

**Oracle® Communications
EAGLE Query Server**

Installation Guide

Release 1.0

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ORACLE®

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Before beginning this procedure, contact My Oracle Support and inform them of your upgrade plans. Refer to 3.8Appendix H for instructions on accessing My Oracle Support.

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1. INTRODUCTION

1.1 Purpose and Scope

This document describes methods utilized and procedures executed to perform the installation of the Oracle Communications EAGLE Query Server 1.0, henceforth known as EAGLE QS application software on an in-service VM running having a release of Oracle Linux 6.8.

The audience for this internal document consists of Oracle customers and the following groups: Software System, Product Verification, Documentation, and Customer Service including Software Operations and NPI. This document provides step-by-step instructions to install EAGLE QS on their system using an ISO image.

1.2 References

1.2.1 Internal (Oracle)

The following are references internal to Oracle. They are provided here to capture the source material used to create this document. Internal references are only available to Oracle's personnel.

- [1] TEKELEC Acronym Guide, MS005077, revision 2.35, September 2005.
- [2] Software Upgrade Procedure Template, TM005074, Current Version
- [3] Oracle Communications EAGLE Query Server 1.0 PFS, CGBU_PM_1314, Current Version.
- [4] Oracle Communication EAGLE Query Server Security Guide, Current Version.

1.3 Software Release Numbering

Refer to Engineering Release Notes or other appropriate document with the most recent build numbers in order to identify the proper components (software loads, GPLs, etc.) that comprise the product's software release.

1.4 Acronyms

An alphabetized list of acronyms used in the document that are not included in [1]:

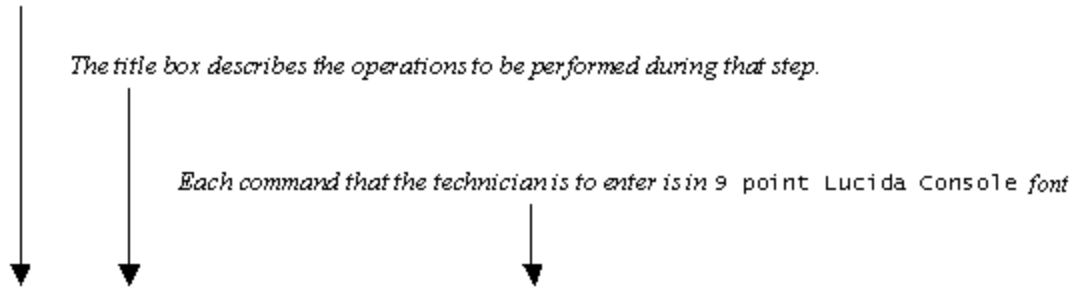
Acronym	Description
AS	Application Server
EPAP	EAGLE Provisioning Application Processor
GA	General Availability
LV	Logical volume
NPI	New Product Introduction
OCEQS	Oracle® Communications EAGLE Query Server
OL	Oracle Linux
QS	Query Server
RPM	Red Hat Package Manager. EAGLE QS software shall be delivered in form of RPM packages.

Table 1. Acronyms

1.5 Terminology

Multiple servers may be involved with the procedures in this manual. Therefore, most steps in the written procedures begin with the name or type of server to which the step applies. For example:

Each step has a checkbox for every command within the step that the technician should check to keep track of the progress of the procedure.



1 <input type="checkbox"/>	Verify all materials required are present	Materials are listed in Material List
-------------------------------	---	---------------------------------------

Figure 1: Example of a step that indicates the Server on which it needs to be executed

Other terminology follows.

Term	Description
Mixed EPAP	An EPAP where both PDB and RTDB databases reside.
Provisionable EPAP	An EPAP server hosting PDB with provisioning interfaces to QS. Both Mixed EPAP and Standalone PDB are Provisionable EPAP.
Standalone PDB	Also known as ‘PDB Only’, this type of EPAP shall have PDB database only. No RTDB database shall exist on the standalone PDB site.

Table 2. Terminology

1.6 Requirement

Customer needs to stop provisioning while executing Procedure 8, Procedure 9 and Procedure 10 for Master Query Server and Procedure 12, Procedure 13 and Procedure 14 for Slave Query Server.

Please read the following notes on procedures:

1. Any procedure completion times are estimates. Times may vary due to differences in database size, user experience, and user preparation.
2. The shaded area within response steps must be verified in order to successfully complete that step.
3. Output displayed in the procedures’ response steps is presented. Actual output varies depending on system. Output is presented for reference only.
4. Where possible, command response outputs are shown as accurately as possible. However, exceptions may include the following:
 - Information such as *time* and *date*.
 - ANY information marked with “XXXX.” Where appropriate, instructions are provided to determine what output should be expected in place of “XXXX.”
5. After completing each step and **at each point where data is recorded from the screen, the technician performing the procedure must check each step.** A checkbox has been provided beneath each step number for this purpose.

6. Captured data is required for future support reference if My Oracle Support is not present during the execution of procedures.
7. User Interface menu items displayed in this document were correct at the time the document was published but may appear differently at time that this procedure is executed.

1.7 EAGLE Query Server Requirements

1.7.1 Minimum Hardware Requirement

EAGLE QS must have the following minimum hardware requirement:

Server Component	Minimum Requirement
Platform	Oracle Corporation Sun Server X6-2
Server Type	VM
OS	Oracle Linux
Release	6.8
Arch	X86_64
Processor	Intel(R) Xeon(R) CPU L5410 @2.33GHz
Number of Cores	16
Available Disk Space for application	500 GB
RAM	16 GB

Table 3. Server Details

1.7.2 Software Package Requirements

1.7.2.1 PERL

Perl 5.10 should be already installed on the EAGLE QS platform as it is required to execute the configuration file to configure the EAGLE QS. Therefore, users are advised to verify its availability and install it (if not available) before proceeding with installation EAGLE QS.

1.7.2.2 IPTABLES/IP6TABLES

iptables and ip6tables service should be running on the EAGLE QS platform. These services are required for opening all three ports of MySQL instances. These port are required for the communication between provisionable EPAP, Master EAGLE QS, Slave EAGLE QS and MySQL Query Client.

1.7.2.3 Open Port

The ports used by OCEQS need to be opened on the firewall for proper functioning of OCEQS.

Note: Ports for SSH (22), Telnet (23) must be opened bi-directionally.

S. No.	Port and Type	Purpose
--------	---------------	---------

1	20 (TCP)	Data port for FTP
2	21 (TCP)	Command port for FTP
3	22 (TCP)	Port used for SSH connection
4	23 (TCP)	Port used for TELNET connection
5	3306 (TCP)	MySQL
6	3307 (TCP)	MySQL
7	3308 (TCP)	MySQL

Table 4. Port Details

1.7.2.4 SSH

For connecting to network elements like provisionable EPAP(s) and MySQL Query Clients (description mentioned in Section 1.8) the SSH service shall be running on the EAGLE QS machine. SSH is required for securely connecting to provisionable EPAP(s) and MySQL Query Client. **For security reasons, it is recommended that all the network elements should communicate with EAGLE QS over secure connections to enhance the security of the connection and to provide a level of protection for the transported data.**

On the Oracle Linux OS, the SSH service is enabled by default. So, the SSH package installation is not required on the server.

1.7.2.5 Download and installation of software packages

If the EAGLE QS machine is on the network that can access the Yum server, to download the packages (and their dependencies), then the packages must be downloaded and installed manually, using the link https://docs.oracle.com/cd/E37670_01/E37355/html/ol_creating_yum_repo.html.

Note: YUM (Yellowdog Updater Modified) is an open source command-line as well as graphical based package management tool for RPM (RedHat Package Manager) based Linux systems. It allows users and system administrator to easily install, update, remove or search software packages on a system

1.7.2.6 System Information

This section contains the table of all the users, groups and system configuration information. The password for EPAP users are same as on EPAP. The passwords of Query server's users will be defined in the procedure as mention in description column.

Customer needs to fill following table before starting installation of the software.

S. No.	Setup	Purpose of User	Description	User Name	Password
1.	EPAP	Application User	The user is available at EPAP and used for the different configuration. In this document we are using this user to configure EAGLE Query Server.	epapconfig	
2.	EPAP	Application User	The user is available at EPAP and used for the logging purpose by the end user. In this	epapdev	

			document we are using this user for logging on EPAP server.		
3.	EPAP	Linux User	The user is available at EPAP. This have access to all commands and files by default on a Linux operating system. In this document we are using this user for logging and executing some commands.	root	
4.	EPAP	MySQL User	The user is available at EPAP. This is a MySQL user used for MySQL replication between EPAP and EAGLE QS. Also this user is created after execution Procedure 7 step 5.	epaprepl	Note: Customer need to choose any non-empty string for the password.
5.	Master/Slave QS	Linux User	The user is available at EAGLE Query server. This have access to all commands and files by default on a Linux operating system. In this document we are using this user for logging and executing some commands.	root(“or a user name that has same access privileges”) e.g. root	
6.	Master/Slave QS	Linux User	This is an admin user of EAGLE Query server. The user is available only at EAGLE Query server. In this document we are using this user for logging into EAGLE Query server after the initial installation. This user is created after execution of Procedure 4 step 4 and 5.	Note: The customer can use any string for “admin” user which do not contain any special characters and numbers. The length of the string must be less than 8 characters. e.g. admin,qsadm,qsdev	Note: Password should be as per the Linux PAM credit rules. User can use man page of “pam_cracklib” to check password rules.
7.	Master/Slave QS	Linux User	This is a configuration user of EAGLE Query Server. The user is available only at EAGLE Query server. This user is created after execution of Procedure 4 step 6 and 7.	Note: The customer can use any string for “config” user which do not contain any special characters and numbers. The length of the string must be less than 8 characters.	Note: Password should be as per the Linux PAM credit rules. User can use man page of “pam_cracklib” to check password rules.

				e.g. qsconfig,cfqqs,config	
8.	Master/Slave QS	MySQL User	<p>The user is available only at EAGLE Query server. This is a MySQL user used for logging into MySQL after configuration of MySQL query client. This user is created after execution of Procedure 15 step 4.</p> <p>Note: You can configure multiple MySQL Query Client's on OCEQS. This means there can be the same, or different passwords, for different dbroot users, for the different MySQL Query Client's.</p>	dbroot	Note: The Customer can choose any string as a password which have length greater than 8.
9.	Master/Slave QS	Linux Group	<p>The group is available only at EAGLE Query server. This is a group used for allow access to both EAGLE QS admin and configuration user as mentioned in Table 5 row 6 and 7. This group is created after execution of Procedure 4 step 8.</p>	<p>Note: The customer can use any string for "group" name which do not contain any special characters and numbers. The length of the string must be less than 8 characters.</p> <p>e.g. qsgrp,grpqs</p>	
10.	Master/Slave QS	MySQL User	<p>The user is available at Master and Slave EAGLE Query Server. This is a MySQL user used for MySQL replication between Master and Slave EAGLE QS. This user is created after execution of Procedure 11 step 4.</p>	qsrepl	Note: The Customer can choose any string as a password which have length greater than 8.

Table 5. Users at EPAP and EAGLE Query Server

Sr. No.	Description	Information
1.	EPAP IP (IPv4/IPv6)	
2.	Master Query Server IP (IPv4/IPv6)	
3.	Slave Query Server IP (IPv4/IPv6)	
4.	MySQL Query Client IP(s) (IPv4/IPv6) Note: You can configure multiple MySQL Query Client's on OCEQS.	

Table 6. System Configuration Information

1.7.3 Generic Requirements

- Screen logging is required throughout the procedure. These logs should be made available to My Oracle Support in the event their assistance is needed.
- Target-release ISO image
- SELinux has two "modes" of operation: permissive and enforcing. In permissive mode SELinux does not enforce its policy, but only logs what it would have granted. So the SELinux status must be set to permissive or disable on Linux server.

1.8 MySQL Query Client Requirement

Eagle QS provides a functionality called "MySQL Query Client" through which a user can access the Eagle QS ASCII database remotely (or locally). The MySQL Query Client would be either a third-party-software like "MySQL Workbench" or a Linux machine having MySQL. The EAGLE QS itself can also work as a MySQL Query Client by configuring the localhost IP as a MySQL Query Client. Please note: to establish a secure connection with the Eagle QS ASCII DB, MySQL 5.7.12 and higher MUST be installed on the MySQL Query Client.

2. GENERAL DESCRIPTION

This document defines the step-by-step actions performed to install the EAGLE QS application software on an in-service VM running on X6-2 servers having a release of Oracle Linux 6.8.

