APTARE IT Analytics Installation and Upgrade Guide for Windows

Release 10.5

VERITAS™

APTARE IT Analytics Installation and Upgrade Guide for Windows

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Documentation

Make sure that you have the current version of the documentation. Each document displays the date of the last update on page 2. The latest documentation is available on the Veritas website.

Veritas Services and Operations Readiness Tools (SORT)

Veritas Services and Operations Readiness Tools (SORT) is a website that provides information and tools to automate and simplify certain time-consuming administrative tasks. Depending on the product, SORT helps you prepare for installations and upgrades, identify risks in your datacenters, and improve operational efficiency. To see what services and tools SORT provides for your product, see the data sheet:

https://sort.veritas.com/data/support/SORT_Data_Sheet.pdf

Contents

Chapter 1

Installing the Portal on a Windows Server

This chapter includes the following topics:

Introduction

Complete the steps to install the Portal on a Windows server.

Note: Local Administrator privileges are required for installing all Portal Server components.

Portal Installation Memory Requirements

For new Portal installations, the minimum server memory requirement is 32 GB. Oracle database requires a minimum of 24 GB of memory. Portal installations will fail if sufficient memory resources are not available on the Portal server.

The Portal Installation software checks the following resources:

- Total physical memory (physical + virtual) must be greater than 24 GB, otherwise Oracle will fail to start. Add more physical memory to the Portal server.
- Windows Virtual Memory must be 24 GB or greater, otherwise Oracle will fail to start. Increase the size of the virual memory if required (**Windows** > **System** > **Advanced System Settings** > **Advanced** tab > **Settings** > **Advanced** tab > click **Change**).

Task 1: Portal and Database Deployment Strategies (Windows)

Installing Oracle and Portal Binaries on the Same Server (Windows)

For the typical Portal installation, the installation process consists of these main tasks:

1. Verify that you have the latest binaries for the version you are installing.
2. Install Oracle application binaries.
3. Install the APTARE IT Analytics Portal software components and the database schema.

Task 2: Pre-Installation Configuration (Windows)

1. Choose a Portal Server. For performance reasons, the APTARE IT Analytics Portal software should not be installed on the same server as the Data Collectors. If, for some reason, you require both to be on the same server, be sure that both the Portal and Data Collector software do not reside in the same directory on the server. Root privileges are required for the Portal software installation tasks.

You will need to log in as a **Local Administrator** to perform the installation. Oracle requires that you are logged in as a **Local Administrator**. Logging in as a Domain Administrator is not sufficient for this installation. Refer to the Oracle web site for the requirement to install on Windows as a user who is a member of the server's local Administrator's group.

2. Verify the OS of the Portal Server. Check that the OS is one of the certified operating systems listed in the *Certified Configurations Guide*.
3. Verify the Third-Party Software list.

   See "Supported Third-Party and Open Source Products" on page 22.
4. Verify Microsoft Visual C++ Runtime libraries are installed.

   APTARE IT Analytics installs Apache HTTP Server which has a dependency on run-time components of Visual C++ libraries. These run-time components are included in the Microsoft Visual C++ 2015 Redistributable Update 3 RC. This Microsoft distribution is available for download from www.microsoft.com. If this redistributable update is not installed prior to running the APTARE IT Analytics installer, Apache HTTP Server will not be able to run.

   Note: If you installed Microsoft Visual C++ 2015 after APTARE IT Analytics 10.3.xx was installed, and services are failing, you must manually install the Apache service using the following command:

   ```
   C;\opt\apache\bin\httpd -k install -n "APTARE Apache"
   ```
5. Verify that sufficient disk space exists on the designated Portal Server. For the database file systems, the amount specified is the minimum required to create the database. It is recommended that you allocate more than the minimum to accommodate growth.

Directory	Minimum Disk Space	Notes
C:\opt	20 GiB	
C:\tmp	10 GiB	
C:\oradata	140 GiB	The Installer prompts for the target drive for the **oradata** directory, so alternate drives are supported.
Total	170 GiB	

- Add **aptareportal.yourdomain.com** and **aptareagent.yourdomain.com** entries to your enterprise DNS Server. Both entries must resolve to the IP address of the Portal server. Also note that the last component of the domain must be one of the recognized root domains; for example, **.com**--not **.3com**.

6. Verify that there are no other web servers--for example, IIS--running on the system.
7. The installer will set up the following system-wide environment variables and update the PATH environment variable. following system environment variables:

Variable Name	Variable Value
ORACLE_HOME	`C:\opt\oracle`
ORACLE_SID	**scdb**

The PATH environment variable will have the following path appended to the end of the current PATH:

```
C:\opt\oracle\bin
```

Task 3: Installing Oracle Application Binaries (Windows)

This section covers the installation and upgrade of the Oracle application binaries on a Windows Portal server.

Refer to the instructions provided with your purchase agreement confirmation email and consult the Veritas Support, if you require additional assistance.

Prerequisites for Oracle Application Binaries on Windows

- Oracle 19c Windows support is limited to specific releases. Refer to the Certified Configurations Guide for supported versions.
- The Oracle 19c binaries will be installed on a Windows server that will serve as the APTARE IT Analytics Portal server. This server cannot have any other Oracle database instances installed on it.
- Oracle requires that you are logged in using an account that has administrative privileges.
- To upgrade to Oracle 19c , Oracle requires a same user account that was used for the previous installation. This often is referred to as the Oracle Service User or the Oracle Home User. During the upgrade process, when prompted for the

Oracle Service User Name, enter this user ID. In addition, verify this account is set up to never have the password expire.

- The Oracle service user account can be an Active Directory account.
- The Oracle service user must be a standard user and must not be a part of Administrator group
- Windows User Account can be a Windows Local User, Windows Domain User or Managed Services Account (MSA). If you want to create a new user during installation, then it can only be a Windows Local User. It cannot be a Windows Domain User or an MSA.

Note: If you use a Domain account, that user must login at least once to the Windows machine.

- Per Oracle requirements, passwords cannot:
  - exceed 30 characters
  - contain invalid characters: ! @ % ^ & * ( ) + = \ | ` ~ [{] } ; : ' " , < > ?
- You cannot change the Oracle Home User once the installation is complete. To change the Oracle Home User, you must reinstall the Oracle Database software.

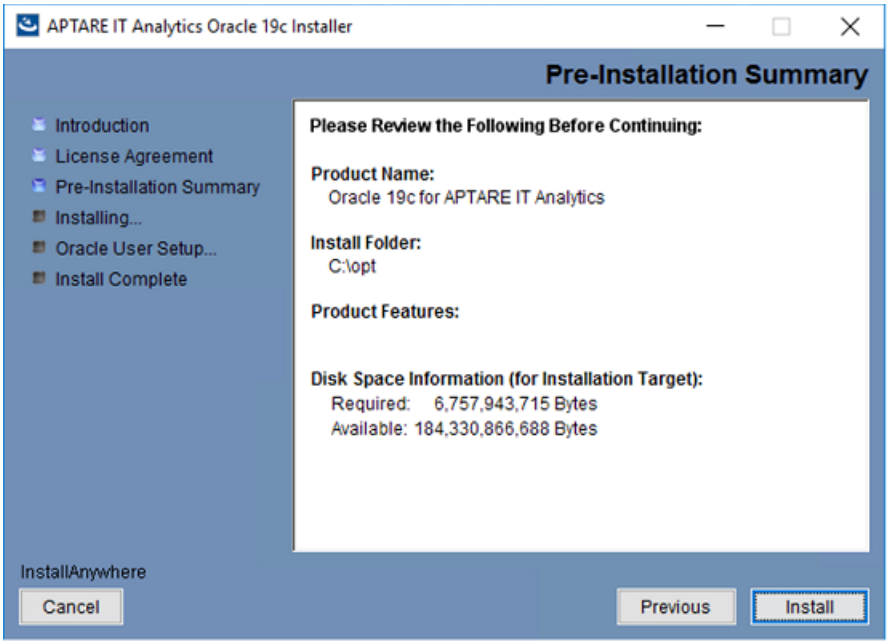
Install the Oracle Binaries

1. Log in to the Portal server as an **Administrator**. Oracle requires that you are logged in using an account that has administrative privileges.
2. Download the executable file to your Windows Portal server.
3. Double-click the executable file.

   ```
   sc_dbinstaller_<versionNumber>_win.exe
   ```

   The version number could be, for example, 193000
4. The InstallAnywhere installation wizard will begin extracting files.
5. Once the files have been extracted, the Introduction window will display. Click **Next** to begin the installation process.
6. Read and accept the end-user license agreement (EULA) and click **Next**.
7. Review the **Pre-Installation Summary**, which summarizes the product components that will be installed and describes the available and required disk space for these components.

