

VMware View Planner User Guide

VMware View Planner 4.4



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About this Guide

1

The VMware View Planner User Guide provides information about deploying VMware View Planner and instructions for performing a VDI performance test.

Intended Audience

This document is intended for anyone who wants to install and run View Planner. The information is written for experienced Windows or Linux system administrators who are familiar with virtual machine technology, virtual desktop infrastructure and datacenter operations.

VMware Technical Publications Glossary

VMware Technical Publications provides a glossary of terms that might be unfamiliar to you. For definitions of terms as they are used in VMware technical documentation, go to <http://www.vmware.com/support/pubs>.

Security Information

2

You must exercise caution and good judgment about where you deploy View Planner. View Planner is not intended to be used in production environments.

Security Warning

The setup procedure for View Planner may open ports or present other security issues that are not acceptable in many secure environments. A View Planner deployment is intended only for a performance test environment and may not be hardened sufficiently for all security requirements. Do not install View Planner harness or agent on virtual machines or OS instances that have been or may ever be deployed in a production environment, or that contain sensitive or personal information.

This chapter includes the following topics:

- [View Planner Port Requirements](#)

View Planner Port Requirements

View Planner uses a specific list of ports. Ensure that you adhere to the port requirements.

Port Requirements

Port	Purpose
22	SSH
68	DHCP
8080	View Planner agent to the harness communication.
8081	View Planner web Interface.
80	View Planner web interface over HTTP and agent to harness data upload.

Caution Above table lists port required for a default view planner deployment. If you want to test your own application by plugging in a custom workload, you may need to open additional ports based on the application requirements.

Overview of VMware View Planner

3

VMware View Planner is a workload generator that simulates typical user operations such as typing in Microsoft Word, playing a PowerPoint slideshow, reading Outlook emails, browsing PDF and Web pages and watching video.

Caution View Planner must not be deployed in production environments. See section [Chapter 2 Security Information](#) for details.

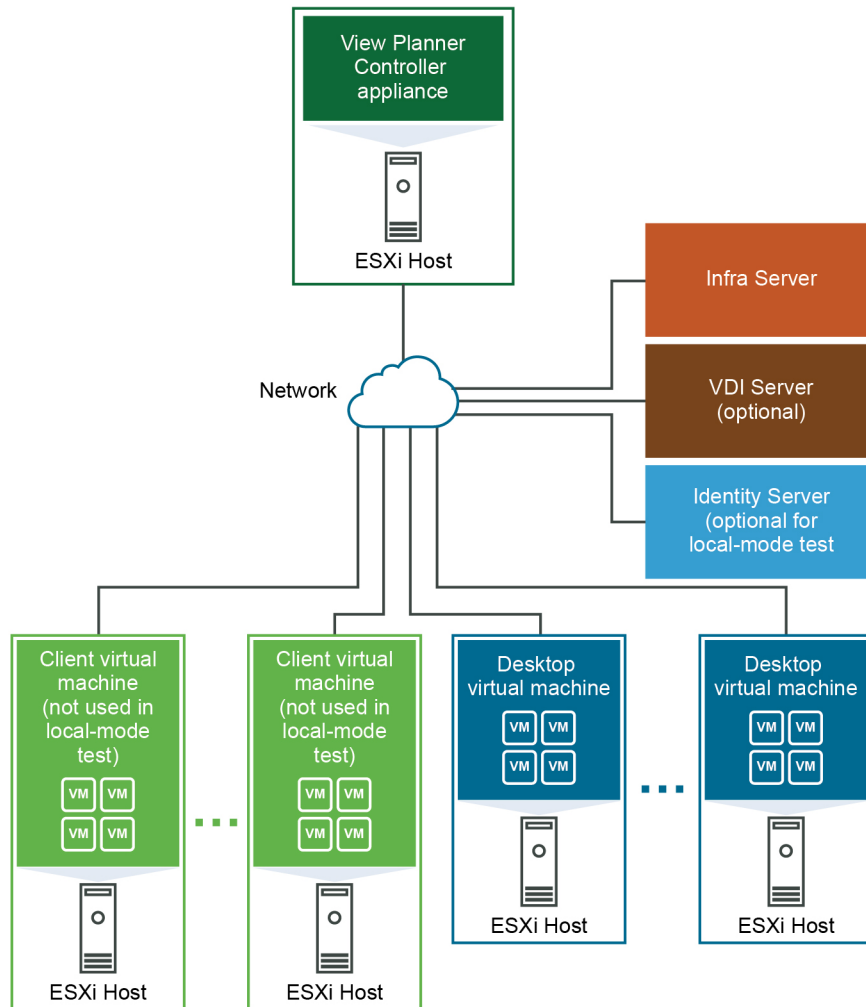
Caution View Planner 4.4 results are not compatible with 4.2 and below versions. If you need to compare results with previous versions set key `ENABLE_LEGACY_RAMPUP_TIME` to 1 in Advanced configuration.

View Planner consists of these components:

- Several desktop virtual machines running on one or more ESXi hosts.
- Several client virtual machines running on one or more ESXi hosts.

Note Client virtual machines are used only in the case of remote-mode runs and not for local-mode runs.

- Single View Planner controller appliance running on an ESXi host.

Figure 3-1. Conceptual Diagram of Typical VMware View Planner Layout

This chapter includes the following topics:

- [VMware View Planner Operation](#)
- [VMware View Planner User Interface](#)
- [Understanding VMware View Planner WorkProfiles](#)
- [Understanding VMware View Planner Reports](#)

VMware View Planner Operation

You can operate VMware View Planner in either remote mode or local mode.

When you start a View Planner run, a controller running in the virtual appliance powers on the desired number of desktops and client (for remote-mode runs) virtual machines, manages the workload execution, and gathers the result.

Remote Mode

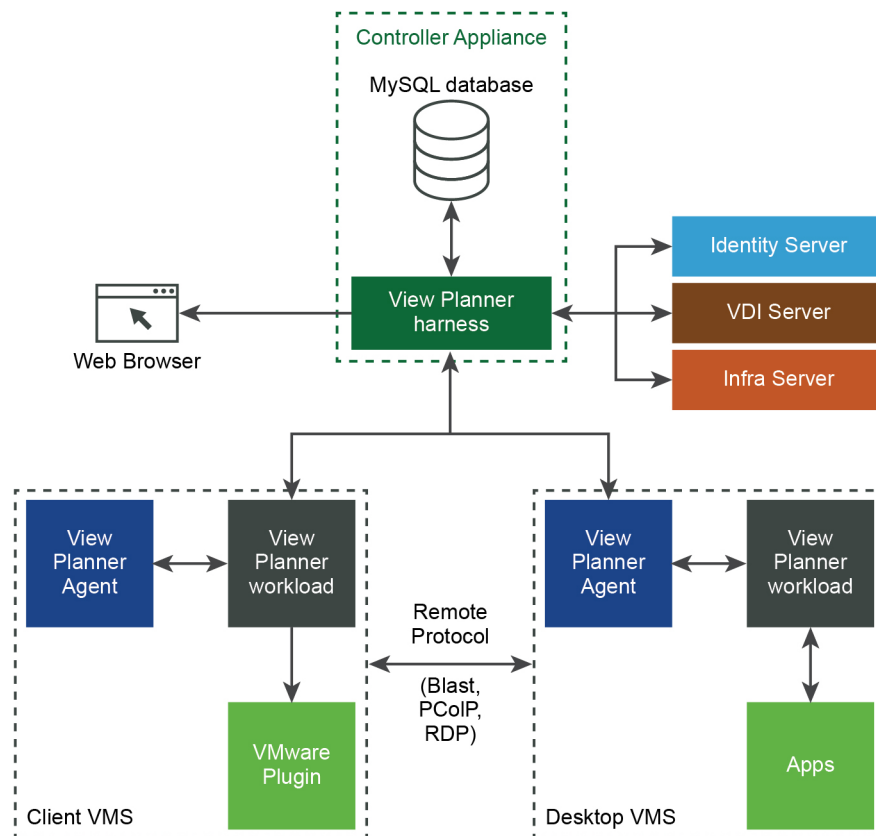
The Remote mode represents real-world VDI deployments. It uses client virtual machines to simulate real users. However, it requires more hardware than the local and passive mode operation.

When you initiate a remote-mode run, the harness powers on the configured number of desktop virtual machines and the same number of client virtual machines. After the virtual machines boot, they report their readiness to the harness. The harness then arranges for each client virtual machine to control and monitor a desktop virtual machine. After the configured number of client-desktop virtual machine pairs are established, the run begins.