You can delete this sentence, but again, how is the customer supposed to know how to install the VM environment on the required Oracle servers?

The EAGLE QS application makes it optional for a newly installed VM to be configured as a Master EAGLE QS or Slave EAGLE QS (after configuring a VM as Master, it cannot be changed to Slave and vice-versa).

The EAGLE QS application can be installed based on the table below.

OS	EAGLE QS Initial Installation Release
Oracle Linux 6.8	1.0

Table 7. Installation Path

3. INSTALLATION PROCEDURE

This section contains installation of software with configuration and time required for each procedure.

3.1 Installation Phases

This section describes the procedure execution order of Master and Slave Query server. The procedures contain the steps for installation of software with basic configuration.

3.1.1 Procedure Execution Order

Section	Master EAGLE QS
3.2	Procedure 1 Procedure 2 Procedure 3 Procedure 4 Procedure 5
3.3	Procedure 6
3.4	Procedure 7 Procedure 8 Procedure 9
3.5	Procedure 10
3.8	Procedure 15

Table 8. Execution table for installation of Master EAGLE QS

Section	Slave EAGLE QS
3.2	Procedure 1 Procedure 2 Procedure 3 Procedure 4 Procedure 5
3.3	Procedure 6
3.6	Procedure 11 Procedure 12 Procedure 13
3.7	Procedure 14
3.8	Procedure 15

Table 9. Execution table for installation of Slave EAGLE QS

The following tables (Table 10, Table 11, Table 12) illustrates the progression of the installation process by procedure with estimated times. The estimated times and the phases that must be completed may vary due to differences in typing ability and system configuration. The phases outlined in Table 11 and Table 12 are to be executed in the order they are listed.

3.1.2 Maintenance Window

The maintenance window starts while customer is executing Procedure 8, Procedure 9 and Procedure 10 for Master Query Server and Procedure 12, Procedure 13 and Procedure 14 for Slave Query Server. The provisioning must be halted while executing above mentioned procedures.

Note: Execute Table 10 before Maintenance Window

Procedure	Task	Setup	Time Taken	Task Start time (min)
Procedure 1	Pre-Install Verification	Master or Slave	10	0
Procedure 2	Install MySQL	Master or Slave	10	10
Procedure 3	Install Application	Master or Slave	10	20
Procedure 4 Procedure 5	Create the Non-Root user and start MySQL Services	Master or Slave	5	30
				35

Table 10. Timeline table for EAGLE QS installation

3.1.3 Configuration Timeline for Master EAGLE QS

- Provisioning should be halted at EPAP when snapshot is created on provisionable EPAP, Transferred to EAGLE QS, and successfully restored i.e. Procedure 8, Procedure 9 and Procedure 10.

Procedure	Task	Setup	Time Taken	Task Start time (min)
Procedure 6	Configure EAGLE QS as Master EAGLE QS	Master	5	0
Procedure 7, Procedure 8, Procedure 9	Configure Master EAGLE QS on provisionable EPAP, Create and Transfer PDB snapshot. Note: Time taken to create PDB snapshot is dependent on database size	Provisionable EPAP	60	5
Procedure 10	Restore PDB Snapshot on Master EAGLE QS Note: Time taken to restore PDB snapshot is dependent on database size.	Master	240	65
				305

Table 11. Timeline table for configuration for Master EAGLE QS

3.1.4 Configuration Timeline for Slave EAGLE QS

Provisioning should be halted at EPAP when snapshot is created on Master Eagle QS, Transferred to Slave Eagle QS and successfully restored i.e. during Procedure 12, Procedure 13, Procedure 14

Procedure	Task	Setup	Time Taken	Task Start time (min)
Procedure 6	Configure EAGLE QS as Slave EAGLE QS	Slave	5	0
Procedure 11	Configure Slave on Master EAGLE QS.	Master	5	5
Procedure 12, Procedure 13	Create Master Snapshot and Transfer it to Slave EAGLE QS.	Master	30	10
Procedure 14	Restore Master Snapshot on Slave EAGLE QS	Slave	10	40

	Note: Time taken to restore Master snapshot is dependent on database size.			
				50

Table 12. Timeline table for Configuration for Slave EAGLE QS

3.1.5 Configuration Timeline for Master and Slave EAGLE QS

Procedure	Task	Time Taken	Task Start time (min)
Procedure 15	Configure MySQL Query Client on Master and Slave EAGLE QS	5	0
			5

3.2 EAGLE QS Installation

Procedure 1 Pre-Install Verification on VM

Procedure 1: Pre-Install Verification on VM

S T E P #	This procedure verifies per-requisites before initial install of the application.	
	Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.	
	IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR ASSISTANCE.	
IMPORTANT: Installation of the Operating System on VM should be completed before starting installation procedure.		
1. <input type="checkbox"/>	Connect to the Server.	If not already connected, connect to the VM via ssh.
2. <input type="checkbox"/>	Log in as root (“or a user that has same access privileges”) user.	If not already logged in, then login as root mentioned in Table 5 row 5: [hostname] console login: root (“or user that has same access privileges”) password: <i>password</i>
3. <input type="checkbox"/>	Verify that Perl is installed on VM with version equal to or greater than 5.10.0.	# perl -v Output should be as follow:

Procedure 1: Pre-Install Verification on VM

		<pre>[root@ORA-2-70 QS]# perl -v</pre> <p>This is perl, v5.10.1 (*) built for x86_64-linux-thread-multi</p> <p>Copyright 1987-2009, Larry Wall</p> <p>Perl may be copied only under the terms of either the Artistic License or the GNU General Public License, which may be found in the Perl 5 source kit.</p> <p>Complete documentation for Perl, including FAQ lists, should be found on this system using "man perl" or "perldoc perl". If you have access to the Internet, point your browser at http://www.perl.org/, the Perl Home Page.</p> <p>Note: Install the Perl package if it is not present. Refer to for RPM installation commands.</p>
4.	<input type="checkbox"/> Verify that LV “/var/QS” exists with minimum 500G space.	<pre># df -hP</pre> <p>Output should be as follow:</p> <pre>[root@ORA-2-70 ~]# df -hP Filesystem Size Used Avail Use% Mounted on /dev/mapper/VolGroup-lv_root 146G 8.5G 130G 7% / tmpfs 3.7G 76K 3.7G 1% /dev/shm /dev/sda1 477M 84M 364M 19% /boot /dev/mapper/VolGroup-lv_home 9.5G 23M 9.0G 1% /home /dev/mapper/VolGroup-LogVol103 527G 70M 500G 1% /var/QS /dev/sr0 3.8G 3.8G 0 100% /media/OL6.8 x86_64 Disc 1</pre> <p>Note: Create the LV if it is not present. Refer to 3.8Appendix B for LV creations.</p>
5.	<input type="checkbox"/> Stop the mysqld services if mysqld is running.	<pre># service mysqld status</pre> <p>mysqld is running.</p> <pre>#service mysqld stop</pre>
6.	<input type="checkbox"/> Verify the status of SELinux.	<pre>#sestatus</pre> <p>Output should be one of the following:</p> <pre>SELinux status: enable SELinux mode: permissive</pre> <p>Note: For the log rotation functionality, the SELinux mode must be set to either Permissive or the status must be set to Disabled. Logs will not be rotated and MySQL services will not come up after reboot when the SELinux mode is set to Enforcing.</p>
7.	<input type="checkbox"/> Verify that iptables is installed on VM.	<pre># rpm -qa grep -i iptables</pre> <p>Output should be as follow:</p> <pre># rpm -qa grep -i iptables iptables-ipv6-1.4.7-16.0.2.el6.x86_64 iptables-1.4.7-16.0.2.el6.x86_64</pre> <p>Note: Install the iptables and ip6tables if it is not present. Refer to 3.8Appendix D for RPM installation commands.</p>
8.	<input type="checkbox"/> Verify that iptables and ip6tables services are running or not.	<p>Check whether iptables and ip6tables services are running or not by below commands:</p> <pre># service iptables status</pre>

Procedure 1: Pre-Install Verification on VM

		<pre># service ip6tables status If the output of above commands show that iptables and ip6tables services are not running, then start the service by below commands: #service iptables start Output should be as follow: iptables: Setting chains to policy ACCEPT: filter [OK] iptables: Flushing firewall rules: [OK] iptables: Unloading modules: [OK] iptables: Applying firewall rules: [OK] # service ip6tables start Output should be as follow: ip6tables: Setting chains to policy ACCEPT: filter [OK] ip6tables: Flushing firewall rules: [OK] ip6tables: Unloading modules: [OK] ip6tables: Applying firewall rules: [OK] Verify that iptables services are started by below commands: # service iptables status Output should be as follows: [root@DSVM1 ~]# service iptables status Table: filter Chain INPUT (policy ACCEPT) num target prot opt source destination 1 ACCEPT tcp -- 0.0.0.0/0 0.0.0.0/0 tcp dpt:3308 2 ACCEPT tcp -- 0.0.0.0/0 0.0.0.0/0 tcp dpt:3307 3 ACCEPT tcp -- 0.0.0.0/0 0.0.0.0/0 tcp dpt:3308 4 ACCEPT tcp -- 0.0.0.0/0 0.0.0.0/0 tcp dpt:3307 5 ACCEPT tcp -- 0.0.0.0/0 0.0.0.0/0 tcp dpt:3308 6 ACCEPT tcp -- 0.0.0.0/0 0.0.0.0/0 tcp dpt:3307 7 ACCEPT all -- 0.0.0.0/0 0.0.0.0/0 state RELATED, ESTABLISHED 8 ACCEPT icmp -- 0.0.0.0/0 0.0.0.0/0 9 ACCEPT all -- 0.0.0.0/0 0.0.0.0/0 10 ACCEPT tcp -- 0.0.0.0/0 0.0.0.0/0 state NEW tcp dpt:22 11 REJECT all -- 0.0.0.0/0 0.0.0.0/0 reject-with ic mp-host-prohibited Chain FORWARD (policy ACCEPT) num target prot opt source destination 1 REJECT all -- 0.0.0.0/0 0.0.0.0/0 reject-with ic mp-host-prohibited Chain OUTPUT (policy ACCEPT) num target prot opt source destination #service ip6tables status Output should be as follows:</pre>
--	--	---

Procedure 1: Pre-Install Verification on VM

		<pre>[root@DSVM1 ~]# service iptables status Table: filter Chain INPUT (policy ACCEPT) num target prot opt source destination 1 ACCEPT tcp ::/0 ::/0 tcp dpt:3308 2 ACCEPT tcp ::/0 ::/0 tcp dpt:3307 3 ACCEPT tcp ::/0 ::/0 tcp dpt:3308 4 ACCEPT tcp ::/0 ::/0 tcp dpt:3307 5 ACCEPT tcp ::/0 ::/0 tcp dpt:3308 6 ACCEPT tcp ::/0 ::/0 tcp dpt:3307 7 ACCEPT all ::/0 ::/0 state RELATED,ESTABLISHED 8 ACCEPT icmpv6 ::/0 ::/0 9 ACCEPT all ::/0 ::/0 10 ACCEPT udp ::/0 fe80::/64 state NEW udp dpt:546 11 ACCEPT tcp ::/0 ::/0 state NEW tcp dpt:22 12 REJECT all ::/0 ::/0 reject-with icmp6-adm-prohibite Chain FORWARD (policy ACCEPT) num target prot opt source destination 1 REJECT all ::/0 ::/0 reject-with icmp6-adm-prohibite Chain OUTPUT (policy ACCEPT) num target prot opt source destination</pre> <p>Note: Install the services of iptables and ip6tables if it is not present. Refer to 3.8Appendix D for RPM installation commands.</p>
9.	<input type="checkbox"/> Execute the “date” command on VM and on EPAP. The time of EPAP and VM should be very close to each other (difference in time of few seconds).	<pre>[root@VM01]# date Mon Mar 27 15:14:02 IST 2017 [epapdev@PDBonly]# date Mon Mar 27 15:14:10 IST 2017</pre>
10.	<input type="checkbox"/> Procedure complete.	Procedure is complete.

