

Terminal  
Services  
Edition 6.0

# Introducing Virtual Desktop Infrastructure in Propalms TSE 6.0



## **1. Introduction:**

Propalms TSE 6.0 introduces the Virtual Desktop Infrastructure that lets you harness the power of virtualization technology. This feature enables you to provision one dedicated virtual machine to a user instead of providing him just the remote desktop on the server. This opens up many interesting possibilities and also lets you handle some of the situations like providing support for legacy applications that may have problems when used simultaneously via Terminal Services or cases where a user requires enhanced rights to their environment. The possibility of providing every user their own virtual machine can address some such corner cases which can't easily be solved using just Terminal Services.

## **2. Scope:**

Propalms VDI enables you to connect to a virtual machine through the existing Propalms LaunchPad and Propalms Client Manager Interface from a Windows based PC Client. Propalms VDI can support only that guest operating system in a Virtual Machine which lets you remotely access a machine using RDP Protocol. Here is a list of Guest Operating systems that are supported by Propalms VDI;

1. Windows Vista Business, Ultimate and Enterprise
2. Windows XP Professional
3. Windows 2000 Server
4. Windows 2003
5. Windows 2008

In other words Propalms VDI does not support any Linux Distribution as a guest OS in the Virtual Machine.

This release of Propalms VDI is only supported on Windows based PC Clients running Propalms Connection Manager Software. It is not supported on Windows CE, Linux or Macintosh Client platforms currently.

This release of Propalms VDI only supports VMware Server. Microsoft Virtual Server or any other Virtualization technology is not supported at this point in time.

Propalms TSE 6.0 introduce one more type of TSE role namely VD (Virtual Desktop) Server. This is the Server that hosts and manages the Virtual Machines. Propalms VD Servers are Load Balanced just like the Application Servers. Propalms TSE Load Balancers collects the load and performance data using various WMI counters from the VD Servers and selects the least loaded server for starting a virtual machine.

Propalms TSE 6.0 does not provide or facilitate the creation of Virtual Machine Images. The VMware images for the Virtual Machine must be created separately outside the Propalms TSE System using VMware Server or any such VMware product that lets you create VMware images.

### **3. Prerequisites:**

Propalms VD Server Role can be installed on Windows Server 2000, Windows Server 2003 and Windows Server 2008 only.

The machine where Propalms VD Server Role is being installed must have VMware Server version 1.0.4 or above installed on it. *VM player and VM workstation or any other VMware product is not supported at the time of this release.*

The VMware Server is available for download and use without any fees, from the VMware website.

Since it is not possible to install required VMware products inside a Virtual Machine, it is not possible to install Propalms VD role on a Virtual machine, it must be installed on a Physical Machine.

### **4. Installation:**

Just like most other Propalms TSE Roles, VDI Role can be installed in two ways. You can either push the Role using console or you can select the role while joining a team. The following section describes the installation procedure for the Propalms VD Server Role.

#### **4.1 Using Propalms Management Console to add Propalms VD Server role**

- i. To install VD Server role go to "Manage" menu, "Servers" submenu on the Propalms Management Console.
- ii. Select the server on which you want to push VD server role and then click on "Add Role" from actions menu. It is assumed that you have already added a machine that has VMware Server installed on it as server in the Propalms TSE System.
- iii. Select VD server role from "Add Roles" page then click "Next".
- iv. Then it will ask for confirmation click "Add" to add VD Server role.

- v. When you click on add Role an installation window will appear on the server console for a while and it will start installing VD server role. During this time you are redirected to the server's page where you can see all your servers.
- vi. After the process has completed, on following page you will see that VD server role has been installed on the server.

#### **4.2 Using Installer CD to install the VD Role while joining a Team**

- i. You can add the VD server role on the server by using Propalms installer. Start Installing Propalms on the server where you want to push VD server role, accept the license click next until you see the following dialog box.
- ii. Select "Join Existing Team" option then click next.
- iii. After clicking next the installer will check for prerequisites. If all requisites are met, then click next. Please enter database name and server name for the team you wish to join on the respective dialog box. Select VD server role and click next.
- iv. Installer will start installing VD server role.
- v. On "Manage -> Servers" page of console you can see that the new server is added in the team with VD server role installed.

