VMware View Integration Guide

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About This Book

This guide describes how to integrate VMware View™ software with third-party software such as Windows PowerShell, business intelligence reporting engines, and Microsoft System Center Operations Manager (SCOM).

Intended Audience

This book is intended for anyone who wants to customize or integrate software to work with View Manager. The information in this manual is written for experienced Windows or Linux system administrators who are familiar with virtual machine technology and datacenter operations.

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Introduction

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With VMware View™, system administrators can provision desktops and control user access to these desktops. Client software connects users to virtual desktops running on VMware vSphere™, or to physical systems running within your network environment.

This chapter includes the following topics:

- "VMware View Components" on page 7
- "Integration Interfaces to VMware View" on page 8

VMware View Components

You can use VMware View with VMware vCenter Server to create desktops from virtual machines that are running on VMware® ESX™ servers and deploy these desktops to end users. In addition, VMware View uses your existing Active Directory infrastructure for user authentication and management.

After you create a desktop, authorized end users can use Web-based or locally installed client software to securely connect to centralized virtual desktops, back-end physical systems, or terminal servers.

VMware View consists of the following major components:

- View Connection Server – a software service that acts as a broker for client connections by authenticating and then directing incoming user requests to the appropriate virtual desktop, physical desktop, or terminal server.

- View Agent – a software service that is installed on all guest virtual machines, physical systems, or terminal servers in order to allow them to be managed by VMware View. The agent provides features such as connection monitoring, Virtual Printing, USB support, and single sign-on.

- View Client – a software application that communicates with View Connection Server to allow users to connect to their desktops.

- View Client with Local Mode – a version of View Client that is extended to support the local desktop feature, which allows users to download virtual machines and use them on their local systems.

- View Administrator – a Web application that allows View administrators to configure View Connection Server, deploy and manage desktops, control user authentication, initiate and examine system events, and carry out analytical activities.

- vCenter Server – a server that acts as a central administrator for VMware ESX servers that are connected on a network. A vCenter Server provides the central point for configuring, provisioning, and managing virtual machines in the datacenter.

- View Composer – a software service that is installed on a vCenter server to allow VMware View to rapidly deploy multiple linked-clone desktops from a single centralized base image.

- View Transfer Server – a software service that manages and streamlines data transfers between the datacenter and View desktops that are checked out for use on end users' local systems. View Transfer Server is required to support desktops that run View Client with Local Mode.

Integration Interfaces to VMware View

You can use several interfaces to integrate VMware View with external applications.

■ Event database – you can configure VMware View to record events to a Microsoft SQL Server or Oracle database. You can then use business intelligence reporting engines to access and analyze this database.

■ View PowerCLI – you can use the PowerShell interface to perform a wide variety of administration tasks on View components.

■ Lightweight Directory Access Protocol (LDAP) – you can export and import LDAP configuration data from and into VMware View. You can create scripts that update this configuration data without accessing View Administrator directly.

■ Microsoft System Center Operations Manager (SCOM) – you can monitor the operations of View components from the SCOM console.

Integrating with the Event Database 2

You can configure VMware View to record events to a Microsoft SQL Server or Oracle database. VMware View records events such as the following examples:

- End-user actions such as logging in and starting a desktop session.

- Administrator actions such as adding entitlements and creating desktop pools.

- Alerts that report system failures and errors.

- Statistical sampling such as recording the maximum number of users over a 24-hour period.

You can use business intelligence reporting engines such as Crystal Reports, IBM Cognos, MicroStrategy 9, and Oracle Enterprise Performance Management System to access and analyze the event database.

This chapter includes the following topics:

Event Database Tables and Schemas

Table 2-1 shows the tables that implement the event database in VMware View.

Table 2-1. Event Database Tables

Table Name	Description
event	Metadata and search optimization data for recent events.
event_data	Data values for recent events.
event_data_historical	Data values for all events.
event_historical	Metadata and search optimization data for all events.

The event database prepends the names of these tables with a prefix that you define when you set up the database. See the *VMware View Installation Guide* for more information.

IMPORTANT   VMware View does not restrict the growth of the event_historical and event_data_historical tables. You must implement a space management policy for these tables.

VMware View records details about events to all the database tables. After a certain period of time has elapsed since writing an event record, VMware View deletes the record from the event and event_data tables. You can use View Administrator to configure the time period for which the database keeps a record in the event and event_data tables. See the *VMware View Installation Guide* for more information.

NOTE   It is possible for events to be lost if you restart View Connection Server instances while the event database is not running. For a solution that avoids this problem see http://kb.vmware.com/kb/1021461.

A unique primary key, EventID, identifies each event that VMware View records in the event and event_historical tables. VMware View records data values for each event in the event_data and event_data_historical tables. You can obtain the complete set of information for an event by joining the event and event_data tables or the event_historical and event_data_historical tables on the EventID column.

The EventType, Severity, and Time columns in the event and event_historical tables identify the type and severity of an event and the time at which it occurred.

Table 2-2 shows the schema for the event and event_historical tables.

Table 2-2. Schema for the event and event_historical Tables

Column Name	Oracle Data Type	SQLServer Data Type	Description
Acknowledged	SMALLINT	tinyint	Whether VMware View acknowledged the event. 0 = false 1 = true
DesktopId	NVARCHAR2(512)	nvarchar(512)	Desktop ID of the associated pool.
EventID	INTEGER	int	Unique primary key for the event.
EventType	NVARCHAR2(512)	nvarchar(512)	Event name that corresponds to an item in the message catalog. For example, BROKER_USERLOGGEDIN.
FolderPath	NVARCHAR2(512)	nvarchar(512)	Full path of the folder that contains the associated object.
GroupId	NVARCHAR2(512)	nvarchar(512)	SID of the associated group in Active Directory.
LUNId	NVARCHAR2(512)	nvarchar(512)	ID of the LUN that stores the associated object.
MachineId	NVARCHAR2(512)	nvarchar(512)	ID of the associated physical or virtual machine.
Module	NVARCHAR2(512)	nvarchar(512)	View component that raised the event. For example, Admin, Broker, Tunnel, Framework, Client, or Agent.
ModuleAndEventText	NVARCHAR2(512)	nvarchar(512)	Event message with values substituted for attribute parameters.
Node	NVARCHAR2(512)	nvarchar(512)	Name of the virtual device node.
Severity	NVARCHAR2(512)	nvarchar(512)	Severity level. For example, INFO, WARNING, ERROR, AUDIT_SUCCESS, AUDIT_FAIL.
Source	NVARCHAR2(512)	nvarchar(512)	Identifier for the source of the event.
ThinAppId	NVARCHAR2(512)	nvarchar(512)	ID of the associated ThinApp™ object.
Time	TIMESTAMP	datetime	Time at which the event occurred, measured from the epoch (January 1, 1970).
UserDiskPathId	NVARCHAR2(512)	nvarchar(512)	ID of the user disk.
UserSID	NVARCHAR2(512)	nvarchar(512)	SID of the associated user in Active Directory.

Table 2-3 shows the schema for the event_data and event_data_historical tables.

Table 2-3. Schema for the event_data and event_data_historical Tables

Column Name	Oracle Data Type	SQLServer Data Type	Description
BooleanValue	SMALLINT	tinyint	Value of a Boolean attribute. 0 = false 1 = true
EventID	INTEGER	int	Unique primary key for the event.
IntValue	INTEGER	int	Value of an integer attribute.
Name	NVARCHAR2(512)	nvarchar(512)	Attribute name (for example, UserDisplayName).
StrValue	NVARCHAR2(512)	nvarchar(512)	Value of a string attribute. For other types of attributes, this column contains an interpretation of the data type as a string.
TimeValue	TIMESTAMP	datetime	Value of a date and time attribute.
Type	SMALLINT	tinyint	The data type of the attribute. 0 = StrValue 1 = IntValue 2 = TimeValue 3 = BooleanValue

Connection Broker Events

Table 2-4 shows the event types for the connection broker.

The BROKER_DAILY_MAX_USERS event reports the maximum number of concurrent desktop sessions over a 24-hour period. Short-lived sessions might not be included in the count because the sampling is performed every five minutes.

The BROKER_VC_DISABLED and BROKER_VC_ENABLED events report the state of of the vCenter driver that VMware View uses to track a vCenter Server. The BROKER_VC_STATUS_* events report the state of a vCenter Server.

