart.
		Exit from the command line of backed-out server.
		# exit
17.	Using the VIP address, access the primary NOAMP GUI.	Access the primary NOAMP GUI as specified in Appendix A.

Step	Procedure		Result									
18. 🗌	Active NOAMP	Main Menu: Admini	stration -> Software M	anagement ->	• Upgrad	Ð						
	VIP: Verify server	Filter' Tasks										
	states.	DR_NO_SG NO_SG										
	Navigate to Main Menu →	Hostname Server		Server Role Network Element	Function	Application Version Upgrade ISO	Start Time Status Message	Finish Time				
	Administration \rightarrow	OCUDR-A Ready	Active	Network OAM&P Site1 NE NO	OAM&P	12.4.0.0.0-16.14.0						
	Software Management → Upgrade	OCUDR-B	Err N/A	Network OAM&P Site1_NE_NO	OAM&P	12.4.0.0.0-16.14.0						
19.	Active NOAMP VIP: 1. Correct Upgrade State on downgraded server 2. Navigate to Main Menu Status &	 If the state is N Due to backout b modify the down Main Menu 	eady, you are finish ot Ready, continue eing initiated from graded server so th u: Status & HA attribute	to next ste the comma nat its Upgr Manage	p. and line ade Stat	instead of thr te moves to Re	eady.	you must				
	Manage→HA[Ed it]	Hostname	Max Allowed HA	Role De	scriptio	on						
	 Select the downgraded server. Select a Max Allowed HA Role 	OCUDR-A	Active •				A Role for OCU	IDR-A				
	value of Active 5. Click Ok . 6. Verify the Max Allowed HA Role	OCUDR-B	Active •	The	e maxim	um desired H4	A Role for OCU	IDR-B				
	is set to the specified value for the server.	DR-OCUDR-A	Active •	The	e maxim	um desired HA	A Role for DR-0	OCUDR-A				
		DR-OCUDR-B	Active •	The	e maxim	um desired HA	A Role for DR-(OCUDR-B				

Step	Procedure				Re	sult			
20.	Active NOAMP VIP: Navigate to Main Menu	Main Menu: Administration -> Software Management -> Upgrade							
			sks ▼ NO_SG						
	Administration ->	Hostname	Upgrade State	OAM HA Role	Server Role	Function	Application Version	Start Time	Finish Time
	Software	Hostname	Server Status	Appl HA Role	Network Element		Upgrade ISO	Status Message	
	Management \rightarrow	OCUDR-A	Ready	Active	Network OAM&P	OAM&P	12.4.0.0.0-16.14.0		
	Upgrade;		Err	N/A	Site1_NE_NO				
	Soloct the tab of	OCUDR-B	Ready	Standby	Network OAM&P	OAM&P	12.4.0.0.0-16.14.0		
	Select the tab of the server group		Err	N/A	Site1_NE_NO				
	server to be downgraded. Verify its Upgrade State is Ready. (It might take a couple minutes for the grid to update.)								
21.	Verify application version	Verify the Application Version value for this server has been downgraded to the original release version.					riginal		
		1	HIS PROCED	OURE HAS B		ETED			

Appendix E. Verifying servers are Syncronized

Step	Procedure	Result										
Step 1.	Procedure Active NOAMP VIP: Confirm servers are in sync before upgrading the next server 1. Navigate to Main Menu → Status & Manage → Database 2. Repl Status is Allowed	Main Menu: Sta Filter V Into' Network Element Site2_NE_DR_NO Site1_NE_NO Site2_NE_DR_NO		Contemporation of the second s	Se OAM Max HA Role Spare Active Standby Spare	Application Max HA Role N/A N/A N/A N/A	Status Normal Normal Normal	DB Level 0 0 0 0 0 0	OAM Repl Status Normal Normal Normal	SIG Repl Status NotApplicable NotApplicable NotApplicable	Repl Status Allowed Allowed Allowed	Repl Audit Status NotApplicable NotApplicable NotApplicable
	Allowed 3. The DB Levels is the same or close in numbers.											

Appendix F. 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 (that is, bare-metal) server must first be upgraded to a newer release of TVOE.

NOAM servers are often implemented as TVOE guests in C-class deployments, so the TVOE upgrade check is necessary. MPs are deployed as guests on the same TVOE host as the OAM servers, and so by the time the MP servers are being upgraded, TVOE has 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.

This procedure checks if TVOE upgrade is required.

Check off ($\sqrt{}$) each step as it is completed. Boxes have been provided for this purpose under each step number.

Step	Procedure	Result
1.	Determine the version of TVOE	 Log into the host server where TVOE is installed. Run the following command to get the current TVOE installed version:
	running on the server that hosts the virtual guest being upgraded.	<pre>[root@udrTVOEblade2 ~]# appRev Install Time: Tue Aug 7 08:17:52 2012 Product Name: TVOE</pre>
		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-CentOS7.4 -x86_64.iso OS: CentOS 6.2
2.	Check the TVOE release version required for target release	Contact My Oracle Support referring Appendix J of this document to determine the appropriate release version.
3.	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 G.