Procedure 2 Install MySQL RPMs

Procedure 2: Install MySQL RPMs

S T E P #	This procedure installs the MySQL on the server.	
	Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.	
IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR ASSISTANCE.		
NOTE: THE MYSQL VERSION ON EPAP AND EAGLE QUERY SERVER SHOULD BE SAME.		
1.	<input type="checkbox"/> Log in as root (“or a user name that has same access privileges”) user.	If not already logged in, then login as root (“or a user name that has same access privileges”) mentioned in Table 5 row 5. [hostname] console login: root (“or user that has same access privileges”) password: <i>password</i>
2.	<input type="checkbox"/> Verify if MySQL is already installed on the server.	\$ rpm -qa grep -i mysql Output should be similar to the following if MySQL is already installed:

Procedure 2: Install MySQL RPMs

		<pre>mysql-libs-5.1.73-7.el6.x86_64</pre> <p>The above output might be observed when eagle QS was never installed . Or</p> <pre>\$ rpm -qa grep -i mysql mysql-commercial-devel-5.7.16-1.1.el6.x86_64 mysql-commercial-common-5.7.16-1.1.el6.x86_64 mysql-commercial-libs-compat-5.7.16-1.1.el6.x86_64 mysql-commercial-client-5.7.16-1.1.el6.x86_64 mysql-commercial-libs-5.7.16-1.1.el6.x86_64 mysql-commercial-server-5.7.16-1.1.el6.x86_64</pre> <p>The above output might be observed when eagle QS was installed and reinstallation is being attempted.</p>
3.	<input type="checkbox"/> Execute rpm command to uninstall all the already installed MySQL rpms. Note: Please skip this step in case if you do not find any MySQL rpm in Procedure 2 step 2.	<pre>\$ rpm -e --nodeps <rpm_name></pre>
4.	<input type="checkbox"/> Copy the EAGLE QS 1.0 RPM to VM.	EAGLE QS 1.0 ISO shall be copied and mounted to the VM. Refer Appendix A to mount the ISO.
5.	<input type="checkbox"/> Change directory to /mnt/eqs.	<pre>\$ cd /mnt/eqs</pre>
6.	<input type="checkbox"/> Install MySQL common RPMs by issuing the given command.	<pre># rpm -ivh mysql-commercial-common-5.7.22-1.1.el6.x86_64.rpm warning: /var/QS/mysql-commercial-common-5.7.22-1.1.el6.x86_64.rpm: Header V3 DSA/SHA1 Signature, key ID 5072e1f5: NOKEY Preparing... ##### [100%] 1:mysql-commercial- common##### [100%]</pre>
7.	<input type="checkbox"/> Install MySQL libs RPMs by issuing the given command.	<pre># rpm -ivh mysql-commercial-libs-5.7.22-1.1.el6.x86_64.rpm warning: /var/QS/mysql-commercial-libs-5.7.22-1.1.el6.x86_64.rpm: Header V3 DSA/SHA1 Signature, key ID 5072e1f5: NOKEY Preparing... ##### [100%] 1:mysql-commercial-libs ##### [100%]</pre>
8.	<input type="checkbox"/> Install MySQL compact RPMs by issuing the given command.	<pre># rpm -ivh mysql-commercial-libs-compat-5.7.22-1.1.el6.x86_64.rpm warning: /var/QS/mysql-commercial-libs-compat-5.7.22-1.1.el6.x86_64.rpm: Header V3 DSA/SHA1 Signature, key ID 5072e1f5: NOKEY Preparing... ##### [100%] 1:mysql-commercial-libs- c##### [100%]</pre>
9.	<input type="checkbox"/> Install MySQL devel RPMs by issuing the given command.	<pre># rpm -ivh mysql-commercial-devel-5.7.22-1.1.el6.x86_64.rpm warning: /var/QS/mysql-commercial-devel-5.7.22-1.1.el6.x86_64.rpm: Header V3 DSA/SHA1 Signature, key ID 5072e1f5: NOKEY</pre>

Procedure 2: Install MySQL RPMs

		Preparing... ##### [100%] 1:mysql-commercial-devel ##### [100%]
10.	Install MySQL client RPMs by issuing the given command. <input type="checkbox"/>	# rpm -ivh mysql-commercial-client-5.7.22-1.1.el6.x86_64.rpm warning: /var/QS/mysql-commercial-client-5.7.22-1.1.el6.x86_64.rpm: Header V3 DSA/SHA1 Signature, key ID 5072e1f5: NOKEY Preparing... ##### [100%] 1:mysql-commercial-client##### [100%]
11.	Install MySQL server RPMs by issuing the given command. <input type="checkbox"/>	rpm -ivh mysql-commercial-server-5.7.22-1.1.el6.x86_64.rpm warning: /var/QS/mysql-commercial-server-5.7.22-1.1.el6.x86_64.rpm: Header V3 DSA/SHA1 Signature, key ID 5072e1f5: NOKEY Preparing... ##### [100%] 1:mysql-commercial-server##### [100%]
12.	Procedure Complete. <input type="checkbox"/>	Install MySQL Procedure is complete.

Procedure 3 Install Application

Procedure 3: Install the Application

S T E P #	This procedure installs the application on the server.	
	Check off (√)each step as it is completed. Boxes have been provided for this purpose under each step number.	
	IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR ASSISTANCE.	
1.	Log in as root (“or a user name that has same access privileges”) user. <input type="checkbox"/>	If not already logged in, then login as root(“or a user name that has same access privileges”) mentioned in Table 5 row 5 : [hostname] console login: root(“or a user name that has same access privileges”) password: <password>
2.	Change directory to /mnt/eqs <input type="checkbox"/>	\$ cd /mnt/eqs
3.	Install EAGLE QS RPM by issuing the given command. <input type="checkbox"/>	# rpm -ivh EAGLEQS-1.0.0.0.1_10.5.0.x86_64.rpm Preparing... ##### [100%] INFO: Checks LVM is Created and have enough space for EAGLE QS 1:EAGLEqs ##### [100%] INFO: Running post install. INFO: Installing new my.cnf file Open ports 3307,3308

Procedure 3: Install the Application

		<pre> . . . INFO: EAGLE QS INSTALLED SUCCESSFULLY. The following errors are expected: "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/pdb/mysql/columns_priv.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/pdb/mysql/db.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/pdb/mysql/event.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/pdb/mysql/func.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/pdb/mysql/ndb_binlog_index.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/pdb/mysql/proc.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/pdb/mysql/procs_priv.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/pdb/mysql/proxies_priv.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/pdb/mysql/tables_priv.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/pdb/mysql/user.MYI" </pre>
4.	Install Complete. <input type="checkbox"/>	Install Procedure is complete.
5.	<p>Note: If Connecting QS to EPAP 16.3</p> <p>Update my.cnf file otherwise not</p>	<pre> # vim /etc/my.cnf Update the file for ibdata50:2G to ibdata50:2G:autoextend as mentioned in the example below . innodb_data_file_path = ibdata1:2G;ibdata2:2G;ibdata3:2G;ibdata4:2G;ibdata5:2G;ibdata6:2G;ibdata7:2G;ibdata8:2G;ibdata9:2 G;ibdata10:2G;ibdata11:2G;ibdata12:2G;ibdata13:2G;ibdata14:2G;ibdata15:2G;ibdata16:2G;ibdata17: 2G;ibdata18:2G;ibdata19:2G;ibdata20:2G;ibdata21:2G;ibdata22:2G;ibdata23:2G;ibdata24:2G;ibdata25 :2G;ibdata26:2G;ibdata27:2G;ibdata28:2G;ibdata29:2G;ibdata30:2G;ibdata31:2G;ibdata32:2G;ibdata3 3:2G;ibdata34:2G;ibdata35:2G;ibdata36:2G;ibdata37:2G;ibdata38:2G;ibdata39:2G;ibdata40:2G;ibdata 41:2G;ibdata42:2G;ibdata43:2G;ibdata44:2G;ibdata45:2G;ibdata46:2G;ibdata47:2G;ibdata48:2G;ibdat a49:2G;ibdata50:2G:autoextend Note: No semicolon should be present at the end of the above mentioned line. </pre>

Procedure 4 Create the Non-Root Users

Procedure 4: Create the Non-Root Users

S	This procedure creates the non-root users for Eagle Query Server.
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Procedure 4: Create the Non-Root Users

T E P #	Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.	
	IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR ASSISTANCE.	
NOTE: This procedure creates the non-root users (admin and config) for EAGLE QS.		
1. <input type="checkbox"/>	Log in as root ("or a user name that has same access privileges") user as mentioned in Table 5 row 5.	If not already logged in, then login as root ("or a user name that has same access privileges") as mentioned in Table 5 row 5 : [hostname] console login: root("or a user name that has same access privileges") password: password
2. <input type="checkbox"/>	The script creates a non-root Linux and group for administration of the QS application. Customer has to execute this script.	# /var/QS/bin/updatePrivilegesForUser.sh The following errors are expected: "myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/pdb/mysql/columns_priv.MYI" "myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/pdb/mysql/db.MYI" "myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/pdb/mysql/event.MYI" "myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/pdb/mysql/func.MYI" "myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/pdb/mysql/ndb_binlog_index.MYI" "myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/pdb/mysql/proc.MYI" "myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/pdb/mysql/procs_priv.MYI" "myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/pdb/mysql/proxies_priv.MYI" "myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/pdb/mysql/tables_priv.MYI" "myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/pdb/mysql/user.MYI" "myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/appconfig/UiDB/eqsConfig.MYI" "myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/appconfig/UiDB/queryclientips.MYI" "myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/appconfig/UiDB/slaveips.MYI"
3. <input type="checkbox"/>	Information message to stop MySQL service should be displayed.	INFO: MySQL is running. Trying to stop MySQL... INFO: MySQL stopped successfully.
4. <input type="checkbox"/>	Input the admin user as mentioned in Table 5 row 6.	Enter the admin user :<admin_user>

Procedure 4: Create the Non-Root Users

	<p>Note: The user name should be less than 8 characters and does not contain any special characters.</p> <p>Note: We are creating an “admin” user which will have all administrative rights of EAGLE Query Server.</p>	
<p>5. <input type="checkbox"/></p>	<p>Input the password for admin user as mentioned in Table 5 row 6.</p> <p>Note: Password should be as per the Linux PAM credit rules.</p> <p>Note: User can use man page of “pam_cracklib” to check password rules.</p> <p>Note: We are creating admin user’s password in this step.</p>	<p>New password:<password> Retype new password:<password> passwd: all authentication tokens updated successfully.</p>
<p>6. <input type="checkbox"/></p>	<p>Input the config user as mentioned in Table 5 row 7.</p> <p>Note: The user name should be less than 8 characters and does not contain any special characters.</p> <p>Note: We are creating a “configuration” user in this step.</p>	<p>Enter the config user :<config_user></p>
<p>7. <input type="checkbox"/></p>	<p>Input the password for config user Table 5 row 7.</p> <p>Note: Password should be as per the Linux PAM credit rules.</p> <p>Note: User can use man page of “pam_cracklib” to check password rules.</p> <p>Note: We are creating configuration user’s password in this step.</p>	<p>New password:<password> Retype new password:<password> passwd: all authentication tokens updated successfully.</p>
<p>8. <input type="checkbox"/></p>	<p>Input the group name as mentioned in Table 5 row 9.</p>	<p>Enter the group name for <admin_user> and <config_user> :<group_name> INFO: Updating the user privileges and changing directory permissions.</p>

Procedure 4: Create the Non-Root Users

	<p>Note: The group name should be less than 8 characters and does not contain any special characters.</p> <p>Note: In this step, we are creating a Linux group name for the admin and config users previously created.</p>	
<p>9. <input type="checkbox"/></p>	<p>Procedure complete.</p>	<p>Procedure is complete.</p>

Procedure 5 Start MySQL services

Procedure 5: Start MySQL services

NOTE: The MySQL services should be started as non-root admin user only.

<p>S T E P #</p>	<p>This procedure starts all the MySQL services.</p> <p>Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR <u>INSTALL ASSISTANCE</u>.</p>	
<p>1. <input type="checkbox"/></p>	<p>Login to EAGLE QS as QS admin user as mentioned in Table 5 row 6.</p> <p>Note: The user should be same as mentioned in Procedure 4 step 4.</p>	<p>login: <admin_user> Password: <admin_password></p>
<p>2. <input type="checkbox"/></p>	<p>Start the mysqlpdb service.</p>	<pre>\$ sudo service mysqlpdb start . . . Waiting for mysqlpdb to start done The following errors are expected: /var/QS/db/pdb/mysql/columns_priv.MYI" myisamchk: error: 140 when opening MyISAM-table /var/QS/db/pdb/mysql/db.MYI' "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/pdb/mysql/event.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/pdb/mysql/func.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/pdb/mysql/ndb_binlog_index.MYI"</pre>

Procedure 5: Start MySQL services

NOTE: The MySQL services should be started as non-root admin user only.