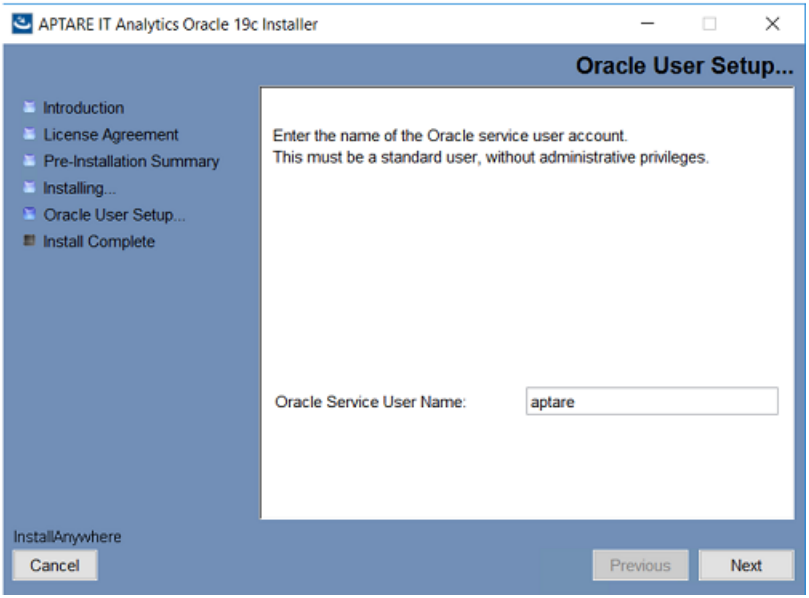
Note: The requirements shown on the following example screen may not match the requirements displayed on your installation screen. Refer to the actual **Pre-Installation Summary** screen for the current requirements.



8. Click **Install** to start the installation of the Oracle application binaries, which places files into the **C:\opt** folder on your Windows server.
   - The progress bar displays the component being installed and the progress of the installation overall.
   - The command prompt window will briefly display as it is removing pre-existing environment variables.
   - The Oracle application binaries will be installed on the **C:** drive. The database itself, however, can be created on an alternate drive during the Portal installation.
9. Enter the name of a valid user account for the Oracle Service User and click **Next**.
   - To install the Oracle services, Oracle requires a user account that does not have administrative privileges. This is often referred to as the Oracle Home User and it becomes the owner of the Oracle services. To create a user at the command prompt, enter:

```
net user <userID> <password> /add
```

When prompted for the Oracle Service User Name, enter this user ID.



10. At this point, the Oracle Universal Installer will take over the session and start its process in the Windows command prompt window. Further actions will not be available in the InstallAnywhere window (tucked behind the command prompt window) until the Oracle Universal Installer successfully completes.
11. When the Oracle Universal Installer completes its process successfully, press **Enter**.

    The command prompt window once again takes over to start the Oracle services.
12. In the Starting Services command prompt window, enter the password for the account that you have identified as the Oracle service user. You will not see your keystrokes echoed in the window.

    You will be prompted twice for the Oracle Service User password, but the prompts are different:

    - `Enter password for Oracle service user:`
    - `Enter <account name>'s password:`

    If you enter an incorrect password too many times, the account can get locked.

See the section called “Account Lockout” on page 13.

13. Return to the InstallAnywhere window and click **Done**.

At this point, the Oracle Application binaries have been installed on your server and Oracle services have been created.

This completes the installation of the APTARE IT Analytics Oracle Application component. The next step is to install the APTARE IT Analytics Portal Software components.

Troubleshoot the Oracle Installation

Because the Oracle installation relies on Oracle requirements and processes, you may encounter issues that require your intervention.

General Troubleshooting

The Oracle installation process logs errors that can aid in troubleshooting. Locate the log file that coincides with the date and time of the error:

```
C:\Program
Files\Oracle\Inventory\logs\installActions<YYYY-MM-DD_HH-MM>
```

Account Lockout

Too many incorrect password entry attempts will lock out the Oracle Service User account. To unlock the account, take the following steps.

1. Enter `lusrmgr.msc` in the Windows PowerShell command prompt window to launch the Local Users and Groups Manager.
2. Open the **Users** folder and double-click the user that needs to be unlocked.
3. In the User Properties window, uncheck the Account is locked out item to re-enable the user account.

Note: An alternative method for unlocking an account can be accessed via the Windows Server Manager: **Server Manager > Tools > Computer Management > Local Users and Groups > Users**

Invalid Oracle Service User Account

When an invalid Oracle Service User Name is entered, the Oracle Universal Installer displays the following messages:

```
The password field is empty.
CAUSE: The password should not be empty.
```

```
ACTION: Provide a non-empty password.
Please press Enter to exit...
```

These messages do not necessarily reflect the true issue. At this point, the password is not relevant. The process actually needs the Oracle Service User Name.

To recover from this error, take the following steps.

1. In the command prompt window, press **Enter**.
2. Return to the InstallAnywhere Failed to Install Oracle window and click **Previous**.
3. Enter a valid account name for the Oracle Service User Name and resume the installation.

Oracle Universal Installer Fails

The most common reason for the Oracle Universal Installer to fail is due to an invalid Oracle Service User account.

See the section called “Invalid Oracle Service User Account” on page 13.

Other failures must be investigated by reviewing log messages, using the following steps.

1. In the Failed to Install Oracle InstallAnywhere window, click **Exit**.
2. Locate the error in the log file:

   ```
   C:\Program
   Files\Oracle\Inventory\logs\installActions<YYYY-MM_HH-MM>
   ```

Note: If you abort the Oracle Universal Installer process by closing the command window, close the InstallAnywhere window and re-run the installer from the beginning.

Oracle Already Exists on the Portal Server

If you are installing Oracle on a server that at some point had APTARE IT Analytics Oracle software installed, the installer will display an InstallAnywhere error dialog window.

Encountering previously installed software may occur under the following circumstances:

- You chose a server that has a version of the APTARE IT Analytics Portal already installed. Determine the version of Oracle that is already installed and reference the APTARE IT Analytics documentation for the steps to uninstall the database/Portal.

- You ran the Oracle installer more than once. In this case, it is likely that you do not want to proceed unless you have determined that it was not a successful installation. If you need to re-run this installer, refer to the following.
  See the section called “Uninstall the Oracle Application Binaries” on page 32.

Unsupported Windows Operating System

If you try to install Oracle on a version earlier than Windows Server 2016, you will get a warning message: **WARNING: The current OS is not supported.**

Exit the installation and choose a server with a supported Windows OS.

Task 4: Installing Portal Application Binaries (Windows)

In this procedure, you will install Portal Server software on your Windows Server.

System: Web/Application Server

To install your Portal Server software

1. Perform the steps outlined in Task 2.
2. Log in to the Portal Server as a **Local Administrator**.

   Note: Oracle requires that you are logged in as a **Local Administrator**. Logging in as a Domain Administrator is not sufficient for this installation.

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3. Go to the downloads section under Support at www.veritas.com and click the relevant download link.
   - Once downloaded, the Portal Installation Wizard should launch automatically. If it does not, using Windows Explorer, navigate to the CD drive, and double-click the executable file:
     sc_installer_<releaseversion>_win_<MMDDYYYY>.exe
   - The Portal Installation Wizard requires about a minute to start up. During this time, the following window is displayed:.
     Once the Portal Installation Wizard extracts the necessary startup files, the Portal Installation Wizard displays the launch screen.
4. Click **Next** to start the installation process. The Portal Installation Wizard displays the **License Agreement** screen and prompts you to accept the End User License Agreement (EULA) to continue.
5. Read and agree to the terms of the License Agreement.

6 Click the “I accept the terms of the License Agreement” and then click **Next**. The **Choose Install Set** screen is displayed.

7 Select your product component installation option:

- **Portal and Reporting Database Installation** - Select this option if you are installing all the components on the same server.
- **Reporting Database Only Installation**
- **Portal Only Installation**

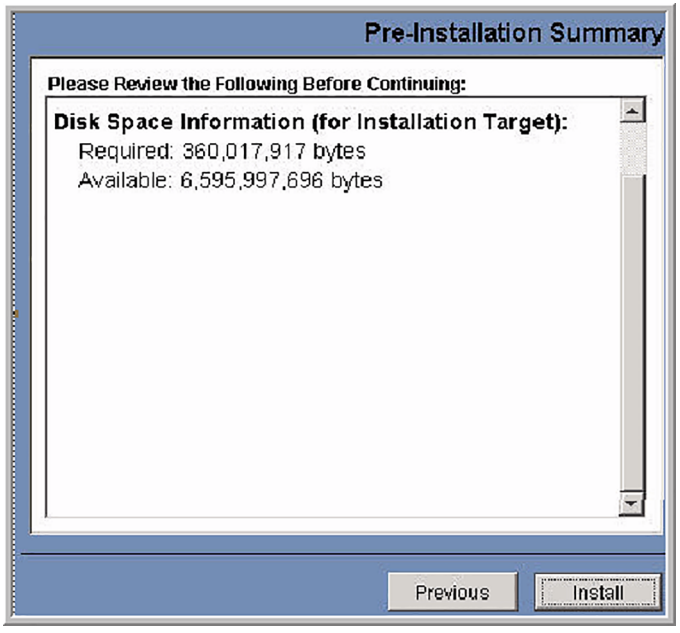
Note: You can select **Reporting Database Only Installation** or **Portal Only Installation** as recommended by Veritas Support. Otherwise, you need to select **Portal and Reporting Database Installation** as the default install option.

