Sun Virtual Desktop Infrastructure

Release Notes for Version 3.1

April 2011

ORACLE®

VDI 3.1 Release Notes

Contents

VDI 3.1 Release Notes

These notes contain important information about the Sun VDI Core, including requirements and supported platforms as well as issues and workarounds. Be sure to read this document before you begin using Sun VDI 3.1.

VDI Package Software

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

Bundled Software

- Sun Virtual Desktop Infrastructure Software 3.1
  Sun VDI Core
  Sun Ray Software 5
  MySQL Cluster 7.0.8a

- Sun VirtualBox for VDI 3.1 (Solaris 10 x86 only)

> ⚠ Sun Ray Windows Connector (SRWC) 2.3 is not supported with Oracle Virtual Desktop Infrastructure Software, Release 3.1 or 3.1.1

Additional Supported Software

- Sun Secure Global Desktop 4.50 (SGD) and above
- Sun VirtualBox for VDI 3.1 (additional platforms for creating desktop templates)

Localization

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

- VDI Software:
  VDI Manager: Chinese (simplified), English, French, Japanese, and Swedish
  VDI Desktop Selector: Chinese (simplified), Chinese (traditional), English, French, German, Japanese, Korean, Spanish, and Swedish
  VDI CLI: English

- VDI Documentation:
  Installation and Administration pages: Chinese (simplified), English, French, Japanese, and Swedish
  Demo Guides and Troubleshooting information: English

Third-Party Software

Sun VDI 3.1 includes software originating from third parties that is subject to GPL/LGPL licenses. The corresponding source code is available via the links below:

- Sun VirtualBox for VDI contains modified GPL code.
  The source code is available at: http://download.virtualbox.org/virtualbox/3.0.12/VirtualBox-3.0.12-OSE.tar.bz2

Hardware Requirements

Sun VDI has very basic hardware requirements. VDI customers can use new or existing hardware as long as it meets the CPU requirements. Hardware sizing is a very important part of planning a VDI installation. For more information on sizing, refer to the Deployment Guide.

Host	CPU Type
VDI hosts	all x86 or all SPARC CPU
VirtualBox host	x86 CPU
Microsoft Hyper-V host	x86 CPU
VirtualBox or Hyper-V storage server	x86 CPU
VMware hosts	x86 CPU
Microsoft Remote Desktop Server	x86 CPU

VDI 3.1 Software Requirements

This section includes support tables for VDI Core host operating systems, virtualization platforms, storage servers, desktop guest systems. For more information about VDI Support, see VDI Configurations.

VDI Core Host and VirtualBox Virtualization Host Operating Systems

Software	Supported in VDI 3.1
Solaris 10 10/09 SPARC and x86 (64-bit)	✅
Solaris 10 5/09 SPARC and x86 (64-bit)	✅

Virtualization Platforms and Desktop Providers

Software	VirtualBox Virtualization Platform	VMware Infrastructure Virtualization Platform	Microsoft Hyper-V Virtualization Platforms	Microsoft Remote Desktop Platform	Not Supported
Sun VirtualBox for VDI (VirtualBox 2.0.10 and 3.0.12)	✅				

All other VirtualBox versions					❌
VMware VirtualCenter server 2.5		✅			
VMware VirtualCenter server 2.5 Updates 1, 2, 3, 4		✅			
VMware vCenter server 4		✅			
VMware vCenter server 4 Update 1		✅			
VMware ESX server 3.5		✅			
VMware ESX server 3.5 Updates 1, 2, 3, 4		✅			
VMware ESX server 4		✅			
VMware ESX server 4 Update 1		✅			
VMware ESXi server 3.5		✅			
VMware ESXi server 3.5 Updates 1, 2, 3, 4		✅			
VMware ESXi server 4		✅			
VMware ESXi server 4 Update 1		✅			
Microsoft Hyper-V Server 2008			✅		
Microsoft Windows Server 2008			✅	✅	
Microsoft Windows Server 2003				✅	

Storage Servers

Software	VirtualBox Virtualization Platforms	VMware Infrastructure Virtualization Platforms	MS Hyper-V Virtualization Platforms
Solaris 10 10/09	✅	Qualified by VMware	✅
Solaris 10 5/09	✅	Qualified by VMware	✅
OpenSolaris 2008.11	✅	Qualified by VMware	✅
OpenSolaris 2009.06	✅	Qualified by VMware	✅
Sun Unified Storage 7000 Series 2009.Q3.2.0	❌ *	Qualified by VMware	❌ *
Sun Unified Storage 7000 Series 2009.Q3.1.0	❌ *	Qualified by VMware	❌ *
Sun Unified Storage 7000 Series 2009.Q3.0.0	❌ *	Qualified by VMware	❌ *