Table 2-4. Connection Broker Events

EventType	Severity	ModuleAndEventText
BROKER_AGENT_OFFLINE	WARNING	The agent running on machine ${MachineName} has not responded to queries, marking it as offline
BROKER_AGENT_ONLINE	WARNING	The agent running on machine ${MachineName} is responding again, but did not send a startup message
BROKER_DAILY_MAX_USERS	INFO	${Time}: Over the past 24 hours, the maximum number of users with concurrent desktop sessions was ${UserCount}
BROKER_DESKTOP_LAUNCH_FAILURE	ERROR	Unable to launch from Pool ${DesktopId} for user ${UserDisplayName}: The broker encountered an error while processing the request, please contact support for assistance
BROKER_DESKTOP_NOT_ENTITLED	AUDIT_FAIL	Unable to launch from Pool ${DesktopId} for user ${UserDisplayName}: User is not entitled to this Pool

Table 2-4. Connection Broker Events (Continued)

EventType	Severity	ModuleAndEventText
BROKER_DESKTOP_PROTOCOL_NOT_ SUPPORTED	AUDIT_FAIL	Unable to launch from Pool ${DesktopId} for user ${UserDisplayName}: Requested protocol ${ProtocolId} is not supported
BROKER_DESKTOP_REQUEST	INFO	User ${UserDisplayName} requested Pool ${DesktopId}
BROKER_EVENT_HANDLING_STARTED	INFO	Broker ${BrokerName} has started handling events
BROKER_EVENT_HANDLING_STOPPED	INFO	${BrokerName} has stopped handling events
BROKER_LOCALMODE_OLD_ANCHOR_ DELETE_FAILURE	WARNING	Old anchor snapshot deletion task failed for Machine ${MachineName}. Error message: ${LocalModeMessage}
BROKER_LOCALMODE_OPERATION_AUDIT_ FAILURE	AUDIT_FAIL	Local Mode Operation ${LocalModeOperation} failed for Desktop ${MachineName}, ID: ${DesktopId}. Error message: ${LocalModeMessage}
BROKER_LOCALMODE_OPERATION_ FAILURE	ERROR	Local Mode Operation ${LocalModeOperation} failed for Desktop ${MachineName}, ID: ${DesktopId}. Error message: ${LocalModeMessage}
BROKER_LOCALMODE_OPERATION_ SUCCESS	AUDIT_SUCCESS	${LocalModeOperation} has completed for Desktop ${MachineName}, ID: ${DesktopId}.
BROKER_MACHINE_ALLOCATED	INFO	User ${UserDisplayName} requested Pool ${DesktopId}, allocated machine ${MachineName}
BROKER_MACHINE_ASSIGNED_ UNAVAILABLE	AUDIT_FAIL	Unable to launch from Pool ${DesktopId} for user ${UserDisplayName}: Assigned machine ${MachineName} is unavailable
BROKER_MACHINE_CANNOT_CONNECT	AUDIT_FAIL	Unable to launch from Pool ${DesktopId} for user ${UserDisplayName}: Failed to connect to Machine ${MachineName} using ${ProtocolId}
BROKER_MACHINE_CHECKEDOUT	AUDIT_FAIL	Unable to launch from Pool ${DesktopId} for user ${UserDisplayName}: VM ${MachineName} is currently checked out on a client device
BROKER_MACHINE_CONFIGURED_VIDEO_ SETTINGS	INFO	Successfully configured video settings for Machine VM ${MachineName} in Pool ${DesktopId}
BROKER_MACHINE_NOT_READY	WARNING	Unable to launch from Pool ${DesktopId} for user ${UserDisplayName}: Machine ${MachineName} is not ready to accept connections
BROKER_MACHINE_OPERATION_DELETED	INFO	machine ${MachineName} has been deleted
BROKER_MACHINE_PROTOCOL_NOT_ SUPPORTED	AUDIT_FAIL	Unable to launch from Pool ${DesktopId} for user ${UserDisplayName}: Machine ${MachineName} does not support protocol ${ProtocolId}
BROKER_MACHINE_PROTOCOL_ UNAVAILABLE	AUDIT_FAIL	Unable to launch from Pool ${DesktopId} for user ${UserDisplayName}: Machine ${MachineName} did not report protocol ${ProtocolId} as ready

Table 2-4. Connection Broker Events (Continued)

EventType	Severity	ModuleAndEventText
BROKER_MACHINE_REJECTED_SESSION	WARNING	Unable to launch from Pool ${DesktopId} for user ${UserDisplayName}: Machine ${MachineName} rejected the start session request
BROKER_MACHINE_SESSION_TIMEDOUT	WARNING	Session for user ${UserDisplayName} timed out
BROKER_POOL_CANNOT_ASSIGN	AUDIT_FAIL	Unable to launch from Pool ${DesktopId} for user ${UserDisplayName}: There are no machines available to assign the user to
BROKER_POOL_EMPTY	AUDIT_FAIL	Unable to launch from Pool ${DesktopId} for user ${UserDisplayName}: The Desktop Pool is empty
BROKER_POOL_NO_MACHINE_ASSIGNED	AUDIT_FAIL	Unable to launch from Pool ${DesktopId} for user ${UserDisplayName}: No machine assigned to this user
BROKER_POOL_NO_RESPONSES	AUDIT_FAIL	Unable to launch from Pool ${DesktopId} for user ${UserDisplayName}: No machines in the Desktop Pool are responsive
BROKER_POOL_OVERLOADED	AUDIT_FAIL	Unable to launch from Pool ${DesktopId} for user ${UserDisplayName}: All responding machines are currently in use
BROKER_POOL_POLICY_VIOLATION	AUDIT_FAIL	Unable to launch from Pool ${DesktopId} for user ${UserDisplayName}: This Desktop Pool does not allow online sessions
BROKER_POOL_PROTOCOL_NOT_SUPPORTED	AUDIT_FAIL	Unable to launch from Pool ${DesktopId} for user ${UserDisplayName}: There were no machines available that support protocol ${ProtocolId}
BROKER_POOL_PROTOCOL_UNAVAILABLE	AUDIT_FAIL	Unable to launch from Pool ${DesktopId} for user ${UserDisplayName}: There were no machines available that reported protocol ${ProtocolId} as ready
BROKER_POOL_TUNNEL_NOT_SUPPORTED	AUDIT_FAIL	Unable to launch from Pool ${DesktopId} for user ${UserDisplayName}: Tunnelling is not supported for protocol ${ProtocolId}
BROKER_PROVISIONING_ERROR_CONFIG_CLEARED	INFO	The previously reported configuration problem is no longer present on Pool ${DesktopId}
BROKER_PROVISIONING_ERROR_CONFIG_SET	ERROR	Provisioning error occurred on Pool ${DesktopId} because of a configuration problem
BROKER_PROVISIONING_ERROR_DISK_CLEARED	INFO	The previously reported disk problem is no longer present on Pool ${DesktopId}
BROKER_PROVISIONING_ERROR_DISK_LC_RESERVATION_CLEARED	INFO	The previously reported error due to available free disk space reserved for linked clones is no longer present on Pool ${DesktopId}
BROKER_PROVISIONING_ERROR_DISK_LC_RESERVATION_SET	ERROR	Provisioning error occurred on Pool ${DesktopId} because available free disk space is reserved for linked clones
BROKER_PROVISIONING_ERROR_DISK_SET	WARNING	Provisioning error occurred on Pool ${DesktopId} because of a disk problem

Table 2-4. Connection Broker Events (Continued)