---

8 Click **Next**. The **Pre-Installation Summary** screen is displayed. This screen summarizes the product components that will be installed and describes the available and required disk space for these components.

Note: This screen will automatically be skipped if you are installing the Oracle binaries and database on a server that is different from the Portal server. For this type of setup, the Installation Wizard skips this screen and automatically installs the Portal only.

Note: The requirements shown on the following example screen may not match the requirements displayed on the installation screen. Refer to the actual **Pre-Installation Summary** screen for the current requirements.



9 Click **Install** to install the Portal Server software in the default `C:\opt` directory on the Portal Server.

The Portal Server software must be installed on the `C:\` drive.

The Portal Installation Wizard displays several status screens as the various software binaries are copied to specific locations on your Portal Server. Afterward, the Portal Installation Wizard prompts for configuration settings.

10 Enter the hostname or IP address of the server on which the Oracle Application binaries have been installed. The installer prompts for the IP address of your Oracle database server. If Oracle is running on the Portal server, you can enter localhost.

11 Enter the Domain Name and Admin Password.

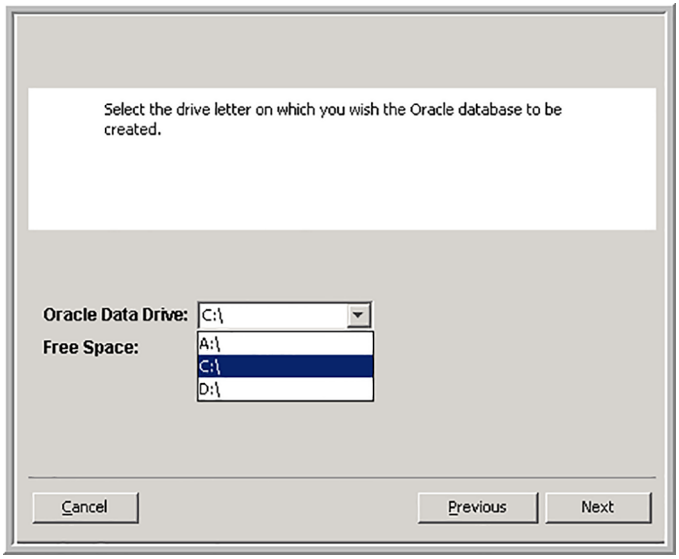
Domain Name	Enter the domain name for your environment (e.g., yourcompany.com). The value entered here determines the URL you will use in your browser to access the portal. For example, **aptareportal.yourcompany.com**.
Admin Password	The admin userid is created during the installation in the format **admin@domainname** (e.g., admin@yourcompany.com). You will be prompted for this admin userid and the password you supply below when you first log in to the Portal.

12 Make a note of the configurations. They will be used during the Data Collector installation.

13 Select the products to install. Press the **Ctrl** key to make multiple selections.

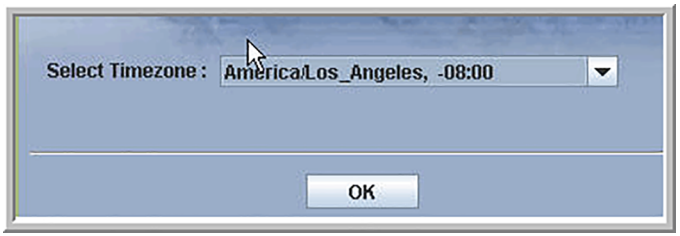
Products — Select only the products for which you have purchased licenses. If you select a product for which you do not have a valid license, you will not be able to access the reports for that product. To make multiple selections, click Control and select the products.

14 Select the drive on which the Oracle database will be created.



Oracle Data Drive — Select the drive letter on which you intend to create the Oracle database. The Portal Installation Wizard customizes the Database SQL Script based on the drive letter. Note the disk space requirements for this drive.

15 Select a time zone. For a list of valid Oracle time zones see http://docs.oracle.com/cd/B13866_04/webconf.904/b10877/timezone.htm



Now, the installer will customize the installation, based on the values you just provided. The installer prepares to launch the database creation script.

16 Click **OK** to launch the database creation process. The Create Database command prompt window opens.

17 Click **Done** in the **InstallAnywhere** dialog to exit the installer.

At this stage of the installation process, all the third-party and software components are in place on your Windows Server. You should now ensure that **aptareportal.mydomain** and **aptareagent.mydomain** (where mydomain is the value entered in a previous step) have been added to DNS or `%WINDOWS_HOME%\SYSTEM32\DRIVERS\ETC\HOSTS`

Note: Throughout this section, the example output and screens are used to provide a reasonable representation of the screens that you will be viewing. However, they may not display precisely the same text that you'll see on the installation screens.

---

18 The database will be created (this step will take between 5-10 minutes to complete).

19 The installer will then load the database with Oracle packages (this step will take between 15-25 minutes to complete).

20 The Portal users and the database schema are now created.

```
Creating APTARE IT Analytics Portal user...
Disconnected from Oracle Release xx - Production
JServer Release xx - Production
Creating APTARE IT Analytics base schema tables...
...
...  (EACH STEP LOGS TO THE screen...)
...
Completed creating APTARE IT Analytics base schema tables
Creating APTARE IT Analytics <product> schema tables...
```

21 Next, the Packages are validated.

Note: The actual output will vary, depending on the products you chose to install.

Note: If you do not see the message “Successfully validated ALL Packages” at the end of this step, or if the installer script reported errors during the install, there is a possible problem with the install and you should save a copy of the following log file and contact the Veritas Support:
C:\opt\oracle\logs\aptare_installer*.log

Note: If you do not see the message “Successfully validated ALL Packages” at the end of this step, or if the installer script reported errors during the install, there is a possible problem with the install. Save copies of the following log files and contact Veritas Support: **C:\opt\oracle\logs\aptare_installer*.log and C:\opt\oracle\logs\aptare_db_create.log**

This completes the setup of the Portal and the database creation.

Task 5: Request the License Key File (Windows)

Refer to the Licensing Guide for details.

Task 6: Log into the Portal (Windows)

Log into the Portal (http://aptareportal.yourcompany.com) with your username as <admin@yourcompany.com>. The Portal has an initial default password **P@ssw0rd**. You must change this password after your first login.

Note: The default password contains a zero, not an uppercase O.

Task 7: Install the License Key File (Windows)

Refer to the Licensing Guide for details.

Task 8: Performing a Cold Backup (Windows)

Prior to deploying the Portal for operational use, it is recommended that you perform a cold backup of the Oracle database. This offline, cold backup simply means that you'll physically copy or backup the files to another location. This cold backup will simplify the restore process, in the event of unanticipated data loss. With a cold backup, you simply have to restore the files and then import the most recent database export. In addition to this initial cold backup, you may consider performing a cold backup periodically--for example, after a significant software upgrade--to re-capture the database schema. Refer to the System Administrator Guide.

Recommended Database Backup Process

1. Cold Backup
2. Daily Exports of the database
3. In the event of data loss, restore the database and then import the most recent database export.

Supported Third-Party and Open Source Products

When you install the Portal and Reporting Database software, you install a compilation of software, which includes open source and third-party software.

Open Source Software

For a list of open source components and licenses, see the license.txt file on the Portal server.