		<pre>"myisamchk: error: 140 when opening MyISAM-table /var/QS/db/pdb/mysql/proc.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/pdb/mysql/procs_priv.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/pdb/mysql/proxies_priv.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/pdb/mysql/tables_priv.MYI"</pre>
3. <input type="checkbox"/>	Verify that mysqlpdb service is running.	<pre>\$ sudo service mysqlpdb status PID:8841 mysqlpdb is running.</pre>
4. <input type="checkbox"/>	Start the mysqlasciiservice.	<pre>\$sudo service mysqlasci start . . . Waiting for mysqlascii to start done The following errors are expected: "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/ascii/mysql/columns_priv.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/ascii/mysql/db.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/ascii/mysql/event.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/ascii/mysql/func.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/ascii/mysql/ndb_binlog_index.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/ascii/mysql/proc.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/ascii/mysql/procs_priv.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/ascii/mysql/proxies_priv.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/ascii/mysql/tables_priv.MYI" "myisamchk: error: 140 when opening MyISAM-table /var/QS/db/ascii/mysql/user.MYI"</pre>
5. <input type="checkbox"/>	Verify that mysqlasciiservice is running.	<pre>\$ sudo service mysqlasci status PID:8846 mysqlasci is running .</pre>
6. <input type="checkbox"/>	Start the mysqlapp service.	<pre>\$sudo service mysqlapp start . . . Waiting for mysqlapp to start done</pre>

Procedure 5: Start MySQL services

NOTE: The MySQL services should be started as non-root admin user only.

		<p>The following errors are expected:</p> <pre>"mysiamchk: error: 140 when opening MyISAM-table /var/QS/db/appconfig/mysql/columns_priv.MYI" "mysiamchk: error: 140 when opening MyISAM-table /var/QS/db/appconfig/mysql/db.MYI" "mysiamchk: error: 140 when opening MyISAM-table /var/QS/db/appconfig/mysql/event.MYI" "mysiamchk: error: 140 when opening MyISAM-table /var/QS/db/appconfig/mysql/func.MYI" "mysiamchk: error: 140 when opening MyISAM-table /var/QS/db/appconfig/mysql/ndb_binlog_index.MYI" "mysiamchk: error: 140 when opening MyISAM-table /var/QS/db/appconfig/mysql/proc.MYI" "mysiamchk: error: 140 when opening MyISAM-table /var/QS/db/appconfig/mysql/procs_priv.MYI" "mysiamchk: error: 140 when opening MyISAM-table /var/QS/db/appconfig/mysql/proxies_priv.MYI" "mysiamchk: error: 140 when opening MyISAM-table /var/QS/db/appconfig/mysql/tables_priv.MYI" "mysiamchk: error: 140 when opening MyISAM-table /var/QS/db/appconfig/mysql/user.MYI" "mysiamchk: error: 140 when opening MyISAM-table /var/QS/db/appconfig/UiDB/eqsConfig.MYI" "mysiamchk: error: 140 when opening MyISAM-table /var/QS/db/appconfig/UiDB/queryclientips.MYI" "mysiamchk: error: 140 when opening MyISAM-table /var/QS/db/appconfig/UiDB/slaveips.MYI"</pre>
7. <input type="checkbox"/>	Verify that mysqlapp service is running.	\$ sudo service mysqlapp status PID:8821 mysqlapp is running .
8. <input type="checkbox"/>	Procedure Complete	Procedure is complete.

3.3 EAGLE QS Configuration

Procedure 6 Configuring the EAGLE QS

Procedure 6: Configuring the EAGLE QS

<p>S T E P #</p>	<p>This procedure configures the EAGLE QS on the server.</p> <p>Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR ASSISTANCE.</p>
---	--

Procedure 6: Configuring the EAGLE QS

NOTE: This procedure configures the EAGLE QS either as Master or Slave EAGLE QS.		
<p>1. <input type="checkbox"/></p>	<p>Login to EAGLE QS as the config user as mentioned in Table 5 row 7. Note: The user should be same as mentioned in Procedure 4 step 6.</p>	<pre>\$ su - <config_user></pre>
<p>2. <input type="checkbox"/></p>	<p>A note of caution should appear. Press Return to continue.</p>	<pre>login as: qsconfig qsconfig@10.248.2.70's password: Last login: Fri Dec 9 14:54:41 2016 from 10.203.139.81 Caution: This is the first login of the text user interface. Failure to enter complete and accurate information at this time will have unpredictable results. You must be prepared to designate this QS as Master or Slave Press return to continue...</pre>
<p>3. <input type="checkbox"/></p>	<p>Upon pressing Return, you can now abort or proceed with the initial configuration. To continue with the configuration, enter Y.</p>	<pre>Are you sure you wish to continue? [N]: Y</pre>
<p>4. <input type="checkbox"/></p>	<p>You are prompted for the EAGLE Query Server Type.</p>	<pre>Enter 1 for Master EAGLE QS: Enter the EAGLE Query Server Type (1 for Master, 2 for Slave): 1 Enter 2 for Slave EAGLE QS: Enter the EAGLE Query Server Type (1 for Master, 2 for Slave): 2</pre>
<p>5. <input type="checkbox"/></p>	<p>The EAGLE QS Configuration Menu is displayed. Enter choice e to exit the main menu.</p>	<pre>Main Configuration Menu of Master EAGLE QS: /-----EAGLE Query Server Configuration Menu-----\ 1 Configure Slave Query Server --- ----- 2 Configure MySQL Query Client --- ----- 3 Platform Menu --- ----- e Exit \-----/ Enter Choice: e</pre> <p>Main Configuration Menu of Slave EAGLE QS:</p>

Procedure 6: Configuring the EAGLE QS

		<pre> /-----EAGLE Query Server Configuration Menu-\ /-----\ 1 Configure MySQL Query Client \ ----- \ 2 Platform Menu \ ----- \ e Exit \ \-----\ Enter Choice: e </pre>
<p>6. <input type="checkbox"/></p>	<p>Procedure complete.</p>	<p>Procedure is complete.</p>

3.4 Master EAGLE QS Configuration on Provisionable EPAP

Procedure 7 Configure Master EAGLE QS on Provisionable EPAP

Note: Provisioning should be halted at EPAP when snapshot is created on provisionable EPAP.

Procedure 7: Configure Master EAGLE QS on provisionable EPAP

<p>S T E P #</p>	<p>This procedure configures the Master EAGLE QS on EPAP</p> <p>Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR ASSISTANCE.</p>	
<p>1. <input type="checkbox"/></p>	<p>Log in to EPAP as the user “epapdev” as mentioned in Table 5 row 2.</p>	<pre> <hostname> console login: epapdev password: <epapdev_password> </pre>
<p>2. <input type="checkbox"/></p>	<p>Switch super user to epapconfig as mentioned in Table 5 row 1.</p>	<pre> \$ su - epapconfig Password: <epapconfig_password> </pre>

Procedure 7: Configure Master EAGLE QS on provisionable EPAP

<p>3. <input type="checkbox"/></p>	<p>The Main menu is displayed. Select Configure Query Server Menu.</p>	<pre> /-----EPAP Configuration Menu-----\ /-----\ 1 Display Configuration ----- 2 Configure Network Interfaces Menu ----- 3 Set Time Zone ----- 4 Exchange Secure Shell Keys ----- 5 Change Password ----- 6 Platform Menu ----- 7 Configure NTP Server ----- 8 PDB Configuration Menu ----- 9 Security ----- 10 Configure EMS Server ----- 11 Configure Alarm Feed ----- 12 Configure Query Server ----- 13 Configure Query Server Alarm Feed ----- 14 Configure SNMP Agent Community ----- e Exit \-----/ Enter Choice: 12 </pre>
<p>4. <input type="checkbox"/></p>	<p>Select "Add Query Server" Menu.</p>	<pre> /-----EPAP Configure Query Server Menu-\ /-----\ 1 Display Query Server Status ----- 2 Add Query Server ----- 3 Remove Query Server ----- 4 Make Snapshot ----- e Exit \-----/ Enter Choice: 2 </pre>
<p>5. <input type="checkbox"/></p>	<p>The submenu to configure IP Address of Master Query Server is displayed.</p> <p>Note: Enter choice "1" for IPv4 configuration. Otherwise, enter choice "2" for IPv6 configuration.</p>	<pre> /-----Add Query Server Menu-\ /-----\ 1 IPv4 Configuration ----- 2 IPv6 Configuration ----- e Exit \-----/ Enter Choice: 1 </pre>

Procedure 7: Configure Master EAGLE QS on provisionable EPAP

	<p>Note: The IP is same as mentioned in Table 6 row 2. Password is for epaprepl user which should be a non-empty string.</p> <p>Note: Here the password is same as mentioned in Table 5 row 4.</p> <p>Note: Here we are creating password for “epaprepl” user.</p>	<p>Example output of IPv4 configuration:</p> <pre>Query Server IP Address: 10.248.2.70 Query Server Password: Re-enter Query Server Password: Query Server [10.248.2.70] has been added successfully. Press return to continue... █</pre>
<p>6. <input type="checkbox"/></p>	<p>Enter choice e to exit the “Add Query Server Menu”.</p>	<pre>/-----Add Query Server Menu-----\ 1 IPv4 Configuration ----- 2 IPv6 Configuration ----- e Exit \-----\ Enter Choice: e █</pre>
<p>7. <input type="checkbox"/></p>	<p>The EPAP Configure Query Server Menu is displayed.</p> <p>Enter choice 1, Display Query Server Status.</p>	<pre>/-----EPAP Configure Query Server Menu-----\ 1 Display Query Server Status ----- 2 Add Query Server ----- 3 Remove Query Server ----- 4 Make Snapshot ----- e Exit \-----\ Enter Choice: 1 Query Server List 10.248.2.70 Press return to continue... █</pre>

Procedure 7: Configure Master EAGLE QS on provisionable EPAP

<p>8. <input type="checkbox"/></p>	<p>Enter choice e to until exit the epapconfig menu.</p>	<pre> /-----EPAP Configuration Menu-----\ /-----\ 1 Display Configuration ----- 2 Configure Network Interfaces Menu ----- 3 Set Time Zone ----- 4 Exchange Secure Shell Keys ----- 5 Change Password ----- 6 Platform Menu ----- 7 Configure NTP Server ----- 8 PDB Configuration Menu ----- 9 Security ----- 10 Configure EMS Server ----- 11 Configure Alarm Feed ----- 12 Configure Query Server ----- 13 Configure Query Server Alarm Feed ----- 14 Configure SNMP Agent Community ----- e Exit \-----/ Enter Choice: e </pre>
<p>9. <input type="checkbox"/></p>	<p>Procedure complete</p>	<p>Procedure is complete.</p>

Procedure 8 Create PDB Snapshot

Procedure 8: Create PDB snapshot

<p>S T E P #</p>	<p>This procedure creates the snapshot of PDB database.</p> <p>Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p>	
<p>NOTE: As EAGLE Query Server 1.0 is partially compatible with EPAP 16.3, so the maximum DB supported on EAGLE Query Server 1.0 is 528M DB both Compact and eXtreme DB Architecture.</p>		
<p>1. <input type="checkbox"/></p>	<p>Log in to EPAP as the user "epapdev" as</p>	<pre> <hostname> console login: epapdev password: <epapdev_password> </pre>

Procedure 8: Create PDB snapshot

	mentioned in Table 5 row 2.	
2. <input type="checkbox"/>	Stop Pdba service.	\$ service Pdba stop
3. <input type="checkbox"/>	Note down the counts of DN/IMSI/IMEI to compare with Eagle QS after restoring the PDB snapshot.	<p>Login to PDB with following commands to note down counts of DN/IMSI/IMEI.</p> <pre># mysql -uroot -p -S /var/TKLC/epap/db/pdb/mysql.sock</pre> <p>NOTE: This example queries the DN counts from PDB. IMSI/IMEI/NE could also be matched,for verification.</p> <p>Example:</p> <pre># mysql -uroot -p -S /var/TKLC/epap/db/pdb/mysql.sock Enter password: Welcome to the MySQL monitor. Commands end with ; or \g. Your MySQL connection id is 21 Server version: 5.7.22-enterprise-commercial-advanced-log MySQL Enterprise Server - Advanced Edition (Commercial) Copyright (c) 2000, 2018, Oracle and/or its affiliates. All rights reserved. Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners. Type 'help;' or '\h' for help. Type '\c' to clear the current input statement. mysql> use pdb; Reading table information for completion of table and column names You can turn off this feature to get a quicker startup with -A Database changed mysql> select count(*) from dn; +-----+ count(*) +-----+ 117002809 +-----+ 1 row in set (0.62 sec)</pre>
4. <input type="checkbox"/>	Remove the existing snapinfo.sql and create a new snapinfo.sql file and set its ownership to epapdev:epap on EPAP.	<pre># rm -rf /var/TKLC/epap/free/snapinfo.sql # touch /var/TKLC/epap/free/snapinfo.sql # chown epapdev:epap /var/TKLC/epap/free/snapinfo.sql</pre>
5. <input type="checkbox"/>	Login to mysql DB on EPAP using PDB mysql.sock file and keep a note of matser status to update it in snapinfo.sql file	<pre># mysql -uroot -p -S /var/TKLC/epap/db/pdb/mysql.sock # FLUSH TABLES WITH READ LOCK; # SHOW MASTER STATUS; # UNLOCK TABLES;</pre> <p>Example:</p> <pre># mysql -uroot -peLapRoot -S /var/TKLC/epap/db/pdb/mysql.sock mysql: [Warning] Using a password on the command line interface can be insecure. Welcome to the MySQL monitor. Commands end with ; or \g. Your MySQL connection id is 249</pre>