Appendix G. 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 F to determine if a TVOE upgrade is required.

NOTES:

- If you are upgrading a server that is not virtualized by TVOE, then this Appendix does not apply.
- This procedure does not apply to Oracle Communications User Data Repository Cloud based systems.

This procedure verifies that all required materials are present.

Check off ($\sqrt{}$) each step as it is completed. Boxes have been provided for this purpose under each step number.

Procedure 24: Upgeade TVOE Platform

Step	Procedure	Result					
1.	Disable all the applications	 Access the primary NOAMP GUI as specified in Appendix A Navigate to Status & Manage → Server 					
	running on current TVOE.	The Server Status screen is displayed					
		 3. Identify the SO or MP (virtual) servers that are running on the TVOE environment to be upgraded, and select these 4. Click Stop. 					
		5. Confirm the operation by clicking OK6. Verify that the Appl State for all the selected servers changed to Disabled					
2.	Find out the guests running on TVOE host.	List the guests running on the TVOE host by using following command: # ssh admusr@ <tvoe ip=""> login as: admusr password: <enter password=""> Switch to root su - password: <enter password=""></enter></enter></tvoe>					
		<pre># virsh listall</pre>					
		NOTE: The output of the virsh list command lists all the guests running on current TVOE host.					
3.	Shutdown each	Run the following command for each guest identified in Step 2:					
	guest running on TVOF host.	<pre># virsh shutdown <guestname></guestname></pre>					
	TVUE nost.	NOTES					
		 Alternatively, you can use the Manage software inventory screen on PM&C to shutdown the guests. Server is not listed on the Status & Manage screen after being shutdown from the TVOE host. 					

Step	Procedure	Result			
4.	Upgrade TVOE	Periodically run the following command until the command displays no entries. This means that all VMs have been shut down:			
5.	After completed	After the TVOE upgrade is completed on the host server, the applications may not be started automatically. Proceed with the next step to restore service.			
6.	Verify Enable Virtual Guest Watchdog is set for VM	From the PM&C VM Management form, verify that Enable Virtual Watchdog is selected. Virtual Machine Management Image: Comparison of the second of the secon			
7. 🗌	Enable all the applications disabled in step1	 Enable all applications running on current TVOE: Log into the NOAM VIP GUI Navigate to Status & Manage → Server. The Server Status screen is displayed Select all the applications (NOs/SOs) 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 Restart. Confirm the operation by clicking OK. Verify that the Appl State for all the selected servers is Enabled. 			

Appendix H. Change Resources Allocated To VM Guests

H.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:

- 1. upgrade is being done from G8 profile to G9 profile;
- 2. 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.

This procedure verifies that all required materials are present.

Check off ($\sqrt{}$) each step as it is completed. Boxes have been provided for this purpose under each step number.

Procedure 25: Change VCPU Cores and RAM Allocated To NOAMP Guests

Step	Procedure	Result
1.	Login to PM&C GUI screen.	Oracle System Login Mon Oct 19 05:33:36 2015 EDT
		Log In Enter your username and password to log in Session timed out at 5:33:36 am.
		Username: pmacadmin Password: •••••• Change password
		Log In Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.

Step	Procedure	Result
2.	Navigate to Main Menu->VM Management	 Main Menu Hardware Software VM Management Storage Administration Status and Manage Task Monitoring Legal Notices Help Logout
3.	Select the TVOE that contains NO server from VM Entities list	VM Entities Refresh Enc: 11901 Bay: 3F UDRPV01-S2-MP-LC-2 UDRPV01-S2-NO-LC-B UDRPV01-S2-SO-LC-B Pc1191236-TVOE Enc: 11901 Bay: 5F
4.	Change Current Power State to Shutdown	View VM Guest Name: UDRPV01-S2-NO-LC- Host: Enc: 11901 Bay: 3F Current Power State: Running Shutdown VM Info Software Network
5.	Click Edit .	Edit Delete Clone Guest Regenerate Device Mapping ISO Install OS Upgrade Accept Upgrade Reject Upgrade