Portal: Supported Software

Table 1-1 Portal: Supported Software

Software Product	LINUX	Windows
Oracle 19c	**New Installation and Upgrading to 10.5.00** ■ 19c	**New Installation and Upgrading to 10.5.00** ■ 19c
Java	Amazon Corretto 11.0.8.10.1 64-bit **Note:** When you install APTARE IT Analytics 10.5, Amazon Corretto version 11.0.7.10.1 will be installed by default. This version will be upgraded to 11.0.8.10.1 when you upgrade to APTARE IT Analytics 10.5 P1 or higher.	Amazon Corretto 11.0.8.10.1 64-bit **Note:** When you install APTARE IT Analytics 10.5, Amazon Corretto version 11.0.7.10.1 will be installed by default. This version will be upgraded to 11.0.8.10.1 when you upgrade to APTARE IT Analytics 10.5 P1 or higher.
VSphere Web Services SDK	5.5, 64-bit	5.5, 64-bit
Apache HTTP Web Server	**Upgrading to 10.5.00** ■ Manual upgrade to 2.4.43 is supported. **New Installation 10.5.00** ■ 2.4.43 ■ Apache 2.4.43 includes SafeLogic SSL for Linux environments.	**Upgrading to 10.5.00** ■ Manual upgrade to 2.4.43 is supported. **New Installation 10.5.00** ■ 2.4.43. Verify that the C++ Redistributable for Visual Studio 2015 is installed.* ■ Apache 2.4.43 includes SafeLogic SSL for Windows environments.

If other versions of the above components are already running on the designated APTARE IT Analytics system, or other components are utilizing resources (such as specific ports) typically used by APTARE IT Analytics, the product usually can be reconfigured to work around these conflicts; however, this cannot be guaranteed.

*Refer to Support for updated binaries as they become available.

Uninstalling Portal Server Software

This procedure assumes that you installed an evaluation version of APTARE IT Analytics, and now want to uninstall it. Use this procedure to uninstall the application and remove the Oracle database and all the data that resides on that database. Files that you created after the product was installed will not be deleted. Perform this procedure on your Portal Server.

To uninstall Portal Server software

Caution: This procedure completely removes APTARE IT Analytics, the Reporting Database, and all the data that resides in that Oracle database.

---

1. If running, shut down the Distributed Transaction Coordinator service.

   ```
   > net stop msdtc
   ```

   This Microsoft service can sometimes lock one of the Oracle files and prevent the uninstall from completing successfully, as outlined in a Microsoft bug report at http://support.microsoft.com/kb/q233297.

2. Run the uninstaller executable (.exe):

   ```
   C:\opt\UninstallerDataPortal\
   ```

3. From a Windows File Explorer window, remove the database and any other files created after the initial installation:

   Delete the `C:\oradata` folder.

   Delete the `C:\opt` folder.

4. Reboot the Windows Server.

   This step is important to ensure that the deletions are complete.

Chapter 2

Upgrade APTARE IT Analytics Portal on Windows

This chapter includes the following topics:

Overview

If you are upgrading to v10.5 and later, you must also upgrade Oracle. Therefore, upgrading from versions lower than 10.5 is a two-step process that involves:

1. Upgrade the Oracle Database Application Binaries to19c. See "Upgrade the Oracle Database Application Binaries to19c" on page 27.

2. Upgrade APTARE IT Analytics Portal. See “ Upgrade APTARE IT Analytics Portal” on page 32.

For complete details about system requirements and upgrading, refer to the *Certified Configurations Guide*. Separate upgrade instructions are provided for Windows and Linux with the assumption that the Portal and database components are installed on the same server.

Upgrade Path

The Portal must be running a minimum of APTARE IT Analytics version 10.3.00 to upgrade to APTARE IT Analytics v10.5. For complete details about system requirements and upgrading, refer to the Certified Configurations Guide. In addition, Oracle 19c is required for version 10.5 and later.

The Portal must be running a minimum of APTARE IT Analytics version 10.4.00 to upgrade to APTARE IT Analytics 10.5. For complete details about system requirements and upgrading, refer to the Certified Configurations Guide. In addition, Oracle 19c is required for APTARE IT Analytics 10.5.

Before Upgrading

- Ensure that you have a valid system backup. For additional information refer to the *System Administrator Guide*. Prior to executing the upgrade utility, the recommendations are:
  - A cold backup of the Portal / Database server(s) file systems.
  - A backup of the file systems containing the Oracle database (typically **<drive>:\oradata\scdb** on Windows) is only valid if it was taken while Oracle was completely shut down.
  - An export of the database.
- If you have installed any patches on your present APTARE IT Analytics version, check the Release Notes to verify that they are included in this release. If you are uncertain, check with the Veritas Support. In most cases, previously installed patches are included in this release.
- Close all instances of baretail.exe, as APTARE IT Analytics copies a new version during the upgrade process.
- The Portal and Database components should be installed on the same server.
- In the Portal, verify that the Data Collectors are set for automatic updates. This setting triggers the automatic download of updated application logic to the Data Collectors in your enterprise. This download is required to ensure the Data

Collectors are running with the latest compatible version. Refer to the vendor-specific Data Collector Installation Guide for additional information about Data Collectors.

- Identify the Java Version on the Data Collector Server and ensure that a 64-bit server is used for the Data Collector Server.
- Beginning with APTARE Release Version 10, Portal upgrades will automatically enable privileges for newly added reports and certain features/functions, for all Administrators. This does not impact previously configured privileges. The Super User can manually revoke any Administrator privileges that have been automatically enabled.

Upgrade the Oracle Database Application Binaries to19c

Prerequisites for Upgrading Oracle Database Application Binaries (Windows)

APTARE IT Analytics v10.5 and later requires Oracle 19c. Note the below mandatory prerequisites regarding the Oracle service user:

- To upgrade to Oracle 19c, Oracle requires the same user account that was used for the previous installation. This often is referred to as the Oracle Service User or the Oracle Home User During the upgrade process. When prompted for the Oracle Service User Name, enter this user ID. In addition, verify this account is set up in such a way that its password never expires.
- Ensure you have the Oracle service user name and its password handy before the upgrade. This will be required during the upgrade process. In case you do not remember the Oracle service user's password:
  - Reset password from User Accounts section
  - From service panel, change password for listener and oraclescdb services logon password by right-clicking on these service names.
  - Restart oracle services and try to login with `sqlplus`.
- Ensure that Oracle service user does not have the Administrative privilege. Oracle Database upgrade fails if the Oracle service user has Administrative privilege.
- Ensure you do not have symbolic links to your Oracle database directories. Oracle upgrade will fail if the installer detects symbolic links to the database directories. You must recreate the directory objects instead of symbolic links for the upgrade to succeed.

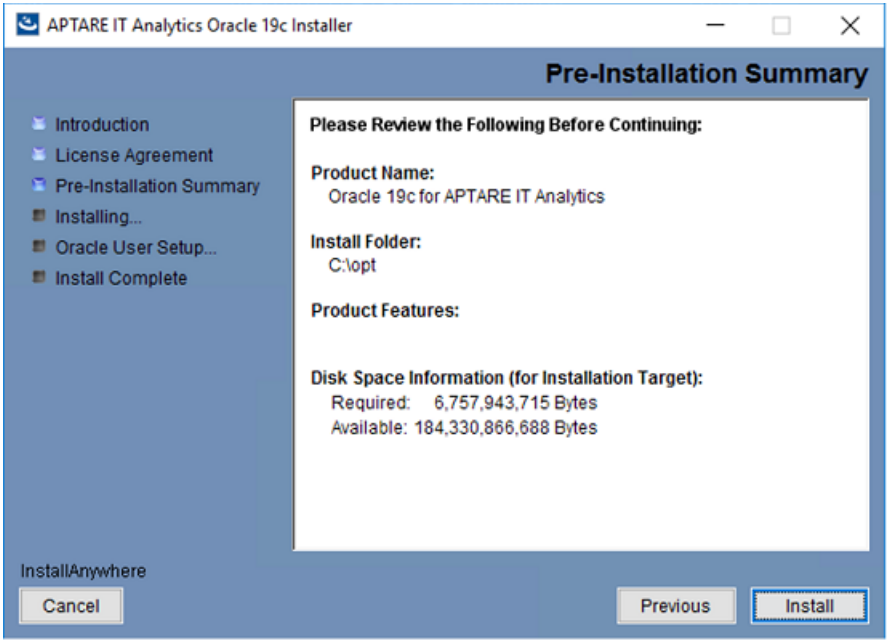
Upgrading the Oracle Database Application Binaries (Windows)

1. Log in to the Portal server as an **Administrator**. Oracle requires that you are logged in using an account that has administrative privileges.
2. Download the executable file to your Windows Portal server.
3. Double-click the executable file.

