

**Oracle® Virtual Desktop Infrastructure**  
Release Notes for Version 3.2.2

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# Oracle Virtual Desktop Infrastructure 3.2.2 Release Notes

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## Oracle Virtual Desktop Infrastructure 3.2.2 Release Notes

These notes contain important information about the Oracle VDI Core, including requirements and supported platforms as well as issues and workarounds. Be sure to read this document before you begin using Oracle Virtual Desktop Infrastructure 3.2.2.

### New Features in Release 3.2.2

- Multi-Monitor
 

The Multi-Monitor feature enables use of more than one monitor connected to a DTU or to a Sun Ray Multihead Group. The desktops may be configured to display one desktop session across multiple monitors, or multiple desktop sessions across multiple monitors.

For more information about the Multi-Monitor feature, refer to the [How to Configure Multi-Monitor](#) page.
- VirtualBox Logs
 

The VirtualBox Logs feature enables the running desktops current log file from to be accessed from the Oracle VDI Manager.

### Oracle Virtual Desktop Infrastructure Package Software

Oracle Virtual Desktop Infrastructure software is a layered software solution that requires a virtualization platform, user directory, database, desktop access software, and Oracle VDI Core software. For more information about the full Oracle Virtual Desktop Infrastructure architecture, refer to the [Architecture](#) page.

#### Bundled Software

The software includes the following core components.

- Oracle Virtual Desktop Infrastructure Software 3.2.2 (including Oracle VDI Core, Sun Ray Software 5.1.2, MySQL Cluster 7.0.8a)
- Oracle VM VirtualBox for Oracle VDI 3.2.2 (Solaris 10 x86 only)

## Additional Supported Software

The additional software pieces can be downloaded by following the links below.

- Oracle Secure Global Desktop (SGD) 4.5 and [Oracle Secure Global Desktop \(SGD\) 4.6](#)
- [Oracle VM VirtualBox for Oracle VDI 3.2.2](#) (additional platforms for creating desktop templates)
- [Oracle Solaris OS](#)
- [Oracle Virtual Desktop Client](#)

## Localization

The Oracle Virtual Desktop Infrastructure 3.2.2 components are available in the following languages after installing the Oracle VDI Core software. No additional package installation is required.

- Oracle VDI Core Software:
  - Oracle VDI Manager: Chinese (simplified), English, French, Japanese, and Swedish
  - Oracle VDI Desktop Selector: Chinese (simplified), Chinese (traditional), English, French, German, Japanese, Korean, Spanish, and Swedish
  - Oracle VDI CLI: English
- Oracle VDI Documentation:
  - Installation and Administration pages: [Chinese \(simplified\)](#), English, [French](#), and [Japanese](#)
  - Demo Guides and Troubleshooting information: English

## Third-Party Software

Oracle Virtual Desktop Infrastructure 3.2.2 includes software originating from third parties that is subject to GPL/LGPL licenses. The corresponding source code is available via the links below:

- [Oracle VM VirtualBox for Oracle VDI 3.2.2](#) contains modified GPL code.  
The source code is available at: <http://download.virtualbox.org/virtualbox/3.2.12/VirtualBox-3.2.12-OSE.tar.bz2>

All correspondence relating to third-party software included in Oracle Virtual Desktop Infrastructure 3.2.2 should be addressed to Oracle Corporation, 500 Oracle Parkway, Redwood Shores, CA 94065.

## Hardware Requirements

Oracle Virtual Desktop Infrastructure has very basic hardware requirements. Customers can use new or existing hardware as long as it meets the CPU requirements. Hardware sizing is a very important part of planning an Oracle Virtual Desktop Infrastructure installation. Refer to an Oracle Sales or Support representative for more details about sizing.



All Oracle VM VirtualBox servers must have the virtualization extensions from AMD (AMD-V) and Intel (VT-x).

| Host   | CPU Type    |
|--|-------------|
| Oracle VDI Core hosts                          | all x86 CPU |
| Oracle VM VirtualBox host                      | x86 CPU     |
| Microsoft Hyper-V host                         | x86 CPU     |
| Oracle VM VirtualBox or Hyper-V storage server | x86 CPU     |
| VMware Infrastructure hosts                    | x86 CPU     |
| Microsoft Remote Desktop Server                | x86 CPU     |



As of Oracle Virtual Desktop Infrastructure 3.2, Solaris SPARC is no longer supported as an Oracle VDI Core host platform.