EventType	Severity	ModuleAndEventText
BROKER_PROVISIONING_ERROR_LICENCE_ CLEARED	INFO	The previously reported licencing problem is no longer present on Pool ${DesktopId}
BROKER_PROVISIONING_ERROR_LICENCE_ SET	ERROR	Provisioning error occurred on Pool ${DesktopId} because of a licencing problem
BROKER_PROVISIONING_ERROR_ NETWORKING_CLEARED	INFO	The previously reported networking problems with a View Agent are no longer present on Pool ${DesktopId}
BROKER_PROVISIONING_ERROR_ NETWORKING_SET	ERROR	Provisioning error occurred on Pool ${DesktopId} because of a networking problem with a View Agent
BROKER_PROVISIONING_ERROR_RESOURCE_ CLEARED	INFO	The previously reported resource problem is no longer present on Pool ${DesktopId}
BROKER_PROVISIONING_ERROR_RESOURCE_ SET	ERROR	Provisioning error occurred on Pool ${DesktopId} because of a resource problem
BROKER_PROVISIONING_ERROR_TIMEOUT_ CUSTOMIZATION_CLEARED	INFO	The previously reported timeout while customizing is no longer present on Pool ${DesktopId}
BROKER_PROVISIONING_ERROR_TIMEOUT_ CUSTOMIZATION_SET	ERROR	Provisioning error occurred on Pool ${DesktopId} because of a timeout while customizing
BROKER_PROVISIONING_ERROR_VM_ CLONING	ERROR	Provisioning error occurred for Machine ${MachineName}: Cloning failed for Machine
BROKER_PROVISIONING_ERROR_VM_ CUSTOMIZATION_ERROR	ERROR	Provisioning error occurred for Machine ${MachineName}: Customization failed for Machine
BROKER_PROVISIONING_ERROR_VM_ CUSTOMIZATION_NETWORKING	ERROR	Provisioning error occurred for Machine ${MachineName}: Customization error due to no network communication between the View agent and Connection Server
BROKER_PROVISIONING_ERROR_VM_ CUSTOMIZATION_TIMEOUT	ERROR	Provisioning error occurred for Machine ${MachineName}: Customization operation timed out
BROKER_PROVISIONING_SVI_ERROR_ COMPOSER_AGENT_INIT_FAILED	ERROR	Provisioning error occurred for Machine ${MachineName}: View Composer agent initialization failed
BROKER_PROVISIONING_SVI_ERROR_ RECONFIG_FAILED	ERROR	Provisioning error occurred for Machine ${MachineName}: Reconfigure operation failed
BROKER_PROVISIONING_SVI_ERROR_REFIT_ FAILED	ERROR	Provisioning error occurred for Machine ${MachineName}: Refit operation ${SVIOperation} failed
BROKER_PROVISIONING_SVI_ERROR_ REMOVING_VM	ERROR	Provisioning error occurred for Machine ${MachineName}: Unable to remove Machine from inventory
BROKER_PROVISIONING_VERIFICATION_ FAILED_USER_ASSIGNED	WARNING	Provisioning verification failed for Machine ${MachineName}: User is already assigned to a machine in Pool ${DesktopId}
BROKER_PROVISIONING_VERIFICATION_ FAILED_USER_CANNOT_BE_ASSIGNED	WARNING	Provisioning verification failed for Machine ${MachineName}: A user cannot be assigned because Pool ${DesktopId} is not persistent

Table 2-4. Connection Broker Events (Continued)

EventType	Severity	ModuleAndEventText
BROKER_PROVISIONING_VERIFICATION_ FAILED_VMNAME_IN_USE	WARNING	Provisioning verification failed for Machine ${MachineName}: A machine already exists in Pool ${DesktopId} with name ${MachineName}
BROKER_SECURITY_SERVER_ADD_FAILED	AUDIT_FAIL	Failed to add security server ${SecurityServerId}
BROKER_SECURITY_SERVER_ADD_FAILED_ PASSWORD_EXPIRED	AUDIT_FAIL	Failed to add security server ${SecurityServerId}, pairing password expired
BROKER_SECURITY_SERVER_ADD_FAILED_ PASSWORD_INCORRECT	AUDIT_FAIL	Failed to add security server ${SecurityServerId}, pairing password incorrect
BROKER_SECURITY_SERVER_ADD_FAILED_ PASSWORD_NOT_SET	AUDIT_FAIL	Failed to add security server ${SecurityServerId}, pairing password not set
BROKER_SECURITY_SERVER_ADDED	AUDIT_SUCCESS	Security server ${SecurityServerId} added
BROKER_SVI_ARCHIVE_UDD_FAILED	AUDIT_FAIL	Failed to archive user data disk ${UserDiskName} to location ${SVIPath}
BROKER_SVI_ARCHIVE_UDD_SUCCEEDED	AUDIT_SUCCESS	Archived user data disk ${UserDiskName} to location ${SVIPath}
BROKER_SVI_ATTACH_UDD_FAILED	AUDIT_FAIL	Failed to attach user data disk ${UserDiskName} to VM ${SVIVMID}
BROKER_SVI_ATTACH_UDD_SUCCEEDED	AUDIT_SUCCESS	Attached user data disk ${UserDiskName} to VM ${SVIVMID}
BROKER_SVI_DETACH_UDD_FAILED	AUDIT_FAIL	Failed to detach user data disk ${UserDiskName} from VM ${SVIVMID}
BROKER_SVI_DETACH_UDD_SUCCEEDED	AUDIT_SUCCESS	Detached user data disk ${UserDiskName} from VM ${SVIVMID}
BROKER_USER_AUTHFAILED_ACCOUNT_ DISABLED	AUDIT_FAIL	User ${UserDisplayName} failed to authenticate because the account is disabled
BROKER_USER_AUTHFAILED_ACCOUNT_ EXPIRED	AUDIT_FAIL	User ${UserDisplayName} failed to authenticate because the account has expired
BROKER_USER_AUTHFAILED_ACCOUNT_ LOCKED_OUT	AUDIT_FAIL	User ${UserDisplayName} failed to authenticate because the account is locked out
BROKER_USER_AUTHFAILED_ACCOUNT_ RESTRICTION	AUDIT_FAIL	User ${UserDisplayName} failed to authenticate because of an account restriction
BROKER_USER_AUTHFAILED_BAD_USER_ PASSWORD	AUDIT_FAIL	User ${UserDisplayName} failed to authenticate because of a bad username or password
BROKER_USER_AUTHFAILED_GENERAL	AUDIT_FAIL	User ${UserDisplayName} failed to authenticate
BROKER_USER_AUTHFAILED_NO_LOGON_ SERVERS	AUDIT_FAIL	User ${UserDisplayName} failed to authenticate because there are no logon servers
BROKER_USER_AUTHFAILED_PASSWORD_ EXPIRED	AUDIT_FAIL	User ${UserDisplayName} failed to authenticate because the password has expired

Table 2-4. Connection Broker Events (Continued)

EventType	Severity	ModuleAndEventText
BROKER_USER_AUTHFAILED_PASSWORD_MUST_CHANGE	AUDIT_FAIL	User ${UserDisplayName} failed to authenticate because the password must change
BROKER_USER_AUTHFAILED_SECUREID_ACCESS_DENIED	AUDIT_FAIL	SecurID access denied for user ${UserDisplayName}
BROKER_USER_AUTHFAILED_SECUREID_NEWPIN_REJECTED	AUDIT_FAIL	SecurID access denied for user ${UserDisplayName} because new pin was rejected
BROKER_USER_AUTHFAILED_SECUREID_WRONG_NEXTTOKEN	AUDIT_FAIL	SecurID access denied for user ${UserDisplayName} because wrong next token entered
BROKER_USER_AUTHFAILED_SECUREID_WRONG_STATE	AUDIT_FAIL	SecurID access denied for user ${UserDisplayName} because of incorrect state
BROKER_USER_AUTHFAILED_TIME_RESTRICTION	AUDIT_FAIL	User ${UserDisplayName} failed to authenticate because of a time restriction
BROKER_USER_NOT_AUTHORIZED	AUDIT_FAIL	User ${UserDisplayName} has authenticated, but is not authorized to perform the operation
BROKER_USER_NOT_ENTITLED	AUDIT_FAIL	User ${UserDisplayName} has authenticated, but is not entitled to any Pools
BROKER_USERCHANGEDPASSWORD	AUDIT_SUCCESS	Password for ${UserDisplayName} has been changed by the user
BROKER_USERLOGGEDIN	AUDIT_SUCCESS	User ${UserDisplayName} has logged in
BROKER_USERLOGGEDOUT	AUDIT_SUCCESS	User ${UserDisplayName} has logged out
BROKER_VC_DISABLED	INFO	vCenter at address ${VCAddress} has been temporarily disabled
BROKER_VC_ENABLED	INFO	vCenter at address ${VCAddress} has been enabled
BROKER_VC_STATUS_CHANGED_CANNOT_LOGIN	WARNING	Cannot log in to vCenter at address ${VCAddress}
BROKER_VC_STATUS_CHANGED_DOWN	INFO	vCenter at address ${VCAddress} is down
BROKER_VC_STATUS_CHANGED_INVALID_CREDENTIALS	WARNING	vCenter at address ${VCAddress} has invalid credientials
BROKER_VC_STATUS_CHANGED_NOT_YET_CONNECTED	INFO	Not yet connected to vCenter at address ${VCAddress}
BROKER_VC_STATUS_CHANGED_RECONNECTING	INFO	Reconnecting to vCenter at address ${VCAddress}
BROKER_VC_STATUS_CHANGED_UNKNOWN	WARNING	The status of vCenter at address ${VCAddress} is unknown
BROKER_VC_STATUS_CHANGED_UP	INFO	vCenter at address ${VCAddress} is up
MULTIPLE_DESKTOPS_FOR_KIOSK_USER	WARNING	User ${UserDisplayName} is entitled to multiple desktop pools

View Agent Events

Table 2-5 shows the event types for View Agent.