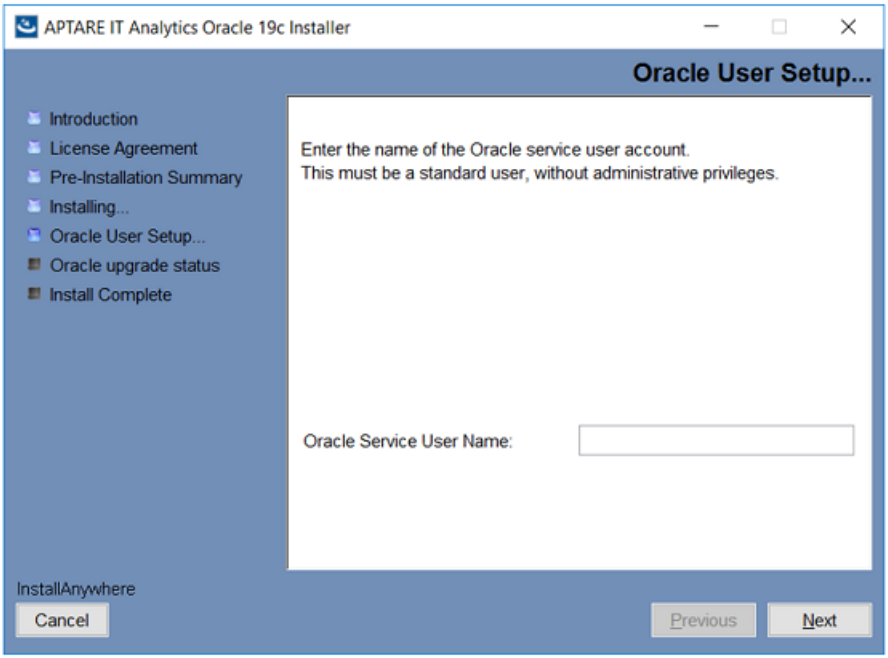
   ```
   sc_dbinstaller_<versionNumber>_win.exe
   ```

   The version number could be, for example, 193000
4. The InstallAnywhere installation wizard will begin extracting files.
5. Once the files have been extracted, the Introduction window will display. Click **Next** to begin the installation process.
6. Read and accept the end-user license agreement (EULA) and click **Next**.
7. Review the **Pre-Installation Summary**, which summarizes the product components that will be installed and describes the available and required disk space for these components.

Note: The requirements shown on the following example screen may not match the requirements displayed on your installation screen. Refer to the actual **Pre-Installation Summary** screen for the current requirements.



8. Click **Install** to start the installation/upgrade of the Oracle application binaries, which internally detects the existing Oracle installed on server, checks the version compatibility, and places files into the C:\opt folder on your Windows server.
   - The progress bar displays the component being installed and the progress of the installation overall.
   - The command prompt window will briefly display the process being executed.
   - The Oracle application binaries will be installed on the **C:** drive. The database itself, however, can be created on an alternate drive during the Portal installation.
9. Enter the name of a valid user account for the Oracle Service User and click **Next**. For the upgrade process, the Oracle Service User must be same as the user used during existing Oracle Service user.

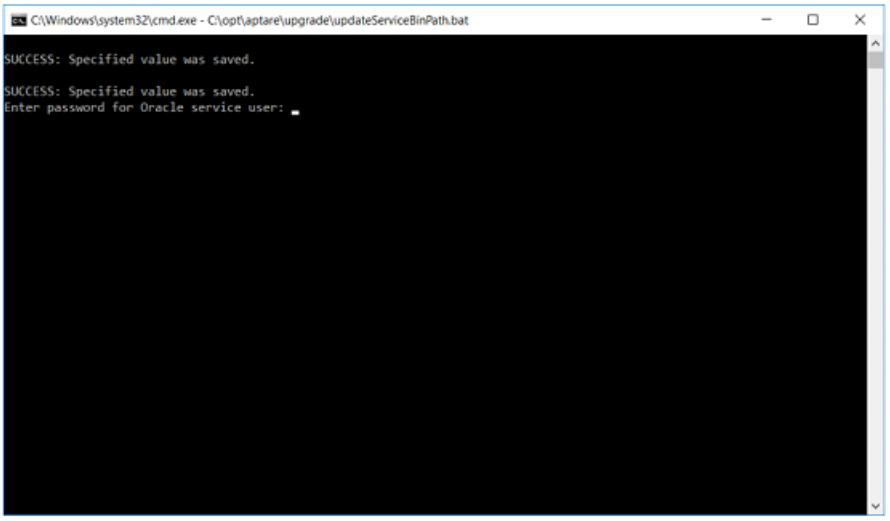


10. At this point, the Oracle upgrader will take over the session and start its process in the Windows command prompt window.
11. When the Oracle Universal Installer completes its process successfully, press **Enter**.

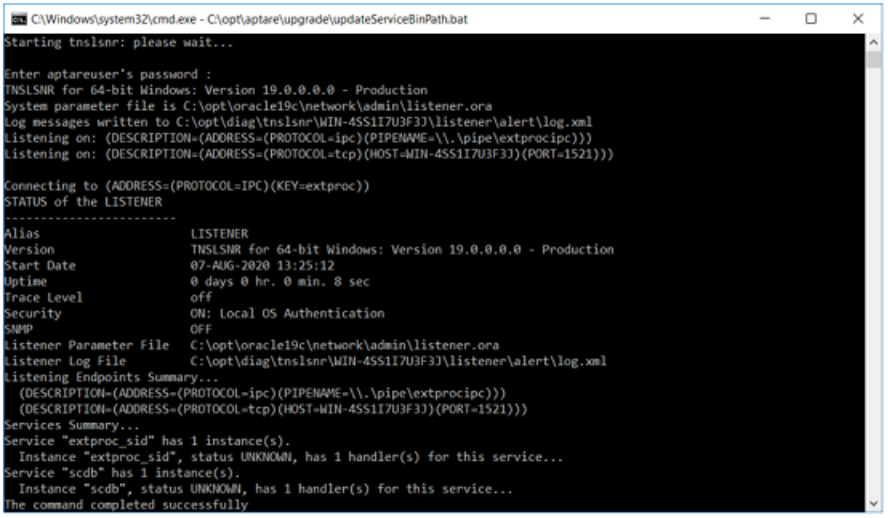
    The command prompt window once again takes over to start the Oracle services.
12. In the Starting Services command prompt window, enter the password for the account that you have identified as the Oracle service user. You will not see your keystrokes echoed in the window.

    You will be prompted twice for the Oracle Service User password, but the prompts are different:

    ```
    Enter password for Oracle service user:
    ```




```
Enter <account name>'s password:
```



If you enter an incorrect password, you will be prompted to enter the correct password. If you enter the incorrect password too many times, the account can get locked.

See the section called “Account Lockout” on page 13.

13. Return to the InstallAnywhere window and click **Done**.

14. Update the portal.properties file with the new Oracle connection string.

See “Task 4: Installing Portal Application Binaries (Windows)” on page 15.

Uninstall the Oracle Application Binaries

You may need to uninstall Oracle if you are moving the Portal and database to a new Windows server.

See the section called “Oracle Already Exists on the Portal Server” on page 14.

Note: Throughout this process, there may be some messages indicating a failure to delete a file or directory because it is in use. These messages can be ignored, as subsequent steps in the process will remove them.

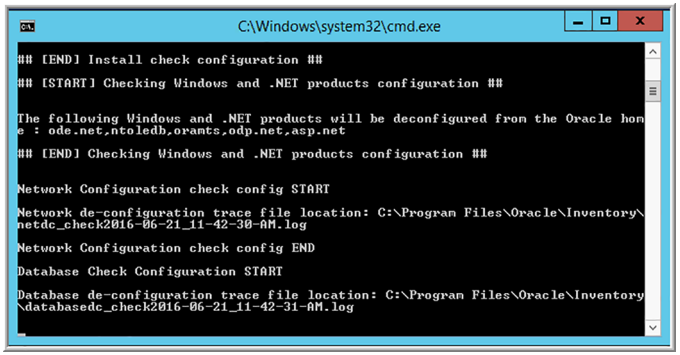
---

1. Go to the Oracle installation folder to access the uninstaller that is relevant only for Oracle 19c.

   ```
   c:\opt\Oracle19cSetup
   ```

2. Double-click **deInstallAll12c.bat**.

   This process not only removes the files from the `c:\opt\Oracle12cSetup` folder, but it also removes all references in the operating system, such as registry entries.



Upgrade APTARE IT Analytics Portal

Download the APTARE IT Analytics Portal upgrade utility installer for Windows and copy it to the portal server before you proceed with the next steps.

Upgrading a Shared Services Environment

In a shared services environment, where the connect as sysdba privilege is not present, you must provide a CREATE SYNONYM privilege to the APTARE_RO user before upgrading. APTARE_RO is a read-only user for the Portal.

Note: Unless this privilege has been deliberately revoked, this step is mandatory for an upgrade. If this privilege is not granted, errors in the upgrade script will occur and functionality within the SQL Template Designer will be impacted.

---

1. Log in with root access.
2. Stop the portal and data receiver Tomcat services.
3. At the command line, execute the following commands:

```
su - aptare

sqlplus / as sysdba

SQL >GRANT CREATE SYNONYM TO APTARE_RO;
```

In a shared services environment, where the connect as sysdba privilege is not present, you must provide a CREATE JOB and DBMS_SCHEDULER privilege to the PORTAL user before upgrading.