## Oracle Virtual Desktop Infrastructure 3.2.2 Software Requirements

This section includes support tables for Oracle VDI Core host operating systems, virtualization platforms, storage servers, desktop guest systems. For more information about how to configure the Oracle Virtual Desktop Infrastructure components, refer to the [Configurations](#) page.

### Oracle VDI Core Host and Oracle VM VirtualBox Virtualization Host Operating Systems

| Software                            | Supported in Oracle Virtual Desktop Infrastructure 3.2.2                          |
|-------------------------------------|---|
| Oracle Solaris 10 5/09 x86 or later |  |

### Virtualization Platforms and Desktop Providers

| Software  | Oracle VDI Hypervisor   | VMware Infrastructure   | Microsoft Hyper-V  | Microsoft Remote Desktop  | Not Supported   |
|---|---|---|--|---|---|
| Oracle VM VirtualBox 3.0.12, 3.0.14, 3.2.8, 3.2.10, 3.2.12  |  |   |  |   |   |
| All other Oracle VM VirtualBox versions                     |   |   |  |   |  |
| VMware VirtualCenter server 2.5 (Including Updates 1,2,3,4) |   |    |  |   |   |
| VMware vCenter server 4.0 (Including Updates 1,2), 4.1      |   |    |  |   |   |
| VMware ESX server 3.5, 4, 4.1                               |   |  |  |   |   |
| VMware ESXi server 3.5, 4, 4.1                              |   |  |  |   |   |
| Microsoft Hyper-V Server 2008 R2                            |   |   |  |   |   |
| Microsoft Windows Server 2008 R2                            |   |   |  |  |   |
| Microsoft Windows Server 2003                               |   |   |  |  |   |

### Storage Servers

| Software                                    | Oracle VDI Hypervisor   | VMware Infrastructure | Microsoft Hyper-V   |
|---|---|-----------------------|---|
| Oracle Solaris 10 10/09 x86 (64-bit)        |  | Qualified by VMware   |  |
| Sun Unified Storage 7000 Series 2010.Q3.x   |  | Qualified by VMware   |  |
| Sun Unified Storage 7000 Series 2010.Q1.2.1 |  | Qualified by VMware   |  |
| Sun Unified Storage 7000 Series 2010.Q1.2.0 |  | Qualified by VMware   |  |
| Sun Unified Storage 7000 Series 2010.Q1.1.0 |  | Qualified by VMware   |  |
| Sun Unified Storage 7000 Series 2010.Q1.0.2 |  | Qualified by VMware   |  |
| Sun Unified Storage 7000 Series 2010.Q1.0.1 |  | Qualified by VMware   |  |
| Sun Unified Storage 7000 Series 2010.Q1.0.0 |  | Qualified by VMware   |  |
| Sun Unified Storage 7000 Series 2009.Q2.5.1 |  | Qualified by VMware   |  |

|  |  |                     |  |
|--|--|---------------------|--|
| Solaris 10 10/09 with Sun Modular Storage (ST2530, ST2540, ST6140, ST6180, ST6540, ST6580, ST6780) |  | Qualified by VMware |  |
|--|--|---------------------|--|

**Tip**

For more information about the Sun Unified Storage 7000 Series, see the [Fishworks Documentation](#).

## User Directories

| Versions of Active Directory  | Supported | Not Supported |
|---|-----------|---------------|
| Windows Server 2003   |           |               |
| Windows Server 2003 R2  |           |               |
| Windows Server 2008   |           |               |
| Windows Server 2008 R2  |           |               |
| LDAP Directories  | Supported | Not Supported |
| Oracle Directory Server Enterprise Edition 6.3.1                              |           |               |
| Oracle Directory Server Enterprise Edition 7.0                                |           |               |
| Microsoft Active Directory on Windows Server 2003, 2003 R2, 2008, and 2008 R2 |           |               |
| Novell eDirectory 8.8   |           |               |
| OpenLDAP 2.4.19   |           |               |