During the run, each client virtual machine acts similar to a user, taking its designated desktop virtual machine through a series of predefined operations while measuring the performance of that desktop virtual machine.

When the run is completed, both the desktop and client virtual machines report the results to the harness and the result is stored in a database for post-processing.

Figure 3-2. VMware View Planner Operation (Remote Mode)



Passive Remote Mode

A client virtual machine can connect with multiple desktops in the passive mode configuration. Passive mode requires fewer client machines in comparison to remote mode while simulating network and system load of VDI protocols.

In this mode, a client virtual machine can act as a passive user and can connect with multiple desktops. Therefore, you can test the same number of desktops with lesser hardware while simulating network and system load of VDI protocols in desktops .

During the run, the View Planner agent in the desktop virtual machine acts as a user and takes the virtual machine through a series of predefined operations while measuring its performance.

When the run is completed, the desktop virtual machines report their results to the harness and the result is stored in a database for post-processing.

Local Mode

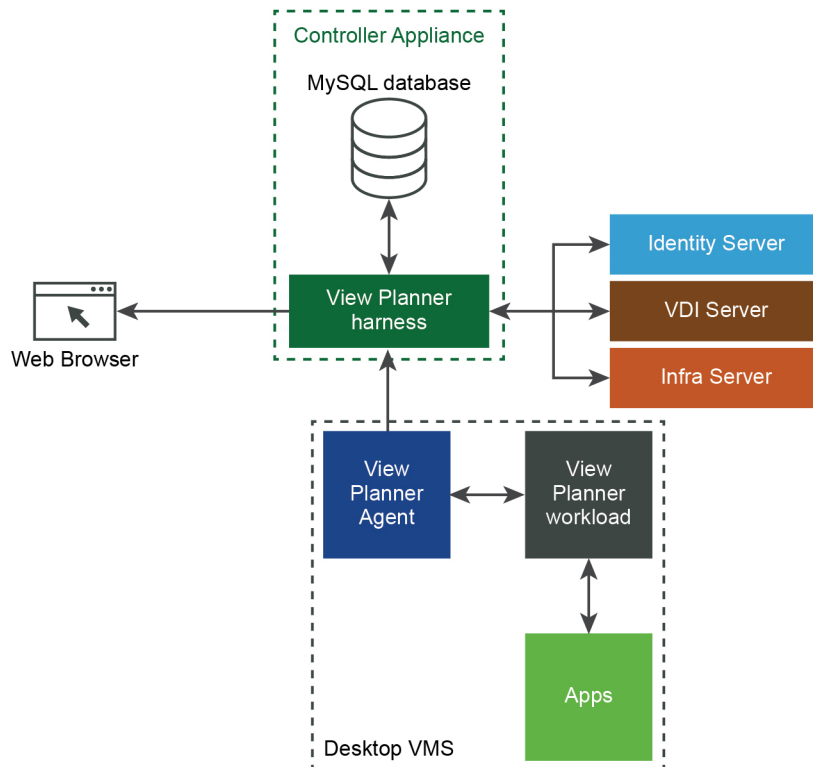
Local mode does not use client virtual machines and, therefore, needs a lesser hardware to test the same number of virtual machines. This mode does not simulate the network and system load of VDI protocols and is not an accurate representation of real-world VDI deployments.

When you initiate a local-mode run, the harness powers on the configured number of desktop virtual machines. After the virtual machines boot, they report their readiness to the harness, which then starts the run.

During the run, the View Planner agent in the desktop virtual machine acts like a user, taking the virtual machine through a series of predefined operations while measuring its performance.

When the run is completed, the desktop virtual machines report their results to the harness, where they are stored in a database for post-processing.

Figure 3-3. VMware View Planner Operation (Local Mode)



VMware View Planner User Interface

You can interact with the View Planner using the web UI or the command-line Interface provided by the controller appliance.

Using the View Planner User Interface, you can:

- Define the Test-bed configuration.
- Provision the desktop and client virtual machines.
- Monitor progress of View Planner runs.
- View results and reports.

Command-line interface can also be used for automating View Planner operations.

Understanding VMware View Planner WorkProfiles

Work Profile defines the group of application workloads to be executed during the run. You can either select one of the standard work profiles or create your own based on the applications used by users.

Work Profile Name	standardTestProfile_chrome
Description	This work profile can be used for the standard benchmark test.
Workloads	vp_Adobe, vp_Chrome, vp_msExcel, vp_msOutlook, vp_msPowerPoint, vp_msWord, vp_ChromeWebAlbum, vp_winMediaPlayer
Recommended think time	5 seconds
Time taken for 1 iteration	15 minutes approximately
Recommended minimum iteration count	5

Work Profile Name	standardTestProfile_edge
Description	This work profile can be used for the standard benchmark test.
Workloads	vp_Adobe, vp_msExcel, vp_msOutlook, vp_msPowerPoint, vp_msWord, vp_winMediaPlayer, vp_EdgeWebAlbum
Recommended think time	5 seconds
Time taken for 1 iteration	15 minutes approximately
Recommended minimum iteration count	5

Work Profile Name	fileOperationsTestProfile
Description	This work profile can be used to test file operations.
Workloads	p_RandomFileGenerator, vp_MoveFiles, vp_CompressFolder, vp_CopyFiles
Recommended think time	5 seconds
Time taken for 1 iteration	2–5 minutes approximately

Work Profile Name	fileOperationsTestProfile
Recommended minimum iteration count	5
File size	0.125 GB
Work Profile Name	highMemoryTestProfile
Description	This work profile can be used to test the memory. This work profile opens multiple chrome tabs in the background to stress on memory.
Workloads	Vp_highMemPreRunChrome, vp_msExcel, vp_msPowerPoint, vp_msWord, vp_highMemPostRunChrome
Recommended think time	15 seconds
Time taken for 1 iteration	15 minutes approximately
Recommended minimum iteration count	6
Work Profile Name	User_Experience_Profile
Description	This Experimental work profile is being developed to measure the user experience like drag and drop, scrolling smoothness among others.
Workloads	vp_scroll, vp_WindowDragDrop, vp_fileDragDrop
Recommended think time	5 seconds
Time taken for 1 iteration	
Recommended minimum iteration count	5
Work Profile Name	Ubuntu_Test_Profile
Description	This work profile contains all the workloads supported with Ubuntu.
Workloads	vp_RandomFileGenerator, vp_MoveFiles, vp_CompressFolder, vp_CopyFiles, vp_Chrome, vp_ChromeWebAlbum, vp_FirefoxVideo
Recommended think time	5 seconds
Time taken for 1 iteration	10 minutes approximately
Recommended minimum iteration count	5
Work Profile Name	Proven_Storage_Certification
Description	This work profile is used for VMware proven storage certification.
Workloads	vp_Adobe, vp_Chrome, vp_msExcel, vp_msOutlook, vp_msPowerPoint, vp_msWord, vp_ChromeWebAlbum, vp_winMediaPlayer, vp_RandomFileGenerator, vp_MoveFiles, vp_CopyFiles
Recommended think time	5 seconds
Time taken for 1 iteration	15 minutes approximately
Recommended minimum iteration count	5

Understanding VMware View Planner Reports

When a View Planner run completes, the View Planner controller appliance generates a run report containing a summary of the run results.

View Planner workload mix consists of multiple applications running in the desktop virtual machines and performing user operations. These user operations are separated into the three groups:

Group A	Interactive, CPU bound operations
Group B	IO bound operations
Group C	long running and other miscellaneous operations

The operations in Groups A and B are used to determine Quality of Service, while the operations in Group C are used to generate additional load.

View Planner Quality of Service

Quality of Service (QoS), determined separately for Group A user operations and Group B user operations, is the 95th percentile latency of all the operations in a group. The default thresholds are 1.0 seconds for Group A and 6.0 seconds for Group B.

View Planner Application Response Time

View planner application response time table reports the time taken by each work load operation.

Application response time table reports following info about workload operations:

- Operation Name.
- Operation Group (Group A/B/C).
- Executed / Expected count of an operation.
- The Mean value of the operation latency as reported by all virtual machines under test.
- The Median value of the operation latency as reported by all virtual machines under test.
- Variance: Latency difference between slowest and fastest operation.

How to Run VMware View Planner

4

VMware View Planner can be configured to run in various test modes like Remote, Local, RDSH.

Caution View Planner must not be deployed in production environments. See section [Chapter 2 Security Information](#) for details.

