

Oracle® Virtual Desktop Infrastructure
Update Guide for Version 3.2.2

April 2011

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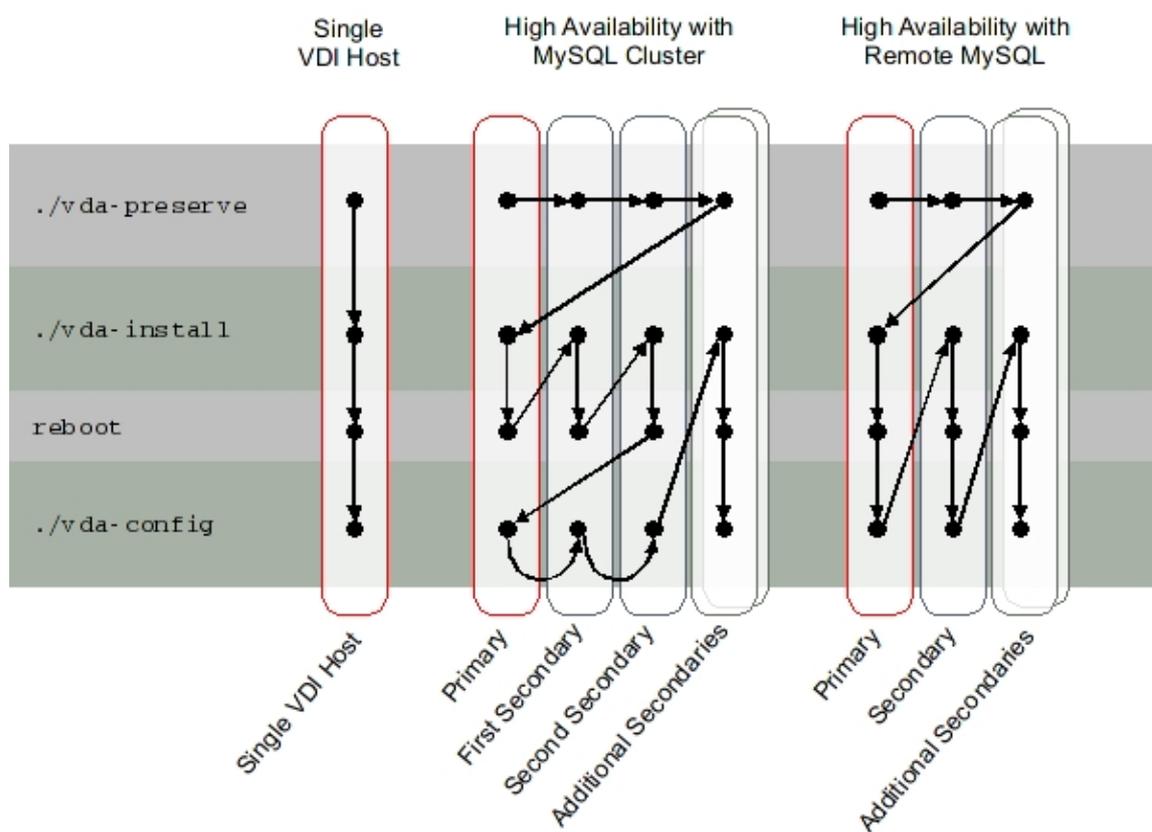
VDI 3.2.2 Update Installation (All Topics)

About Updating to Oracle Virtual Desktop Infrastructure 3.2.2

There are three supported update types for Oracle Virtual Desktop Infrastructure 3.2 software – release 3.2 to 3.2.2, release 3.1.1 to 3.2.2, and release 3.1 to 3.2.2. All update types follow the same procedures.

Because of the various supported databases and virtualization platforms in Oracle Virtual Desktop Infrastructure, it's necessary to follow specific instructions for updating to release 3.2.2. The following update paths are currently supported:

- How to Update to Release 3.2.2 (High Availability with MySQL Cluster)
- How to Update to Release 3.2.2 (High Availability with Remote MySQL)
- How to Update to Release 3.2.2 (Single Oracle VDI Core Host)



In addition to updating the Oracle VDI Core setup, the virtualization platform will also require an update.