### **5. Provisioning a Virtual Machine:**

**5.1** Before you can provision a Virtual Machine to a user you must have a VMware image of a Virtual Machine properly created using some VMware product like VMware Server. As already mentioned above the guest OS can only be one of the following;

- Windows Vista Business, Ultimate and Enterprise
- Windows XP Professional
- Windows 2000 Server
- Windows 2003
- Windows 2008

**5.2** It is very important that one must know the actual host name of the Virtual Machine. Since the virtual machine can be configured to use DHCP to acquire an IP, and get a different IP addresses every time. Hence the host name is used instead of IP Address. This dependency on the host name of the guest operating system of the Virtual Machine may be considered as a limitation at this point of time, efforts are being made to remove this dependency and future release of Propalms VDI may not have this host name dependency.

**5.3** Since the Propalms Connection Manager will open a RDP Session with this virtual machine, it is but obvious that Remote Desktop feature must be installed and enabled on the Virtual Machine before provisioned.

**5.4** Also RDP port 3389 should not be blocked by any Firewall present on the virtual machine.

**5.5** If Virtual machine is on a domain, then the domain user credentials used to log on to the Propalms TSE LaunchPad can be readily used to log on to the Virtual Machine to give the user a seamless experience. But for this to work the users trying to access this virtual machine must be given enough rights to log on to this machine using Remote Desktop. In other words such users must be present in *Remote Desktop Users group* of that virtual machine.

There two ways to Provision Virtual Machines to users;

- I. **Individual VM Provisioning:** This process will let you provision a single Virtual Machine to an individual user at a time.
- II. **Advance Assignment:** This feature allows you to provision multiple Virtual Machines to multiple users in single process. Each user will be assigned a separate Virtual Machine, depending on some rules for naming the Virtual Machine VMware images. For assigning multiple virtual machines to multiple Users, the administrators must follow some naming scheme while creating the VMware images so that the user to VMware image mapping can be established without having to specify image name for each and every user separately. This naming scheme is referred as "Rule".

Go to Manage menu and select Virtual Desktop off the management console. You will get the Virtual Desktop page. On this page information about all the Virtual Machines are displayed.

From this page you can,

- i) Add virtual machines in Propalms to assign to the users.
- ii) Update Virtual Machine information.
- iii) Remove assigned Virtual Machine.
- iv) Advance Assignment: You can add multiple virtual desktop for multiple users and publish them on multiple virtual desktop servers in a single operation as explained above.

### Adding a Virtual Machine:

- a) If you want to add Virtual Machine in your team click on "Add Virtual Machine".
- b) Select the server on which Virtual Desktop to be hosted and click "Next"
- c) Enter Virtual Machine information e.g. Display name, path etc. and click "Next"  
The Virtual image file name and file path is the exact name of the .vmx file and path where the .vmx file is saved.
- d) Select the users to which the virtual machines will be available and click "Next".
- e) Review Virtual Machine information you have given, if ok click "Add" to add virtual Machine.
- f) Go to Manage tab and select Virtual Desktop menu, here you can see added Virtual Machine information.

### Updating a Virtual Machine:

- a) Select Virtual Machine whose information you want to update and click on "Update Virtual Machine"
- b) Update the information of Virtual Machine and Click "Update"
- c) You will see Virtual Machine information has been updated.

### Removing a Virtual Machine:

- a) Select Virtual Machine to remove from your team. Click on "Remove Virtual Machine".
- b) Click on "Remove" to remove Virtual Machine from Propalms TSE System.

### Advance Assignment or Multiple VM Provisioning:

- a) If you want to add multiple virtual desktop for multiple users and publish them on multiple virtual desktop servers, click on "Advance Assignment"
- b) Select Virtual Desktop server on which multiple desktops are to be hosted and click "Next"
- c) Select the users to which Virtual Machine(s) will be available and click "Next"
- d) Enter Virtual Machine information e.g. it's name, description, path of the virtual image and select the rule.

*Rule 1 (User\_, Free Text):* Internal machine name will be "username\_Free Text" e.g. User name is John and Free Text is xp then machine name will be "John\_xp".

*Rule 2 (Free Text, User\_):* Internal machine name will be "xp\_John".

*Rule 3(Free Text, User, Free Text):* Internal machine name will be xp\_John\_xp.

- d) Review the Virtual Machine information and do the modification if necessary then click "Add".
- e) Go to "Manage" menu, "Virtual Desktop" submenu. Here you will find newly added virtual machines in your team.

**Limitations, Known Issues:**

1. You can not use Propalms VDI to provision Virtual Machines running any operating system like Linux Distribution as it does not support RDP.
2. Native Client on PC, Linux Client, Java Client, Macintosh Client and Windows CE based client do not support Propalms VDI Feature in this release.
3. Propalms VD Role can not be installed on a Virtual Machine because of the limitations of VMware itself.