Table 2-5. View Agent Events

EventType	Severity	ModuleAndEventText
AGENT_CONNECTED	INFO	User ${UserDisplayName} has logged in to a new session on machine ${MachineName}
AGENT_DISCONNECTED	INFO	User ${UserDisplayName} has disconnected from machine ${MachineName}
AGENT_ENDED	INFO	User ${UserDisplayName} has logged off machine ${MachineName}
AGENT_PENDING	INFO	The agent running on machine ${MachineName} has accepted an allocated session for user ${UserDisplayName}
AGENT_PENDING_ EXPIRED	WARNING	The pending session on machine ${MachineName} for user ${UserDisplayName} has expired
AGENT_RECONFIGURED	INFO	Machine ${MachineName} has been successfully reconfigured
AGENT_RECONNECTED	INFO	User ${UserDisplayName} has reconnected to machine ${MachineName}
AGENT_RESUME	INFO	The agent on machine ${MachineName} sent a resume message
AGENT_SHUTDOWN	INFO	The agent running on machine ${MachineName} has shut down, this machine will be unavailable
AGENT_STARTUP	INFO	The agent running on machine ${MachineName} has contacted the connection server and sent a startup message
AGENT_SUSPEND	INFO	The agent on machine ${MachineName} sent a suspend message

View Administrator Events

Table 2-6 shows the event types for View Administrator.

Table 2-6. View Administrator Events

EventType	Severity	ModuleAndEventText
ADMIN_ADD_DESKTOP_ENTITLEMENT	AUDIT_SUCCESS	${EntitlementDisplay} was entitled to Pool ${DesktopId} by ${UserDisplayName}
ADMIN_ADD_LICENSE	AUDIT_SUCCESS	${UserDisplayName} added license
ADMIN_ADD_LICENSE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to add license
ADMIN_ADD_PM	AUDIT_SUCCESS	${UserDisplayName} added physical machine ${MachineName} to Pool ${DesktopId}
ADMIN_ADD_PM_FAILED	AUDIT_FAIL	${UserDisplayName} failed to add physical machine ${MachineName} to Pool ${DesktopId}
ADMIN_ADD_THINAPP_ENTITLEMENT	AUDIT_SUCCESS	Application ${ThinAppDisplayName} was assigned to Desktop ${MachineName} by ${UserDisplayName}
ADMIN_ADD_THINAPP_ENTITLEMENT_ FAILED	AUDIT_FAIL	${UserDisplayName} failed to add Application entitlement
ADMIN_ADD_THINAPP_POOL_ ENTITLEMENT	AUDIT_SUCCESS	Application ${ThinAppDisplayName} was assigned to Pool ${DesktopId} by ${UserDisplayName}
ADMIN_ADMINSTRATOR_REMOVE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to remove all permissions for Administrator ${AdminPermissionEntity}

Table 2-6. View Administrator Events (Continued)

EventType	Severity	ModuleAndEventText
ADMIN_ADMINSTRATOR_REMOVED	AUDIT_SUCCESS	${UserDisplayName} removed all permissions for Administrator ${AdminPermissionEntity}
ADMIN_CONFIGURE_TRANSFER_SERVER_ LOCAL_REPO	INFO	Configure a local Transfer Server Repository. Path ${PathName}
ADMIN_CONFIGURE_TRANSFER_SERVER_ NETWORK_REPO	INFO	Configure a network Transfer Server Repository. Path: ${PathName}, domain: ${DomainName}, user name ${DomainUser}
ADMIN_CONNECTION_BROKER_UPDATE_ FAILED	AUDIT_FAIL	${UserDisplayName} failed to update connection broker ${BrokerId}
ADMIN_CONNECTION_BROKER_UPDATED	AUDIT_SUCCESS	${UserDisplayName} updated connection broker ${BrokerId}: (${AttrChangeType}: ${AttrName} = ${AttrValue})
ADMIN_CONNECTION_SERVER_BACKUP_ FAILED	AUDIT_FAIL	${UserDisplayName} failed to initiate a backup of connection broker ${BrokerId}
ADMIN_CONNECTION_SERVER_BACKUP_ INITIATED	AUDIT_SUCCESS	${UserDisplayName} initiated a backup of connection broker ${BrokerId}
ADMIN_CONNECTION_SERVER_DISABLE_ FAILED	AUDIT_FAIL	${UserDisplayName} failed to disable connection broker ${BrokerId}
ADMIN_CONNECTION_SERVER_DISABLED	AUDIT_SUCCESS	${UserDisplayName} is disabling connection broker ${BrokerId}
ADMIN_CONNECTION_SERVER_ENABLE_ FAILED	AUDIT_FAIL	${UserDisplayName} failed to enable connection broker ${BrokerId}
ADMIN_CONNECTION_SERVER_ENABLED	AUDIT_SUCCESS	${UserDisplayName} is enabling connection broker ${BrokerId}
ADMIN_DATABASE_CONFIGURATION_ADD_ FAILED	AUDIT_FAIL	${UserDisplayName} failed to add database configuration
ADMIN_DATABASE_CONFIGURATION_ ADDED	AUDIT_SUCCESS	${UserDisplayName} has added database configuration
ADMIN_DATABASE_CONFIGURATION_ DELETE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to delete database configuration
ADMIN_DATABASE_CONFIGURATION_ DELETE_FAILED	AUDIT_SUCCESS	${UserDisplayName} has deleted database configuration
ADMIN_DATABASE_CONFIGURATION_ UPDATE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to update database configuration
ADMIN_DATABASE_CONFIGURATION_ UPDATED	AUDIT_SUCCESS	${UserDisplayName} has updated database configuration
ADMIN_DEFAULT_DESKTOPPOOL_ASSIGN	AUDIT_SUCCESS	${UserDisplayName} assigned Pool ${DesktopId} for default desktop to ${UserName}
ADMIN_DEFAULT_DESKTOPPOOL_ASSIGN_ FAILED	AUDIT_FAIL	${UserDisplayName} failed to assign Pool ${DesktopId} for default desktop to ${UserName}
ADMIN_DEFAULT_DESKTOPPOOL_ UNASSIGN	AUDIT_SUCCESS	${UserDisplayName} removed pool assignment for default desktop to ${UserName}
ADMIN_DEFAULT_DESKTOPPOOL_ UNASSIGN_FAILED	AUDIT_FAIL	${UserDisplayName} failed to remove Pool assignment for default desktop to ${UserName}
ADMIN_DELETE_PACKAGE	INFO	Delete transfer package ${PackageName}

Table 2-6. View Administrator Events (Continued)