If your existing Oracle Virtual Desktop Infrastructure installation uses an Oracle VM VirtualBox virtualization platform, it's required that you update to the [supported version](#) for Oracle Virtual Desktop Infrastructure 3.2.2. The Oracle VM VirtualBox server should be updated after updating the Oracle VDI Core hosts to avoid communication issues with the Oracle VDI Core. Besides updating the Oracle VM VirtualBox server, you'll also need to update the Oracle VM VirtualBox Guest Additions on all the desktops to correspond to the release on the Oracle VM VirtualBox host. Refer to the [How to Update to Release 3.2.2 \(Virtualization Platforms\)](#) page for more details.

If your existing Oracle Virtual Desktop Infrastructure installation uses a VMware vCenter virtualization platform, you'll need to update the VDI Tools on each of the desktops. Refer to the [How to Update to Release 3.2.2 \(Virtualization Platforms\)](#) page for more details.

If you would like to upgrade to the Sun Storage 7000 2010.Q1 firmware, you should also do that after updating the Oracle VDI Core. Refer to the [How to Update to Sun Storage 7000 2010.Q1](#) page for more details.

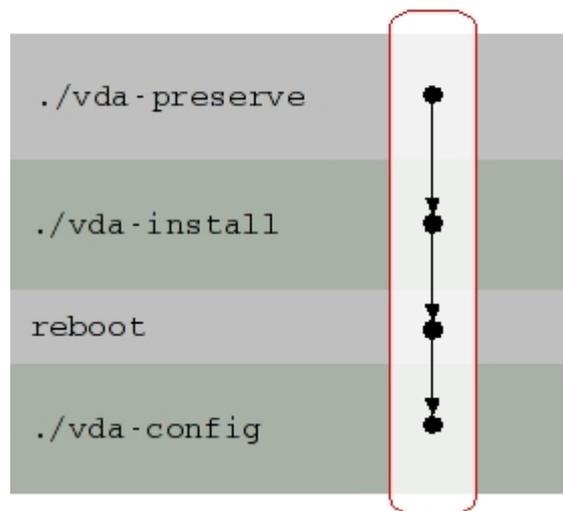
How to Update to Release 3.2.2 (Single Oracle VDI Core Host)



Outage Implications

Updating the Single Oracle VDI Core host will cause a full Oracle VDI Core outage.

Single VDI Host



Before You Begin



Back up!

Use the following checklist to be sure all important data has been backed up properly.

- Database - It is highly recommended that you backup the database before starting the update process. This will allow you restore your system later if, for some reason, the update process were to fail. For more information about backing up data, refer to the [How to Back Up and Restore Data \(Remote MySQL Database\)](#) page in the Sun VDI 3.1 documentation.
- Customized `pam.conf` files - The update process will regenerate the content of the file `/etc/pam.conf` (an SRSS access configuration file). If you have customized the file, you will need to back it up before updating, and re-add the customization to the newly generated file.

**Making Changes with Oracle VDI Manager and CLI**

Making changes to the Oracle VDI Core through the Oracle VDI Manager or CLI is strictly forbidden while updating to release 3.2.2.

Steps

1. Run the update installation and configuration on the Single Oracle VDI Core host.

- a. As root user, unzip the Oracle VDI Core archive, and change to the corresponding directory.

```
# unzip vda_3.2.2_amd64.zip
# cd vda_3.2.2_amd64
```

- b. Run the `vda-preserve` script.

```
# ./vda-preserve
```

- c. Run the installation.

```
# ./vda-install
```

The `vda-install` script will recognize if a previous release is installed and will ask if you want to update. By answering 'y', the installation part of the update process will be started. The existing packages will be un-installed and replaced by the new Oracle Virtual Desktop Infrastructure 3.2.2 packages.

- d. Once the `vda-install` script has finished, reboot the Single Oracle VDI Core host, and wait until the host is up again.

```
# reboot
```

- e. Run the configuration.

