

Oracle® Virtual Desktop Infrastructure
VDI Demo (Microsoft Remote Desktop Services) for Version
3.2

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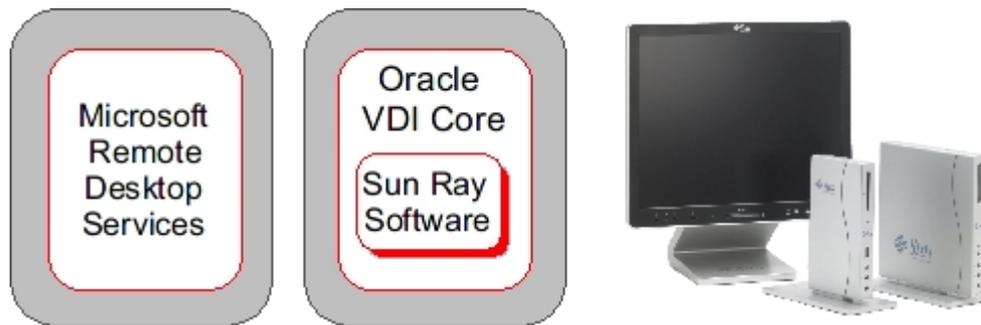
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Oracle Virtual Desktop Infrastructure Demo (Microsoft Remote Desktop Services)

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The following information describes how to install and configure the Oracle Virtual Desktop Infrastructure components (Oracle VDI Core and virtualization platform). You will need two separate hosts to be able to perform this install.



System Requirements

- 1 Windows Server 2008 or Windows Server 2003
Refer to [Windows Server 2008](#) or [Windows Server 2003](#) hardware requirements.
- 1 host for the VDI Core
At least one 2.0GHz x86 CPU
At least 4GB RAM
At least 32GB disk space

i The Oracle Virtual Desktop Infrastructure Demos are not supported production environment configurations. For more information about supported production environment Oracle Virtual Desktop Infrastructure configurations, refer to the [Configurations](#) page.

1. Install and Configure Microsoft Remote Desktop Services

Use the following information to install and configure Microsoft Remote Desktop Services (RDS) for your Oracle Virtual Desktop Infrastructure Demo. It assumes you have referred to the Microsoft documentation for installing and configuring a Windows Server. For general information about how RDS works with the Oracle VDI Core, see the [About Microsoft Remote Desktop Platforms](#) section.

How to Install Microsoft Remote Desktop Services

- To install the Remote Desktop Services role on Windows Server 2003 refer to <http://www.microsoft.com/windowsserver2003/technologies/terminalservices/default.mspx>.
- To install the Remote Desktop Services role on Windows Server 2008 refer to <http://www.microsoft.com/windowsserver2008/en/us/rds-product-home.aspx>.

How to Prepare a Windows Server

After installing Microsoft Hyper-V or Microsoft Remote Desktop Services you must prepare your Windows server to communicate with the Oracle VDI Core. Oracle Virtual Desktop Infrastructure does not require any agents to be installed on the Windows servers, instead the Oracle VDI Core communicates with Windows servers using Windows Remote Management (WinRM) over HTTPS (a secure protocol). For HTTPS, WinRM requires a server certificate to operate properly. This certificate is used for encryption of the communication channel. For more details, see "[Windows Remote Management](#)" or "[Configuration and Security](#)" in the Microsoft documentation.

Preparing the Windows server for communication with the Oracle VDI Core is a two-step process. First, you must generate the self-signed certificate using the Microsoft Internet Information Services (IIS) 6.0 Resource Kit Tools (Step 1, below). Then configure `winrm` to listen for HTTPS requests (Step 2, below).

 These steps are necessary for Remote Desktop Services (or Terminal Services) Windows servers so that critical information about the server can be displayed in the Oracle VDI Manager (including CPU usage, memory usage, and number of user sessions). The delivery of desktop sessions from RDS pools is still provided by a regular RDP connection. For information about how to configure the RDP settings per desktop pool, see the [How to Configure RDP Options Per Pool](#) page.

Before You Begin

 The following commands should be executed in Command shell, not Powershell.

Steps

1. Generate a self-signed certificate on the Windows server.
Use the `selfssl.exe` tool which is part of the IIS 6.0 Resource Kit and can be downloaded from the [Microsoft Support web site](#).

- a. Copy `selfssl.exe` to your Windows Server.
- b. Create a self-signed certificate:

```
C:\Program Files\IIS Resources\SelfSSL\selfssl /T /V:<days>
```

There parameter `/V:` dictates the number of days the certificate will be valid. There is no maximum value.