Procedure 8: Create PDB snapshot

		<p>Server version: 5.7.22-enterprise-commercial-advanced-log MySQL Enterprise Server - Advanced Edition (Commercial)</p> <p>Copyright (c) 2000, 2018, Oracle and/or its affiliates. All rights reserved.</p> <p>Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.</p> <p>Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.</p> <pre>mysql> FLUSH TABLES WITH READ LOCK; Query OK, 0 rows affected (0.00 sec) mysql> SHOW MASTER STATUS; +-----+-----+-----+-----+-----+ File Position Binlog_Do_DB Binlog_Ignore_DB Executed_Gtid_Set +-----+-----+-----+-----+-----+ pdb-repl.000013 154 +-----+-----+-----+-----+-----+ 1 row in set (0.00 sec) mysql> UNLOCK TABLES; Query OK, 0 rows affected (0.00 sec) mysql> exit</pre> <p>NOTE: Note down the values of column “FILE” and “Position” in the output of query show master status. Value of “FILE” will be the value of MASTER_LOG_FILE and value of Position will be used for MASTER_LOG_POS in te next step.</p>
<p>6. <input type="checkbox"/></p>	<p>Update the snapinfo.sql file with master log file and position, received in step no.4 of this procedure</p>	<pre>\$ echo CHANGE MASTER TO MASTER_USER='epaprep1', MASTER_PORT=3307, MASTER_LOG_FILE='\${log}', MASTER_LOG_POS=\${pos} >> /var/TKLC/epap/free/snapinfo.sql</pre> <p>NOTE: Update the \${log} and \${pos}.</p> <p>NOTE: Please make sure that MASTER_USER='epaprep1' and MASTER_LOG_FILE='XYZ' are within single quotes otherwise DB restore might fail. So update the snapinfo.sql file if MASTER_USER and MASTER_LOG_FILE values are not in single quotes.</p> <p>Example:</p> <pre>\$ echo CHANGE MASTER TO MASTER_USER='epaprep1', MASTER_PORT=3307, MASTER_LOG_FILE='pdb-repl.000013', MASTER_LOG_POS=154 >> /var/TKLC/epap/free/snapinfo.sql \$ cat /var/TKLC/epap/free/snapinfo.sql CHANGE MASTER TO MASTER_USER='epaprep1', MASTER_PORT=3307, MASTER_LOG_FILE='pdb-repl.000013', MASTER_LOG_POS=154</pre>

Procedure 8: Create PDB snapshot

7. <input type="checkbox"/>	Stop the mysqlpdb service on EPAP	Switch user to root <pre>#su - root # service mysqlpdb stop Waiting for mysqlpdb to stop..... done</pre> Switch back to epapdev user from root. <pre># su - epapdev</pre>
8. <input type="checkbox"/>	Create the pdb tar from CLI. Verify that snapshot files are created successfully.	<pre># cd /var/TKLC/epap/db;sudo tar --exclude='pdb/auto.cnf' --exclude='pdb/mysqld.pid' --exclude='pdb/ib_logfile0' --exclude='pdb/ib_logfile1' --exclude='pdb/mysql' -zcvf /var/TKLC/epap/free/pdb.tar.gz pdb</pre> <p>Example:</p> <pre>pdb/ pdb/server-cert.pem pdb/performance_schema/ pdb/performance_schema/status_by_user.frm pdb/performance_schema/table_io_waits_summary_by_table.frm pdb/pdb/dn_range.frm pdb/pdb/repLog.frm pdb/pdb/dn9dig.frm pdb/pdb/asd.frm pdb/pdb/dnB_asd.frm pdb/pdb/commands.frm pdb/pdb/bucketMap.frm pdb/pdb/imei9dig.frm pdb/pdb/dnB_b1.frm pdb/pdb/dnBlock.frm</pre> <pre># cd /var/TKLC/epap/free #ls -lrth</pre> <pre>\$ ls -lrt pdb.tar.gz -rw-r----- 1 root root 238772681 Mar 6 01:52 pdb.tar.gz</pre>
8. <input type="checkbox"/>	Update the ownership and permission of snapinfo.sql and pdb.tar.gz file.	<pre># sudo /bin/chown epapdev:epap /var/TKLC/epap/free/pdb.tar.gz # sudo /bin/chmod 644 /var/TKLC/epap/free/pdb.tar.gz</pre> <pre># ls -lrt pdb.tar.gz snapinfo.sql -rw-r----- 1 epapdev epap 109 Mar 6 01:48 snapinfo.sql -rw-r--r-- 1 epapdev epap 238772681 Mar 6 01:52 pdb.tar.gz</pre>
9. <input type="checkbox"/>	Procedure complete.	Procedure is complete.

Procedure 9 Transfer PDB snapshot to Master EAGLE QS

Procedure 9: Transfer PDB Snapshot to Master EAGLE QS

S T E P #	<p>This procedure transfers PDB Snapshot to Master EAGLE QS.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR UPGRADE ASSISTANCE.</p>	
1. <input type="checkbox"/>	Log in to EPAP as the user “epapdev” as	<pre><hostname> console login: epapdev password: <epapdev_password></pre>

Procedure 9: Transfer PDB Snapshot to Master EAGLE QS

	mentioned in Table 5 row 2.	
2. <input type="checkbox"/>	Switch to the root user as mentioned Table 5 row 3.	<code>\$ su - password: <root_password></code>
3. <input type="checkbox"/>	Change directory where snapshot files are present.	<code># cd /var/TKLC/epap/free</code>
4. <input type="checkbox"/>	Use SFTP to transfer the snapshot files to a Master EAGLE QS. Note: Here qs IP is same as mentioned in Table 6 row 2. qs_admin_user is admin user of QS as mentioned in Table 5 row 6. Note: The user should be same as mentioned in Procedure 4 step 4.	<code># sftp <qs_qdmin_user>@<qs_IP> Connecting to <qs_IP>... FIPS integrity verification test failed. The authenticity of host '10.248.2.70 (10.248.2.70)' can't be established. RSA key fingerprint is a2:ae:db:30:a3:d6:2d:13:70:c8:72:66:b4:95:de:0a. Are you sure you want to continue connecting (yes/no)? yes Warning: Permanently added '<qs_IP>' (RSA) to the list of known hosts. <qs_admin_user>@<qs_IP> password: sftp>cd /var/QS/free sftp>put snapinfo.sql Uploading snapinfo.sql to /var/QS/free/snapinfo.sql snapinfo.sql 100% 112 0.1KB/s 00:00 sftp>put pdb.tar.gz Uploading pdb.tar.gz to /var/QS/free/pdb.tar.gz pdb.tar.gz 100% 1104KB 1.1MB/s 00:00 sftp> bye</code>
5. <input type="checkbox"/>	Procedure complete.	Procedure is complete.

3.5 PDB Restore on Master EAGLE QS

Procedure 10 Restore PDB snapshot on Master EAGLE QS

Procedure 10: Restore PDB Snapshot on Master EAGLE QS

S T E P #	This procedure executes the steps required to restore the PDB database on Master EAGLE QS. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR <u>UPGRADE ASSISTANCE</u> .	
	NOTE: As EAGLE Query Server 1.0 is partially compatible with EPAP 16.3, so the maximum DB supported on EAGLE Query Server 1.0 is 528M DB both Compact and eXtreme DB Architecture.	
1. <input type="checkbox"/>	Log in Master EAGLE QS as "admin_user" as mentioned in Table 5 row 6.	If not already logged-in, then log in. <code><hostname> console login: admin_user password: <admin_user_password></code>

Procedure 10: Restore PDB Snapshot on Master EAGLE QS

	Note: The user should be same as mentioned in Procedure 4 step 4.	
2. <input type="checkbox"/>	Verify that snapinfo files are present in free directory.	<pre>\$cd /var/QS/free \$ ls -lrth output should be as follow: -rw-r----- 1 qsadmin qsadmin 112 Dec 11 12:55 snapinfo.sql -rw-r----- 1 qsadmin qsadmin 4.5G Dec 11 13:47 pdb.tar.gz</pre>
3. <input type="checkbox"/>	Change group name as mentioned in Table 5 row 9 and permission of snapshot files. Note: Group name must be same as created in Procedure 4 , step 8.	<pre>\$ chgrp <group name> snapinfo.sql pdb.tar.gz \$ chmod 660 snapinfo.sql pdb.tar.gz</pre>
4. <input type="checkbox"/>	Verify that permissions are updated successfully	<pre>\$ ls -lrth Output should be as follow: -rw-rw---- 1 qsadmin qs 167 Dec 14 18:11 snapinfo.sql -rw-rw---- 1 qsadmin qs 51M Dec 14 18:11 pdb.tar.gz</pre>
5. <input type="checkbox"/>	Switch user to config user. Note: The user should be same as mentioned in Procedure 4 step 6.	<pre>\$ su - <config_user> Password:<config_user_password></pre>
6. <input type="checkbox"/>	The main menu is displayed. Enter Choice '3' Platform menu.	<pre>/-----EAGLE Query Server Configuration Menu-\ /-----\ 1 Configure Slave Query Server ----- 2 Configure MySQL Query Client ----- 3 Platform Menu ----- e Exit \-----\ Enter Choice: 3</pre>
7. <input type="checkbox"/>	The platform menu is displayed. Enter choice '1' to restore the database.	<pre>/-----EAGLE Query Server Platform Menu-\ /-----\ 1 Restore DB ----- 2 Create MASTER Snapshot ----- 3 Reboot ----- e Exit \-----\ Enter Choice: 1</pre>
8. <input type="checkbox"/>	Enter Y to continue the restore DB.	<pre>Are you sure you wish to continue? [N]: Y</pre>
9. <input type="checkbox"/>	Enter the full path of snapshot file.	<pre>Enter the filename with full path: /var/QS/free/pdb.tar.gz</pre>

Procedure 10: Restore PDB Snapshot on Master EAGLE QS

<p>10. <input type="checkbox"/></p>	<p>Enter the IP address of EPAP. Note: Here EPAP_IP should be same as mentioned Table 6 in row 1.</p>	<pre>Enter the IP address of Master server on which replication will start: <EPAP_IP></pre>
<p>11. <input type="checkbox"/></p>	<p>Enter the password of epaprepl user. Note: "epaprepl" password must be same as given in Procedure 7, step 5.</p>	<pre>Enter the Password for replication user [epaprepl]: Re-enter the Password for replication user [epaprepl]: █</pre>
<p>12. <input type="checkbox"/></p>	<p>After successful restore of DB the Platform menu should be displayed.</p>	<pre>DB is restored successfully. Press return to continue... █</pre>
<p>13. <input type="checkbox"/></p>	<p>Enter choice e to exit the platform menu.</p>	<pre> /-----EAGLE Query Server Platform Menu-----\ /-----\ 1 Restore DB ----- 2 Create MASTER Snapshot ----- 3 Reboot ----- e Exit \-----\ Enter Choice: e NOTE: Ignore the following errors logged in <host name> .err 2017-01-06T11:55:03.758184Z 0 [ERROR] Column count of performance_schema.setup_actors is wrong. Expected 5, found 3. Created with MySQL 50627, now running 50716. Please use mysql_upgrade to fix this error. 2017-01-06T11:55:03.782411Z 0 [ERROR] Column count of performance_schema.table_lock_waits_summary_by_table is wrong. Expected 68, found 73. Created with MySQL 50627, now running 50716. Please use mysql_upgrade to fix this error. 2017-01-06T11:55:03.782799Z 0 [ERROR] Column count of performance_schema.threads is wrong. Expected 17, found 14. Created with MySQL 50627, now running 50716. Please use mysql_upgrade to fix this error.</pre>