Caution

View Planner 4.4 results are not compatible with 4.2 and below versions. If you need to compare results with previous versions set key `ENABLE_LEGACY_RAMPUP_TIME` to 1 in Advanced configuration.

This chapter includes the following topics:

- [Perform a Local Mode Test](#)
- [Perform a Remote or Passive Mode Test](#)
- [Perform a Remote or Passive Mode RDSH Test](#)
- [Perform a Remote or Passive Mode RDSH Application Test](#)

Perform a Local Mode Test

The local mode test is simpler to configure and requires minimum hardware to test the same number of desktops as client virtual machines are not needed.

Procedure

- 1 Deploy View Planner harness using the steps provided in [Deploying the View Planner Harness](#).
View Planner harness web UI must be accessible.
- 2 Configure the Infra server and VDI server in View Planner Harness using the steps in [Configuring the View Planner Harness](#).
- 3 Use one of the following options to prepare the desktop Golden VM:
 - For windows, see [Setting Up the View Planner Windows Desktop Virtual Machines](#).
 - For Linux, see [Setting Up the View Planner Linux Desktop Virtual Machines](#).
- 4 You can use one of the two following options for creating desktop virtual machines for tests:
 - Create desktop pool using VMware Horizon View.

- Create desktop virtual machines using steps provided in [Creating Clones Using View Planner](#).
 - Use desktop Golden VM created in Step 3 as the parent VM.
 - Select the snapshot and Sysprep / QuickPrep profile created in Step 3.
- 5 Create a local mode run profile using steps provided in [Creating a Run Profile](#).
 - a Set the **Run Mode** to `local`.
 - b Set **Desktop Prefix** to the pool prefix if you are using a VMware Horizon View pool.
 - 6 Start the run using steps provided in [Starting a View Planner Run](#).

Perform a Remote or Passive Mode Test

This mode represents real-world VDI deployments. However, it requires more hardware than the local mode operation.

Procedure

- 1 Deploy View Planner harness using steps provided in [Deploying the View Planner Harness](#).
View Planner harness web UI must be accessible.
- 2 Configure Infra server, Identity Server, and VDI server in View Planner Harness using steps in [Configuring the View Planner Harness](#).
- 3 Use one of the following option to prepare the desktop Golden VM:
 - For windows, use [Setting Up the View Planner Windows Desktop Virtual Machines](#).
 - For Linux, use [Setting Up the View Planner Linux Desktop Virtual Machines](#).
- 4 Create desktop pool using VMware Horizon View.
 - Use the desktop Golden VM created in Step 3 as the parent VM.
 - Select the snapshot and Sysprep/QuickPrep profile created in Step 3.

Disable configuration **Global settings>General>Hide domain list in client user interface** in the Horizon view UI.
- 5 Prepare the client Golden VM using steps provided in [Setting Up the View Planner Windows Client Virtual Machines](#).
- 6 Create client virtual machines using the steps provided in [Creating Clones Using View Planner](#).
 - Use the client Golden VM created in Step 5 as the parent VM.
 - Select the snapshot and Sysprep/QuickPrep profile created in Step 5.
 - For [Remote Mode](#) test, create equal number of client virtual machines as desktops.
 - For [Passive Remote Mode](#) test, client count should be equal to the desktop count divided by `max_sessions_per_client_passive_mode`. The default value of `max_sessions_per_client_passive_mode` is set to 25 and can be modified using steps provided in [Chapter 8 Advanced Configuration](#).

- 7 Create a remote mode run profile using steps provided in [Creating a Run Profile](#).
 - a Set the **Run Mode** to *remote* or *passive*.
 - b Set **Desktop Type** to *vdi*.
 - c Set **Desktop Prefix** to the VMware Horizon View pool prefix.
 - d Set **Client Prefix** to the client virtual machine prefix.
- 8 Start the run using steps provided in [Starting a View Planner Run](#).

Perform a Remote or Passive Mode RDSH Test

You can configure View Planner for Remote Desktop Session Host (RDSH).

Procedure

- 1 Deploy View Planner harness using steps provided in [Deploying the View Planner Harness](#).
View Planner web UI must be accessible.
- 2 Configure Infra server, Identity Server, and VDI server in View Planner Harness Using Steps in [Configuring the View Planner Harness](#).
- 3 Prepare the RDSH server Golden VM using steps provided in [Setting Up the View Planner Windows Desktop Virtual Machines](#).
- 4 Create an RDSH Farm and RDSH desktop pool using VMware Horizon View.
 - Use the RDSH Golden VM created in the Step 3 as the parent VM.
 - Select the snapshot and Sysprep/QuickPrep profile created in Step 3.
 Disable configuration **Global settings>General>Hide domain list in client user interface** in VMware Horizon View UI.
- 5 Prepare the client Golden VM using steps provided in [Setting Up the View Planner Windows Client Virtual Machines](#).
- 6 Create client virtual machines using the steps provided in [Creating Clones Using View Planner](#).
 - Use the client Golden VM created in Step 5 as the parent VM.
 - Select the snapshot and Sysprep/QuickPrep profile created in Step 5.
 - For [Remote Mode](#) test, create equal number of client virtual machines as desktops.
 - For [Passive Remote Mode](#) test, client count should be equal to the desktop count divided by `max_sessions_per_client_passive_mode`. The default value of `max_sessions_per_client_passive_mode` is set to 25 and can be modified using steps provided in [Chapter 8 Advanced Configuration](#).
- 7 Create a remote mode run profile using steps provided in [Creating a Run Profile](#).
 - a Set the **Run Mode** to *remote* or *passive*.
 - b Set **Desktop Type** to *rdsh_desk*.

- c Set **Desktop Prefix** to the VMware Horizon View RDSH farm prefix
 - d Set **Client Prefix** to the client virtual machine prefix.
- 8 Start the run using steps provided in [Starting a View Planner Run](#).

Perform a Remote or Passive Mode RDSH Application Test

You can configure View Planner for the Remote Desktop Session Host(RDSH) Application test.

Procedure

- 1 Deploy View Planner harness using steps provided in [Deploying the View Planner Harness](#).
View Planner harness web UI must be accessible.
- 2 Configure Infra server, Identity Server, and VDI server in View Planner Harness Using Steps in [Configuring the View Planner Harness](#).
- 3 Prepare the RDSH server Golden VM using steps provided in [Setting Up the View Planner Windows Desktop Virtual Machines](#).
- 4 Create an RDSH farm and application pool using VMware Horizon View.
 - While creating RDSH farm, use the RDSH Golden VM created in Step 3 as the parent VM.
 - Select the snapshot and Sysprep/QuickPrep profile created in Step 3.

Create a new manual RDSH application pool using RDSH farm. Enter the name and ID of the application pool as **viewplanner** and path of the application to C:\viewplanner\vp_default.bat.

Disable configuration **Global settings>General>Hide domain list in client user interface** in Horizon view UI.
- 5 Prepare the client Golden VM using steps provided in [Setting Up the View Planner Windows Client Virtual Machines](#).
- 6 Create the required number of the client virtual machines using the steps provided in [Creating Clones Using View Planner](#).
 - Use the client Golden VM created in Step 5 as the parent VM.
 - Select the snapshot and Sysprep/QuickPrep profile created in Step 5.
 - For [Remote Mode](#) test, create equal number of client virtual machines as desktops.
 - For [Passive Remote Mode](#) test, client count should be equal to the desktop count divided by max_sessions_per_client_passive_mode. The default value of max_sessions_per_client_passive_mode is set to 25 and can be modified using steps provided in [Chapter 8 Advanced Configuration](#).

- 7 Create a remote mode run profile using steps provided in [Creating a Run Profile](#).
 - a Set the **Run Mode** to *remote* or *passive*.
 - b Set **Desktop Type** to *rdsh_apps*.
 - c Set **Desktop Prefix** to the VMware Horizon View RDSH farm prefix.
 - d Set **Client Prefix** to the client virtual machine prefix.
- 8 Start the run using steps provided in [Starting a View Planner Run](#).

How to Set Up VMware View Planner

5

VMware View Planner includes two components: View Planner harness and the View Planner agent.

Caution View Planner must not be deployed in production environments. See section [Chapter 2 Security Information](#) for details.

Caution View Planner 4.3 results are not compatible with previous versions. If you need to compare results with previous versions set key `ENABLE_LEGACY_RAMPUP_TIME` to 1 in Advanced configuration.

- The View Planner harness is released as an OVA file.
- The View Planner agent is released as an installer that must be installed in test virtual machines (desktop and clients).