- c. Run the `certutil` command, and make note of the Cert Hash of the new certificate:

```
certutil -store MY
```

 If the Windows server and Oracle VDI Core server are not in time sync, you might not be able to connect the Oracle VDI Core to the server because the certificate is not valid for the delta between both servers.

2. Configure Windows Remote Management for HTTPS.

The `winrm` tool is used to configure remote management settings on the server. You must specify the certificate hash to be used, and the authentication settings to allow the Oracle VDI Core to send requests.

- a. Install WS-Man (WinRM).

 This step is for Windows Server 2003 only. Windows Server 2008 and Hyper-V Server 2008 come with WinRM pre-installed.

- b. Download the WS-MAN v1.1. installation file (`WindowsServer2003-KB936059-x86-ENU.exe`) from www.microsoft.com.
- c. Proceed to the installation by running the installation file `WindowsServer2003-KB936059-x86-ENU.exe`.
- d. Create a listener on the Windows Server.

In a command shell run:

```
winrm create winrm/config/listener?Address=IP:<HYPER_IP>+Transport=HTTPS
@{Hostname="<HOST>" ;CertificateThumbprint="<CERTHASH>" ;Port="443" }
```

- Replace `<HYPER_IP>` with the IP address of the Windows Server.
- Replace `<HOST>` with the Computer Name of the Windows Server.
- Replace `<CERTHASH>` with the Cert Hash value, with no spaces, noted from the self-signed certificate created with `selfssl`.

- e. Open that port so that the Windows Server can receive requests from the Oracle VDI Core:

```
netsh firewall add portopening TCP 443 "Oracle VDI Remote Management"
```

Port 443 is the port the Oracle VDI Core listens on by default.

- f. Enable Basic authentication on the server by running the command:

```
winrm set winrm/config/service/auth @{Basic="true" }
```

 If you use a port other than 443 for Oracle VDI Core communication with Microsoft Hyper-V or RDS, you must remember to specify this port when adding the host in Oracle VDI Manager.

2. Install and Configure the Oracle VDI Core Software

How to Install and Configure the Oracle VDI Core for a Demo

Steps

1. As root user, unzip the Oracle VDI Core archive if you have not already done so, and run the installation (shown for x86).

```
# unzip vda_3.2.1_amd64.zip
# cd vda_3.2.1_amd64
# ./vda-install
```

After accepting the license agreement, the installation process begins, and all Oracle VDI Core components are installed.

2. After successful installation reboot your machine.

```
# reboot
```

3. As root user, run the `vda-config` script, and choose the "0 Evaluation Oracle VDI Host" configuration type:

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

For more information about the settings of the default configuration, see the [Oracle Virtual Desktop Infrastructure Defaults](#) page.

Once configuration is complete, go to <http://<server name>:1800> (or <http://localhost:1800> if remote administration has been disabled). Use root user credentials to log into the Oracle VDI Manager. You will be re-directed to https and the browser will ask you to accept the security certificate. After confirmation, you should get the login screen.

3. Set Up a User Directory

How to Set Up a User Directory for a Demo

Typically the user information is already stored in an Active Directory or LDAP server. Before you can assign users to desktops, you must configure the desired Active Directory/LDAP server and the Oracle VDI Core.

 If you do not have a directory already installed, you may use [OpenDS](#) as explained in this [blog entry](#).

 If you would like more details about setting up Active Directory with Kerberos authentication, refer to the new [How to Set Up Active Directory and Kerberos for a Demo](#) page.

Oracle VDI Manager Steps

1. Select the Settings category in the left sidebar.
2. Select the Company subcategory, and click New in the Companies table.
This will activate the New Company wizard.
3. Choose between Active Directory and LDAP user directory types. You can also choose 'none' if you only require token assignments.

- LDAP directory that supports Anonymous Authentication

 Active Directory does not support Anonymous Authentication.

- a. Select LDAP Type, and click Next.
- b. Select Anonymous Authentication.
- c. Enter the hostname or IP address, and port number, of the LDAP server. 389 is the default port number used by most LDAP servers.
- d. Enter the base DN of the LDAP server. Specifying a base DN is optional. It allows you to restrict the part of the LDAP directory used to search for the users. In most cases it is not necessary to provide the base DN.

For example: `cn=Users,dc=my,dc=company,dc=com`

- Active Directory or other type of LDAP directory that does not support Anonymous Authentication

- a. Select LDAP Type, and click Next.
- b. Select Simple Authentication.
- c. Enter the hostname or IP address, and port number, of the LDAP server. 389 is the default port number used by most LDAP servers.
- d. Enter the base DN of the LDAP server. Specifying a base DN is optional. It allows you to restrict the part of the LDAP directory used to search for the users. In most cases it is not necessary to provide the base DN.