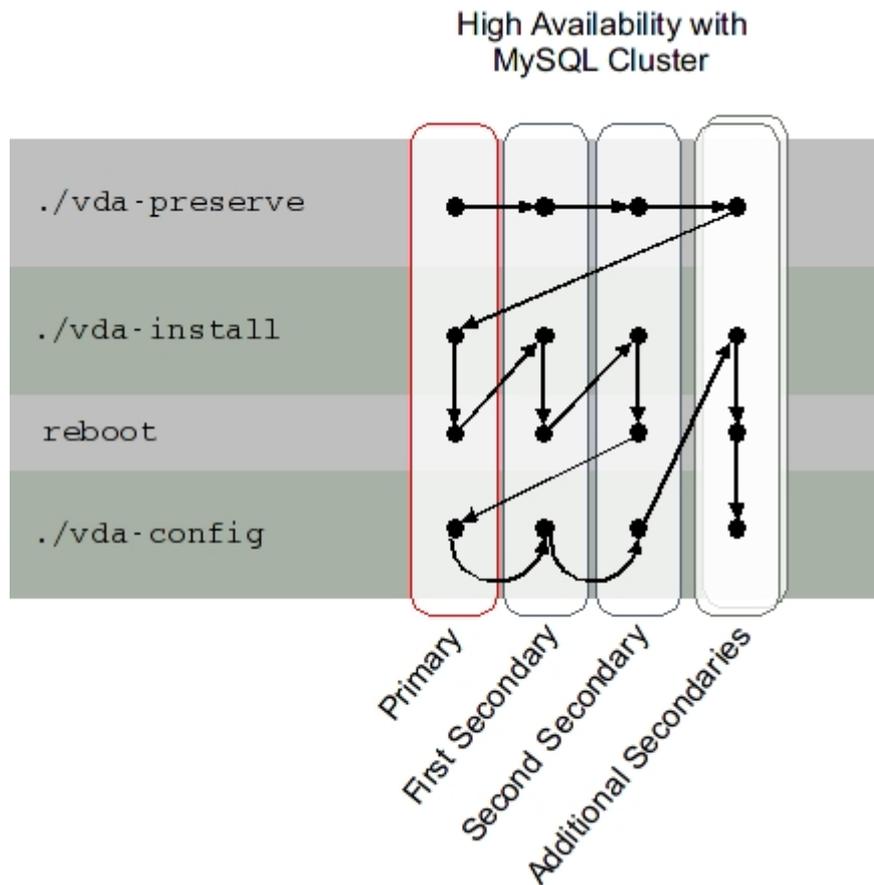
```
/opt/SUNWvda/sbin/vda-config
```

The `vda-config` script will recognize if the Single Oracle VDI Core host is in the middle of the update process, and will conclude the update process by running the update configuration. The configuration will turn on all Oracle VDI Core-related services again.

How to Update to Release 3.2.2 (High Availability with MySQL Cluster)

**Outage Implications**

Updating the Oracle VDI Core Primary host and the first two Oracle VDI Core Secondary hosts will cause an Oracle VDI Core outage on these hosts. Additional secondary Oracle VDI Core hosts will stay functional throughout the update process. Once the first phase of the migration has been started you must not restart any of the SQL nodes running on any of the hosts.

**Before You Begin****Back up!**

Use the following checklist to be sure all important data has been backed up properly.

- ✔ Database - It is highly recommended that you backup the database before starting the update process. This will allow you restore your system later if, for some reason, the update process were to fail. For more information about backing up data, refer to the [How to Back Up and Restore Data \(Bundled MySQL Database\)](#) page in the Sun VDI 3.1 documentation.
- ✔ Customized `my.cnf` files - The update process for any host within a MySQL (embedded) cluster setup will regenerate the content of the file `/etc/opt/SUNWvda/my.cnf` (a database configuration file). If you have customized the file, you will need to back it up before updating, and re-add the customization to the newly generated file.
- ✔ Customized `pam.conf` files - The update process will regenerate the content of the file `/etc/pam.conf` (an SRSS access configuration file). If you have customized the file, you will need to back it up before updating, and re-add the customization to the newly generated file.

**Making Changes with the Oracle VDI Manager and CLI**

Making changes to the Oracle VDI Core through the Oracle VDI Manager or CLI is strictly forbidden while updating to release 3.2.2.

Steps

1. Preserve the data on all the Oracle VDI Core hosts.

- a. As root user, unzip the Oracle VDI Core archive, and change to the image directory.

```
# unzip vda_3.2.2_amd64.zip
# cd vda_3.2.2_amd64
```

- b. Run the `vda-preserve` script.

```
# ./vda-preserve
```

- c. Run the previous sub-steps on all Oracle VDI Core Primary and Secondary hosts.