Sun Unified Storage 7000 Series 2009.Q2.5.1	✓	Qualified by VMware	✓
Sun Unified Storage 7000 Series 2009.Q2.5.0	✓	Qualified by VMware	✓
Sun Unified Storage 7000 Series 2009.Q2.4.0	✓	Qualified by VMware	✓
Sun Unified Storage 7000 Series 2009.Q2.3.1	✓	Qualified by VMware	✓
Sun Unified Storage 7000 Series 2009.Q2.3.0	✗	Qualified by VMware	✗
Sun Unified Storage 7000 Series 2009.Q2.2.1	✗	Qualified by VMware	✗
Sun Unified Storage 7000 Series 2009.Q2.2.0	✗	Qualified by VMware	✗
Sun Unified Storage 7000 Series 2009.Q2.1.1	✓	Qualified by VMware	✓
Sun Unified Storage 7000 Series 2009.Q2.1.0	✓	Qualified by VMware	✓
Sun Unified Storage 7000 Series 2009.Q2.0.0	✓	Qualified by VMware	✓
Sun Unified Storage 7000 Series 2008.Q4.2.3	✗	Qualified by VMware	✗
Sun Unified Storage 7000 Series 2008.Q4.2.2	✗	Qualified by VMware	✗
Sun Unified Storage 7000 Series 2008.Q4.2.1	✓	Qualified by VMware	✓
Sun Unified Storage 7000 Series 2008.Q4.2.0	✓	Qualified by VMware	✓
Sun Unified Storage 7000 Series 2008.Q4.1.1	✓	Qualified by VMware	✓
Sun Unified Storage 7000 Series 2008.Q4.1.0	✓	Qualified by VMware	✓
Sun Unified Storage 7000 Series 2008.Q4.0.1	✗	Qualified by VMware	✗
Sun Unified Storage 7000 Series 2008.Q4.0.0	✗	Qualified by VMware	✗
Solaris 10 10/09 with Sun Modular Storage (ST2530, ST2540, ST6140, ST6180, ST6540, ST6580, ST6780)	✓	Qualified by VMware	✓
Solaris 10 5/09 with Sun Modular Storage (ST2530, ST2540, ST6140, ST6180, ST6540, ST6580, ST6780)	✓	Qualified by VMware	✓
OpenSolaris 2008.11 with Sun Modular Storage (ST2530, ST2540, ST6140, ST6180, ST6540, ST6580, ST6780)	✓	Qualified by VMware	✓

OpenSolaris 2009.06 with Sun Modular Storage (ST2530, ST2540, ST6140, ST6180, ST6540, ST6580, ST6780)	✅	Qualified by VMware	✅

* With the 2009.Q3.0.0 release a new iSCSI stack (COMSTAR) has been introduced to the Unified Storage 7000 Series which is incompatible with the VirtualBox and Hyper-V desktop providers of the VDI 3.0 and VDI 3.1 releases. COMSTAR will be supported by VDI 3.1.1 which will be released as soon as possible after the 3.1 release.

> ⚠️ Tip
> For more information about the Sun Unified Storage 7000 Series, see the Fishworks Documentation.

Desktop Guest Systems

Software	VirtualBox Virtualization Platforms	VMware Infrastructure Virtualization Platforms	MS Hyper-V Virtualization Platforms	Not Supported
Windows XP SP2/3	✅	✅	✅	
Windows Vista Enterprise	✅	✅	✅	
Windows 7	✅			
Windows 2000 SP4	✅			
Ubuntu 8.10 (Intrepid Ibex)	✅			
Ubuntu 9.04 (Jaunty Jackalope)	✅			
OpenSolaris 2009.06	✅			
SUSE Linux Enterprise 11	✅			

Web Browser for VDI Manager

	Firefox 3	Firefox 3.5	Internet Explorer 6	Internet Explorer 7	Internet Explorer 8
Windows	✅	✅	❌	✅	✅
Solaris	✅	✅	N/A	N/A	N/A
Linux	✅	✅	N/A	N/A	N/A

Known Issues and Limitations

utpreserve data in the **/var/tmp** folder causes the 3.1 update procedure to fail. (Bug ID 6914575)

It's not necessary to run utpreserve on either VDI Primary or Secondary hosts. If you have run utpreserve, but have not yet tried to update, move the utpreserve file (directory /var/tmp/SUNWut.upgrade/) to a safe place to updating. If you have run utpreserve, and your update to VDI 3.1 is failing, refer to the "The update installation is failing." Troubleshooting topic.