This chapter includes the following topics:

- [Deploying the View Planner Harness](#)
- [Configuring the View Planner Harness](#)
- [Changing the View Planner Harness IP Address](#)
- [Setting Up the View Planner Windows Desktop Virtual Machines](#)
- [Setting Up the View Planner Windows Client Virtual Machines](#)
- [Setting Up the View Planner Linux Desktop Virtual Machines](#)
- [Setting Up the View Planner Linux Client Virtual Machines](#)
- [Setting Up the SSL Certificate in Microsoft Active Directory](#)
- [Creating Clones Using View Planner](#)
- [Registering a Workload to View Planner Harness](#)
- [Creating a Work Profile](#)
- [Creating a Run Profile](#)
- [Starting a View Planner Run](#)
- [Setting Up the User Experience Workloads](#)
- [Setting Up Microsoft Edge Driver](#)

■ Enabling vSAN Data Collection

Deploying the View Planner Harness

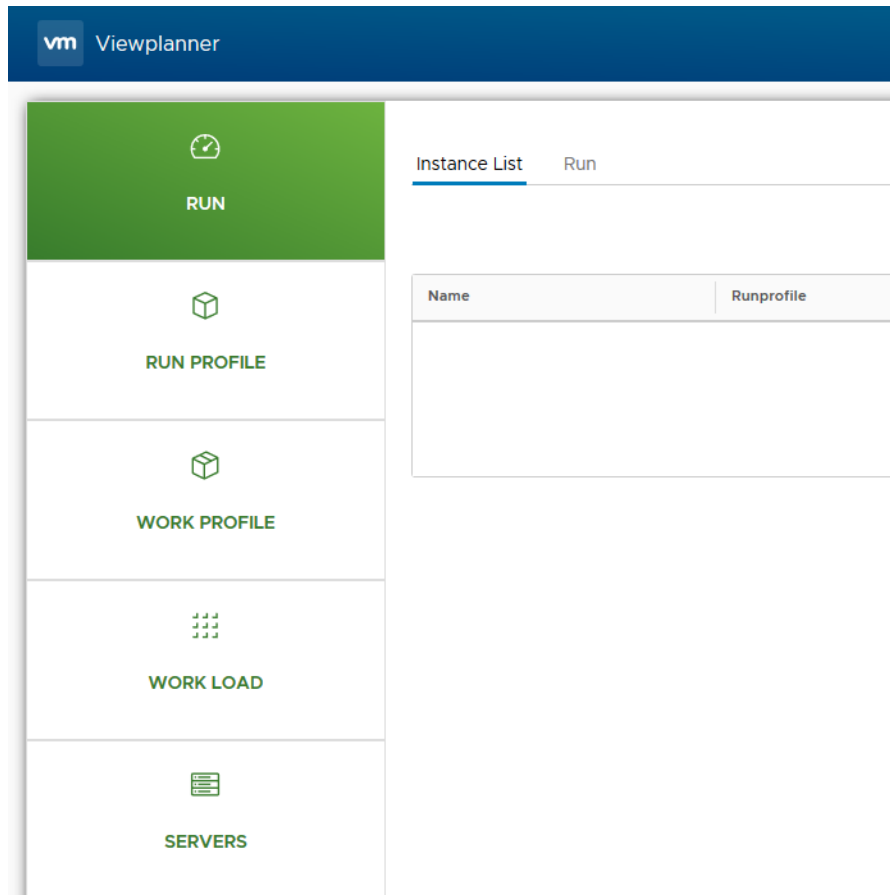
You can deploy the View Planner harness using the OVA file.

Procedure

- 1 Download the `viewplanner-harness-version.ova` file from <https://www.vmware.com/products/view-planner.html>.
- 2 Start the OVA installation using vSphere Client.
- 3 When prompted, enter the network parameters for static IP allocation. For DHCP, leave it blank.
IP allocation is set to static by default.
- 4 Enter the password when prompted. Wait for the OVA initialization to complete.
Password provided during the OVA initialization is the root password of the harness OS.
- 5 Access the User Interface using the URL `http://Your_Harness_IP/vp-ui`. Use default user name **vmware** and password **viewplanner**.

The first OVA boot can take up to 20 minutes to complete. If the web UI login fails after 20 minutes, try a different browser or incognito mode.

Figure 5-1. VMware View Planner Web User Interface



- 6 Change the default password after first login via web UI when prompted.

New Password should:

- Be different from the default password **viewplanner**.
- Contain at least 8 characters.
- Not contain whitespaces.

- 7 You can also access View Planner harness command-line interface using SSH. Learn more about command tool at [Chapter 6 View Planner Command Tool](#).

Configuring the View Planner Harness

Configuring the harness includes adding a vCenter Server, Active Directory, and the VDI server.

Procedure

- 1 To add an infra server, click the **SERVERS > Infra server > ADD NEW**.

- 2 Enter your vCenter Server details and click **SAVE**.

Figure 5-2. VMware View Planner Add Infra Server

Add Infra Server

Name *	<input type="text" value="unique_vc_name"/>
Type *	<input type="text" value="vCenter"/>
IP/URL *	<input type="text" value="10.10.10.10"/>
Datacenter *	<input type="text" value="datacenter_or_cluster_with_test_VI"/>
Domain *	<input type="text" value="vsphere.local"/>
UserName *	<input type="text" value="administrator"/>
Password *	<input type="password" value="....."/>

SAVE

CANCEL

- 3 To confirm that infra server is working properly, click the **test** option next to the server entry.
- 4 If you are using vSAN datastore, then [Enabling vSAN Data Collection](#).
- 5 Setup SSL certificate and enable LDAP in Microsoft active directory using the steps provided in [Setting Up the SSL Certificate in Microsoft Active Directory](#).

Identity Server (Active Directory) is optional for a local mode run.

- 6 To add Active Directory to View Planner, click **SERVICES > Identity Servers > ADD NEW**.

- 7 Enter your Active Directory details and click **Save**.

Figure 5-3. VMware View Planner Add Identity Server

Add Identity Server

Domain Name *	<input type="text" value="ad.domain.com"/>
Type *	<input type="text" value="Microsoft Active Directory"/>
IP/URL *	<input type="text" value="10.10.10.10"/>
UserName *	<input type="text" value="administrator"/>
Password *	<input type="password" value="....."/>

- 8 To confirm that identity server is working properly, click the **test** option next to your identity server.
- 9 To add aVDI server in View Planner, click **SERVERS > VDI Servers > ADD NEW**.
- 10 Enter your View server details and click **Save**.

Figure 5-4. VMware View Planner Add VDI Server

Add Vdi Server

Name *	<input type="text" value="unique_name"/>
Type *	<input type="text" value="View"/>
IP/URL *	<input type="text" value="10.10.10.10"/>
Domain *	<input type="text" value="view.domain.com"/>
UserName *	<input type="text" value="administrator"/>
Password *	<input type="password" value="....."/>

- 11 To confirm that infra server is working properly, Click the test option next to your VDI server.

Changing the View Planner Harness IP Address

You can change the IP address of View Planner Harness after deployment.

Prerequisites

View Planner Harness should be ready.

Procedure

- 1 Log in to the View Planner Harness using ssh.
Use the root user with the password set during the deployment to log in.
- 2 Execute `/opt/vmware/share/vami/vami_config_net` command to configure the network parameters.
- 3 Choose IP address allocation for `eth0` option from the menu.
- 4 Configure IPv4 address.
- 5 Select DHCP or static IP.
- 6 In case you select static IP, provide the IP address and Netmask when prompted.
- 7 Reboot the View Planner Harness.

Setting Up the View Planner Windows Desktop Virtual Machines

Setting up a Windows desktop virtual machine requires installing components such as VMware Horizon View Desktop agent, View Planner agent, and test applications.

Procedure

- 1 Create a base Windows 10 / 7 VM.
- 2 Shut down the VM.
- 3 Open the `.vmx` file of the VM and add the `monitor_control.pseudo_perfctr = "1"` entry to the file .
This entry provides access of the host timer, which is more accurate than the VM timer.
- 4 Install all required software for the test, such as VMware Horizon View Agent, Microsoft Office, Adobe PDF reader, and Chrome.
- 5 Disable auto lock, auto sleep and screen saver.
- 6 Install View Planner agent on the VM using `viewplanner-agent-version.msi`.

- 7 Enter the harness IP when prompted.

The view planner agent process must have access to read and write registry without windows UAC prompts. Disable windows UAC, if necessary.