Note: Unless this privilege has been deliberately revoked, this step is mandatory for an upgrade. If this privilege is not granted, errors in the upgrade script will occur and functionality for Oracle jobs will be impacted.

---

1. Log in with root access.
2. Stop the portal and data receiver Tomcat services.
3. At the command line, execute the following commands:

```
su - aptare

sqlplus / as sysdba

SQL > GRANT CREATE JOB TO PORTAL;

SQL > GRANT EXECUTE ON DBMS_SCHEDULER TO PORTAL;
```

Revoking Privileges (Optional)

As a standard practice, during an APTARE IT Analyticsupgrade, Oracle-related code is leveraged and system-level objects (dba_, V$, etc.) and users (sys, system) are accessed. This scenario is not optimal in a shared service environment where organizations prefer to maintain their own Oracle credentials. Starting with release 10.4, portal upgrades can be run with limited privileges for the PORTAL user. Specific SQL statements can be executed to revoke the additional privileges assigned prior to the 10.4 release.

Note: When privileges are revoked, the APTARE IT Analytics upgrade process is prevented from calculating the space in the datafiles and canceling Oracle jobs which may interfere with upgrade. By revoking these privileges, the local administrator assumes this responsibility.

Complete these steps to revoke privileges from a PORTAL user.

1. Log in with root access.
2. Stop the portal and data receiver Tomcat services.

   At the command line, execute the following commands:

```
su - aptare
sqplplus / as sysdba
SQL >REVOKE SELECT ANY DICTIONARY FROM PORTAL;
SQL>REVOKE SELECT_CATALOG_ROLE FROM PORTAL;
SQL>REVOKE SELECT ON dba_free_space FROM PORTAL;
SQL>REVOKE SELECT ON dba_data_files FROM PORTAL;
SQL>REVOKE SELECT ON dba_temp_files FROM PORTAL;
```

Running the Upgrade Utility Installer

The following instructions assume you have the specific upgrade installer file for your platform.

Troubleshooting Tips

When upgrading to APTARE Release Version 10.x.xx, the date format defaults to the Portal operating system locale, and ignores any previous configuration.

Note: Perform the installation as an Administrator user who is a member of the ORA_DBA group.

Download the Upgrade Utility Installer ISO and copy it to the portal server.

Running the Upgrade Utility Installer

Note: Perform the upgrade as an Administrator user who is a member of the ORA_DBA group.

1. Double-click the upgrade utility installer executable `sc_upgrader_xxxx.exe`.
2. Follow the installer prompts to extract the upgrade files and utilities.
3. If you have chosen to Run Later in the earlier steps, complete the upgrade process by running the upgrade utility located at:

   ```
   C:\opt\aptare\upgrade\upgrade.bat
   ```

Running the Upgrade Utility

The following instructions assume that the Portal and Database components reside on the same server. You must be currently running APTARE IT Analytics version 10.3.00 to upgrade to 10.5.00.

1. Ensure that all APTARE IT Analytics application services are up and running. Next, as an Administrator user on Windows, run the following command and respond to the prompts accordingly:

   ```
   C:\opt\aptare\upgrade\upgrade.bat
   ```

   - If there are errors during the upgrade, the following banner is displayed:

   ```
   ############################################################
   # WARNING     WARNING     WARNING     WARNING     WARNING #
   # Possible problems were encountered during the upgrade. #
   # Please check the log file
   C:\opt\aptare\upgrade\logs\upgrade.log#
   # for errors and contact Customer Support if necessary.#
   ############################################################
   ```

2. If the upgrade process encountered any errors, save a copy of the log file for any correspondence with the Veritas Support. You can find the upgrade log file in the following location:

   ```
   C:\opt\aptare\upgrade\logs\upgrade.log
   ```

Note: If you have installed any patches on your present APTARE IT Analytics version, check the latest Release Notes to verify that they are included in this release. If you are uncertain, please check with Veritas Support. In most cases, previously installed patches are included in the current release.

Note: If your upgrade fails because of an Apache version conflict, contact the Veritas Support for instructions and a link to download a new version.

Attribute Merging During the Portal Upgrade

Version 10 introduced several enhancements to attribute management.

- A new attribute type, a multi-object attribute, replaces the way that attributes functioned in previous releases. This mult-object attribute enables creation of a single attribute that will be available for all objects, such as hosts, arrays, and switches.
- Prior to Version 10, object-specific attributes were required. For example, if you wanted a Location attribute for both host and array objects, you needed to create a separate Location attribute for each object. Now, with multi-object attributes, a single attribute can be used for all objects (for example, arrays, hosts, LUNs and switches).
- System Attributes were introduced in Version 10. System attributes provide a set of popular attributes that you can populate with your own enterprise-specific values. These new system attributes are multi-object attributes with the following names: Application, Business_Unit, Data_Center, Department, Environment, Location, Organization, Owner, and Region. These system attributes cannot be deleted.
- The naming convention for attributes was also changed in Version 10. Attribute names must begin with an alpha character. Use only alpha, numeric, or underscore characters in the name. Spaces and special characters are not allowed. This may mean that you will need to modify attribute names after you upgrade so that you can modify and save the list of values.

Attribute Management During the Portal Upgrade

Because you may already have attributes in your database that have names that duplicate the system names introduced in Version 10, the upgrade process must apply logic to prevent duplicate attribute names. During the Portal upgrade, the following logic is used:

- In the top-level domain, if the upgrader finds an existing attribute that has a name that is the same as a new system attribute (for example, Location) it

creates the system attribute and populates it with the list of values from the existing attribute.

- For multi-tenancy environments where there are multiple domains, if an attribute is found in both a parent and child domain, the child domain will not inherit the values but instead, the values of the attribute in the child domain will remain intact. See also, Attribute Inheritance Overrides.
- If multiple attributes with the same name are encountered in the same domain (for example, a host Location attribute and an array Location attribute), the values from all the attributes with the same name (for all objects) are merged into the system attribute.
- The upgrader will list the attributes with the list of values that will be merged into the new System Attributes. You can choose to let the upgrader merge the attributes or you can stop the upgrade and use the steps provided to rename existing attributes.
  See the section called “Steps to Rename Duplicate Attributes” on page 37.
- Merging of values ensures that all objects that have been assigned the attribute will retain this attribute with its values and therefore, reports that use the attributes will continue to work as expected.

Example of a Merge of Attribute Values

Before the upgrade:

- Location attribute exists for Hosts, with a list of values: San Diego, New York, Seattle.
- Location attribute exists for Arrays, with a list of values: Paris, London, Singapore.

After the upgrade:

- Location system attribute has been created to replace the object-specific attributes. This system attribute will contain a merged list of values (LOV): San Diego, New York, Seattle, Paris, London, Singapore.
- This list of values applies to all objects.
- Once the upgrade is successful, you may want to modify the merged list of values via the Portal: Select **Admin > Advanced > Attributes**.

Steps to Rename Duplicate Attributes

1. Log in to the Portal server
2. At the command line:

```
su - aptare
```

3. At the command line, launch sqlplus:

   ```
   sqlplus <pwd>/<pwd>@//localhost:1521/scdb
   ```

   Example: **sqlplus portal/portal@//localhost:1521/scdb**

4. To rename an attribute, execute the following SQL statements, substituting <variables> with values listed in the upgrade messages:

   ```
   UPDATE apt_attribute
   SET attribute_name = <attributeName>
   WHERE attribute_id = <AttributeID>;
   Commit;
   ```

   Example: This example renames the Location attribute so that it is not merged with the system attribute named Location.

   ```
   UPDATE apt_attribute
   SET attribute_name = 'Location1'
   WHERE attribute_id = 100001;
   Commit;
   ```

Best Practice for Attributes in Multi-Tenancy Environments

- Maintain attributes at the top-level domain so that the attributes are available to all client/child domains.
- During the Portal upgrade to Version 10.x.xx, newly introduced System Attributes will be added to the top-level domain.

Upgrading the Portal with Additional Licensed Modules

If you have purchased licenses for additional modules, the following procedures provide the steps to create the necessary database tables.

Upgrade Scenarios

- Adding File Analytics, Capacity Manager, Fabric Manager, and Virtualization Manager
- Adding Backup Manager
- Adding new subsystems to existing Capacity Manager
- Adding new subsystems to an existing Backup Manager

Most APTARE IT Analytics licensed modules use the same set of instructions to upgrade the Portal with new licensed modules, upgrade existing licensed modules, and add subsystem support.

Backup Manager requires an additional step to add specific subsystems, such as EMC Avamar. Capacity Manager automatically adds new subsystem support through the standard upgrade process.