EventType	Severity	ModuleAndEventText
ADMIN_DESKTOP_ADDED	AUDIT_SUCCESS	${UserDisplayName} added Pool ${DesktopId}
ADMIN_DESKTOP_ASSIGN	AUDIT_SUCCESS	${UserDisplayName} assigned Desktop ${MachineName} to ${UserName}
ADMIN_DESKTOP_ASSIGN_FAILED	AUDIT_FAIL	${UserDisplayName} failed to assign Desktop ${MachineName} to ${UserName}
ADMIN_DESKTOP_EDITED	AUDIT_SUCCESS	${UserDisplayName} edited Pool ${DesktopId} (${AttrChangeType}: ${AttrName} = ${AttrValue})
ADMIN_DESKTOP_MAINTENANCE_MODE_ UPDATE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to update desktop ${MachineName} to ${MaintenanceMode} maintenance mode
ADMIN_DESKTOP_MAINTENANCE_MODE_ UPDATED	AUDIT_SUCCESS	${UserDisplayName} updated desktop ${MachineName} to ${MaintenanceMode} maintenance mode
ADMIN_DESKTOP_UNASSIGN	AUDIT_SUCCESS	${UserDisplayName} removed assignment for Desktop ${MachineName}
ADMIN_DESKTOP_UNASSIGN_FAILED	AUDIT_FAIL	${UserDisplayName} failed to remove assignment for Desktop ${MachineName}
ADMIN_ENABLE_DESKTOP_FAILED	AUDIT_FAIL	${UserDisplayName} failed to set Pool ${DesktopId} to ${EnableStatus}
ADMIN_ENABLE_DESKTOP_SUCCEEDED	AUDIT_SUCCESS	${UserDisplayName} set Pool ${DesktopId} to ${EnableStatus}
ADMIN_ENABLED_DESKTOP_PROVISION_ FAILED	AUDIT_FAIL	${UserDisplayName} failed to set provisioning for Pool ${DesktopId} to ${EnableStatus}
ADMIN_ENABLED_DESKTOP_PROVISION_ SUCCEEDED	AUDIT_SUCCESS	${UserDisplayName} set provisioning for Pool ${DesktopId} to ${EnableStatus}
ADMIN_EVENT_CONFIGURATION_UPDATE_ FAILED	AUDIT_FAIL	${UserDisplayName} failed to update event configuration
ADMIN_EVENT_CONFIGURATION_UPDATED	AUDIT_SUCCESS	${UserDisplayName} has updated global configuration
ADMIN_FOLDER_ADD_FAILED	AUDIT_FAIL	${UserDisplayName} failed to add folder ${AdminFolderName}
ADMIN_FOLDER_ADDED	AUDIT_SUCCESS	${UserDisplayName} added folder ${AdminFolderName}
ADMIN_FOLDER_CHANGE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to change object ${ObjectID}(type=${ObjectType}) to folder ${AdminFolderName}
ADMIN_FOLDER_CHANGED	AUDIT_SUCCESS	${UserDisplayName} changed object ${ObjectID}(type=${ObjectType}) to folder ${AdminFolderName}
ADMIN_FOLDER_DELETE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to delete folder ${AdminFolderName}
ADMIN_FOLDER_DELETED	AUDIT_SUCCESS	${UserDisplayName} deleted folder ${AdminFolderName}
ADMIN_GLOBAL_CONFIGURATION_ UPDATE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to update global configuration
ADMIN_GLOBAL_CONFIGURATION_ UPDATED	AUDIT_SUCCESS	${UserDisplayName} updated global configuration (${AttrChangeType}: ${AttrName} = ${AttrValue})

Table 2-6. View Administrator Events (Continued)

EventType	Severity	ModuleAndEventText
ADMIN_GLOBAL_POLICY_UPDATE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to update global policies
ADMIN_GLOBAL_POLICY_UPDATED	AUDIT_SUCCESS	${UserDisplayName} updated global policy (${AttrChangeType}: ${AttrName} = ${AttrValue})
ADMIN_LOCALMODE_INITIATE_ REPLICATION	INFO	Inititate replication for Machine ${MachineName}
ADMIN_LOCALMODE_LOCK_MACHINE	INFO	Lock Machine ${MachineName} on vCenter
ADMIN_LOCALMODE_LOCK_MACHINE_ FAILED	WARNING	Lock Machine ${MachineName} failed on vCenter
ADMIN_LOCALMODE_ROLLBACK_DESKTOP	INFO	Machine ${MachineName} has been rolled back
ADMIN_LOCALMODE_UNLOCK_MACHINE	INFO	Unlock Machine ${MachineName} on vCenter
ADMIN_LOCALMODE_UNLOCK_MACHINE_ FAILED	WARNING	Unlock Machine ${MachineName} failed on vCenter
ADMIN_PERFMON_CONFIGURATION_ UPDATE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to update performance monitoring configuration
ADMIN_PERFMON_CONFIGURATION_ UPDATED	AUDIT_SUCCESS	${UserDisplayName} has updated performance monitoring configuration
ADMIN_PERMISSION_ADD_FAILED	AUDIT_FAIL	${UserDisplayName} failed to add Permission to ${AdminPermissionEntity} with Role ${AdminRoleName} on Folder ${AdminFolderName}
ADMIN_PERMISSION_ADDED	AUDIT_SUCCESS	${UserDisplayName} added Permission to ${AdminPermissionEntity} with Role ${AdminRoleName} on Folder ${AdminFolderName}
ADMIN_PERMISSION_REMOVE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to remove Permission to ${AdminPermissionEntity} with Role ${AdminRoleName} on Folder ${AdminFolderName}
ADMIN_PERMISSION_REMOVED	AUDIT_SUCCESS	${UserDisplayName} removed Permission to ${AdminPermissionEntity} with Role ${AdminRoleName} on Folder ${AdminFolderName}
ADMIN_POOL_POLICY_UPDATE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to update Pool ${DesktopId} policies
ADMIN_POOL_POLICY_UPDATED	AUDIT_SUCCESS	${UserDisplayName} updated Pool ${DesktopId} policy (${AttrChangeType}: ${AttrName} = ${AttrValue})
ADMIN_PUBLISH_PACKAGE	INFO	Publish transfer package ${PackageName}
ADMIN_REMOVE_DESKTOP_ENTITLEMENT	AUDIT_SUCCESS	${EntitlementDisplay} was unentitled from Pool ${DesktopId} by ${UserDisplayName}
ADMIN_REMOVE_DESKTOP_FAILED	AUDIT_FAIL	${UserDisplayName} failed to removed Pool ${DesktopId}
ADMIN_REMOVE_DESKTOP_SUCCEEDED	AUDIT_SUCCESS	${UserDisplayName} removed Pool ${DesktopId}
ADMIN_REMOVE_THINAPP_ENTITLEMENT	AUDIT_SUCCESS	Application ${ThinAppDisplayName} was unassigned from Desktop ${MachineName} by ${UserDisplayName}

Table 2-6. View Administrator Events (Continued)

EventType	Severity	ModuleAndEventText
ADMIN_REMOVE_THINAPP_ENTITLEMENT_ FAILED	AUDIT_FAIL	${UserDisplayName} failed to remove Application entitlement
ADMIN_REMOVE_THINAPP_POOL_ ENTITLEMENT	AUDIT_SUCCESS	Application ${ThinAppDisplayName} was unassigned from Pool ${DesktopId} by ${UserDisplayName}
ADMIN_RESET_THINAPP_STATE	AUDIT_SUCCESS	Application ${ThinAppDisplayName} state are reset for Desktop ${DesktopDisplayName} by ${UserDisplayName}
ADMIN_RESET_THINAPP_STATE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to reset Application state for ${ThinAppDisplayName}
ADMIN_ROLE_ADD_FAILED	AUDIT_FAIL	${UserDisplayName} failed to add Role ${AdminRoleName} with privileges ${AdminPrivilegeName}
ADMIN_ROLE_ADDED	AUDIT_SUCCESS	${UserDisplayName} added Role ${AdminRoleName} with privileges ${AdminPrivilegeName}
ADMIN_ROLE_PRIV_UPDATE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to update Role ${AdminRoleName} to privileges ${AdminPrivilegeName}
ADMIN_ROLE_PRIV_UPDATED	AUDIT_SUCCESS	${UserDisplayName} updated Role ${AdminRoleName} to privileges ${AdminPrivilegeName}
ADMIN_ROLE_REMOVE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to remove Role ${AdminRoleName}
ADMIN_ROLE_REMOVED	AUDIT_SUCCESS	${UserDisplayName} removed Role ${AdminRoleName}
ADMIN_ROLE_RENAME_FAILED	AUDIT_FAIL	${UserDisplayName} failed to rename Role ${AdminRoleName} to ${AdminRoleNewName}
ADMIN_ROLE_RENAMED	AUDIT_SUCCESS	${UserDisplayName} renamed Role ${AdminRoleName} to ${AdminRoleNewName}
ADMIN_SECURITY_SERVER_ADD_FAILED	AUDIT_FAIL	${UserDisplayName} failed to add security server ${SecurityServerId}
ADMIN_SECURITY_SERVER_ADDED	AUDIT_SUCCESS	${UserDisplayName} added security server ${SecurityServerId}
ADMIN_SECURITY_SERVER_EDIT_FAILED	AUDIT_FAIL	${UserDisplayName} failed to edit security server ${SecurityServerId}
ADMIN_SECURITY_SERVER_EDITED	AUDIT_SUCCESS	${UserDisplayName} edited security server ${SecurityServerId} (${AttrChangeType}: ${AttrName} = ${AttrValue})
ADMIN_SECURITY_SERVER_REMOVE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to remove security server ${SecurityServerId}
ADMIN_SECURITY_SERVER_REMOVED	AUDIT_SUCCESS	${UserDisplayName} removed security server ${SecurityServerId}
ADMIN_SESSION_SENDMSG	AUDIT_SUCCESS	${UserDisplayName} sent message (${SessionMessage}) to session (User ${UserName}, Desktop ${MachineName})
ADMIN_SESSION_SENDMSG_FAILED	AUDIT_FAIL	${UserDisplayName} failed to send message (${SessionMessage}) to session ${ObjectId}