- 8 If this is an RDSH server, set *RDSH_SERVER_MODE* to 1 and *AUTOLOGIN_USER_ACCOUNT* to windows user name that is configured for auto login in *C:\viewplanner\config\agent.config*.
- 9 If you are using Microsoft Edge, install the driver using the steps in [Setting Up Microsoft Edge Driver](#).
- 10 Shut down the VM and take a snapshot.
- 11 Create a desktop Sysprep / QuickPrep customization script using vCenter Server.

This script is used while creating clones from golden desktop VM. The customization script must enable auto-login using an admin account. For remote mode test, configure customization script to join Microsoft active directory domain.

Setting Up the View Planner Windows Client Virtual Machines

Setting up a Windows client virtual machine requires installing components such as VMware Horizon View Client and View Planner agent.

Procedure

- 1 Create a base Windows 10 / 7 VM.
- 2 Shut down the VM.
- 3 Open the .vmx file of the VM and add the *monitor_control.pseudo_perfctr = "1"* entry to the file .

This entry provides access of the host timer, which is more accurate than the VM timer.

- 4 Install the VMware Horizon View Client.
- 5 Disable the Identity server Certification check
 - a Open VMware Horizon View Client.
 - b Click Tools option on the top right corner.
 - c click configure SSL.
 - d Select **Do not verify server identity certificates** option.
- 6 Disable auto lock, auto sleep and screen saver.
- 7 Install View Planner agent on the VM using *viewplanner-agent-version.msi*.
- 8 Enter the harness IP when prompted.

The view planner agent process must have access to read and write registry without windows UAC prompts. Disable windows UAC, if necessary.

- 9 If you are using *userExperienceProfile* work profile, setup the workload using steps in [Setting Up the User Experience Workloads](#) .

- 10 Shut down the VM and take a snapshot.

- 11 Create a desktop Sysprep/QuickPrep customization script using vCenter Server.

This script is used while creating clones from golden client VM. Customization script must enable auto-login using an admin account.

Setting Up the View Planner Linux Desktop Virtual Machines

Setting up Linux desktop virtual machine requires installing components such as VMware Horizon View Desktop agent, View Planner agent and test applications.

Procedure

- 1 Create a base Ubuntu / Photon VM.

See [Chapter 11 Support Matrix](#) for supported versions.

For Ubuntu, enable auto-login during installation.

- 2 Shut down the VM.

- 3 Open the .vmx file of the VM and add the *monitor_control.pseudo_perfctr = "1"* entry to the file .

This entry provides access of the host timer, which is more accurate than the VM timer.

- 4 Install all required software for the test, such as VMware Horizon View Agent, Firefox, and Chrome.

- 5 Install View Planner agent on the VM :

- a Download and extract the *viewplanner-linux-agent-c-version.tar.gz* file.

- b Provide executable permission to *agent/linux_agent_setup.sh*.

- c Run the setup script *linux_agent_setup.sh* in agent folder as the root user.

- a Enter the harness IP when prompted.

- 6 Shut down the VM and take a snapshot.

- 7 For Ubuntu, create a VM customization script using vCenter Server.

This script is used while creating clones from Ubuntu VM. The customization script must enable auto-login.

Setting Up the View Planner Linux Client Virtual Machines

Setting up Linux client virtual machine requires installing components such as VMware Horizon View Client and View Planner agent.

Procedure

- 1 Create a base Ubuntu VM.

See [Chapter 11 Support Matrix](#) for supported versions.

Enable auto-login during installation.

- 2 Shut down the VM.

- 3 Open the .vmx file of the VM and add the *monitor_control.pseudo_perfctr = "1"* entry to the file .

This entry provides access of the host timer, which is more accurate than the VM timer.

- 4 Install VMware Horizon View Client.

- 5 Install View Planner agent on the VM:

- a Download and extract the `viewplanner-linux-agent-c-version.tar.gz` file.
- b Provide executable permission to `agent/linux_agent_setup.sh`.
- c Run the setup script `linux_agent_setup.sh` in the agent folder as the root user.
- a Enter the harness IP when prompted.

- 6 Shut down the VM and take a snapshot.

- 7 Create a VM customization script using vCenter Server.

This script is used while creating clones from Linux VM. The customization script must enable auto-login.

Setting Up the SSL Certificate in Microsoft Active Directory

VMware View Planner uses an SSL connection for interacting and managing users with Microsoft Active Directory.

Prerequisites

Microsoft Active Directory must be installed.

Procedure

- ◆ Use steps outlined in the [Microsoft guide](#) to set up and enable SSL in Microsoft Active Directory.

Creating Clones Using View Planner

You can clone virtual machines required for test using View Planner.

Procedure

- 1 In View Planner Web UI, navigate to **VMs** tab.

2 Enter required details for the clones to be created.

View Planner supports linked and full clones for both Windows and Linux VMs. Instant clones are supported only for Windows VMs.

Figure 5-5. VMware View Planner Clone Virtual Machines

Clone VMs

Infra Server	test_infra	▼
Type	Linked	▼
Parent VM	golden_vm	
Prefix	test_dektop	
Count	10	
Snapshot Name	golden_vm_snapshot	
Custom Spec	VC_sysprep/quickprep_profile	
	<input checked="" type="radio"/> Host <input type="radio"/> Cluster	
Host	test_host_name	+

CLONE CANCEL

3 Click **CLONE** and wait for virtual machines to be created.

This step might take some time based on the number and type of clones to be created. Provide sufficient time for initialize of virtual machines before starting the test.

Registering a Workload to View Planner Harness

You can register a new workload to the list of existing workloads in the View Planner Harness.

Procedure

- 1 In View Planner Web UI, navigate to **WORKLOAD** tab.
- 2 Click on **ADD NEW**.
- 3 Enter the workload name as **vp_workload_name** and version.
- 4 Click **SAVE** to register the workload.

Creating a Work Profile

Work Profile defines the workloads to be executed during the run.

Procedure

- 1 In View Planner Web UI, navigate to **WORKPROFILE** tab.
- 2 Click **ADD NEW**.
- 3 Enter the **WORKPROFILE** name.
- 4 Select the workloads to be added in work profile from the list of registered workloads.
- 5 Click **SAVE** to add the new work profile.

Creating a Run Profile

Run Profile defines the parameters of a run.

Procedure

- 1 In View Planner Web UI, navigate to the **RUN PROFILE** tab and click **ADD NEW**.
- 2 Enter required details and click **NEXT**.

Figure 5-6. VMware View Planner Create Run Profile

Set iteration count to 5. Mandatory fields are marked as *. Other fields can be left blank.

Add Run Profile wizard moves to the **Work Group** tab.

- 3 Provide a **Work Group** name.

If there is a remote run, View Planner creates Active Directory users using **Work Group** Name as the prefix.

- 4 Select an identity server added previously as **Domain Name**.

This is applicable for a remote mode test only.

5 Select a work profile.

For a standard test, use `standardTestProfile_chrome` or `standardTestProfile_edge`. Other Work Profiles can be used for testing individual application.

6 Provide the VM percent to be used in this workgroup.

If you are creating one workgroup, the default value is 100% . Total value of the VM percent between all workgroups must be 100 if you are creating more than one workgroup.

7 Select a **Display Protocol**.

This is applicable for the remote mode test only.

Ubuntu only supports Blast protocol .

Figure 5-7. VMware View Planner Create a Work Group

Add Run Profile

- 1 Run Profile
- 2 Work Group**
- 3 Preview

Work Group

Name *

Domain Name *

Workprofile Name *

Percent VM *

Display Protocol *

Desktop Type *

DeskVM *

Add Desk VM

Prefix

Infraserver Name

Vdiserver Name

☐ ☐

ClientVM *

Add Client VM

Prefix

Infraserver Name

☐ ☐

[CANCEL](#) [BACK](#) [NEXT](#)

8 Select a **Desktop Type**.

- For a normal Remote runs with the VDI server, select `vdi`.
- For a VMware Horizon View direct connect runs, select `direct_connect`.
- For an RDSH server runs, select `rdsh_desk`.

- For an RDSH application server runs, select `rdsh_apps`.
- 9 Enter the desktop virtual machine details.
 - a Provide a desktop prefix.
If the VMware Horizon View pool is being used, provide the pool prefix else provide the prefix of desktop clones.
 - b Select an Infra server configured previously.
 - c Select a VDI server.
Optional in for a local mode run and not required for a direct connect run.
 - d Press **save (✓)** button.
 - 10 Fill Client virtual machine details.
 - a Provide a prefix for client virtual machines.
 - b Select an Infra server that manages clients.
 - c Press **save (✓)** button.
 - 11 Click **ADD** and repeat steps 3–10 if another workgroup is required.
 - 12 Click **NEXT** and review the details once all required workgroups are added.