Database Table Creation Scripts

Table 2-1 Database Table Creation Script Names

Licensed Module and Subsystem	Name
Backup Manager	base
Capacity Manager	srm
Commvault Simpana	cmv
EMC Avamar	avm
EMC Networker	leg
Fabric Manager	swi
File Analytics	afa
Generic Backup	gen
HP Data Protector	hpd
IBM Tivoli Storage Manager	tsm
Veritas Backup Exec	bue
Veritas NetBackup	nbu
Virtualization Manager	vmm

Adding Additional Products

Once you upgrade the APTARE IT Analytics platform, to add new licensed modules use the following procedures to set up the database tables.

These instructions apply to:

- Adding File Analytics, Capacity Manager, Fabric Manager, and Virtualization Manager
- Adding new subsystems to an existing Backup Manager

Please note these are generic instructions and you must replace the variable entries with those that correspond with your subsystem.

Prerequisites

- Capacity Manager must be installed prior to installing Fabric Manager and File Analytics.

To add database tables

Prepare the database for the new tables.

1 On C:

```
cd \opt\oracle\database\setup
```

2 Run the SQL scripts.

```
sqlplus portal/portal@//localhost:1521/scdb @setup_<name>.plb
```

Example: **sqlplus portal/portal@//localhost:1521/scdb @setup_avm.plb**

3 On C: as sysdba:

```
cd \opt\oracle\database\ora_scripts
sqlplus / as sysdba @create_aptare_ro_user_<name>_views.sql
```

EXAMPLE: **sqlplus / as sysdba @create_aptare_ro_user_avm_views.sql**

Validate the database.

4 On C:

```
cd \opt\oracle\database\tools
sqlplus portal/portal@//localhost:1521/scdb @validate_sp.sql
```

Note: Run the validate_sp.sql script when the Portal and Data Collector Services are down. Performance is degraded when the services are running.

You must enable the features in the Portal web interface after you upgrade if the release introduces new features and reports.

Enabling New Features and Report Templates Using the Portal

When a release introduces new features and report templates, you must enable access for your users in the Portal by modifying administrative settings in the Portal after you upgrade. Refer to the User Privileges documentation for instructions.

Data Collector Upgrades

For performance reasons, do not install Data Collectors on the same server as the APTARE IT Analytics Portal. However, if you must have both on the same server, verify that the Portal and Data Collector software do not reside in the same directory.

Mandatory Prerequisites

- On Windows Data Collectors, close all DOS Command Console windows in any of the <APTARE_HOME> directories before upgrading.
- Do not use downloadlib.[sh|bat] to upgrade the binaries on the Data Collector. Initiate the Data Collector upgrade from the APTARE IT Analytics Portal.

Troubleshooting - Manual Data Collector Upgrades

If the Data Collector fails after completing the previous requirements and prerequisites, perform the following:

On the Collector Server:

1. End all running APTARE-related Java processes.
2. Start the APTARE Agent Service
   - If it starts and continues to run, proceed to the following section.
     See "Collector Updates from the APTARE IT Analytics Portal" on page 42.
3. If the APTARE Agent Service does not continue to run, verify no APTARE-related Java processes are running. If required, end all running APTARE-related Java processes.
   - Restart the Collector Server, if the Java processes cannot be killed manually. Prior to restarting the server, disable the automatic start of the APTARE Agent Service.
4. Rename <APTARE_HOME>/jre to jre.old.
5. Copy <APTARE_HOME>/upgrade/staging/snapshot/jre to <APTARE_HOME>/
6. Enable the automatic start of APTARE Agent service, if you previously disabled the service.
7. Start the APTARE Agent Service, and proceed to the Portal.

   See "Collector Updates from the APTARE IT Analytics Portal" on page 42.

Collector Updates from the APTARE IT Analytics Portal

1. Log in to the APTARE IT Analytics portal, and navigate to **Admin>Data Collection>Collector Updates**.
2. Select the Data Collector that failed to upgrade.
3. Verify if either aptare.jar or Upgrade Manager failed to upgrade.
4. Click **Upgrade Both**, **Upgrade aptare.jar**, or **Update Upgrade Manager**, depending on what failed to upgrade. Allow up to an hour for completion, depending on the size of your system.
5. Contact Veritas Support for additional issues.

Clustered NetBackup Upgrade Procedure

For Distributed NetBackup deployments only (Data Collector software is installed on each NetBackup Master Server)

Clustered NetBackup Nodes require a unique upgrade strategy in order to keep their Data Collector versions in synch:

- The active node automatically updates during the Portal upgrade process.
- The passive node requires a manual update.

To ensure that both the active and passive nodes in a clustered pair are operating with the same version of the Data Collector, take the following steps:

1. After a Portal upgrade, the Data Collector automatically updates the NetBackup Master active node to the latest **aptare.jar** version. This process then pushes the update to all the collectors in the policy.
2. Fail over to the passive node in order to make it the active node.
3. At the command line of the newly active node, use the **downloadlib** utility to manually download and update **aptare.jar**.

```
Windows: <Home>\mbs\bin\downloadlib.bat
Linux: <Home>/mbs/bin/downloadlib.sh
```

Note: Check with your Veritas representative to determine if anything needs to be disabled prior to taking this step on the newly active node so that the upgrade does not trigger an event.

Upgraded Methods to Incorporate Enterprise Objects

During a Portal upgrade to APTARE Release Version 10.x.xx, all Dynamic Template Designer Methods will be modified to associate a method with an enterprise object (such as an array or host), rather than the method being associated with a APTARE IT Analytics product (such as Capacity Manager).

The upgrader automatically makes the necessary changes, which may result in the following considerations:

- If the upgrader encounters a method that could apply to multiple enterprise objects (for example, a backup method that is relevant for both a Data Domain and a Job enterprise object), the upgrader makes a copy of the method with an Upgrade label append to the method name. This new version of the method has a populated enterprise object field so that your reports won't fail. Note that the WITH clause alias in this new version will still reference the old name, but this will not cause reports to fail. You can modify this to make the method accurate, however, this modification is not required.
- Once upgraded, some methods may have a null value for the enterprise object. For example, a method that was created for Virtualization Manager does not have a corresponding supported enterprise object (Data Domain, Host, Job, or Storage Array). If such a method is found by the upgrader and the method is in use by a Dynamic Template, the upgrader implicitly assumes the enterprise object for the template is relevant and populates the enterprise object field accordingly. However, if the method currently is not in use, the enterprise object field remains null.
- Upgraded methods that result in null enterprise object values can be identified by viewing the list of methods: Tools > Templates > Method Designer.
- To use a method in a Dynamic Template, the enterprise object field must be populated. Therefore, when you modify and save a method (Save/Save as), you will be prompted to select an enterprise object.

Chapter 3

Oracle Patches for the Database Server

This chapter includes the following topics:

Applying Oracle Recommended Patches

Installing the Oracle Patch (OPatch)

1. Execute the command to shut down Aptare services.

   ```
   C:\opt\aptare\utils\stopallservices.bat
   ```

2. Explicitly stop the Distributed Transaction Coordinator service (which is not an Oracle service) if it is running.

   ```
   .
   net stop msdtc
   ```

3. Navigate to the patch folder:

   ```
   cd C:\opt\oracle\p31247621_190000_MSWIN-x86-64
   \31247621
   ```

4. Set the PATH:

   ```
   set PATH=%ORACLE_HOME%\opatch;%PATH%
   ```

5. Check for any OPatch conflicts.

   ```
   opatch prereq CheckConflictAgainstOHWithDetail -ph ./
   ```

6 If no conflict is detected, execute the following command from the folder C:\opt\oracle\Opatch:

```
C:\opt\oracle\Opatch\opatch apply
```

7 Follow the prompts to apply the patch. After unzipping the patch on the server, the readme file is located at: C:\opt\oracle\p31247621_190000_MSWIN-x86-64\31247621

8 Verify OPatch succeeded with the following command:

```
C:\opt\oracle\OPatch\opatch lsinventory -detail
```

9 Start all Aptare Services including Oracle. Next steps require the database to be running including the pluggable database.

```
C:\opt\aptare\utils\startallservices.bat
```

10 Run following command to apply the patch to the pluggable database:

```
C:\opt\Oracle\Opatch\datapatch -verbose
```

Validating the Patch

1 Connect to SQL Plus using following command:

```
C:\opt\oracle\OPatch>sqlplus / as sysdba
```

2 Run following queries to show the patch installed:

```
SQL>select * from sys.registry$history;

SQL>select * from sys.registry$sqlpatch ;

SQL> set serverout on

SQL> exec dbms_qopatch.get_sqlpatch_status;
```

Chapter 4

Upgrading and Migrating to a New Server

This chapter includes the following topics:

Upgrading and Migrating to a New Server

If you are upgrading from an 8.4.02 Portal to a 9.x Portal and then to APTARE Release Version 10, you may need to migrate your Linux server. This section covers migrating to a Linux Portal server and then migrating the APTARE IT Analytics Database to this new server.

