



RMAN Plug-in Installation Instructions

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RMAN Plug-in and Compatibility Information

The Quantum RMAN 1.1.0 plug-in is based on Oracle Recovery Manager (RMAN) API specification Version 2.1. The following components are required for RMAN operation with the DXi:

- Oracle version 11 or 12.
- Quantum RMAN Plug-in (downloaded separately through the remote management console or from the Quantum Service and Support Web site).

Operating System Support

Windows Support

The Quantum RMAN 1.1.0 plug-in contains support for the following Windows operating systems:

- Windows 2012 64-bit
- Windows 2016 64-bit

Linux Support

The Quantum RMAN 1.1.0 plug-in contains support for the following Linux operating systems:

- RedHat Enterprise Linux 6 x86 64-bit
- RedHat Enterprise Linux 7 x86 64-bit
- SUSE Enterprise Linux 12 x86 64-bit
- Oracle Linux 6 x86 64-bit
- Oracle Linux 7 x86 64-bit

For additional configuration requirements, see [RMAN Plug-in Support on the next page](#)

General Guidelines

The following list provides general guidelines for RMAN Plug-ins:

- A host can only have a single RMAN plug-in installed at a time. (Multiple hosts with different installed plug-in versions are supported.)
- Refer to the *DXi6900 User's Guide* or *DXi4700 User's Guide* for more information on RMAN and replication capabilities.

RMAN Plug-in Support

RMAN Plug-in support is available for the DXi4700, DXi6900, and DXi6900-S. RMAN Plug-ins are available for the following operating systems:

- [Windows 64-Bit below](#)
- [Linux below](#)

Windows 64-Bit

| | |
|--|--|
| File Name: | QuantumRMANPluginWinX64-1.1.0-3316.msi |
| Current Plug-in Version: | 1.1.0 |
| DXi Software Version Supported: | 3.4.0 or higher |

| Platform | Oracle 11 | Oracle 12 |
|---------------------|-----------|-----------|
| Windows 2012 64-bit | Yes | No |
| Windows 2016 64-bit | Yes | No |

Linux

The following Linux RMAN Plug-ins are available:

- [RedHat Enterprise Linux below](#)
- [Oracle Linux on the next page](#)
- [SUSE Enterprise Linux on the next page](#)

RedHat Enterprise Linux

| | |
|--|--|
| File Name: | QuantumRMANPlugin-1.1.0-3316-linuxR x86_64.rpm |
| Current Plug-in Version: | 1.1.0 |
| DXi Software Version Supported: | Linux 6 - 3.4.0 or higher Linux 7 - 3.2.5 or higher |

| Platform | Oracle 11 | Oracle 12 |
|--------------------------------------|-----------|-----------|
| RedHat Enterprise Linux 6 x86 64-bit | Yes | Yes |
| RedHat Enterprise Linux 7 x86 64-bit | Yes | Yes |

Oracle Linux

| | |
|--|--|
| File Name: | QuantumRMANPlugin-1.1.0-3316-linuxR x86_64.rpm |
| Current Plug-in Version: | 1.1.0 |
| DXi Software Version Supported: | Linux 6 - 3.4.0 or higher Linux 7 - 3.2.5 or higher |

| Platform | Oracle 11 | Oracle 12 |
|---------------------------|-----------|-----------|
| Oracle Linux 6 x86 64-bit | Yes | Yes |
| Oracle Linux 7 x86 64-bit | Yes | Yes |

SUSE Enterprise Linux

| | |
|--|--|
| File Name: | QuantumRMANPlugin-1.1.0-3341-linuxS x86_64.rpm |
| Current Plug-in Version: | 1.1.0 |
| DXi Software Version Supported: | 3.4.0 or higher |

| Platform | Oracle 11 | Oracle 12 |
|-------------------------------------|-----------|-----------|
| SUSE Enterprise Linux 12 x86 64-bit | Yes | Yes |

Installing the RMAN Plug-in

Prerequisites

Before installing the Quantum RMAN Plug-in:

- The Oracle server must be properly installed and configured. For more information on Oracle Database installation, refer to the *Oracle Database Quick Installation Guide* at https://docs.oracle.com/cd/E11882_01/install.112/e24326/toc.htm#BHCCADGD
- Firewall ports 4095-4102 should be opened.
- A backup user and application specific shares (RMAN shares) should be created in the DXi system. For more information on managing users and shares, refer to the *DXi-Series RMAN Configuration Guide*.

To install the RMAN Plug-in, follow the appropriate section below for your platform:

- [Install the RMAN Plug-in for Linux below](#)
- [Install the RMAN Plug-in for Windows on page 8](#)

Install the RMAN Plug-in for Linux

If older RMAN plug-ins are already installed on the Oracle server, you must uninstall them first. For uninstallation steps, see [Uninstalling the RMAN Plug-in on page 9](#).