Table 2-6. View Administrator Events (Continued)

EventType	Severity	ModuleAndEventText
ADMIN_SVI_ADD_DEPLOYMENT_GROUP_ FAILED	AUDIT_FAIL	Failed to add deployment group for ${SVIParentVM} : ${SVISnapshot}
ADMIN_SVI_ADD_DEPLOYMENT_GROUP_ SUCCEEDED	AUDIT_SUCCESS	Added deployment group ${SVIDeploymentGroupID} for ${SVIParentVM} : ${SVISnapshot}
ADMIN_SVI_ADD_UDD_FAILED	AUDIT_FAIL	Failed to add user data disk ${UserDiskName}
ADMIN_SVI_ADD_UDD_SUCCEEDED	AUDIT_SUCCESS	Added user data disk ${UserDiskName}
ADMIN_SVI_ADMIN_ADDED	AUDIT_SUCCESS	${UserDisplayName} added SVI QuickPrep domain ${SVIAdminFqdn}(${SVIAdminName})
ADMIN_SVI_ADMIN_REMOVED	AUDIT_SUCCESS	${UserDisplayName} removed SVI QuickPrep domain (id=${SVIAdminID})
ADMIN_SVI_ADMIN_UPDATED	AUDIT_SUCCESS	${UserDisplayName} updated SVI QuickPrep domain ${SVIAdminFqdn}(${SVIAdminName})
ADMIN_SVI_ATTACH_UDD_FAILED	AUDIT_FAIL	Failed to request attach user data disk ${UserDiskName} to VM ${SVIVMID}
ADMIN_SVI_ATTACH_UDD_SUCCEEDED	AUDIT_SUCCESS	Requested attach user data disk ${UserDiskName} to VM ${SVIVMID}
ADMIN_SVI_DELETE_UDD_FAILED	AUDIT_FAIL	Failed to delete user data disk ${UserDiskName}
ADMIN_SVI_DELETE_UDD_SUCCEEDED	AUDIT_SUCCESS	Deleted user data disk ${UserDiskName}
ADMIN_SVI_DETACH_UDD_FAILED	AUDIT_FAIL	Failed to request detach user data disk ${UserDiskName} from VM ${SVIVMID}
ADMIN_SVI_DETACH_UDD_SUCCEEDED	AUDIT_SUCCESS	Requested detach user data disk ${UserDiskName} from VM ${SVIVMID}
ADMIN_SVI_REBALANCE_VM_FAILED	AUDIT_FAIL	Failed to rebalance VM ${SVIVMID}
ADMIN_SVI_REBALANCE_VM_SUCCEEDED	AUDIT_SUCCESS	Rebalanced VM ${SVIVMID}
ADMIN_SVI_REFRESH_VM_FAILED	AUDIT_FAIL	Failed to refresh VM ${SVIVMID}
ADMIN_SVI_REFRESH_VM_SUCCEEDED	AUDIT_SUCCESS	Refreshed VM ${SVIVMID}
ADMIN_SVI_RESYNC_VM_FAILED	AUDIT_FAIL	Failed to resync VM ${SVIVMID} to deployment group ${SVIDeploymentGroupID}
ADMIN_SVI_RESYNC_VM_SUCCEEDED	AUDIT_SUCCESS	Resyncd VM ${SVIVMID} to deployment group ${SVIDeploymentGroupID}
ADMIN_SVI_UPDATE_POOL_DEPLOYMENT_ GROUP_FAILED	AUDIT_FAIL	Failed to update pool ${DesktopId} to deployment group ${SVIDeploymentGroupID}
ADMIN_SVI_UPDATE_POOL_DEPLOYMENT_ GROUP_SUCCEEDED	AUDIT_SUCCESS	Updated pool ${DesktopId} to deployment group ${SVIDeploymentGroupID}
ADMIN_SVI_UPDATE_UDD_FAILED	AUDIT_FAIL	Failed to update user data disk ${UserDiskName}
ADMIN_SVI_UPDATE_UDD_SUCCEEDED	AUDIT_SUCCESS	Set user data disk ${UserDiskName} pool to ${DesktopId} and user to ${UserName}
ADMIN_THINAPP_ADD_FAILED	AUDIT_FAIL	${UserDisplayName} failed to add Application ${ThinAppDisplayName}
ADMIN_THINAPP_ADDED	AUDIT_SUCCESS	${UserDisplayName} added Application ${ThinAppDisplayName}

Table 2-6. View Administrator Events (Continued)

EventType	Severity	ModuleAndEventText
ADMIN_THINAPP_DESKTOP_AVAILABLE	AUDIT_SUCCESS	Application ${ThinAppDisplayName} is now available on Desktop ${DesktopDisplayName}
ADMIN_THINAPP_DESKTOP_REMOVED	AUDIT_SUCCESS	Application ${ThinAppDisplayName} has been removed from Desktop ${DesktopDisplayName}
ADMIN_THINAPP_EDITED	AUDIT_SUCCESS	${UserDisplayName} edited Application ${ThinAppDisplayName}
ADMIN_THINAPP_FAILED_DESKTOP_ DELIVERY	AUDIT_FAIL	Failed to deliver Application ${ThinAppDisplayName} to Desktop ${DesktopDisplayName}
ADMIN_THINAPP_FAILED_DESKTOP_ REMOVAL	AUDIT_FAIL	Failed to remove Application ${ThinAppDisplayName} from Desktop ${DesktopDisplayName}
ADMIN_THINAPP_GROUP_ADD_FAILED	AUDIT_FAIL	${UserDisplayName} failed to add Application Template ${ThinAppGroupName}
ADMIN_THINAPP_GROUP_ADDED	AUDIT_SUCCESS	${UserDisplayName} added Application Template ${ThinAppGroupName} with Applications ${ThinAppGroupApplications}
ADMIN_THINAPP_GROUP_EDIT_FAILED	AUDIT_FAIL	${UserDisplayName} failed to edit Application Template ${ThinAppGroupName}
ADMIN_THINAPP_GROUP_EDITED	AUDIT_SUCCESS	${UserDisplayName} edited Application Template ${ThinAppGroupName} with Applications ${ThinAppGroupApplications}
ADMIN_THINAPP_GROUP_REMOVE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to remove Application Template ${ThinAppGroupName}
ADMIN_THINAPP_GROUP_REMOVED	AUDIT_SUCCESS	${UserDisplayName} removed Application Template ${ThinAppGroupName}
ADMIN_THINAPP_REMOVE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to remove Application ${ThinAppDisplayName}
ADMIN_THINAPP_REMOVED	AUDIT_SUCCESS	${UserDisplayName} removed Application ${ThinAppDisplayName}
ADMIN_THINAPP_REPO_ADD_FAILED	AUDIT_FAIL	${UserDisplayName} failed to add Repository ${ThinAppRepositoryName}, path ${ThinAppRepositoryPath}
ADMIN_THINAPP_REPO_ADDED	AUDIT_SUCCESS	${UserDisplayName} added Repository ${ThinAppRepositoryName}, path ${ThinAppRepositoryPath}
ADMIN_THINAPP_REPO_EDIT_FAILED	AUDIT_FAIL	${UserDisplayName} failed to edit Repository ${ThinAppRepositoryName}, path ${ThinAppRepositoryPath}
ADMIN_THINAPP_REPO_EDITED	AUDIT_SUCCESS	${UserDisplayName} edited Repository ${ThinAppRepositoryName}, path ${ThinAppRepositoryPath}
ADMIN_THINAPP_REPO_REMOVED	AUDIT_SUCCESS	${UserDisplayName} removed Repository ${ThinAppRepositoryName}
ADMIN_TRANSFER_SERVER_ADDED	AUDIT_SUCCESS	${UserDisplayName} added transfer server ${TransferServerDisplay}