## Desktop Guest Systems

| Software                           | Oracle VDI Hypervisor | VMware Infrastructure | Microsoft Hyper-V | Not Supported |
|------------------------------------|-----------------------|-----------------------|-------------------|---------------|
| Windows XP SP2/3 (32bit and 64bit) |                       |                       |                   |               |
| Windows Vista Enterprise           |                       |                       |                   |               |
| Windows 7 (32bit and 64bit)        |                       |                       |                   |               |
| Windows 2000 SP4                   |                       |                       |                   |               |
| Oracle Solaris 10 (10/09) or later |                       |                       |                   |               |
| Ubuntu 8.10 (Intrepid Ibex)        |                       |                       |                   |               |
| Ubuntu 9.04 (Jaunty Jackalope)     |                       |                       |                   |               |
| Ubuntu 9.10 (Karmic Koala)         |                       |                       |                   |               |
| Ubuntu 10.04 (Lucid Lynx)          |                       |                       |                   |               |
| SUSE Linux Enterprise 11           |                       |                       |                   |               |
| Oracle Enterprise Linux 5.5        |                       |                       |                   |               |

## Web Browser for Oracle VDI Manager

|         | Firefox 3.6   | Internet Explorer 8   |
|---------|---|---|
| Windows |  |  |
| Solaris |  | N/A   |
| Linux   |  | N/A   |

## Known Issues and Limitations

Cloning does not work for pools with names including parenthesis. (Bug ID 6969378)

Cloning does not work for pools with names like 'WindowsXP(VMware)'.

Oracle VDI Core configuration fails to create database tables with remote Windows databases that use utf8. (Bug ID 6966719)

MySQL on Windows limits key sizes to 767 bytes. Due to this limit, the Oracle VDI Core configuration process will fail when run with a remote MySQL database on Windows that has utf8 enabled. There are two possible workarounds for this issue.

1. Modify the file `/etc/opt/SUNWvda/vda-schema-create.sql` on your primary Oracle VDI Core host. Change the line:

```
UNIQUE INDEX distinguished_name (`distinguished_name` ASC, `ud_id` ASC) ,
```

to:

```
UNIQUE INDEX distinguished_name (`distinguished_name`(250) ASC, `ud_id` ASC) ,
```

The Oracle VDI Core configuration process should now complete successfully. Note, this workaround may cause problems assigning users to pools or desktops where the `distinguished_name` of the user exceeds 250 characters.

2. Change the character set of the MySQL database to latin1 and run the Oracle VDI Core configuration process again. Note, this workaround will cause problems logging in users who have utf8 characters in their username.

Cloning fails if the Sysprep timezone setting does not match the host timezone. (Bug ID 6965449)

This issue is caused by the fact that our default Sysprep information uses a different timezone (GMT) than the virtualization host. Because the timezone setting of the template will have been removed during the system preparation process, there could be a mismatch between the guest and the host. This issue has the following workaround.

1. Disable cloning in the pool's Cloning tab.
2. Click Edit in the System Preparation section of the Cloning tab.
3. In the Edit System Preparation window, change the TimeZone setting from 85 to the appropriate code for your timezone (for example, India Standard Time is 190). Click Save.
4. Enable cloning in the pool and check if the problem is still reproducible.

Suspended Microsoft Hyper-V desktops are not restored in previous state after host or storage maintenance. (Bug ID 6919755)

When a host or storage associated with a Microsoft Hyper-V desktop provider is put into maintenance mode, any running desktops associated with that host or storage are suspended. If the maintenance work on the host or storage causes the disk number associated with the desktops disk to change, the Oracle VDI Core will need to reassign the disk when it next starts the desktop. As Microsoft Hyper-V desktops are read-only when suspended, the Oracle VDI Core has to power off the desktop in order to reassign the disk. This causes the state associated with the desktop to be lost.

All desktops should be powered off when putting a Microsoft Hyper-V host or storage into maintenance mode.

### Printers are not being redirected on Windows 7. (Bug ID 6911352)

Printers are not being redirected, even though they have been specified using the "-r printer:<name>" option.

### Oracle VDI Guest Sessions cannot always connect to Windows Vista desktops. (Bug ID 6901532)

Windows setup on Vista does not always honour the `NetworkLocation` setting in the `unattend.xml` file. If this happens you may experience problems obtaining kiosk sessions for cloned Vista desktops. To workaround this problem, connect to the cloned desktop and set the Network Location using Control Panel, Network and Sharing Center, Customize.

### Cacao does not automatically start after installing the latest Oracle Solaris 10 Update 7 patch cluster. (Bug ID 6896674)

After installing the latest Oracle Solaris 10 Update 7 patch cluster on an Oracle VDI Core host and rebooting, cacao doesn't start automatically and, as a result, Oracle VDI Core services are not available. In this case, cacao can be started manually using the "`cacaoadm start`" command. The problem does not occur after second and subsequent reboots of the Oracle VDI Core host.