2. Run the update installation on the Primary Oracle VDI Core host from the image directory.

- a. Go to the image directory.

```
# cd vda_3.2.2_amd64
```

- b. Run the installation.

```
# ./vda-install
```

The `vda-install` script will recognize if previous releases of the Oracle VDI Core are installed and will ask if you want to update. By answering 'y' phase 1 of the update process will be started. The installation part of the update process will back up several settings on your Oracle VDI Core Primary and prepare the database to support new release 3.2.2 features. The first update phase will also shut down the MySQL Cluster management node and, because the Oracle VDI Core Primary has been configured to host sessions, will turn off all Oracle VDI Core related services. Next, the previous release packages will be un-installed and replaced by the new Oracle Virtual Desktop Infrastructure 3.2.2 packages.

- c. Once the `vda-install` script has finished, reboot your Oracle VDI Core Primary, and wait until the host is up again.

```
# reboot
```

3. Run the update installation on the first Oracle VDI Core Secondary host.

In order to safely update your two Oracle VDI Core Secondary hosts, install the Oracle VDI Core on the first Secondary completely, and then install the Oracle VDI Core on your second Secondary completely. Installing the Oracle VDI Core on both Secondary hosts at the same time is not supported.

- a. Go to the image directory.

```
# cd vda_3.2.2_amd64
```

- b. Run the installation.

```
# ./vda-install
```

The `vda-install` script will recognize if a previous release is installed and will ask you whether you want to update or not. Answering 'y' will start the installation and back up several settings on your Oracle VDI Core Secondary. In addition to backing up several settings on your Secondary, the installation script will also shut down the MySQL Cluster data node and will turn off all Oracle VDI Core-related services on the host. Next, the previous release packages will be un-installed and replaced by the new Oracle Virtual Desktop Infrastructure 3.2.2 packages.

- c. Once the `vda-install` script has finished, reboot your first Secondary and wait until the host is up again.

```
# reboot
```

- d. Check that the MySQL database has been fully started again by running the following command.

```
/opt/SUNWvda/sbin/vda-db-status
```

All nodes must be in the 'up' state.

4. Run the update installation on the second Oracle VDI Core Secondary host by following Step 2 above.

5. Run the update configuration on the Oracle VDI Core Primary host.

Once the installation part of the update process is complete on the Oracle VDI Core Primary and first two Secondaries, you are ready to start the configuration part of the update process.

- As root user, run the following command.

```
# /opt/SUNWvda/sbin/vda-config
```

The `vda-config` script will recognize if the Oracle VDI Core Primary is in the middle of the update process, and will conclude the update process by running the update configuration. If the Primary host was configured to act as a fully functional Oracle VDI Core host, the configuration will turn on all Oracle VDI Core-related services again.

6. Run the update configuration on the first Oracle VDI Core Secondary host.

After the update configuration has finished on the Oracle VDI Core Primary, you can start the update configuration on the first two Secondaries. Like the update installation, you must completely configure the first Secondary, then completely configure the second Secondary. Configuring the Oracle VDI Core on both Secondary hosts at the same time is not supported.

- As root user, run the following command.

```
# /opt/SUNWvda/sbin/vda-config
```

The `vda-config` script will recognize if the Secondary is in the middle of the update process, and will conclude the update process by running the update configuration. The configuration will turn on all Oracle VDI

Core-related services again.

7. Run the update configuration on the second VDI Secondary host by following Step 5 above.
8. Run the update installation and configuration on additional (optional) Secondary hosts.
After you have completely updated the Primary host and first two Secondary hosts, you can update the additional Secondaries in any sequence. To start the update process, run the following steps.

- a. Go to the image directory.

```
# cd vda_3.2.2_amd64
```

- b. Run the installation.

```
# ./vda-install
```

The `vda-install` script will recognize if a previous release is installed and will ask you whether you want to update or not. By answering 'y' the migration process will be started. It will un-install the previous release packages, and replace them with the new Oracle Virtual Desktop Infrastructure 3.2.2 packages.

- c. Once `vda-install` script has finished, reboot your Oracle VDI Core host, and wait until the host is up again.