Procedure 10: Restore PDB Snapshot on Master EAGLE QS

		<p>These errors occur because EAGLE QS is running on 5.7.12 or higher version of MySQL whereas EPAP is running on MySQL 5.6.27.</p> <p>Also, Ignore the following errors logged in pdb2ascii.dbg</p> <pre>ERROR: Unable to execute insert into DN9DIG values..... ERROR: Insertion failed for insert into DN9DIG values..... ERROR: Unable to execute insert into IME19DIG values..... ERROR: Insertion failed for insert into IME19DIG values..... ERROR: Unable to execute insert into IMS19DIG values..... ERROR: Insertion failed for insert into IMS19DIG values..... ERROR: Unable to execute insert into PDBCAPACITYINFO values..... ERROR: Insertion failed for insert into PDBCAPACITYINFO..... ERROR: Unable to execute insert into RTDB_DBLEVEL values..... ERROR: Insertion failed for insert into RTDB_DBLEVEL values.....</pre> <p>These errors occur because the 9Dig tables are not present on QS while they are present on EPAP.</p> <p>The following errors are expected:</p> <pre>myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/ascii/mysql/ndb_binlog_index.MYI' myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/ascii/mysql/proc.MYI' myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/ascii/mysql/proc.MYI' myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/ascii/mysql/procs_priv.MYI' myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/ascii/mysql/procs_priv.MYI' myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/ascii/mysql/proxies_priv.MYI' myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/ascii/mysql/proxies_priv.MYI' myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/ascii/mysql/tables_priv.MYI' myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/ascii/mysql/tables_priv.MYI' myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/ascii/mysql/user.MYI' myisamchk: error: 140 when opening MyISAM-table '/var/QS/db/ascii/mysql/user.MYI'</pre>
<p>14. <input type="checkbox"/></p>	<p>Login to root user as mentioned in Table 5 row 5.</p>	<pre>\$ su - root Password: <root_password></pre>
<p>15. <input type="checkbox"/></p>	<p>Execute command to add entry of EPAP IP in /etc/hosts file.</p> <p>Note: Here EPAP_IP should be same as mentioned Table 6 row 1.</p>	<pre>\$ echo "<EPAP_IP> EPAP" >> /etc/hosts</pre>

Procedure 10: Restore PDB Snapshot on Master EAGLE QS

16. <input type="checkbox"/>	Verify that counts in DN/IMSI/IMEI and other tables are matching in the PDB and ASCII DB of EAGLE QS and PDB of EPAP.	<p>Use the commands given below to verify counts.</p> <p>TO login in ASCII DB of EAGLE QS using following commands: # mysql -uroot -p -S /var/QS/db/ascii/mysql.sock # use ascii;</p> <p>Example:</p> <pre># mysql -uroot -p -S /var/QS/db/ascii/mysql.sock Enter password: welcome to the MySQL monitor. Commands end with ; or \g. Your MySQL connection id is 6 Server version: 5.7.22-enterprise-commercial-advanced-log MySQL Enterprise Server - Advanced Edition (Commercial) Copyright (c) 2000, 2018, Oracle and/or its affiliates. All rights reserved. Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners. Type 'help;' or '\h' for help. Type '\c' to clear the current input statement. mysql> use ascii; Reading table information for completion of table and column names You can turn off this feature to get a quicker startup with -A Database changed mysql> select count(*) from DN; +-----+ count(*) +-----+ 117002809 +-----+ 1 row in set (25.75 sec) mysql></pre> <p>To login in PDB of EAGLE QS using following commands: #mysql -uroot -p -S /var/QS/db/pdb/mysql.sock # use pdb;</p> <p>Example:</p> <pre># mysql -uroot -p -S /var/QS/db/pdb/mysql.sock Enter password: welcome to the MySQL monitor. Commands end with ; or \g. Your MySQL connection id is 25 Server version: 5.7.22-enterprise-commercial-advanced-log MySQL Enterprise Server - Advanced Edition (Commercial) Copyright (c) 2000, 2018, Oracle and/or its affiliates. All rights reserved. Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners. Type 'help;' or '\h' for help. Type '\c' to clear the current input statement. mysql> use pdb; Reading table information for completion of table and column names</pre>
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Procedure 10: Restore PDB Snapshot on Master EAGLE QS

		<p>You can turn off this feature to get a quicker startup with -A</p> <pre>Database changed mysql> select count(*) from dn; +-----+ count(*) +-----+ 117002809 +-----+ 1 row in set (26.31 sec)</pre> <p>NOTE: The count in ASCII DB and PDB for same datatype should be same and same with that on EPAP also.</p>
17.	<input type="checkbox"/> Now PDBA and mysqlpdb should be restarted on EPAP. Login to EPAP and start PDBA and mysqlpdb services.	<p>NOTE: This step is to be executed on EPAP connected with the Query server.</p> <pre><hostname> console login: epapdev password: <epapdev_password></pre> <p>Switch user to root <pre>\$ su - root \$ service mysqlpdb start \$ service Pdba start</pre></p>
18.	<input type="checkbox"/> Procedure Complete.	This procedure is complete.
19.	If the following error is seen on EAGLE query server, complete the steps in 3.8Appendix B:	<i>"Last_IO_Error: Fatal error: The slave I/O thread stops because master and slave have equal MySQL server UUIDs; these UUIDs must be different for replication to work."</i>

3.6 Configure Slave on Master EAGLE QS

Procedure 11 Configure Slave EAGLE QS on Master EAGLE QS

Procedure 11: Configure Slave EAGLE QS on Mater EAGLE QS

S T E P #	This procedure configures the Slave EAGLE QS on Master EAGLE QS.	
	Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number.	
IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORTAND ASK FOR UPGRADE ASSISTANCE.		
1.	<input type="checkbox"/> Log in Master EAGLE QS as "config_user" as mentioned in Table 5 row 7. Note: The user should be same as mentioned in Procedure 4 step 6.	If not already logged-in, then log in. <pre><hostname> console login: config_user password: <config_user_password></pre>

Procedure 11: Configure Slave EAGLE QS on Mater EAGLE QS

<p>2. <input type="checkbox"/></p>	<p>The main menu is displayed. Enter choice '1' to configure the Slave EAGLE QS.</p>	<pre> /-----EAGLE Query Server Configuration Menu-\ /-----\ 1 Configure Slave Query Server ----- 2 Configure MySQL Query Client ----- 3 Platform Menu ----- e Exit \-----\ Enter Choice: 1 </pre>
<p>3. <input type="checkbox"/></p>	<p>Select "Add Slave EAGLE Query Server" Menu.</p>	<pre> /-----Configure Slave EAGLE Query Server Menu-\ /-----\ 1 Display Slave EAGLE Query Server ----- 2 Add Slave EAGLE Query Server ----- 3 Remove Slave EAGLE Query Server ----- e Exit \-----\ Enter Choice: 2 </pre>
<p>4. <input type="checkbox"/></p>	<p>The submenu to configure IP Address of Query Server is displayed.</p> <p>Note: Enter choice "1" for IPv4 configuration. Otherwise, enter choice "2" for IPv6 configuration. The length of the password should be minimum 8 for the user qsrepl as mentioned in Table 5 row 10.</p> <p>Note: Here we are creating password for "qsrepl" user.</p>	<pre> /----- Add Slave EAGLE Query Server Menu-\ /-----\ 1 IPv4 Configuration ----- 2 IPv6 Configuration ----- e Exit \-----\ Enter Choice: 1 </pre> <p>Example output of IPv4 configuration of Slave EAGLE QS.</p> <pre> Slave Query Server IPv4 Address: 10.248.2.144 Enter Slave Query Server password of user [qsrepl]: Re-enter Slave Query Server password of user [qsrepl]: Slave Query server 10.248.2.144 has been added. Press return to continue... </pre>

Procedure 11: Configure Slave EAGLE QS on Mater EAGLE QS

<p>5. <input type="checkbox"/></p>	<p>The EPAP Configure Query Server Menu is displayed. Enter choice 1, Display Slave EAGLE Query Server.</p>	<pre> /-----Configure Slave EAGLE Query Server Menu-----\ /-----\ 1 Display Slave EAGLE Query Server ----- 2 Add Slave EAGLE Query Server ----- 3 Remove Slave EAGLE Query Server ----- e Exit \-----\ Enter Choice: 1 List of configured slaves: IP[1] : 10.248.2.144 </pre>
<p>6. <input type="checkbox"/></p>	<p>Enter choice e to exit the configure Slave Query Server menu.</p>	<pre> /-----Configure Slave EAGLE Query Server Menu-----\ /-----\ 1 Display Slave EAGLE Query Server ----- 2 Add Slave EAGLE Query Server ----- 3 Remove Slave EAGLE Query Server ----- e Exit \-----\ Enter Choice: e </pre>
<p>7. <input type="checkbox"/></p>	<p>Procedure Complete.</p>	<p>This procedure is complete.</p>

Procedure 12 Create Master Snapshot

Procedure 12: Create Master Snapshot

<p>S T E P #</p>	<p>This procedure is used to create the Master Snapshot.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p> <p>NOTE: BEFORE STARTING THIS PROCEDURE, PLEASE ENSURE THAT PROVISIONING IS STOPPED FROM EPAP SIDE.</p>	
<p>1. <input type="checkbox"/></p>	<p>Log in to the EPAP connected to Master QS and stop PDBA and mysqlpdb services to ensure that provisioning from stopped at EPAP side.</p> <p>Skip this step if PDBA and mysqlpdb are already stopped at EPAP side.</p>	<p>If not already logged-in, then log in.</p> <pre> <hostname> console login: epapdev password: <epapdev_user_password> \$ su - root \$ service Pdba stop \$ service mysqlpdb stop </pre>

		NOTE: if it says that PDBA and mysqlpdb are already stopped then skip to next step.
2. <input type="checkbox"/>	Log in Master EAGLE QS as "root", as mentioned in Table 5 row 7	If not already logged-in, then log in. <pre><hostname> console login: root password: <root_user_password></pre>
3. <input type="checkbox"/>	Remove the existing snappos.sql and create a new snappos.sql file and set its ownership to <config_user> Note: Here config_user must be as mentioned in Table 5 row 7.	<pre># rm -rf /var/QS/free/snappos.sql # touch /var/QS/free/snappos.sql # chown <config_user>:<config_user> /var/QS/free/snappos.sql # chmod 777 /var/QS/free/snappos.sql</pre> <p>Example:</p> <p>If the config user is config then set the ownership as given below:</p> <pre>Chown config:config /var/QS/free/snappos.sql</pre>
4. <input type="checkbox"/>	Login to ASCII DB on Master QS using ASCII DB mysql.sock file and keep a note of master status to update it in snappos.sql file	<pre># mysql -uroot -p -S /var/QS/db/ascii/mysql.sock # FLUSH TABLES WITH READ LOCK; # SHOW MASTER STATUS; # UNLOCK TABLES;</pre> <p>Example:</p> <pre># mysql -uroot -p -S /var/QS/db/ascii/mysql.sock Enter password: Welcome to the MySQL monitor. Commands end with ; or \g. Your MySQL connection id is 51 Server version: 5.7.22-enterprise-commercial-advanced-log MySQL Enterprise Server - Advanced Edition (Commercial)</pre> <p>Copyright (c) 2000, 2018, Oracle and/or its affiliates. All rights reserved.</p> <p>Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.</p> <p>Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.</p> <pre>mysql> show master status; +-----+-----+-----+-----+-----+ File Position Binlog_Do_DB Binlog_Ignore_DB Executed_Gtid_Set +-----+-----+-----+-----+-----+ repl.000018 26728396 +-----+-----+-----+-----+-----+ 1 row in set (0.00 sec)</pre> <pre>mysql> FLUSH TABLES WITH READ LOCK; Query OK, 0 rows affected (0.00 sec)</pre>