### Suspend/Resume functionality requires all hosts to execute Oracle VM VirtualBox with the same UID (User ID). (Bug ID 6878370)

When installing each Oracle VM VirtualBox host, take care to ensure that each user executing the Oracle VM VirtualBox web service has the same UID. Installing Oracle VM VirtualBox to run as 'root' (UID=0) is the easiest way of ensuring this. This is required for suspend and resume functionality to work as expected.

### Microsoft RDS hosts appear unresponsive in the Oracle VDI Manager. (Bug ID 6876911)

One or more RDS hosts might be reported as unresponsive by the Oracle VDI Manager even if the host can be reached and serve new RDS sessions. If some but not all hosts from the Microsoft Remote Desktop provider are unresponsive, the status of the desktop provider on the summary page will be reported as "Major Issues. Some hosts are unresponsive."

If all hosts from the Microsoft Remote Desktop provider are unresponsive, the status of the desktop provider on the summary page will be reported as "Critical. The desktop provider cannot serve any desktops. Check hosts." Reboot the RDS hosts reported as unresponsive.

### Suspend/Resume Functionality Requires Identical CPU Make and Model. (Bug ID 6872361)

To avoid errors when using the suspend and resume functionality, ensure that all Oracle VM VirtualBox hosts have identical CPU manufacturers and identical (or very similar) CPU models. Attempting to resume a virtual machine on hardware that is different from the hardware it was suspended on will often result in failures. These errors occur because the virtual machine may attempt to use a CPU flag or instruction that is no longer available upon being resumed.

### Memory for ARC cache should be restricted to a lower limit when using ZFS on S10u7. (Bug ID 6844780)

When all Oracle Virtual Desktop Infrastructure components (Oracle VDI Core host, Oracle VM VirtualBox host, and ZFS storage) are installed on a single box, Oracle VM VirtualBox will not be able to start any desktops.

ZFS uses any memory available (up to the limit) for an ARC cache. If other programs try to access the memory, ZFS should release it. Unfortunately, the Oracle VDI Core evaluates the memory before trying to start a virtual machine and recognizes that not enough memory is available to start the virtual machine. Full details are available here

[http://www.solarisinternals.com/wiki/index.php/ZFS\\_Evil\\_Tuning\\_Guide#ARCSIZE](http://www.solarisinternals.com/wiki/index.php/ZFS_Evil_Tuning_Guide#ARCSIZE).

The memory for the ARC cache can be limited to a max value by adding an entry in `/etc/systems` file.

For example, to restrict the memory to 2GB, in `/etc/system` add:

```
set zfs:zfs_arc_max = 2147483648
```

It has been verified that keeping this value to as low as 512MB and importing a file of 2.7G will work as desired.

### Adding a VMware vCenter desktop provider may fail on the first attempt. (Bug ID 6842069)

Sometimes, an initial attempt to add a VMware vCenter desktop provider may fail with the error "Unable to Contact VMware VirtualCenter" and the reason "The host is not reachable at port 443". To workaround this issue, simply provide the relevant information again and add the desktop provider a second time.

Users with "@" characters in their passwords cannot authenticate. (Bug ID 6801620)

Due to a Java SE 6 bug, users whose passwords contain the "@" character are unable to authenticate using the Oracle VDI Desktop Selector. To work around this problem, you can configure the Desktop Selector to use an alternative Java SE installation. You should choose either Java SE 5 or Java SE 6u14 or later.

The Java SE installation used by the Desktop Selector can be configured using the "-j" option of the Oracle VDI Sun Ray Kiosk Session. For more information on setting Oracle VDI Sun Ray Kiosk Session options, please see the [How to Adapt the Bundled Sun Ray Kiosk Session](#) page.

Using the Oracle VDI CLI in parallel with the Oracle VDI Manager. (Bug ID 6770476)

Using the CLI to modify some data, while having an Oracle VDI Manager session running, might generate errors in the Oracle VDI Manager and log you out. At the following login, the Oracle VDI Manager will work fine again.