For example: `cn=Users,dc=my,dc=company,dc=com`

- e. Enter the user name. It must be the fully distinguished name (DN) of a user that has sufficient privileges

to search the LDAP directory.

For example: `cn=super-user, cn=Users, dc=my, dc=company, dc=com`.

f. Enter the password for the user.

4. Set Up Desktop Providers and Pools

How to Create Desktop Providers

Desktop providers encapsulate the details of the underlying virtualization platform. At a minimum, you must configure one desktop provider before you can continue with the creation of pools. There is no limitation to the number of providers the system can manage. At any time, you can configure additional providers.

Desktop providers can also be configured to run a specified number of synchronous desktop cloning and recycling jobs during and outside of specified peak hours. To specify peak times, go to the Peak Times tab of the desktop provider's profile.

Oracle VDI Manager Steps

1. [Sign into the Oracle VDI Manager](#).
2. Select the Desktop Providers category, and click New in the Desktop Providers table. This will activate the New Desktop Provider wizard that enables you to add multiple hosts and multiple storages in a loop.
3. The New Desktop Provider wizard will require different information depending on the virtualization platform in use. For instance, all desktop providers require a host IP address and administrator credentials. Oracle VDI or Microsoft Hyper-V desktop providers require a host and a storage.
4. Once you click Finish, the new desktop provider will appear in the Oracle VDI Manager.
 - Oracle VDI and Microsoft Hyper-V desktop providers - You can now view the details, including CPU and memory use. It is also possible to add or remove additional host or storages as needed. For Microsoft Hyper-V desktop providers, you should also check the Network tab of the desktop provider to verify that the virtual network you created on your Microsoft Hyper-V machine has been detected correctly.
 - VMware vCenter desktop providers
You can now view the VMware vCenter resource details, including datacenters, VMware clusters, and datastores.
 - Microsoft Remote Desktop providers
You can now view the provider details, including CPU and memory use. It is possible to add or remove additional Microsoft Remote Desktop Services hosts as needed, provided they all belong to the same cluster.
 - Generic desktop providers
Refer to the [How to Import Individual Windows PCs](#) for information about importing individual Windows PCs.

How to Create Desktop Pools

Oracle Virtual Desktop Infrastructure organizes desktops in pools. A pool is a collection (or container) of desktops. Typically you will create different pools for different types of users. For example, the engineering team in your company might have different desktop requirements than the marketing department.



Oracle VDI Desktop Providers Only

When changing pool settings from NAT networking to Host Networking + Windows RDP, existing desktops that are running must be stopped and restarted or else subsequent user requests for these desktops will fail.

This issue occurs because existing, running desktops will be using NAT and will not have a public IP address.

After the pools settings have been changed, subsequent requests for that desktop will attempt to access the desktop via the private (and unaccessible) NAT IP.



Microsoft Remote Desktop Providers Only

Only one pool can be created per Microsoft Remote Desktop provider.

Oracle VDI Manager Steps

1. [Sign into the Oracle VDI Manager.](#)
2. Select a Company in the Pools category.
3. Click New in the Pools table.
A New Pool wizard is displayed.
 - a. For Oracle VDI and Microsoft Hyper-V desktop providers, choose one of the following pool types:
 - Dynamic pools are filled with cloned flexible desktops. If you choose the Dynamic Pool type, the desktops in the pool will be temporarily assigned to users. They will be recycled each time the user logs out. This pool type is considered dynamic because the user-desktop assignments are often changing.
 - Growing pools are filled with cloned personal desktops. If you choose the Growing Pool type, the desktops in the pool will be permanently assigned to users. Users can log in and out without losing their desktop settings. The desktops are not recycled.
 - Manual pools are initially empty. They are filled manually by importing personal desktops. The Manual Pool type should be used if cloned desktop assignment is not an option.



For Microsoft Remote Desktop providers, pool types do not apply.

5. Add Users to Pools, and Assign Tokens to Users

How to Assign Users to Pools or Desktops

You can either assign a user to a specific desktop, or you can assign a user (or user group) to a desktop pool. If a user is assigned to a pool and requests a desktop, the Oracle VDI Core will automatically deliver any available desktop from the pool.

For Microsoft Remote Desktop providers, users cannot be directly assigned to desktops. Instead, users or groups are assigned to Remote Desktop Services pools.