Table 2-6. View Administrator Events (Continued)

EventType	Severity	ModuleAndEventText
ADMIN_TRANSFER_SERVER_ENTER_MAINTENANCE	AUDIT_SUCCESS	Transfer server ${TransferServerDisplay} enters maintenance mode
ADMIN_TRANSFER_SERVER_EXIT_MAINTENANCE	AUDIT_SUCCESS	Transfer server ${TransferServerDisplay} exits maintenance mode
ADMIN_TRANSFER_SERVER_REMOVED	AUDIT_SUCCESS	${UserDisplayName} removed transfer server ${TransferServerDisplay}
ADMIN_UNREGISTER_PM	AUDIT_SUCCESS	${UserDisplayName} unregistered physical machine ${MachineName})
ADMIN_UNREGISTER_PM_FAILED	AUDIT_FAIL	${UserDisplayName} fails to unregister physical machine ${MachineName})
ADMIN_USER_INFO_UPDATE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to update user info with AD server for ${UserName}
ADMIN_USER_INFO_UPDATED	AUDIT_SUCCESS	${UserDisplayName} updated user info with AD server for ${UserName}
ADMIN_USER_POLICY_DELETE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to delete Pool ${DesktopId} override policies for user ${UserName}
ADMIN_USER_POLICY_DELETED	AUDIT_SUCCESS	${UserDisplayName} deleted Pool ${DesktopId} override policy for user ${UserName} (${AttrChangeType}: ${AttrName} = ${AttrValue})
ADMIN_USER_POLICY_UPDATE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to update Pool ${DesktopId} policies for user ${UserName}
ADMIN_USER_POLICY_UPDATED	AUDIT_SUCCESS	${UserDisplayName} updated Pool ${DesktopId} policy for user ${UserName} (${AttrChangeType}: ${AttrName} = ${AttrValue})
ADMIN_USERLOGGEDIN	AUDIT_SUCCESS	User ${UserDisplayName} has logged in to View Administrator
ADMIN_USERLOGGEDOUT	AUDIT_SUCCESS	User ${UserDisplayName} has logged out from View Administrator
ADMIN_VC_ADD_FAILED	AUDIT_FAIL	${UserDisplayName} failed to add VC server ${VCAddress}
ADMIN_VC_ADDED	AUDIT_SUCCESS	${UserDisplayName} added VC server ${VCAddress}
ADMIN_VC_EDITED	AUDIT_SUCCESS	${UserDisplayName} edited VC server ${VCAddress} (${AttrChangeType}: ${AttrName} = ${AttrValue})
ADMIN_VC_LICINV_ALARM_DISABLED	AUDIT_SUCCESS	Alarm on VC server ${VCAddress} for License Inventory monitoring was disabled as all Hosts have desktop licenses
ADMIN_VC_REMOVE_FAILED	AUDIT_FAIL	${UserDisplayName} failed to remove VC server ${VCAddress}
ADMIN_VC_REMOVED	AUDIT_SUCCESS	${UserDisplayName} removed VC server ${VCAddress}

View Transfer Server Events

Table 2-7 shows the event types for View Transfer Server.

Table 2-7. View Transfer Server Events

EventType	Severity	ModuleAndEventText
TRANSFER_SERVER_PACKAGE_DISPLACEMENT	WARNING	Transfer package ${PackageName} was not published on current Transfer Server Repository
TRANSFER_SERVER_PACKAGE_MISSING	WARNING	Transfer package ${PackageName} was missing on current Transfer Server Repository
TRANSFER_SERVER_PACKAGE_RECOVERY	INFO	Transfer package ${PackageName} recovered
TRANSFER_SERVER_PUBLISH_PACKAGE_FAILURE	ERROR	Failed to publish transfer package ${PackageName} on TransferServer ${TransferServerDisplay}
TRANSFER_SERVER_REAPER_FAILED	ERROR	Failed to clean up disk ${DiskPath} on TransferServer ${TransferServerDisplay}
TRANSFER_SERVER_STATE_CHANGED	INFO	TransferServer ${TransferServerDisplay} state has changed from ${TransferServerOldState} to ${TransferServerNewState} on ${TransferServerStateInput}.

Event Message Attributes

Table 2-8 shows the attributes that ModuleAndEventText messages use. To determine the data type of an attribute, you can examine the value of the Type column in the event_data or event_data_historical table.

Table 2-8. Attributes Used with ModuleAndEventText Messages

Attribute Name	Description
AdminFolderName	Name of a folder requiring privileged access.
AdminPermissionEntity	Name of an object requiring privileged access.
AdminPrivilegeName	Name of an administrative privilege.
AdminRoleName	Name of an administrative role.
AdminRoleNewName	New name of an administrative role.
AttrChangeType	Type of change that was applied to a generic attribute.
AttrName	Name of a generic attribute.
AttrValue	Value of a generic attribute.
BrokerId	Identifier of a View Connection Server instance.
BrokerName	Name of a View Connection Server instance.
DesktopDisplayName	Display name of a desktop pool.
DesktopId	Identifier of a desktop pool.
DiskPath	Path of a View Transfer Server package.
DomainName	Domain name for a remote View Transfer Server repository.
DomainUser	User name with access to a remote View Transfer Server repository.
EntitlementDisplay	Display name of a desktop entitlement.
LocalModeMessage	Message for a local desktop operation.
LocalModeOperation	Name of a local desktop operation.

Table 2-8. Attributes Used with ModuleAndEventText Messages (Continued)

Attribute Name	Description
MachineId	Identifier of a physical or virtual machine.
MachineName	Name of a physical or virtual machine.
MaintenanceMode	Maintenance mode state.
ObjectID	Identifier of an inventory object.
ObjectType	Type of an inventory object.
PackageName	Name of a View Transfer Server package.
PathName	Path of a View Transfer Server repository.
PolicyDisplayName	Display name of a policy.
PolicyObject	Identifier of a policy object.
PolicyValue	Value of a policy object.
ProtocolId	Identifier of a display protocol.
SecurityServerId	Identifier of a security server.
SVIAdminFqdn	FQDN of a QuickPrep domain.
SVIAdminID	Identifier of a QuickPrep domain.
SVIAdminName	Name of a QuickPrep domain.
SVIDeploymentGroupID	Identifier of a View Composer deployment group.
SVIOperation	Name of a View Composer operation.
SVIParentVM	Parent virtual machine in View Composer.
SVIPath	Path of an object in View Composer.
SVISnapshot	Snapshot in View Composer.
SVIVMID	Identifier of a virtual machine in View Composer.
ThinAppDisplayName	Display name of a ThinApp object.
ThinAppId	Identifier of a ThinApp object.
ThinAppRepositoryName	Name of a ThinApp repository.
ThinAppRepositoryPath	Path of a ThinApp repository.
Time	Date and time value.
TransferServerDisplay	Display name of View Transfer Server.
TransferServerNewState	Current state of View Transfer Server.
TransferServerOldState	Previous state of View Transfer Server.
TransferServerStateInput	Input event causing a View Transfer Server to change state.
UserCount	Maximum number of desktop users over a 24-hour period.
UserDiskName	Name of a user data disk.
UserDisplayName	User name in the form DOMAIN\username.
UserName	Name of a user in Active Directory.
VCAddress	URL of a vCenter Server.