- d. Run the configuration.

```
# /opt/SUNWvda/sbin/vda-config
```

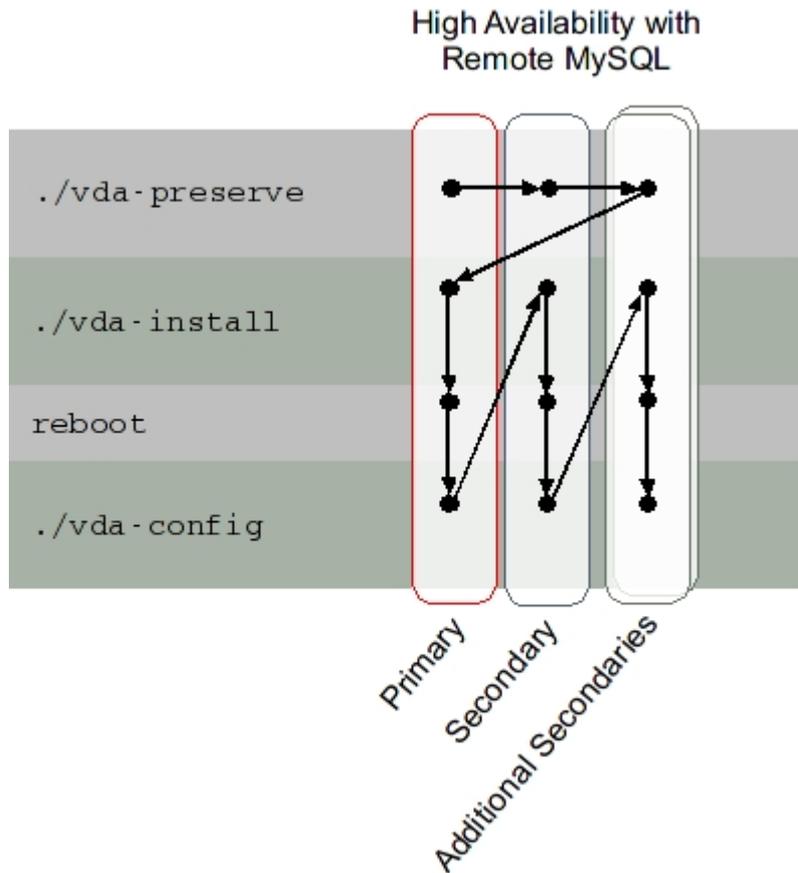
The `vda-config` script will recognize if the Secondary is in the middle of the update process, and will conclude the update process by executing the update configuration. The update configuration will turn on all Oracle VDI Core-related services again.

How to Update to Release 3.2.2 (High Availability with Remote MySQL)



Outage Implications

Updating the Oracle VDI Core Primary host and the first two Oracle VDI Core Secondary hosts will cause an Oracle VDI Core outage on these hosts. Additional Secondary hosts will stay functional throughout the update process. Once the first phase of the migration has been started you must not restart any of the SQL nodes running on any of the hosts.



Before You Begin



Back up!

Use the following checklist to be sure all important data has been backed up properly.



Database - It is highly recommended that you backup the database before starting the update process. This will allow you restore your system later if, for some reason, the update process were to fail. For more information about backing up data, refer to the [How to Back Up and Restore Data \(Remote MySQL Database\)](#) page in the Sun VDI 3.1 documentation.



Customized `pam.conf` files - The update process will regenerate the content of the file `/etc/pam.conf` (an SRSS access configuration file). If you have customized the file, you will need to back it up before updating, and re-add the customization to the newly generated file.



Making Changes with Oracle VDI Manager and CLI

Making changes to the Oracle VDI Core through the Oracle VDI Manager or CLI is strictly forbidden while updating to release 3.2.2.

Steps

1. Preserve the data on all Oracle VDI Core hosts.
 - a. As root user, unzip the Oracle VDI Core archive, and change to the corresponding directory.

```
# unzip vda_3.2.2_amd64.zip
# cd vda_3.2.2_amd64
```

- b. Run the `vda-preserve` script.

```
# ./vda-preserve
```

- c. Run the previous sub-steps on all Oracle VDI Core Primary and Secondary hosts.

2. Run the update installation on the Primary Oracle VDI Core host from the image directory.

- a. Go to the image directory.

```
# cd vda_3.2.2_amd64
```

- b. Run the installation.

```
# ./vda-install
```

The `vda-install` script will recognize if previous releases of the Oracle VDI Core are installed and will ask if you want to update. By answering 'y' phase 1 of the update process will be started. The installation part of the update process will back up several settings on your Oracle VDI Core Primary and prepare the database to support new release 3.2.2 features. The first update phase will also shut down the MySQL Cluster management node and, because the Oracle VDI Core Primary has been configured to host sessions, will turn off all Oracle VDI Core related services. Next, the previous release packages will be un-installed and replaced by the new Oracle Virtual Desktop Infrastructure 3.2.2 packages.