Figure 5-8. VMware View Planner Review Run Profile

Add Run Profile

1 Run Profile
2 Work Group
3 Preview

Preview

unique_run_profile_name

Name	unique_run_profile_name
VM count	1
Run Mode	remote
Iteration Count	5
Think Time	
Rampup Time	
Description	
WorkGroup	testgroup
Domain Name	ad.domain.com
WorkProfile Name	standardTestProfile_chrome
Percent VM	100
Display Protocol	blast
Desktop Type	vdI

CANCEL BACK FINISH

- 13 Click **FINISH**.

Starting a View Planner Run

You can start a run using Run Profile as a template.

Procedure

- 1 In View Planner Web UI, navigate to the **RUN** tab and click button **NEW RUN**.

You see a **New Run** wizard.

- 2 Select a Run Profile created previously and provide a unique name for run.

Figure 5-9. VMware View Planner Start Run

New Run

Run Profile	unique_run_profile_name 
Run Name	unique_run_name
Description	<div>Enter Description</div>

START RUN

CANCEL

- 3 Click **START RUN** button.
- 4 Use the **Run** option in **RUN** tab to track status of run. A run can take long time to complete based on Work Profile and virtual machine count.
- 5 Navigate to **RUN > Instance List** to get the report of the run after completion.

Setting Up the User Experience Workloads

View Planner has a user experience workloads that quantifies user experience.

Procedure

- 1 Install view planner agent in golden client VM and make sure that the agent is running.
 - User Experience workload is supported with only Windows 10 client and desktop.
 - User Experience workload can be used only with remote mode runs.
- 2 Power on the view planner harness.
- 3 Run following commands from view planner command tool to pull **vp_scroll**, **vp_fileDragDrop** and **vp_WindowDragDrop** workload from harness to golden client VM:

```
workload --pull vp_scroll_1.0 --vmprefix golden_VM_prefix --count 1 --infraServer
infra_server_name
```



```
workload --pull vp_WindowDragDrop_1.0 --vmprefix golden_VM_prefix --count 1 --infraServer
infra_server_name
```

```
workload --pull vp_fileDragDrop_1.0 --vmprefix golden_VM_prefix --count 1 --infraServer
infra_server_name
```

Due to the large size, user experience workloads are not provided by default in agent and must be pulled from harness in golden client VM, if necessary.

Setting Up Microsoft Edge Driver

Microsoft Edge selenium driver is required to run workloads that use Microsoft edge.

Procedure

- 1 If you are using Microsoft Edge version 18 or later:
 - a Open command prompt with administrator permissions.
 - b Install Microsoft edge driver using the DISM.exe /Online /Add-Capability /CapabilityName:Microsoft.WebDriver~~~~0.0.1.0 command.
- 2 For earlier Microsoft Edge versions :
 - a Download the corresponding selenium driver from the [Microsoft Driver](#) site.
 - b Rename the downloaded driver to **MicrosoftWebDriver.exe**.
 - c Copy **MicrosoftWebDriver.exe** to C:\viewplanner\lib.

Enabling vSAN Data Collection

If vSAN datastore is used, then performance services must be enabled for the cluster from vCenter to get read, write requests and latencies.

Procedure

- ◆ To enable vSAN performance services, follow [these](#) steps.

It is not mandatory to enable vSAN performance services for view planner run, though vSAN related performance metrics will be reported only when performance services are enabled. Performance metrics other than vSAN will be reported otherwise.

View Planner Command Tool

6

You can use the View Planner command tool to configure and run View Planner instead of the web UI. The command tool can also be used for automation.

This chapter includes the following topics:

- [Accessing Command Tool](#)
- [View Planner Commands](#)

Accessing Command Tool

You can access the View Planner command-line tool by Connecting to harness using SSH.

Procedure

- 1 Access the harness command line using SSH. Use user name **root** and the password provided during harness OVA installation.
- 2 Use the `vpcmd -u user -p password` command to access the View Planner command tool. Use user name **vmware** and default password is **viewplanner**.

View Planner Commands

You can use the `help` command to get a list of available commands and `helpcommand_name` to get the command details.

- Command to add an infra server:
`infraServer -a unique_name -t vcenter -i IP --datacenter datacenter_name -d domain -u user_name`
- Command to add an identity server:
`identityServer -a domain_name -t microsoft_ad -i IP -u user_name`
- Command to add a VDI server:
`vdiServer -a unique_name -t view -i IP -d vdi_user_domain -u user_name`
- Command to add custom workloads:
`workload -a name -v version`

- Command to add workProfile:

```
workProfile --add name --description description --addWorkloads
workload_names_separated_by_comma
```

- Commands to Add runProfile:

```
runProfile -a name --runMode <local/remote> --VMcount VM_count --iterCount
iteration_count --description run_profile_descriptionn
```

```
workGroup -a name --runProfile run_rofile_name --domain identity_server_name --
workProfile work_profile_name --percent 100 --displayProtocol <pcoip/blast/rdp>
--deskType <vdi/direct_connect/rdsh_desk/rdsh_apps>
```

```
workGroup --addDesk work_group_name --runProfile run_profile_name --prefix
desktop_pool_prefix --infraServer infra_server_name --vdiServer vdi_server_name
```

- Commands to start and track run:

```
run --start run_profile_name --instance unique_run_instance_name
```

```
run --status
```

- Command to generate the report:

```
report --generate --instance run_instance_name --format <pdf/txt> --mode <local/
remote> --begin first_iteration_number_starting_from_1 --end
last_iteration_number
```

- Commands to get a log bundle from harness:

```
run --getLogs run_instance_name
```

- Command to pull new workloads from harness:

```
workload --pull workload_name --vmprefix VM_prefix --count 1 --infraServer
infra_server_name
```

View Planner Custom Workload

7

You can plugin your own scripts and automation with the view planner as a custom workload.

View Planner provides various workloads to measure performance at scale for applications like browsers, Microsoft Office, pdf reader among others. For your in-house and unique applications, view planner provides you the ability to develop and plug in your own workloads. Custom workloads can be created to simulate applications usage and measure latency values.

A workload developed by the user can use services like latency measurement and watermarking. Logs are collected and shipped to harness automatically.

This chapter includes the following topics:

- [Developing a Custom Workload](#)

Developing a Custom Workload

In this section, we create a custom workload that automates windows notepad application using an existing sample workload "vp_pythonExample_1.0" available in the view planner agent.

Prerequisites

- 1 View Planner harness should be ready.
- 2 A windows desktop, with the view planner agent installed.
- 3 Perform a local run with windows desktop to make sure that setup is working.

Procedure

- 1 In windows desktop virtual machine, navigate to `c:\viewplanner\workloads\vdi_user` folder. This directory contains all view planner workloads.
- 2 We will use an existing workload "vp_pythonExample_1.0" as a template, for this create a copy of the "vp_pythonExample_1.0" workload folder along side other workloads.
- 3 Rename the copied folder to a unique name, we will provide the name "vp_notepad_1.0" for our notepad workload.
- 4 "vp_notepad_1.0" folder contains two files.
 - `workload_script.py` contains the python code responsible for the automation of application.

- workload.config contains various configuration options for the workload.

5 Modify the workload name in the default section of the workload.config file.

```
[DEFAULT]
NAME = vp_notepad
```

6 Notepad workload will perform two operations during its execution, "notepad_open" and "notepad_close", this needs to be updated in workload_script.py. Open workload_script.py file and modify the op_count variable to total count of operations to be executed in the workload.

```
#[EDIT IT] Provide number of operations to be executed in this workload
op_count = 2
```

7 Provide the operation name, operation category, and number of times an operation must be executed for each iteration in the op_details array in the workload_script.py file.