Sun Unified Storage Q3.2009 is not supported. (Bug ID 6886469)

With the 2009.Q3.0.0 release a new iSCSI stack (COMSTAR) has been introduced to the Unified Storage 7000 Series which is incompatible with VDI 3.0 and VDI 3.1 releases. COMSTAR will be supported by VDI 3.1.1 which will be released as soon as

possible after the 3.1 release.

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

After installing the latest Solaris 10 Update 7 patch cluster on a VDI host and rebooting, cacao doesn't start automatically and, as a result, vdi 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 VDI host.

VDI 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.

When a desktop powers off, uttsc freezes for a long time. (Bug ID 6817710)

If a desktop is powered down while a user session is connected using uttsc, uttsc may fail to recognise that the desktop is no longer available and may freeze for a long period of time.

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.

Sun Ray Desktop Access Client disabled after migration from VDI 3.0 to VDI 3.1. (Bug ID 6904283)

After migrating from VDI 3.0 to VDI 3.1 the Sun Ray policy allowing access from the Sun Desktop Access Client may be disabled resulting in inability to start Sun Ray sessions from the client.

Solution - Manually enable Sun Desktop Access Client policy as follows:

- Point a browser at the Sun Ray administration console (http://<yourhost>:1660) and login.
- Navigate to the Advanced > System Policy tab.
- Enable the Sun Desktop Access Client in the Non-Card Users section and press Save.
- Follow the Switch to Servers tab to perform the restart link at the top of the page and restart your Sun Ray services.

Solaris hosts must have adequate swap space. (Bug ID 1225025)

Solaris hosts running VirtualBox must have swap space equal to, or greater than the host's physical memory size. For example, 16GB physical memory would require at least 16GB swap. This can be configured during a Solaris 10 install by choosing a 'custom install' and changing the default partitions.
For existing Solaris 10 installs you will need to create a swap image file on the local filesystem and mount it. The swap file image size should be: Physical Memory - Current Swap = Additional Swap Required. For example, 16GB physical memory - 1GB = 15GB of additional swap required. To add the swap to your system:
For ZFS:

```
# zfs create -V 16gb _<ZFS volume>_/swap
# swap -a /dev/zvol/dsk/_<ZFS volume>_/swap
```

To have the swap mounted after a reboot, add the following line to `/etc/vfstab`:

```
/dev/zvol/dsk/_<ZFS volume>_/swap - - swap - no -
```

For UFS:

```
# mkfile 15g /path/to/swap.img
# swap -a /path/to/swap.img
```

To have the swap mounted after a reboot, add the following line to `/etc/vfstab`:

```
/path/to/swap.img - - swap - no -
```

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

When all VDI components (VDI host, VirtualBox host, and ZFS storage) are installed on a single box (x86 platform, running S10u7), VirtualBox will not be able to start any desktops.
Cause – 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, VDI 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.

Solution – 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.

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

When installing each VirtualBox host, take care to ensure that each user executing the VirtualBox web service has the same UID. Installing 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.

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 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.

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

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

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

One or more RDS hosts might be reported as unresponsive by the 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."
Solution- Reboot the RDS hosts reported as unresponsive.

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 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 VDI Sun Ray Kiosk Session. For more information on setting VDI Sun Ray Kiosk Session options, please see the How to Adapt the Bundled Sun Ray Kiosk Session page.

Reporting Problems and Providing Feedback

To report a bug in the software or to ask a question, please contact the VDI Team an Community at the Sun 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 Sun Specialist Support

If you have a Sun Standard or Premium Support Agreement, we would like to encourage you to contact the Sun 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 Services to open a ticket directly.

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

- Your Sun Service Contract number. (ex: "NK11111111")
- The product you are calling about. ("Sun Virtual Desktop Infrastructure")
- A brief description of the problem you would like assistance with. (ex: "I am having problems updating to VDI 3.1")

Further Information

You may also be interested in these related Release Notes:

- Sun Ray Server Software 4.2 Release Notes
- Sun Ray Windows Connector 2.2 Release Notes
- Sun Secure Global Desktop 4.50 Release Notes