Oracle VDI Manager Steps

1. [Sign into the Oracle VDI Manager.](#)
2. Select a Company in the Users category.
 - To assign a user or a group, select the Users and Groups tab in the Company's profile.
 - a. Search for users and groups in the user directory.
You can specify user name or user ID.
 - b. Click on the user name, and click the Assignment tab in their profile.
 - c. Select Add in the Assigned Desktops or Assigned Pools table, depending on your preference.
 - To assign a custom group, select the Custom Groups tab in the Company's profile.
 - a. Click the Assignment tab in the custom group's profile.
 - b. In the Assigned Pools table, select Add.
3. Select the checkbox for the desktop or pool assignment, and click OK.

You can always see which pools and desktops are associated with a user by clicking the Summary tab of the user or group's profile.

How to Assign Tokens to Users

In a Sun Ray environment, users may take advantage of smart cards (tokens) to initiate a session on a Sun Ray Thin Client (DTU). With Oracle Virtual Desktop Infrastructure, you can assign a token to a user. It is also possible to assign desktops directly to specific tokens. Once tokens have been created, they can be assigned to pools and desktops.

Oracle VDI Manager Steps

1. Sign into the Oracle VDI Manager.
2. Select a Company in the Users category, and the Users and Groups tab in the Company's profile.
3. Search for a user in the user directory.
4. Click on the user name, and click the Token tab in their profile.
5. Assign the token.
 - If you are assigning a new token, click New in the Tokens table. Then Enter the ID of the new token (e.g. Payflex.500d9b8900130200).
 - If you are assigning an existing token, select Add in the Tokens table. Then search for the desired token.



Token IDs can be copied directly from the SRSS Admin GUI (see the Tokens tab and display Currently Used Tokens).

CLI Steps

1. Open a terminal window and sign in to the server with root credentials.
For a multi-host configuration, use one of the Oracle VDI Core Secondary hosts.
2. Assign a token.
 - Assign a new token to a user.

```
# /opt/SUNWvda/sbin/vda token-create -p token-id=<token ID>,user=<user ID>
```

- Example – Creating a new token and assigning it to a user

```
# /opt/SUNWvda/sbin/vda token-create -p
token-id=Payflex.600a7c5600130200,user=jd123456
Token Payflex.600a7c5600130200 created
```

- Assign an existing token to a user.

```
# /opt/SUNWvda/sbin/vda token-create -p token-id=<token ID>,user=<user ID>
```

- Example – Assigning an existing token to a user

```
# /opt/SUNWvda/sbin/vda token-setprops -p user=jd123456
Payflex.600a7c5600130200
Token properties updated
```

6. Access a Desktop

The two easiest desktop access methods for a demo setup are Sun Ray and Remote Desktop Connection because they are already configured with Oracle VDI Core configuration. The following information will explain a quick way to get them up and running. If you would like to configure the advanced options for these software, or use Sun Secure Global Desktop Software (SGD) as your

desktop access method, please refer to the main documentation set on the [Accessing Desktops](#) page.

How to Access Desktops with Sun Ray

Sun Ray Software supports [Sun Ray Thin Clients](#) and [Oracle Virtual Desktop Clients](#) as virtual desktop access methods. The steps below refer describe desktop access with a Thin Client. For detailed information about desktop access with Sun Ray, see the [Accessing Desktops](#) page.

Steps

If you have already directed your Thin Client to your Oracle VDI Core host, you will not need to do any extra configuration. Simply insert a user smartcard, and enter user credentials to access your desktop.

- Turn off authentication (optional).
This information is included to simplify a demo setup, but it is not a required step. If you decide to turn off authentication, no password will be required at the Oracle VDI Desktop Selector screen. If you required authentication for the guest operating system during virtual machine creation, the user must still authenticate themselves in the guest operating system.

Executed the following command on the Oracle VDI Core host:

```
/opt/SUNWvda/sbin/vda settings-setprops -p clientauthentication=Disabled
```



If you are already working from a Thin Client directed at a server other than your Oracle VDI Core host, you will need to redirect the Thin Client. Refer to the [How to Redirect a DTU Session](#) on the SRSS 4.2 information site for further details.

How to Access Desktops with Microsoft Remote Desktop Connection

For detailed information about desktop access with Microsoft Remote Desktop Connection, see the [Accessing Desktops](#) page.

Steps

1. Open a Windows Remote Connection client either on Windows or Mac OSX.
2. Enter details for the Oracle VDI Core host and provide a user ID as the connection parameter.
3. Establish the connection to access your desktop.