Users must be running a minimum of version 9.x to upgrade to APTARE Release Version 10.

The Portal must be running a minimum of APTARE IT Analytics version 10.3 to upgrade to APTARE IT Analytics 10.5.

Install the latest release of APTARE IT Analytics on the new server

1. Download the latest release and installation instructions from the www.veritas.com.
2. Perform a fresh install of the database and portal on the new server.
3. Request a new license key for the server from license-aptare@veritas.com.

   See “Task 5: Request the License Key File (Windows)” on page 21.
4. Install the new license, once you receive it.

   See “Task 7: Install the License Key File (Windows)” on page 22.

Perform an export of the database on the existing server

1. Follow the instructions for your platform in the *System Administrator Guide* to create a database export.
2. Copy/Transfer the export file to your new server.

Stop Portal and Agent Services on the new server

On Windows (as an admin):

```
Execute \opt\aptare\utils\stopportal.bat
Execute \opt\aptare\utils\stopagent.bat
```

Drop and re-create the existing portal user on the new server

On Windows (as member of ORA_DBA group):

- sqlplus / as sysdba
- drop user portal cascade;
  @/opt/aptare/database/ora_scripts/create_portal_user.plb;

Import the database onto the new server

Follow the instructions for your platform in the Importing the Oracle Database section in the *APTARE IT Analytics System Administrator Guide*.

Start Portal and Agent Services on the new server

On Windows (as an admin):

```
Execute \opt\aptare\utils\startportal.bat
Execute \opt\aptare\utils\startagent.bat
```

Download, install, and execute to upgrade the database schema

1. Download the upgrade installer and documentation from the www.veritas.com.
2. Run the upgrade installer.

   See "Running the Upgrade Utility Installer" on page 34.

   This installs the upgrade executable, but does not execute it.
3. Verify that all APTARE IT Analytics application services are up and running.
4. As user **root**, run the following relevant command and respond to the prompts accordingly:
   - On Windows:

```
C:\opt\aptare\upgrade\upgrade.bat
```

You will receive warnings that your current version is already up to date, proceed.

Choose component two (2) for both

Once the script has completed, review the log file indicated to check for any errors

Testing

If desired, you can use the local host file method of IP address resolution to test the functionality of the new portal prior to any DNS cut-over from the existing server.

Update Data Collector binaries (if necessary)

Do not install on the same machine as the new portal/database server.

1. Download the Data Collector installer and documentation from www.veritas.com.
2. Follow the instructions in the documentation for your Data Collector to uninstall.
3. Re-install the Data Collector to the latest version, giving the correct URL for the new server.

Chapter 5

Portal Upgrades (Win): Tomcat and Apache

This chapter includes the following topics:

Overview

If your environment requires the latest versions of Tomcat and Apache to comply with security standards, use the following instructions to update to the latest versions. These upgrades are required only if you must satisfy security audit requirements. The Tomcat and Apache upgrades are independent--that is, you can do one without the other.

To simplify the upgrade process, these third-party component upgrades should be done after the portal upgrade.

Note: These upgrade instructions apply to the standard, default Portal environments. If you have a multi-tenancy environment (for example, services providers) or if there are multiple tomcat instances for the Data Receiver, you may have to contact Veritas Support to assist in customizing the instructions.

Note: If your upgrade fails because of an Apache version conflict, contact the Veritas Support for instructions and a link to download a new version.

Upgrading from Tomcat 7 to Tomcat 8 (Win)

1. Stop all APTARE services by running:

   `C:\opt\aptare\utils\stopallservices.bat`

2. Remove portal services by running:

   `C:\opt\aptare\utils\removeportalservices.bat`

3. Rename C:\opt\tomcat to C:\opt\tomcat-old
4. Log into the Veritas Support to retrieve the distribution files that are used in these instructions.
5. Download the latest Tomcat binary distribution, `setupAgentTomcatService.bat`, `setupPortalTomcatService.bat`, `agent-java-settings.bat`, `portal-java-settings.bat` and Tomcat configuration tar ball containing the aptare-instances folder to your Windows Portal server.
6. Unzip apache-tomcat-8.5.xx.zip to C:\opt folder

   The new path should be: C:\opt\tomcat folder
7. Extract `tomcat_windows_release_10500.tar.gz` into C:\opt\tomcat folder. After this operation the folder structure will look like:

   C:\opt\tomcat\aptare-instances\portal

   C:\opt\tomcat\aptare-instances\agent
8. Copy the content of `agent-java-settings.bat` into the following and update the settings as required:

   C:\opt\aptare\datarcvrconf\tomcat\java-settings.bat
9. Copy content of `portal-java-settings.bat` into the following and update the settings as required:

   C:\opt\aptare\portalconf\tomcat\java-settings.bat
10. Copy `setupPortalTomcatService.bat` into the following folder:

    C:\opt\aptare\utils
11. Copy `setupAgentTomcatService.bat` into the following folder:

    C:\opt\aptare\utils
12. Locate the folder C:\opt\aptare\utils\

13. Modify the following files by renaming all occurrences of tomcat7.exe to tomcat8.exe:
    - `removeservices.bat`
    - `removeportalservices.bat`
14. Install the portal services by running:

    ```
    C:\opt\aptare\utils\setupPortalTomcatService.bat
    ```

    ```
    C:\opt\aptare\utils\setupAgentTomcatService.bat
    ```

15. Start all services by running:

    ```
    C:\opt\aptare\utils\startallservices.bat
    ```

Upgrading the Apache Web Server to 2.4.xx to 2.4.yy (Windows)

Prerequisite

Verify that the C++ Redistributable for Visual Studio 2015 is installed. If not, you can download the vc_redist.x64.exe from https://www.microsoft.com/en-us/download/details.aspx?id=48145 and install it before you attempt to upgrade Apache.

1. Stop all services by running:

    ```
    C:\opt\aptare\utils\stopallservices.bat
    ```

2. Remove Apache services by running:

    ```
    C:\opt\apache\bin\httpd -k uninstall -n "APTARE Apache"
    ```

3. Log into Veritas Support to retrieve the distribution files that are used in these instructions.
4. Download the latest binary apache.zip and following apache configuration files:
    - httpd.conf
    - httpd-aptare.conf
    - httpd-override.conf
    - httpd-ssl.conf

- httpd-ssl-aptare.conf
- httpd-ssl-override.conf

5. Rename C:\opt\apache to C:\opt\apache-old
6. Unzip apache.zip into C:\opt

   The new path should be: C:\opt\apache
7. Copy worker.properties from c:\opt\apache_old\conf to c:\opt\apache\conf.
8. Copy `httpd.conf`, `httpd-aptare.conf`, and `httpd-override.conf` files to C:\opt\apache\conf folder.
9. Copy `httpd-ssl.conf`, `httpd-ssl-aptare.conf` and `httpd-ssl-override.conf` file in C:\opt\apache\conf\extra folder.
10. Replace all occurrence of ~PORTAL_BASE~ in C:\opt\apache\conf\httpd.conf, C:\opt\apache\conf\httpd-aptare.conf and C:\opt\apache\conf\extra\httpd-ssl.conf with C:\opt\aptare.
11. Replace all occurrence of ~DOMAIN_NAME~ in C:\opt\apache\conf\httpd.conf and C:\opt\apache\conf\extra\httpd-ssl.conf with domain name of portal.
12. Add any custom setting that was added in C:\opt\apache\conf\httpd.conf in C:\opt\apache\conf\httpd-override.conf.
13. Add any custom setting that was added in C:\opt\apache\conf\extra\httpd-ssl.conf in C:\opt\apache\conf\extra\httpd-ssl-override.conf.
14. If the certificates and key files are located under C:\opt\apache-old\conf copy them to C:\opt\apache\conf

    ---

    Note: This is the default location. These files may be in a different custom location in your system. The location of the files will be indicated by httpd-ssl.conf.

    ---

15. Verify Apache configurations by opening the command prompt and entering:

    ```
    > cd c:\opt\apache\bin

    > httpd.exe -t
    ```

16. Install Apache Services by running:

    ```
    C:\opt\apache\bin\httpd -k install -n "APTARE Apache"
    ```

If upgrading to Apache 2.4.33 or later comment out the following lines in httpd-ssl.conf with hash as follows:

```
#SSLSessionCache
"shmcb:C:/opt/apache/logs/ssl_scache(512000)"
#SSLSessionCacheTimeout  300
#SSLMutex  default
```

17. Start all services by running:

```
C:\opt\aptare\utils\startallservices.bat
```