		<pre>mysql> UNLOCK TABLES; Query OK, 0 rows affected (0.00 sec) mysql> exit; Bye</pre> <p>NOTE: Note down the values of column “FILE” and “Position” in the output of query show master status. Value of “FILE” will be the value of MASTER_LOG_FILE and value of Position will be used for MASTER_LOG_POS in te next step.</p>
<p>5. <input type="checkbox"/></p>	<p>Update the snappos.sql file with master log file and position, received in step no.14 of this procedure</p>	<p>Update the /var/QS/free/snappos.sql file using below command.</p> <pre>echo CHANGE MASTER TO MASTER_USER='qsrepl',MASTER_PORT=3308, MASTER_LOG_FILE='\${log}', MASTER_LOG_POS=\${pos},MASTER_SSL=1,MASTER_SSL_CA='/var/QS/db/asci i/ca.pem',MASTER_SSL_CAPATH = 'ca_directory_name',MASTER_SSL_CERT ='/var/QS/db/ascii/client- cert.pem',MASTER_SSL_KEY ='/var/QS/db/ascii/client-key.pem'>> /var/QS/free/snappos.sql</pre> <p>NOTE: Update the \${log} and \${pos}.</p> <p>NOTE: Please make sure that MASTER_USER='qsrepl', MASTER_LOG_FILE='XYZ', MASTER_SSL_CA='/var/QS/db/ascii/ca.pem', MASTER_SSL_CAPATH = 'ca_directory_name', MASTER_SSL_CERT ='/var/QS/db/ascii/client-cert.pem' and MASTER_SSL_KEY ='/var/QS/db/ascii/client-key.pem' are within single quotes otherwise DB restore might fail. So update the snappos.sql file if not in single quotes.</p> <p>Example:</p> <pre>\$ echo CHANGE MASTER TO MASTER_USER='qsrepl',MASTER_PORT=3308, MASTER_LOG_FILE='repl.000018', MASTER_LOG_POS=26728396,MASTER_SSL=1,MASTER_SSL_CA='/var/QS/db/as cii/ca.pem',MASTER_SSL_CAPATH = 'ca_directory_name',MASTER_SSL_CERT ='/var/QS/db/ascii/client- cert.pem',MASTER_SSL_KEY ='/var/QS/db/ascii/client-key.pem'>> /var/QS/free/snappos.sql</pre> <pre>\$ cat /var/QS/free/snappos.sql CHANGE MASTER TO MASTER_USER='qsrepl',MASTER_PORT=3308, MASTER_LOG_FILE='repl.000018', MASTER_LOG_POS=26728396,MASTER_SSL=1,MASTER_SSL_CA='/var/QS/db/asc ii/ca.pem',MASTER_SSL_CAPATH = 'ca_directory_name',MASTER_SSL_CERT ='/var/QS/db/ascii/client-cert.pem',MASTER_SSL_KEY ='/var/QS/db/ascii/client-key.pem'</pre>
<p>6. <input type="checkbox"/></p>	<p>Note down the counts in DN/IMSI/IMEI and other tables, to match it with slave Eagle QS after the ascii DB restore is complete on Slave QS.</p>	<p>Use the commands given below to verify counts.</p> <p>TO login in ASCII DB of EAGLE QS using following commands:</p> <pre># mysql -uroot -p -S /var/QS/db/ascii/mysql.sock # use ascii;</pre> <p>Example:</p> <pre># mysql -uroot -p -S /var/QS/db/ascii/mysql.sock Enter password: Welcome to the MySQL monitor. Commands end with ; or \g. Your MySQL connection id is 6 Server version: 5.7.22-enterprise-commercial-advanced-log MySQL Enterprise Server - Advanced Edition (Commercial)</pre>

		<p>Copyright (c) 2000, 2018, Oracle and/or its affiliates. All rights reserved.</p> <p>Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.</p> <p>Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.</p> <pre>mysql> use ascii; Reading table information for completion of table and column names You can turn off this feature to get a quicker startup with -A Database changed mysql> select count(*) from DN; +-----+ count(*) +-----+ 117002809 +-----+ 1 row in set (25.75 sec) mysql></pre> <p>NOTE: The count in ASCII DB for same datatype should be same with that on Master Eagle QS and EPAP also.</p>
7.	<input type="checkbox"/> Stop the mysqlpdb and mysqlascii services.	<pre># service mysqlpdb stop # service mysqlascii stop</pre>
8.	<input type="checkbox"/> Create the ascii db tar from CLI. Verify that snapshot file is created successfully.	<pre># cd /var/QS/db;sudo /bin/tar --exclude=ascii/auto.cnf --exclude=ascii/mysql.pid --exclude=repl.* --exclude='mysql\' -zcvf /var/QS/free/ascii.tar.gz ascii</pre> <p>Example:</p> <pre># cd /var/QS/db;sudo /bin/tar --exclude=ascii/auto.cnf --exclude=ascii/mysql.pid --exclude=repl.* --exclude='mysql\' -zcvf /var/QS/free/ascii.tar.gz ascii ascii/ ascii/ib_buffer_pool ascii/private_key.pem ascii/server-cert.pem ascii/ib_logfile0 ascii/ibtmp1 ascii/ca-key.pem ascii/ca.pem ascii/sys/x@0024innodb_buffer_stats_by_schema.frm ascii/sys/schema_table_statistics_with_buffer.frm ascii/sys/user_summary_by_statement_latency.frm ascii/sys/x@0024ps_digest_95th_percentile_by_avg_us.frm ascii/sys/innodb_buffer_stats_by_schema.frm ascii/sys/x@0024user_summary_by_stages.frm ascii/sys/sys_config_update_set_user.TRN ascii/sys/x@0024waits_by_user_by_latency.frm ascii/sys/x@0024ps_schema_table_statistics_io.frm ascii/sys/innodb_buffer_stats_by_table.frm ascii/sys/waits_by_user_by_latency.frm ascii/sys/user_summary_by_file_io.frm /bin/tar: ascii/mysql.sock: socket ignored ascii/public_key.pem</pre>

		<pre># cd /var/QS/free #ls -lrth # chmod 644 ascii.tar.gz \$ ls -lrt ascii.tar.gz -rw-r--r--. 1 root root 190927217 Mar 8 05:39 ascii.tar.gz</pre>
9. <input type="checkbox"/>	<p>Verify that snapshot files are created successfully.</p> <p>Note: Here config_user must be as mentioned in Table 5 row 7.</p>	<pre># cd /var/QS/free #ls -lrth</pre> <p>output should be as follow:</p> <pre>-rw-r--r-- 1 <config_user><config_user> 112 Dec 11 12:55 snappos.sql -rw-r--r-- 1 root root 4.5G Dec 11 13:47 ascii.tar.gz</pre>
10. <input type="checkbox"/>	<p>Start the mysqlpdb and mysqlascii services on Master QS.</p>	<pre>#service mysqlpdb start #service mysqlascii start</pre>
11. <input type="checkbox"/>	<p>Procedure Complete.</p>	<p>This procedure is complete.</p>

Procedure 13 Transfer Master Snapshot to Slave EAGLE QS

Procedure 13: Transfer Master Snapshot to Slave EAGLE QS

S T E P #	<p>This procedure transfers Master Snapshot to Slave EAGLE QS.</p> <p>Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR UPGRADE ASSISTANCE.</p>	
1. <input type="checkbox"/>	<p>Log in Master EAGLE QS as “qs_admin_user” as mentioned in Table 5 row 6</p> <p>Note: The user should be same as mentioned in Procedure 4 step 4.</p>	<p>If not already logged-in, then log in.</p> <pre><hostname> console login: qs_admin_user password: <qs_admin_user_password></pre>
2. <input type="checkbox"/>	<p>Change directory where snapshot files are present.</p>	<pre>\$ cd /var/QS/free</pre>
3. <input type="checkbox"/>	<p>Use SFTP to transfer the snapshot files to a Slave EAGLE QS.</p> <p>Note: Here IP should be same as mentioned in Table 6 row 3.</p>	<pre>sftp <slave_qs_qdmin_user>@<slave_qs_IP> Connecting to <slave_qs_IP>... FIPS integrity verification test failed. The authenticity of host '<slave_qs_ip>' can't be established. RSA key fingerprint is a2:ae:db:30:a3:d6:2d:13:70:c8:72:66:b4:95:de:0a. Are you sure you want to continue connecting (yes/no)? yes Warning: Permanently added '<slave_qs_IP>' (RSA) to the list of known hosts. <slave_qs_admin_user>@<slave_qs_IP> password: sftp>cd /var/QS/free sftp>put snappos.sql Uploading snappos.sql to /var/QS/free/snappos.sql</pre>

Procedure 13: Transfer Master Snapshot to Slave EAGLE QS

		snappos.sql 100% 112 0.1KB/s 00:00 sftp>put ascii.tar.gz Uploading ascii.tar.gz to /var/QS/free/ascii.tar.gz ascii.tar.gz 100% 1104KB 1.1MB/s 00:00 sftp> bye
4. <input type="checkbox"/>	Procedure complete.	Procedure is complete.

3.7 ASCII Database Restore

Procedure 14 Restore Master Snapshot on Slave EAGLE QS

Procedure 14: Restore Master Snapshot on Slave EAGLE QS

S T E P #	This procedure restores the Master Snapshot on Slave EAGLE QS. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR <u>UPGRADE ASSISTANCE</u> .	
	1. <input type="checkbox"/>	Log in Slave EAGLE QS as “admin_user” as mentioned in Table 5 row 6. Note: The user should be same as mentioned in Procedure 4 step 4.
	2. <input type="checkbox"/>	Verify that snapshot files are present in free directory.
	3. <input type="checkbox"/>	Change the permission of snapshot files. Note: Group name must be same as created in Procedure 4, step 8 and mentioned in Table 5 row 9.
	4. <input type="checkbox"/>	Verify that permissions are updated successfully.
5. <input type="checkbox"/>	Switch user to configuration user as mentioned in Table 5 row 7.	
		If not already logged-in, then log in. <hostname> console login: admin_user password: <admin_user_password> \$ cd /var/QS/free \$ ls -lrth output should be as follow: -rw-r--r-- 1 qsadmin qsadmin 300 Dec 12 10:49 snappos.sql -rw-r--r-- 1 qsadmin qsadmin 1.1M Dec 12 10:49 ascii.tar.gz \$ chgrp <groupname> snappos.sql ascii.tar.gz \$ chmod 660 snappos.sql ascii.tar.gz \$ ls -lrth Output should be as follow: -rw-rw---- 1 qsadmin qs 300 Dec 14 18:43 snappos.sql -rw-rw---- 1 qsadmin qs 1.1M Dec 14 18:43 ascii.tar.gz \$ su - <config_user> Password: <config_user_password>

Procedure 14: Restore Master Snapshot on Slave EAGLE QS

	Note: The user should be same as mentioned in Procedure 4 step 6.	
6. <input type="checkbox"/>	The main menu is displayed. Enter choice '2' to select Platform menu.	<pre> /-----EAGLE Query Server Configuration Menu-----\ /-----\ 1 Configure MySQL Query Client ----- 2 Platform Menu ----- e Exit \-----\ Enter Choice: 2 </pre>
7. <input type="checkbox"/>	The Platform menu is displayed. Enter choice '1' to select Restore DB.	<pre> /-----EAGLE Query Server Platform Menu-----\ /-----\ 1 Restore DB ----- 2 Reboot ----- e Exit \-----\ Enter Choice: 1 </pre>
8. <input type="checkbox"/>	Enter Y to continue the restore DB.	Are you sure you wish to continue? [N]: Y
9. <input type="checkbox"/>	Enter the full path of snapshot file.	Enter the filename with full path: /var/QS/free/ascii.tar.gz
10. <input type="checkbox"/>	Enter the IP address of Master EAGLE QS. Note: Here Master_IP should be same as mentioned in Table 6 row 2.	Enter the IP address of Master server : <Master QS IP>
11. <input type="checkbox"/>	Enter the password of qsrepl user as mentioned in Table 5 row 10. Note: The password for qsrepl user should be same as entered in Procedure 11, step-4	Enter the Password for user [qsrepl]: Re-enter the Password for user [qsrepl]:
12. <input type="checkbox"/>	After successful restore of DB the Platform menu should displayed.	MyISAM file: /var/QS/db/ascii/mysql/user.MYI is already checked Waiting for mysqlascii to start.. done DB is restored successfully.