- c. Once the `vda-install` script has finished, reboot your Oracle VDI Core Primary, and wait until the host is up again.

```
# reboot
```

- d. Run the configuration.

```
# /opt/SUNWvda/sbin/vda-config
```

The `vda-config` script will recognize if the Oracle VDI Core Primary is in the middle of the update process, and will conclude the update process by running the update configuration. If the Primary host was configured to act as a fully functional Oracle VDI Core host, the configuration will turn on all Oracle VDI Core-related services again.

3. Run the update installation and configuration on the Oracle VDI Core Secondary host.

In order to safely update your two Secondary hosts, install the Oracle VDI Core on the first Secondary completely, and then install the Oracle VDI Core on your second Secondary completely. Installing the Oracle VDI Core on both Secondary hosts at the same time is not supported.

- a. Go to the image directory.

```
# cd vda_3.2.2_amd64
```

- b. Run the installation.

```
# ./vda-install
```

The `vda-install` script will recognize if a previous release is installed and will ask you whether you want to update or not. By answering 'y' the migration process will be started. It will un-install the previous release packages, and replace them with the new Oracle Virtual Desktop Infrastructure 3.2.2 packages.

- c. Once `vda-install` script has finished, reboot your Oracle VDI Core host, and wait until the host is up again.

```
# reboot
```

- d. Run the configuration.

```
# /opt/SUNWvda/sbin/vda-config
```

The `vda-config` script will recognize if the Secondary is in the middle of the update process, and will conclude the update process by executing the update configuration. The update configuration will turn on all Oracle VDI Core related services again.

How to Update to Release 3.2.2 (Virtualization Platforms)

When updating to Oracle Virtual Desktop Infrastructure 3.2.2, it will be necessary to perform some tasks on the virtualization platform. Oracle Virtual Desktop Infrastructure installations with an Oracle VM VirtualBox virtualization platform will require a newer version of Oracle VM VirtualBox to use the new features in Oracle Virtual Desktop Infrastructure 3.2.2, and the corresponding Guest Additions will need to be installed on the virtual machines. VMware vCenter virtualization platforms will not require updating since Oracle Virtual Desktop Infrastructure 3.2.2 supports all the same versions of VMware vCenter and VMware ESX Server as in previous versions.

Before You Begin

The Oracle VDI Core hosts should be updated before the virtualization platform. If you have not already updated the Oracle VDI Core hosts, refer to the [About Updating to Oracle Virtual Desktop Infrastructure 3.2.2](#) page for more details.

Steps for Oracle VM VirtualBox Virtualization Platforms

1. Update the Oracle VM VirtualBox version on the Oracle VM VirtualBox host.
 - a. Un-install the previous version of Oracle VM VirtualBox by changing to the Oracle VM VirtualBox installation directory, and running the following command as root user.

```
# ./vb-install -u
```

- b. When Oracle VM VirtualBox has been successfully removed, install the **currently supported** version of Oracle VM VirtualBox by running the following command.

```
# ./vb-install
```

2. Update the Guest Additions on all virtual machines.

 When you upgrade Oracle VM VirtualBox on a given host, a new SSL certificate is generated on that host. Subsequently, when the Oracle VDI Core tries to access the host, it will discover the mismatch between the certificate it expects and the new certificate available on the host. Authentication of the Oracle VM VirtualBox host will fail because the Oracle VDI Core does not trust the host and will not allow access. To address the situation, the Oracle VM VirtualBox host must be "reconfigured" in Oracle VDI Manager or CLI. This reconfiguration includes accepting the new SSL certificate to ensure that the Oracle VDI Core can correctly authenticate the Oracle VM VirtualBox host.

Steps for VMware vCenter Virtualization Platforms

The only requirement for updating the VMware vCenter virtualization platform to work with Oracle Virtual Desktop Infrastructure 3.2.2 is to update the VDI tools on each of the VMware vCenter desktops.

- Update the VDI Tools on VMware vCenter desktops.
 1. Remove the existing VDI Tools file from the virtual machine using the "Add or Remove Programs tool".
 2. Copy the installer file, `vda-tools-x86.msi` for 32-bit platforms or `vda-tools-x64.msi` for 64-bit platforms, from the `vda_3.2.2/Windows/Packages` directory of the Oracle VDI Core archive to the virtual machine.
 3. Within the virtual machine's console, double-click the installer and follow the prompts to complete installation.
 4. The VM Services list should now contain the Oracle VDI Tools service, running and set to start automatically.