To install the plug-in on the Oracle server:

1. Go to the Quantum Client Plugins page to download the RMAN plug-in (see [Figure 1 below](#)).

<http://www.quantum.com/serviceandsupport/softwareanddocumentationdownloads/ostclientplugin/index.aspx>

Figure 1: Quantum Client Plug-in Page

| Oracle™ RMAN | | | |
|--|---------------------|-----------|-----------|
| Plugin Version Compatibility | | | |
| Installation Instructions | 243 KB | Oct 2016 | |
| RMAN Configuration Guide | 387 KB | Oct 2016 | |
| Click your Operating System below to begin Download: | | | |
| Operating System | RMAN Plugin Version | Oracle 11 | Oracle 12 |
| RedHat Enterprise Linux 7 64-bit | 1.0.0 | Yes | No |
| Oracle Linux 7 64-bit | 1.0.0 | Yes | No |

2. Download the ZIP file for the appropriate operating system.

- Unzip the ZIP file 5-01201-03_RevA_DXiXXXX_1.1.0-33xx_RMAN Plugin.zip. The download contains both the Quantum Public Key and the Plug-in RPM file (see [Figure 2 below](#)).

Figure 2: Quantum RMAN Plug-in Download Example

| Name | Type | Compressed size | Password ... | Size | Ratio |
|--|---------------|-----------------|--------------|----------|-------|
| 5-01201-01_RevA_DXIG6900-S_RMAN Plugin_MD5.txt | Text Document | 1 KB | No | 1 KB | 0% |
| QTM-DXi-Public-GPG-Key.txt | Text Document | 2 KB | No | 2 KB | 23% |
| QuantumRMANPlugin-1.0.0-3204.x86_64.rpm | RPM File | 1,612 KB | No | 1,614 KB | 1% |

- Validate the RPM Signature with the Quantum Public Key (see [Figure 3 below](#))

Figure 3: RPM Validation

```
su -  
rpm --import QTM-DXi-Public-GPG-Key.txt  
rpm -K QuantumRMANPlugin-1.1.0-33xx-linuxS_x86_64.rpm
```

- Install the RPM as root (see [Figure 4 below](#)).

i Note: The ORACLE_HOME path may be different depending on your file structure.

Figure 4: RPM Install

```
su -  
export ORACLE_HOME=/home/oracle/app/oracle/product/11.2.0/db1  
rpm -ivh QuantumRMANPlugin-1.1.0-33xx-linuxS_x86_64.rpm
```

- Set the RMAN configuration/allocation parameter to the following: SBT_LIBRARY=libQuantumobk.so
- The following text appears after the installation is complete:

```
Installation successfully completed.  
See the Quantum RMAN Plug-in Installation Instructions and Quantum DXi-Series RMAN  
Configuration Guide for further information on setting up RMAN support.
```

- Verify the RMAN plug-in installation by using **sbttest**:

Additional Information

- It is recommended that you verify your systems PATH variable prior to running sbttest.
- Backup share, user, and password should already exist on the DXi specified in BACKUP_HOST. To add RMAN shares and manage users on the DXi system, refer to the *Quantum DXi-Series RMAN Configuration Guide*.

```
export BACKUP_HOST=<ip address of DXi>
export BACKUP_SHARE=<application specific share on DXi>
export BACKUP_USERNAME=<user name>
export BACKUP_PASSWORD=<password>
sbttest test -libname libQuantumobk.so
```

If **sbttest** fails to verify the plug-in, it will report why the authentication failed. In the example below, the authentication failed due to an incorrect exported password (see [Figure 5 below](#)).

i Note: Not every failure will be an authentication failure, but **sbttest** will report why the failure occurred.

Figure 5: sbttest Authentication Failure Example

```
[oracle@oel72rman1 temp]$ sbttest fail -libname libQuantumobk.so
The sbt function pointers are loaded from libQuantumobk.so library.
-- sbtinit succeeded
-- sbtinit (2nd time) succeeded
sbtinit: vendor description string=Quantum MMS for RMAN 1.0.0.3204
sbtinit: Media manager is version 1.0.0.132
sbtinit: Media manager supports SBT API version 2.0
sbtinit: allocated sbt context area of 3888 bytes
MMAPI error from sbtinit2: 7501, sbtinit2: authentication to server
10.20.165.14 username = chuck failed: MI_STS_EAUTH
-- sbtinit2 failed
```

Creating Symbolic Links to Oracle Databases

The Quantum RMAN plug-in installation creates a symbolic link to the Quantum RMAN plug-in library in

`$ORACLE_HOME/lib.`

If you have other Oracle database installations, in each of these home lib directories manually create similar symbolic links matching the one this installation created. See [Figure 6 below](#) for an example.

Figure 6: Symbolic Link Creation Example

```
export ORACLE_HOME=<an Oracle Installation>
ln -s -f /usr/Quantum/libQuantumobk.so $ORACLE_HOME/lib/libQuantumobk.so
```

i Note: An alternative to creating symbolic links in each `$ORACLE_HOME/lib` is to specify an absolute path when allocating a channel within RMAN: `SBT_LIBRARY=/usr/Quantum/libQuantumobk.so`

For more information on configuring the RMAN plug-in, see the *Quantum DXi-Series RMAN Configuration Guide*.