- Operation name given in the op_details array is used for reporting. So the operation name must be unique. Appending the workload name as prefix to the operation name is a way to have unique operation names.
- For the detailed information about the operation category see [Understanding VMware View Planner Reports](#).

```
#[EDIT IT] Provide workload operation names in order to be executed
op_details[0][0] = "notepad_open"           # Operation name
op_details[0][1] = operation_group.OP_GROUP_B # Operation type
op_details[0][2] = 1                         # Expected execution count per workload iteration

op_details[1][0] = "notepad_close"
op_details[1][1] = operation_group.OP_GROUP_A
op_details[1][2] = 1
```

8 Remove or add the new elements on the op_details array depending on the operation count.

9 In workload_script.py, add python functions to automate the open and close operations of notepad preceding the line *MAIN : script starts here* .

```
def OpenNotepad():
    notepadPath = "C:\\Windows\\notepad.exe"
    ret = subprocess.Popen(notepadPath)
```

```

if ret == 1:
    logger.error("Error in opening notepad")
    return FAILURE
return SUCCESS

```

```

def CloseNotepad():
    ret = subprocess.Popen(["taskkill", "/F", "/IM", "notepad.exe"])
    if ret == 1:
        logger.error("Error in closing notepad")
        return FAILURE
    return SUCCESS

```

- 10 In workload execution loop, replace the log stating "Add code to run operation one here" with a function call to open and close notepad in order.

```

#Start watermark and log time-stamp [DO NOT REMOVE]
workloadHelper.startOpLog(op_details[counter][0])

# New operations can be added as new case in below switch. These switch cases will be called by
scheduler in order, once all switch cases are executed workload will deregister from scheduler
and exit.

# Workload switch [DO NOT REMOVE]
if (counter == 0):
    if OpenNotepad() == FAILURE:
        workloadHelper.finished(FAILURE)
elif (counter == 1):
    if CloseNotepad() == FAILURE:
        workloadHelper.finished(FAILURE)
else:
    break

# End watermark and log time-stamp [DO NOT REMOVE]
workloadHelper.endOpLog(op_details[counter][0])

```

workloadHelper.startOpLog() and workloadHelper.endOpLog () functions in the preceding code measure the latency of each operation individually. Logs related to the workload are reported in the logs folder of respective workload. These logs are shipped to harness automatically.

- 11 Save the workload_script.py file.
- 12 Register the workload to the harness using the steps provided in [Registering a Workload to View Planner Harness](#).
- 13 Create a new workProfile using steps in [Creating a Work Profile](#), select your new workload when asked.

- 14 Create the run profile using the steps provided in [Creating a Run Profile](#), select workProfile created in above step when asked.

For remote or passive mode runs, the workload folder must be copied to the c:\viewplanner\workloads\vdi_user folder of the client machine.

- 15 Start a view planner run using the steps in [Starting a View Planner Run](#).

Advanced Configuration

8

You can access advanced configuration options by navigating to **SETTINGS > Configuration** page.

Configuration Option	Value	Description
agent_scheduler_think_time_sec	Integer (default 5)	Time agent scheduler takes between scheduling of workload operations in seconds. Increasing this value reduces overall CPU load and increases run time.
default_test_user_password	Q1w2e3r4!	Password used by View Planner for creating Test Active Directory users
delete_ad_users_after_run	0/1 (default 0)	Test users created in AD will be automatically deleted after run completes when this value is enabled. This configuration must not be enabled for the RDSH test.
enable_legacy_rampup_time	0/1(default 0)	This value should be set to 1 if results need to be compared with older (4.0, 4.1 and 4.2) versions of viewplanner.
minimum_vm_required_percent	80	View Planner proceeds with run when at least this % of VMs are initialized without error.
rampup_time_base_sec	60	View Planner agent uses this number as base for calculating the default ramp-up time. Increasing this value reduces CPU load and increases run time.
rampup_time_increment_per_vm_sec	2	View Planner agent uses this number for calculating the default ramp-up time. Increasing this value reduces CPU load and increases run time.
rampup_time_max_sec	600	View Planner agent uses this number for calculating maximum the default ramp-up time. Increasing this value reduces CPU load and increases run time.
rampup_time_mgmt_run_sec	0	View Planner uses this ramp-up time for pre-run and preparation workloads.
rdsh_apps_pool_name	viewplanner	View Planner expects vp_default.bat to be exported as this application name if there is a RDSH application test.
skip_vm_health_check	0/1	Set this value to 1 to skip the VM health check during the run.
status_with_timestamp	0/1	Set this value to 1 to see the run status with time stamp in web UI.
unmanaged_server_user_prefix	vptest	View Planner uses this value as user prefix, when an unmanaged Identity server is used.
desktops_force_reboot	0/1	Set this value to 0 to disable the force reboot of the desktops during run.

Configuration Option	Value	Description
clients_force_reboot	0/1	Set this value to 0 to disable the force reboot of the clients during run.
vm_reboot_rate_per_minute	40	Maximum VM reboot requested per minute, lower value means a less load on the host.
vm_login_rate_per_minute	60	Set this value to limit remote login requests per minute during run. Default 0 means as fast as possible.
wait_time_after_vm_boot_sec	0	Set this value to provide some time to settle virtual machines after reboot.
max_sessions_per_client_passive_mode	25	Maximum number of remote sessions created by each client during passive mode run.

Troubleshooting Information

9

You can refer this section for common View Planner issues and solutions.

This chapter includes the following topics:

- [Failed to Access View Planner Web UI After OVA Installation](#)
- [Failed to Find VMs During Run](#)
- [Ratio of Actual to Expected Operations is Low in the Local Mode Test](#)
- [Ratio of Actual to Expected Operations is Low in the Remote Mode Test](#)
- [Updating Selenium Drivers for Browsers](#)

Failed to Access View Planner Web UI After OVA Installation

View Planner Web UI is unreachable after installation of OVA.

Solution

- 1 View Planner OVA can take few minutes to initialize, wait for approximately 20 minutes before accessing Web UI.
- 2 Check IP address of the harness VM, Access the User Interface using the URL `http://Your_Harness_IP/vp-ui`.
- 3 Check if the vApp option is enabled for the Virtual Machine.
- 4 Check if the command tool is accessible using steps provided in [Accessing Command Tool](#).
- 5 If the command tool is accessible, Make sure that required ports are configured properly. See [View Planner Port Requirements](#).
- 6 If the command tool is not accessible, make sure the vApp option is enabled for the Virtual Machine before first boot.

Failed to Find VMs During Run

View Planer fails to search and prepare desktops and client VMs during view planner run.

Cause

This issue can occur due to misconfigured test virtual machines (desktops and clients).

Solution

- 1 Make sure that view planner agent is installed in client and desktop virtual machines.
- 2 Check if auto login is enabled in client and desktop virtual machines.
- 3 Make sure that VM prefix provided during the run profile creation matches the virtual machine prefix.
If you are using VMware Horizon View pool virtual machines, VM prefix provided should match the pool prefix.
- 4 If virtual machines are failing to boot within time limit due to the high resource usage in the host machine, try reducing VM reboot rate using key `vm_reboot_rate_per_minute`, For details see [Chapter 8 Advanced Configuration](#).
- 5 Make sure desktop and clients can ping the harness and vice versa. Check if there are any connection errors reported in view planner command prompt window in desktop and clients.
- 6 Check if necessary ports are open, see [View Planner Port Requirements](#).

Ratio of Actual to Expected Operations is Low in the Local Mode Test

OE ratio is less than 1 when few operations of workloads failed to run during tests.

Cause

This issue occurs due to misconfigured test applications.

Solution

- ◆ Check if all required applications for test, such as Microsoft Office, Chrome, and Adobe reader, are installed with correct version and activated with the proper license.

Ratio of Actual to Expected Operations is Low in the Remote Mode Test

OE ratio can be less than 1 in remote mode tests when few operations of workloads cannot be measured during tests.

Cause

This issue occurs due to problems while measuring remote latency with view planner watermark technology.

Solution

- 1 Create a local mode report of your remote mode test by running this command in [Chapter 6 View Planner Command Tool](#).

```
report --generate --instance run_instance_name --format pdf --mode local --begin
first_iteration_number_starting_from_1 --end last_iteration_number
```

- 2 If OE ratio in the local mode report is low, check [Ratio of Actual to Expected Operations is Low in the Local Mode Test](#).
- 3 If ratio in the local mode report is high:
 - a Log in manually from simulated clients to desktop using VMware Horizon client and make sure that the desktop is using full screen of the client machine.
 - b Disable auto lock and sleep feature of desktop and client operating system.
 - c Disable any screen savers.

Updating Selenium Drivers for Browsers

Browser workloads in view planner are automated using selenium. Selenium drivers may need updates depending on browser versions.

Please follow these instructions to update browser drivers in case browser workloads fails.

Selenium driver for Microsoft Edge

Selenium driver for Microsoft Edge is required to automate Microsoft Edge browser

Procedure

- ◆ Follow steps given in [Setting Up Microsoft Edge Driver](#) to set up or update the selenium driver for Microsoft Edge.