How to Update to Sun Storage 7000 2010.Q1

Steps

1. Put the storage in maintenance mode.



It is required that all desktops are powered off when putting a Microsoft Hyper-V host or storage into maintenance mode. For more information refer to Bug ID 6919755 in the [Oracle Virtual Desktop Infrastructure 3.2.1 Release Notes](#).

- a. Select the Desktop Providers category, and click the desktop provider containing the storage server you would like to suspend.
- b. Select the Storage tab, select the storage server, and click Maintenance.
 - i. Choose a time for the server to begin entering maintenance, or click Now to select the current time.
 - ii. Click OK to submit the maintenance mode job.
- c. Wait until the maintenance mode job has completed before performing the next step.

2. Upgrade the firmware.

The storage must run a 2009.Q2 firmware to be safely upgraded to 2010.Q1.

For more information on the storage upgrade, release notes, download links, and a version history of the Sun Storage 7000 Series refer to [FishWorks documentation](#).



When the storage is enabled for the first time in the Oracle VDI Core after it has been upgraded, a resume job will adapt the LUNs on the storage, as well as the volume entries in the Oracle VDI Core, database to the new environment.

To successfully resume the storage it is necessary that every LUN in every project of the storage is known by the database. Therefore, you must not upgrade a storage which is already used by the Oracle VDI Core if

- third party tools have been creating LUNs on the storage
- another VDI installation is, or was, using the storage

3. Enable the storage.

- a. Select the Desktop Providers category, and click the desktop provider containing the storage server.
- b. Select the Storage tab, select the storage server, and click the Enable button.

How to Back Up and Restore the VDI Core Database

As with all user-level data, it is important to back up the VDI Core database periodically. This is also a crucial step if you plan to reinstall an Oracle VDI Core host.

The following information should be used when backing up data for both MySQL Cluster and Remote MySQL database types. To learn more about Oracle VDI Core configurations and the corresponding databases, refer to the [About Oracle VDI Core Configuration](#) page.

 This backup task archives only the content of the VDI Core database. The volumes of desktops and templates as well as configuration and settings values are not backed up.

Before You Begin

Here is a list of important notes when backing up and restoring the VDI Core database.

- To back up and restore the Sun VDI 3.1 and 3.1.1 databases, refer to [How to Back Up and Restore Data \(Bundled MySQL Database\)](#) and [How to Back Up and Restore Data \(Remote MySQL Database\)](#).
- For multi-host setups, the backup and restore process should only be done on one host. It does not need to be done on every host.
- You can perform the backup and restore tasks on different hosts as long as the archived backup is accessible.
- You can perform the backup and restore tasks on the primary host if you have configured it to host VDI sessions (you ran the `vda-config` command twice).
- The backup job stops all other VDI jobs to run. Jobs are automatically started again after the backup finishes.
- The restore job stops the entire VDI system to run, but active sessions will continue to run. When a restore job finishes, you must restart the VDI system (through the Common Agent Container (cacao)) on all secondary hosts and the primary host if you have configured it to host VDI sessions.

Steps

1. Make a backup of the database.

- From the CLI, call the `backup` command.

```
# /opt/SUNWvda/sbin/vda-backup -p </path/to/directory> -o
<output-file-name>
```

While the backup job is running, all other jobs are stopped or put in queue in all hosts. A backup archive is created, that includes one file, with an `.db` extension and a timestamp-based name. For a detailed view of the `backup` command syntax use the following command.

```
# /opt/SUNWvda/sbin/vda-backup -h
```

- From the Oracle VDI Manager:
 - a. Select the Settings category, then the VDI Center subcategory.
 - b. Select the Summary tab, and click Backup in the VDI Hosts table.

2. Restore the backed up database on the new Oracle Virtual Desktop Infrastructure installation.

- From the CLI, call the `restore` command.

```
# /opt/SUNWvda/sbin/vda-restore -i </path/to/backup.zip>
```

For a detailed view of the `restore` command syntax use the following command.

```
# /opt/SUNWvda/sbin/vda-restore -h
```

3. After the restore job finishes, restart the VDI system on all secondary hosts and the primary host if you have configured it to host VDI sessions.

```
# cacoadm stop -f  
# cacoadm start
```