Step	Procedure	Result						
6.	For Gen9 upgrade only: Change Num vCPUs to 28	Edit VM Guest Name: UDRPV01-S2-NO-LC-B Host: fe80::8edc:d4ff:feae:ad4 Current Power State: Shut Down Shutdown						
7.	For Oracle RMS upgrade only: Change Num vCPUs to 36 and Memory (MBs) to 196608	Edit VM Guest Name: NO-A Current Power State: Shut Down Host: fe80::4405:d3ff:fee6:56d3 On Change VM Info Software Network Media Memory (MBs): 196,608 Image Image * Do not oversubscribe the TVOE host's memory. VM UUID: fe38720b-5cf5-4041-acd2-a01569fe1533 Image If an error displays in the GUI and it inhibits allocating 36 vCPU cores to NOAMP, ensure that the PM&C has been upgraded to version 6.0.1.0.1-60.22.0 or higher.						
8.	Click Save .	Save Cancel						
9.	Change Current Power State to On	Current Power State: Shut Down On Change NOTE: Power-up procedure takes a while.						
10.	When the Power is on, the current power state should show running.	View VM Guest Name: UDRPV01-S1-MP-1 Current Power State: Running Host: Enc: 11902 Bay: 5F Shutdown < Change VM Info Software Network Media						
	THIS PROCEDURE HAS BEEN COMPLETED							

Appendix I. 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.

This procedure verifies that all required materials are present.

Check off ($\sqrt{}$) each step as it is completed. Boxes have been provided for this purpose under each step number.

Step	Procedure		Result				
1.	Using the VIP address, access the primary NOAMP GUI.	Access the primary NOAMP GUI as specified in Appendix A.					
2.	Active NOAMP VIP: Navigate to Main Menu →	Main Menu: Configuration -> Networkin	•				
		Name OAM	Intra-NE Network	Inter-NE Network			
	Configuration \rightarrow	Replication	M	XMI			
	Networking ->	Signaling	XSI1	XSI1			
		HA_Secondary	IMI	XSI1			
	Services	HA_MP_Secondary	IMI	×MI			
		Replication_MP	IMI	XMI			
		ComAgent	IM	XSI1			

Step	Procedure	Result								
3. 🗌	Active NOAMP VIP: Change Service value. 1. Change Inter-NE HA_Secondary to XSI1. 2. Click Apply. 3. Click OK.	Main Menu: Configuration -> Networking -> Services [Edit]								
		Services								
		Name	Intra-NE Network Inter-NE Network							
		OAM	IMI 🔻	XMI •						
		Replication	IMI 🔻	XMI						
		Signaling	XSI1 •	XSI1 •						
		HA_Secondary	IMI 🔻	XSI1 V						
		HA_MP_Secondary	IMI •	XMI •						
		Replication_MP	IMI 🔻	XMI •						
		ComAgent	IMI 🔻	XSI1 V						
		Ok Apply C	ancel							
		You must		OK	s changes, ComAgent					
4.	Active NOAMP VIP: The Services configuration screen opens.	Main Menu: Configuration -> Networkin	ng -> Services							
		Name OAM Replication Signaling HA_Secondary HA_MP_Secondary Replication_MP ComAgent		Intra NE Network IMI IMI IMI IMI IMI IMI IMI		Inter-NE Network XMI XMI XSI1 XSI1 XMI XMI XMI XSI1				

Step	Procedure	Result									
5.	Reboot all NOAMP servers	Reboot all NOAMP servers either by using: • The active NOAMP GUI Status & Manage → Server screen and click Reboot: Main Menu: Status & Manage -> Server Filter* ▼									
		Server Hostname	Network Element	Appl State	Alm	DB	Reporting Status	Proc			
		DR-OCUDR-A	Site2_NE_DR_NO	Enabled	Err	Norm	Norm	Norm			
		DR-OCUDR-B	Site2_NE_DR_NO	Enabled	Err	Norm	Norm	<u>Norm</u>			
		OCUDR-A	Site1_NE_NO	Enabled	Err	Norm	Norm	<u>Norm</u>			
		OCUDR-B	Site1_NE_NO	Enabled	Err	Norm	Norm	Norm			
		• The terminal of each server with the reboot command:									
		\$ sudo reboot									
		NOTE: This is performed on all NOAMPs.									
THIS PROCEDURE HAS BEEN COMPLETED											

Appendix J. My Oracle Support

My Oracle Support (<u>https://support.oracle.com</u>) is your initial point of contact for all product support and training needs. A representative at Customer Access Support (CAS) can assist you with My Oracle Support 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 <u>http://www.oracle.com/us/support/contact/index.html</u>. When calling, make these selections 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 one of the following options:
 - o For Technical issues such as creating a Service Request (SR), Select 1
 - o For Non-technical issues such as registration or assistance with My Oracle Support, Select 2

You are connected to a live agent who can assist you with My Oracle Support registration and opening a support ticket.

My Oracle Support is available 24 hours a day, 7 days a week, 365 days a year.

Appendix K. Locate Product Documentation on the Oracle Help Center SITE

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

- 1. Log into the Oracle Technology Network site at <u>http://docs.oracle.com</u>.
- 2. Select the Find a product
- 3. Enter User Data Repository

Takes you to CGBU Documentation. A list of the documentation set for the selected product and release displays.

- 4. Select User Data Repository followed by version
- 5. To download a file to your location, right-click the **PDF**, select **Save target as** (or similar command based on your browser), and save to a local folder.