Procedure 14: Restore Master Snapshot on Slave EAGLE QS

<p>13. <input type="checkbox"/></p>	<p>Enter choice e to exit the platform menu.</p>	<pre> /-----EAGLE Query Server Platform Menu-----\ /-----\ 1 Restore DB ----- ----- 2 Reboot ----- ----- e Exit \-----\ Enter Choice: e </pre>
<p>14. <input type="checkbox"/></p>	<p>Enter choice e to exit the configuration menu.</p>	<pre> /-----EAGLE Query Server Configuration Menu-----\ /-----\ 1 Configure MySQL Query Client ----- ----- 2 Platform Menu ----- ----- e Exit \-----\ Enter Choice: e </pre>
<p>15. <input type="checkbox"/></p>	<p>Now PDBA and mysqlpdb should be restarted on EPAP. Login to EPAP connected to EAGLE QS and start PDBA and mysqlpdb services.</p>	<p>NOTE: This step is to be executed on EPAP connected with the Query server.</p> <pre> <hostname> console login: epapdev password: <epapdev_password> Switch user to root \$ su - root \$ service mysqlpdb start \$ service Pdba start </pre>
<p>16. <input type="checkbox"/></p>	<p>Procedure complete.</p>	<p>Procedure is complete.</p>

3.8 Configure MySQL Query Client

Procedure 15 Configure MySQL Query Client on EAGLE QS

Procedure 15: Configure MySQL Query Client on EAGLE QS

<p>S T E P #</p>	<p>This procedure Configure the MySQL Query Client on EAGLE QS.</p> <p>Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p>	
<p>1. <input type="checkbox"/></p>	<p>Log in to Master or Slave EAGLE QS as "config_user".</p>	<p>If not already logged-in, then log in.</p> <pre> <hostname> console login: config_user password: <config_user_password> </pre>

Procedure 15: Configure MySQL Query Client on EAGLE QS

	<p>Note: Here config_user is as mentioned in Table 5 row 7.</p>	
<p>2. <input type="checkbox"/></p>	<p>The main menu is displayed. Enter choice '2' to select "Configure MySQL Query Client" on Master EAGLE QS. Otherwise select '1' on Slave EAGLE QS.</p>	<p>Main Menu on Master EAGLE QS:</p> <pre> /-----EAGLE Query Server Configuration Menu-\ /-----\ 1 Configure Slave Query Server ----- 2 Configure MySQL Query Client ----- 3 Platform Menu ----- e Exit \-----\ </pre> <p>Enter Choice: 2</p> <p>Main Menu on Slave EAGLE QS:</p> <pre> /-----EAGLE Query Server Configuration Menu-\ /-----\ 1 Configure MySQL Query Client ----- 2 Platform Menu ----- e Exit \-----\ </pre> <p>Enter Choice: 1</p>
<p>3. <input type="checkbox"/></p>	<p>Select "Add MySQL Query Client" Menu.</p>	<pre> /-----Configure MySQL Query Client Menu-\ /-----\ 1 Display MySQL Query Client ----- 2 Add MySQL Query Client ----- 3 Remove MySQL Query Client ----- e Exit \-----\ </pre> <p>Enter Choice: 2</p>

Procedure 15: Configure MySQL Query Client on EAGLE QS

<p>4. <input type="checkbox"/></p>	<p>The submenu to configure IP Address of MySQL Query Client is displayed.</p> <p>Note: Enter choice “1” for IPv4 configuration. Otherwise, enter choice “2” for IPv6 configuration.</p> <p>NOTE: To access the Master or Slave QS ASCII DB locally, you must configure localhost IP as a MySQL Query Client.</p> <p>Otherwise the ASCII DB will not accessible. Also user can use “Esc” to abort the operation.</p> <p>Note: The IP must be one of those mentioned in Table 6 row 4. The Password must contain at least 8 characters. The password is created here and will be used to access the QS ASCII DB from the MySQL Query Client.</p> <p>Note: Here we are creating password for “dbroot” user.</p> <p>Please note: If you have MySQL Query Client software, such as MySQL Workbench, running on an external server, you need to add that external servers IP address here along with a dbroot password.</p>	<pre> /----- Add MySQL Query Client Menu-----\ /-----\ 1 IPv4 Configuration ----- 2 IPv6 Configuration ----- e Exit \-----/ Enter Choice: 1 Example output of Localhost configuration on EAGLE QS. MySQL Query Client IPv4 Address: 127.0.0.1 Enter MySQL Query Client password of user [dbroot]: Re-enter MySQL Query Client password of user [dbroot]: MySQL Query Client 127.0.0.1 has been added. Example output of any remote server configuration on EAGLE QS: MySQL Query Client IPv4 Address: 192.168.11.12 Enter MySQL Query Client password of user [dbroot]: Re-enter MySQL Query Client password of user [dbroot]: MySQL Query Client 192.168.11.12 has been added. </pre>
<p>5.</p>	<p>Enter choice ‘e’.</p>	

Procedure 15: Configure MySQL Query Client on EAGLE QS

<input type="checkbox"/>		<pre> /----- Add MySQL Query Client Menu-\ /-----\ 1 IPv4 Configuration ----- 2 IPv6 Configuration ----- e Exit \-----\ Enter Choice: e</pre>
6. <input type="checkbox"/>	<p>The Configure MySQL Query Client Menu is displayed.</p> <p>Enter choice 1, Display MySQL Query Client.</p>	<p>Example output of Localhost configuration on EAGLE QS:</p> <pre> /-----Configure MySQL Query Client Menu-\ /-----\ 1 Display MySQL Query Client ----- 2 Add MySQL Query Client ----- 3 Remove MySQL Query Client ----- e Exit \-----\ Enter Choice: 1 List of configured Query Clients: IP[1] : 127.0.0.1</pre> <p>Example output of any remote server configuration on EAGLE QS:</p>

Procedure 15: Configure MySQL Query Client on EAGLE QS

		<pre> /-----Configure MySQL Query Client Menu-\ /-----\ 1 Display MySQL Query Client \ ----- \ 2 Add MySQL Query Client \ ----- \ 3 Remove MySQL Query Client \ ----- \ e Exit \ \-----\ Enter Choice: 1 List of configured Query Clients: IP[1] : 192.168.11.12 </pre>
<p>7. <input type="checkbox"/></p>	<p>Enter choice e to exit the configure MySQL Query Client menu.</p>	<pre> /-----Configure MySQL Query Client Menu-\ /-----\ 1 Display MySQL Query Client \ ----- \ 2 Add MySQL Query Client \ ----- \ 3 Remove MySQL Query Client \ ----- \ e Exit \ \-----\ Enter Choice: e </pre>
<p>8. <input type="checkbox"/></p>	<p>Enter choice e to exit the main configure menu.</p>	<pre> /-----EAGLE Query Server Configuration Menu-\ /-----\ 1 Configure Slave Query Server \ ----- \ 2 Configure MySQL Query Client \ ----- \ 3 Platform Menu \ ----- \ e Exit \ \-----\ Enter Choice: e </pre>
<p>9. <input type="checkbox"/></p>	<p>Procedure is complete.</p>	<p>Procedure is complete.</p>

APPENDIX A. MOUNT THE EAGLE QS ISO

To proceed with EAGLE QS 1.0 installation, the EAGLE QS ISO file should be mounted on the VM.

Assumption: The EAGLE QS ISO is present on VM.

Procedure 16: Mount the EAGLE QS ISO

S T E P #	<p>This procedure provides instructions to mount an ISO image.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR UPGRADE ASSISTANCE.</p>	
1. <input type="checkbox"/>	Log in to the VM as the root ("or a user name that has same access privileges") user as mentioned in Table 5 row 5.	Login: root("or a user name that has same access privileges") password: <password>
2. <input type="checkbox"/>	Create a directory where iso shall be mounted.	# mkdir /mnt/eqs
3. <input type="checkbox"/>	Mount the ISO.	# mount -o loop <path to EAGLE QS ISO file> /mnt/eqs
4. <input type="checkbox"/>	Change directory to /mnt/eqs.	<p>Execute the following command to change a directory: # cd /mnt/eqs</p> <p>Execute the following command to verify that rpm is present: # ls -lrth</p> <pre> -rw-r--r-- 1 root root 128K Dec 9 12:27 EAGLEQS-1.0.0.0.1_10.5.0.x86_64.rpm -r-xr-xr-x. 1 root root 2236920 Mar 17 02:44 mysql-commercial-libs-5.7.16-1.1.el6.x86_64.rpm -r-xr-xr-x. 1 root root 3743708 Mar 17 02:44 mysql-commercial-devel-5.7.16-1.1.el6.x86_64.rpm -r-xr-xr-x. 1 root root 327756 Mar 17 02:44 mysql-commercial-common-5.7.16-1.1.el6.x86_64.rpm -r-xr-xr-x. 1 root root 23767996 Mar 17 02:44 mysql-commercial-client-5.7.16-1.1.el6.x86_64.rpm -r-xr-xr-x. 1 root root 1716448 Mar 17 02:44 mysql-commercial-libs-compat-5.7.16-1.1.el6.x86_64.rpm -r-xr-xr-x. 1 root root 158941748 Mar 17 02:44 mysql-commercial-server-5.7.16-1.1.el6.x86_64.rpm -r--r--r--. 1 root root 1804 Mar 22 06:09 TRANS.TBL </pre>
5. <input type="checkbox"/>	Procedure complete.	This procedure is complete.

APPENDIX B. MASTER QS PDB RESTORED ERROR

1. Remove the auto.cnf file in /var/QS/db/pdb
2. Restart the mysql interfaces:
 service mysqlpdb restart
 service mysqlascii restart
 service mysqlapp restart

APPENDIX C. CREATE LOGICAL VOLUME

Following is an example (will not work in all environment) used to create the logical volume on VM server.

1. Create logical volume of size 500G and with the name of vol01 on virtual group “/dev/vgroot”:
lvcreate -L 510G -n vol01 /dev/vgroot
2. Create file system on logical volume:
mkfs.ext4 /dev/vgroot/vol01
3. Add an entry for your newly created logical volume into /etc/fstab
/dev/vgroot/vol01 /var/QS ext4 defaults 1 2
4. Mount the logical volume
mkdir /var/QS
mount .-a

APPENDIX D. RPM COMMANDS

Following are the commands used to install and upgrade the rpm.

1. Install RPM in verbose mode and with hash mark option.
rpm -ivh <rpm_name>
2. Install RPM in verbose mode, with hash mark and without checking any dependencies options.
rpm -ivh --nodeps <rpm_name>
3. Install RPM in verbose mode, with hash mark, without checking any dependencies and install forcefully options.
rpm -ivh --nodeps --force <rpm_name>
4. Upgrade RPM in verbose mode and with hash mark options.
rpm -Uvh <rpm_name>
5. Upgrade RPM in verbose mode, with hash mark and without checking any dependencies options.
rpm -Uvh --nodeps <rpm_name>

APPENDIX E. UNINSTALL THE EAGLE QS

To proceed with EAGLE QS 1.0 uninstallation, the EAGLE QS should be installed on the VM. It will clean up all the changes done by the application during the installation of EAGLE QS.

Assumption: The EAGLE QS is installed on VM.

Procedure 17: Uninstall the EAGLE QS

S T E P #	<p>This procedure provides instructions to uninstall the EAGLE Query Server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR UPGRADE ASSISTANCE.</p>	
1. <input type="checkbox"/>	<p>Log in to the VM as the root (“or a user name that has same access privileges”) user as mentioned in Table 5 row 5.</p>	<p>Login: root(“or a user name that has same access privileges”) password: <password></p>
2. <input type="checkbox"/>	<p>Verify that EAGLE QS is install on VM.</p>	<p># rpm -qa grep -i eagleqs</p> <p>Output should be as follow: eagleqs-1-1.3.x86_64</p>
3. <input type="checkbox"/>	<p>Uninstall EAGLE QS RPM by issuing the given command.</p> <p>Note: Before uninstall Query server customer needs to close all the sessions of the software that are active.</p> <p>Note: Uninstalling Query server will remove the users/group created by Software.</p>	<p># rpm -e eagleqs-1-1.3.x86_64</p> <p>Waiting for mysqlapp to stop. done Waiting for mysqlascii to stop. done Waiting for mysqlpdb to stop. done INFO: EAGLE QS UNINSTALLED SUCCESSFULLY</p>
4. <input type="checkbox"/>	<p>Uninstallation complete.</p>	<p>This procedure is complete.</p>

APPENDIX G. CUSTOMER SIGN OFF

Sign-Off Record

***** Please review this entire document. *****

This is to certify that all steps required for the upgrade successfully completed without failure.

Sign your name, showing approval of this procedure, and email this page and the above completed Table to Tekelec, email: upgrades@tekelec.com.

Customer: Company Name: _____ **Date:** _____

Site: Location: _____

Customer :(Print) _____ **Phone:** _____

Fax: _____

Start Date: _____

Completion Date: _____

This procedure has been approved by the undersigned. Any deviations from this procedure must be approved by both Oracle and the customer representative. A copy of this page should be given to the customer for their records. The SWOPS supervisor will also maintain a signed copy of this completion for future reference.

Oracle Signature: _____ **Date:** _____

Customer Signature: _____ **Date:** _____

APPENDIX H. MY ORACLE SUPPORT

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

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

- For Technical issues such as creating a new Service Request (SR), select **1**.
- For Non-technical issues such as registration or assistance with My Oracle Support, select **2**.
- For Hardware, Networking and Solaris Operating System Support, select **3**.

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.