## Fixed Bugs

6891500 - keep selection in desktop selector  
 6918357 - More on Revisions" OLH link is broken  
 6936019 - MIGRATION:cacao.properties (cacao limit/count) does not update to 100MB/10 on migrating to 3.1.1  
 6982800 - RDP Broker tries to connect to console session of RDS Session Host  
 6986472 - ESC - vdi client intermittently returned VRPD port 0.  
 6987807 - 3.2: global hotdesking should revert DTU back to default SRS FOG without requiring DTU reset  
 6989179 - ESC - NPE thrown when trying to delete token from CLI  
 6990555 - ESC - Removing token erroneously says 'unassigned from pool null'  
 6990971 - ESC - Some jobs running indefinitely, holding pool cloning  
 6991116 - ESC - token-desktops command does not work.  
 6992055 - Multi-Monitor support for VBox desktops  
 6992093 - RFE: Request to add apache log rotation  
 6992111 - Multi-Desktop on Multi-Head Sun Ray Clients  
 6993034 - During Migration from 3.2 to 3.2.1,vda-Preserve log file shows 3.1.1  
 6993059 - Desktops cannot be started after replacing storage  
 6993502 - RDP broker should be aware of onetime passwords when using VRDP  
 6993509 - RDP broker should honor domain information  
 6994808 - Change browser window title of VDI bui  
 6995280 - VDI should retain one time password to reuse if VBox hosts are unresponsive  
 6996444 - UI Should provide download button for VBox log files  
 6996815 - VBox Host and Desktop metric collection always queries 3 times unnecessarily  
 6997133 - Some threads don't catch for "Exception"  
 6997235 - Sysprep/fastprep timeout should be configurable  
 6998159 - ClassCastException when clicking on revisions  
 6999049 - Forced password change tries to use top level AD domain rather than subdomain with accounts for auth  
 6999265 - VDI should configure VBoxes core dumper  
 6999329 - When mullti monitor value set to 2, user is not getting the session  
 6999614 - Flash Console cannot connect to desktops  
 6999945 - vCenter cloning resources not visible/available  
 7000992 - BUG – memory size of imported template switches from 2048 to -2048  
 7001173 - User name is preset in desktop dialog after changing screen resolution  
 7001256 - VDi uninstall needs to force a reboot to fully uninstall SRS software.  
 7002237 - SSO broken for Windows RDP  
 7002392 - ESC: users still assigned to available desktops after logging off  
 7002464 - Sporadic memory leaks caused by VBox connection reaper  
 7002493 - Race condition when requesting 2 desktops and one is not user assigned  
 7002784 - Recycling Policy "Reset to Snapshot" is not working for Hyper-V desktops  
 7003112 - ESC: VDI fails to unmount floppy during cloning  
 7003168 - Enabling uttsc enhanced network security won't authenticate to Win 7 VM  
 7005069 - Some times Import job fails for VB and HV templates/desktops

## Reporting Problems and Providing Feedback

To report a bug in the software or to ask a question, please contact the Oracle VDI Team and Community at the [Oracle VDI Software Forum](#). If you need a fix for a bug, and have a Standard or Premium Support Agreement, you should open a case with Support.

If you are reporting a bug, please provide the following information where applicable:

- Description of the problem, including the situation, where the problem occurs, and its impact on your operation.
- Machine type, operating system version, browser type and version, locale and product version, including any patches you have applied, and other software that might be affecting the problem.
- Detailed steps on the method you have used, to reproduce the problem.
- Any error logs or core dumps.

## Contacting Oracle Specialist Support

If you have a Sun Standard or Premium Support Agreement or Oracle Customer Support Identifier, we would like to encourage you to contact the Oracle Virtual Desktop Infrastructure Support team directly for immediate technical assistance. If unknown, you may first want to find the correct [Service Center](#) for your country, then contact Sun/Oracle Services to open a ticket directly.

The responding attendant will need the following information to get started:

- Your Sun Service Contract number. ( ex: "NK11111111" ) or Oracle Customer Support Identifier
- The product you are calling about. ( "Oracle Virtual Desktop Infrastructure" )
- A brief description of the problem you would like assistance with. ( ex: "I am having problems updating to an Oracle Virtual Desktop Infrastructure 3.2.2 installation" )

## Further Information

You may also be interested in these related Release Notes:

- [Sun Ray Server Software 4.2 Release Notes](#)
- [Oracle Virtual Desktop Client 2.1 Release Notes](#)
- [Sun Ray Windows Connector 2.2 Release Notes](#)
- [Oracle Secure Global Desktop 4.6 Release Notes](#)