Install the RMAN Plug-in for Windows

If older RMAN plug-ins are already installed, you must uninstall them first. For uninstallation steps, see [Uninstalling the RMAN Plug-in on the next page](#).

Additional Information

- It is recommended that you verify your systems PATH variable prior to running `sbttest`.
- Installing a new plug-in on Windows overwrites the existing `C:\Windows\Quantum\libstspiQuantum.ini` configuration file. If you have made custom changes to the original file, please make a copy of the file prior to installing the new plug-in.
- After installing the plug-in, you must manually reconfigure your custom settings in the new plug-in `.ini` file. You can use the older `.ini` file as a reference to do this. However, do *not* overwrite the new plug-in `.ini` file with the older file.

1. Before starting an RMAN Windows plug-in installation, stop all Oracle and RMAN services:
`net stop OracleService*`
* any Oracle SIDs during installation, default ORCL.
2. Run **QuantumRMANPluginWinX64-1.1.0-3316.msi**. Follow the instructions given by the installation wizard to complete the installation.

During installation, the Quantum default certificate files are installed on the DXi in the `%WINDIR%\Quantum` directory. These files are needed if the **TLS with AES 256** encryption option for Accent is enabled on the DXi.

If you want to use custom certificates, first make a backup of the default certificates located in the **%WINDIR%\Quantum** directory. Then copy the custom certificates into this directory.

3. The RMAN Plug-in is installed. Restart all Oracle and RMAN services:

```
net start OracleService*
```

* any Oracle SIDs during installation, default ORCL.

4. Verify the RMAN plug-in installation by using **sbtttest.exe**:

i Note: Backup share, user, and password should already exist on the DXi specified in BACKUP_HOST. To add RMAN shares and manage users on the DXi system, refer to the *Quantum DXi-Series RMAN Configuration Guide*.

```
set BACKUP_HOST=<ip address of DXi>
set BACKUP_SHARE=<application specific share on DXi>
set BACKUP_USERNAME=<user name>
set BACKUP_PASSWORD=<password>
sbtttest test -libname C:\Windows\Quantum\orasbt.dll
```

i Note: Uninstalling the RMAN Plug-in removes the existing certificates, and installing a new OST Plug-in installs the factory default certificates. Before uninstalling the plug-in, make a copy of any custom certificates in the **%WINDIR%\Quantum** directory, then restore the custom certificates to this location after installing a new plug-in.

Uninstalling the RMAN Plug-in

To uninstall the RMAN Plug-in, refer to the following sections:

- [Uninstall the Linux Plug-in below](#)
- [Uninstall the Windows Plug-in on the next page](#)

Uninstall the Linux Plug-in

To uninstall the RMAN Linux Plug-in:

1. As a root, uninstall the plug-in:

```
rpm -e QuantumRMANPlugin
```
2. Directory `/usr/Quantum` will not be removed if it is not empty. For example, RMAN plug-in logging is in

the logs subdirectory. Copy these to another location before removal if you want to save them.

To remove:

```
rm -rf /usr/Quantum
```

3. Uninstallation is complete.

Uninstall the Windows Plug-in

To uninstall the Windows Plug-in:

1. Go to **Start > Control Panel > Programs > Programs and Features**.
2. Select **Quantum RMAN Plug-in for Windows**.
3. Click **Uninstall** to start the un-installation process.

Contacting Quantum

More information about this product is available on the Service and Support website. The Service and Support Website contains a collection of information, including answers to frequently asked questions (FAQs).

For further assistance, or if training is desired, contact Quantum:

| Region | Support Contact |
|---------------|--|
| North America | 1-800-284-5101 (toll free) +1-720-249-5700 |
| EMEA | +800-7826-8888 (toll free) +49 6131 324 185 |
| Asia Pacific | +800-7826-8887 (toll free) +603-7953-3010 |

For worldwide support:

<http://www.quantum.com/serviceandsupport/get-help/index.aspx#contact-support>

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RMAN Plug-in Release Notes

The following sections contain information about resolved and known issues in Quantum RMAN Plug-in.

RMAN Plug-in Known Issues

The following issues are known in the Quantum RMAN Plug-in 1.0.1.

| Bug Number | SR Number | Description | Workaround |
|------------|-----------|---|---|
| 45854 | | <p>Incorrect pop-up failure message appears when attempting to configure an RMAN share replication to a target that does not support RMAN shares.</p> <p>Depending on the target configuration, the following error messages appear:</p> <p>"Source and Target Share Type's are not matching. Source share type is cifs and Target share type is nfs"</p> <p>"Source and Target Share Type's are not matching. Source share type is cifs and Target share type is cifs"</p> | <p>If this error message appears, you are attempting to replicate to a target that does not support RMAN shares. Replicate to a target that supports RMAN shares.</p> |

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