Updating selenium driver for Firefox

To automate Firefox browser corresponding Selenium Gecko driver must be installed.

Procedure

- 1 Get version of your Firefox browser from Help->About Firefox.
- 2 Download supporting Firefox driver from [here](#). Extract geckodriver.exe for windows and geckodriver for linux from downloaded zip.
- 3 Do following steps in your golden VM:-
 - For windows VM, create folder named <firefoxVersion>_<driverVersion> inside C:\viewplanner\lib\firefox_driver. Extract geckodriver.exe from downloaded zip and copy to newly created folder.

- For linux VM, create folder named <firefoxVersion>_<driverVersion> inside /root/vp_agent/lib/firefox_driver. Extract geckodriver from downloaded zip and copy to newly created folder.

If Firefox version is 68 and driver version is 0.26, then create folder named 68_0.26.

Updating selenium driver for Chrome

To automate Google Chrome browser corresponding Selenium driver for Chrome must be installed.

Procedure

- 1 Get version of your Chrome from Help->About Google Chrome.
- 2 Download corresponding chrome driver from [here](#).
- 3 Do following steps in your golden VM:-
 - For windows VM, create folder named [baseVersion_fullVersion] inside C:\viewplanner\lib\chrome_driver. Extract chromedriver.exe from downloaded zip and copy to newly created folder.
 - For linux VM, create folder named [baseVersion_fullVersion] inside /root/vp_agent/lib/chrome_driver. Extract chromedriver from downloaded zip and copy to newly created folder.

If chrome version is 78.0.3904.105, then create folder C:\viewplanner\lib\chrome_driver\78_78.0.3904.105 for windows and /root/vp_agent/lib/chrome_driver/78_78.0.3904.105 for linux.

Status Codes

10

You can refer this section for VMware View Planner Error Codes.

Status Code Name	Status Code
SUCCESS	0
FAIL	1
FILE_NOT_FOUND	2
FILE_OPEN_FAILED	3
FILE_ERROR	4
OUT_OF_RANGE	5
WRONG_ARGUMENTS	6
NOT_IMPLEMENTED	7
STATE_ERROR	8
UNSUPPORTED_OPERATION	9
UNSUPPORTED_ARGUMENT	11
WRONG_ARGUMENT_COUNT	12
UNSUPPORTED_DISPLAY_PROTOCOL	13
UNSUPPORTED_DESKTOP_TYPE	14
UNSUPPORTED_INFRA_SERVER	15
UNSUPPORTED_VDI_SERVER	16
UNSUPPORTED_IDENTITY_SERVER	17
UNSUPPORTED_RUN_MODE	18
UNSUPPORTED_VM_PARENT_TYPE	19
AGENT_AVAILABLE	20
AGENT_BUSY	21
AGENT_UNREACHABLE	22
AGENT_HANGED	23
INSUFFICIENT_DESKTOPS	24
INSUFFICIENT_CLIENTS	25
RESOURCE_IN_USE	26

Status Code Name	Status Code
RESOURCE_NOT_AVAILABLE	27
RUN_IN_PROGRESS	28
RUN_NOT_IN_PROGRESS	29
RUN_PAUSED	30
RUN_STOPPED	31
RUN_COMPLETED	32
RUN_ERROR	33
UNABLE_TO_TEST_UNMANAGED_SERVER	34
ALREADY_EXIST	35
DO_NOT_EXIST	36
FAILED_TO_FIND_VMS	37
ENCRYPTION_FALIURE	38
DECRYPTION_FALIURE	39
INVALID_RAMPUP_TIME	40
INVALID_THINK_TIME	41
INVALID_ITERATION_COUNT	42
INVALID_VM_COUNT	43
INVALID_VM_PERCENT	44
INVALID_WORK_PROFILE	45
INVALID_IDENTITY_SERVER	46
INVALID_INFRA_SERVER	47
INVALID_VDI_SERVER	48
INVALID_RUN_PROFILE	49
INVALID_WORK_GROUP	50
DUPLICATE_RUN_INSTANCE_NAME	51
UNSUPPORTED_CLONE_TYPE	52
ADDCLIENT_LOCAL_MODE_ERROR	53
VC_EXCEPTION_ERROR	54
FAILED_TO_READ_CONFIGURATION	55
UNSUPPORTED_USER_TYPE	56
CAN_NOT_REMOVE_SYSTEM_USERS	57
FAILED_TO_REBOOT_VM	58
VM_REBOOT_TIMEOUT	59
HW_PERF_COUNTER_NOT_SET	60
FAILED_TO_REMOVE_RUN_INSTANCE_FILES	61

Status Code Name	Status Code
ALREADY_GENERATING_REPORT	62
VC_HOST_NOT_FOUND	63
VC_PARENT_VM_NOT_FOUND	64
VMS_ALREADY_EXIST	65
FAILED_TO_FIND_SNAPSHOT	66
ERROR_IN_CUSTOM_SPEC	67
ERROR_IN_CREATING_CLONE	68
ERROR_PROVISIONING_CLONE	69
ERROR_PROVISIONING_CLONE	70
WORK_GROUPS_MORE_THAN_VM	71
TOTAL_PERCENT_MORE_THAN_100	72
WRONG_USERNAME_PASSWORD	73
WRONG_DOMAIN_NAME	74
ERROR_CUSTOMIZING_CLONE	75
CONNECTION_FAILED	200
FAILED_TO_ACQUIRE_CONNECTION	201
QUERY_FAILED	202
DUPLICATE_ENTRY	203
INVALID_WORKLOAD	204
FOREGIN_KEY_CONSTRAINT_FAILED	205
SCHEMA_INCOMPLETE	206
INVALID_PASSWORD	207
INVALID_DESK_VM_PROFILE	208
INVALID_CLIENT_VM_PROFILE	209
RUN_INSTANCE_NOT_FOUND	271
UNABLE_TO_GENERATE_REMOTE_MODE_REPORT	272
UNSUPPORTED_DOC_FORMAT	273
REPORT_FILE_CREATION_ERROR	274
EMPTY_REPORT	275
SCHEDULER_STATE_ERROR	281
INVALID_INPUT_FOR_CMD_OPTION	300
BOTH_HOST_CLUSTER_PRESENT	301
NO_HOST_CLUSTER_PRESENT	302
NO_CUSTOM_SPEC_LINKED_CLONE	303
UNKNOWN_ARCHIVE_FORMAT	382

Status Code Name	Status Code
BAD_ARCHIVE_FILE	383
FILE_NOT_IN_ARCHIVE	384
FAILED_TO_PARSE_DESKTOP_LOGS	385
FAILED_TO_PARSE_CLIENT_LOGS	386
VIEW_SUCCESS	500
VIEW_FAIL	501
WRONG_USERNAME_PASSWORD	502
ACCESS_DENIED	503
INVALID_USER_GROUP	504
INVALID_POOL	505
INVALID_POOL_TYPE	506
INVALID_CLONE_TYPE	507
INVALID_VCENTER	508
INVALID_USERASSIGNMENT	509
VM_NOTAVAILABLE_IN_VC	510
INVALID_SNAPSHOTNAME	511
INVALID_HOSTORCLUSTERNAME	512
INVALID_RESOURCEPOOLNAME	513
INVALID_VMFOLDERNAME	514
INVALID_DATASTORENAME	515
INVALID_COMPOSERDOMAIN_DETAILS	516
INVALID_CUSTOMSPECNAME	517
LOGOFF_VM_INCORRECTNAME	518
LOGOFF_VM_FAILURE	519
INVALID_CUSTOMSPECTYPE	520
INVALID_INSTANTCLONEDOMAINDETAILS	521
INVALID_VSANCONFIG	522
INVALID_VIEWSTORAGEACC	523
POOL_NOT_FOUND	524

Support Matrix

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You can refer this section for software support information.

Software Support:

Operating System	Microsoft Windows 7 (32 bit and 64 bit), Microsoft Windows 10 (32 bit and 64 bit), Photon OS (Local Mode), Ubuntu 18.04
VMware Horizon View	7–7.12
vSphere	6–6.7 U3

Workload Application Support:

Microsoft Word	2013, 2016
Microsoft Power Point	2013, 2016
Microsoft Excel	2013, 2016
Microsoft Outlook	2013, 2016
Adobe Acrobat Reader DC	15–20.006.20042
Google Chrome	74–81
Mozilla Firefox	66-74
Microsoft Edge	12.10240–18.18363