Sample Database Queries and Views

List all recent events that are associated with the user fred in the domain MYDOM.

```
CREATE VIEW user_events AS
    (
    SELECT ev.EventID, ev.Time, ev.Module, ev.EventType, ev.Severity, ev.Acknowledged
        FROM ViewEvents.dbo.VE_event_historical AS ev,
            ViewEvents.dbo.VE_event_data_historical AS ed
        WHERE ev.EventID = ed.EventID AND ed.Name = 'UserDisplayName' AND ed.StrValue =
            'MYDOM\fred'
    );
```

List all recent events where the agent on a machine shut down.

```
CREATE VIEW agent_shutdown_events AS
    (
    SELECT ev.EventID, ev.Time, ed.StrValue
        FROM ViewEvents.dbo.VE_event_historical AS ev,
            ViewEvents.dbo.VE_event_data_historical AS ed
        WHERE ev.EventID = ed.EventID AND ev.EventType = 'AGENT_SHUTDOWN' AND
            ed.Name = 'MachineName'
    );
```

List all recent events where a desktop failed to launch because the desktop pool was empty.

```
CREATE VIEW desktop_launch_failure_events AS
    (
    SELECT ev.EventID, ev.Time, ed1.StrValue, ed2.StrValue
        FROM ViewEvents.dbo.VE_event_historical AS ev,
            ViewEvents.dbo.VE_event_data_historical AS ed1,
            ViewEvents.dbo.VE_event_data_historical AS ed2
        WHERE ev.EventID = ed1.EventID AND ev.EventID = ed2.EventID AND
            ev.EventType = 'BROKER_POOL_EMPTY' AND
            ed1.Name = 'UserDisplayName' AND ed2.Name = 'DesktopId'
    );
```

List all recent events where an administrator removed a desktop pool.

```
CREATE VIEW desktop_pool_removed_events AS
    (
    SELECT ev.EventID, ev.Time, ed1.StrValue, ed2.StrValue
        FROM ViewEvents.dbo.VE_event_historical AS ev,
            ViewEvents.dbo.VE_event_data_historical AS ed1,
            ViewEvents.dbo.VE_event_data_historical AS ed2
        WHERE ev.EventID = ed1.EventID AND ev.EventID = ed2.EventID AND
            ev.EventType = 'ADMIN_DESKTOP_REMOVED' AND
            ed1.Name = 'UserDisplayName' AND ed2.Name = 'DesktopId'
    );
```

List all recent events where an administrator added a ThinApp repository.

```
CREATE VIEW thinapp_repository_added_events AS
    (
    SELECT ev.EventID, ev.Time, ed1.StrValue, ed2.StrValue, ed3.StrValue
        FROM ViewEvents.dbo.VE_event_historical AS ev,
            ViewEvents.dbo.VE_event_data_historical AS ed1,
            ViewEvents.dbo.VE_event_data_historical AS ed2,
            ViewEvents.dbo.VE_event_data_historical AS ed3
        WHERE ev.EventID = ed1.EventID AND ev.EventID = ed2.EventID AND ev.EventID = ed3.EventID
            AND
            ev.EventType = 'ADMIN_THINAPP_REPO_ADDED' AND
            ed1.Name = 'UserDisplayName' AND ed2.Name = 'ThinAppRepositoryName' AND
            ed3.Name = 'ThinAppRepositoryPath'
    );
```

Using View PowerCLI 3

View PowerCLI provides an easy-to-use PowerShell interface to VMware View. You can use the View PowerCLI cmdlets to perform various administration tasks on View components.

This chapter includes the following topics:

Introduction to View PowerCLI

Windows PowerShell is a command-line and scripting environment that is designed for Microsoft Windows. PowerShell uses the .NET object model and provides administrators with management and automation capabilities. As with any other console environment, you work with PowerShell by running commands, which are called cmdlets in PowerShell.

VMware View 4.5 includes 45 View PowerCLI cmdlets. You can use these cmdlets in conjunction with the vSphere PowerCLI cmdlets, which provide an administrative interface to the VMware vSphere product. You can also use the View PowerCLI cmdlets to examine the configuration of vCenter Servers in VMware View.

The command-line syntax for the View PowerCLI cmdlets is the same as generic PowerShell syntax. See the Microsoft documentation for more information about using PowerShell.

The View PowerCLI cmdlets are located in the `PowershellServiceCmdlets.dll` file in the directory `C:\Program Files\VMware\VMware View\Server\bin`. This file constitutes the `VMware.View.Broker` snapin. The script configuration file for the View PowerCLI cmdlets is named `InitViewCmdlets.ps1`, and this file is located in the `Extras` folder in the View installation directory. You can edit and extend the script to define cmdlet aliases, to configure the environment, or to set startup actions.

Start the PowerShell Console with View PowerCLI Loaded

You can run the View PowerCLI cmdlets directly on a View Connections Server host that has the following software installed.

- VMware View 4.5 or later

- Microsoft .NET framework

- Windows PowerShell 1.0

To use the View PowerCLI cmdlets to change the configuration of View, you must be logged into a View Connection Server instance as a user in a role with sufficient privileges, such as the Administrators role. If your role is a read-only role, you cannot update configuration data. For more information, see the *VMware View Administrator's Guide*.

To start the PowerShell console with View PowerCLI loaded

1   Select **Start** > **All Programs** > **VMware** > **View PowerCLI**.

2   If you see an error message stating that the script configuration file cannot be loaded because the execution of scripts is disabled, type the following PowerShell command and restart the PowerShell console.

    Set-ExecutionPolicy Unrestricted

Displaying Help for a View PowerCLI cmdlet

To list all View PowerCLI cmdlets, type this command in the PowerShell console.

Get-Command -PSSnapin VMware.View.Broker | more

You can get help for a specific cmdlet by using the Get-Help cmdlet in the PowerShell console. For example, to get help on the Add-ViewVC cmdlet.

Get-Help Add-ViewVC | more

For more detailed information, add the -full parameter.

Get-Help Add-ViewVC -full | more

Alternatively, you can use the help alias for Get-Help.

help Add-ViewVC -full | more

Error When Piping and Specifying Objects at the Same Time

If you attempt to pipe an object into a cmdlet and specify an object of the same type to that cmdlet, the cmdlet fails with the following error.

```
The input object cannot be bound to any parameters for the command either because the command
does not take pipeline input or the input and its properties do not match any of the parameters
that take pipeline input.
```

For example, the following cmdlet usage would produce this error.

Get-Pool -pool_id Pool1 | Update-ManualPool -pool_id Pool2 -displayName "Manual Pool 2"

Escaping Characters in vCenter Pathnames

If you specify a path to a vCenter folder that includes certain special characters in the name of an entity, you must escape these characters. Table 3-1 shows the escape sequences for special characters.

Table 3-1. Escape Sequences for Special Characters

Special Character	Escape Sequence
%	%25
/	%2f
\	%5c

Do not escape the slashes in the pathname itself. For example, you would represent the path to the folder /datacenter_01/vm/img%-12 as /datacenter_01/vm/img%25-12.

Table 3-2 lists the cmdlets and parameters that require you to use escape sequences in entity names.

Table 3-2. Cmdlet Parameters Requiring Escape Sequences

Cmdlet	Parameters Requiring Escape Sequences
Add–AutomaticLinkedClonePool Update–AutomaticLinkedClonePool	–datastoreSpecs –parentVMPath –resourcePoolPath –vmfolderPath
Add–AutomaticPool Update–AutomaticPool	–datastorePaths –resourcePoolPath –templatePath –vmfolderPath
Send–LinkedCloneRecompose	–parentVMPath

View PowerCLI Cmdlets

You can use View PowerCLI cmdlets to administer VMware View on a View Connection Server instance. You can use the Get–Help cmdlet to obtain more help about a View PowerCLI cmdlet as described in

lists the available View PowerCLI cmdlets ordered by noun.

Table 3-3. View PowerCLI Cmdlets Ordered by Noun

Cmdlet	Description
Add–AutomaticLinkedClonePool	Adds an automatically provisioned linked-clone desktop pool.
Update–AutomaticLinkedClonePool	Updates an automatically provisioned linked-clone desktop pool.
Add–AutomaticPool	Adds an automatically provisioned full virtual machine desktop pool.
Update–AutomaticPool	Updates an automatically provisioned full virtual machine desktop pool.
Get–ComposerDomain	Returns information about View Composer.
Get–ConnectionBroker	Returns information about View Connection Server and security server instances.
Update–ConnectionBroker	Updates the configuration of a View Connection Server or security server instance.
Get–DesktopPhysicalMachine	Returns a list of physical machines that are available for use with unmanaged desktop pools.
Get–DesktopVM	Returns information about virtual machines.
Get–EventReport	Returns an event report for a specified view.
Get–EventReportList	Returns the views that are available for use with the Get–EventReport cmdlet.
Get–GlobalSetting	Returns global configuration information about the VMware View environment.
Update–GlobalSetting	Updates global configuration information about the VMware View environment.
Get–License	Returns the VMware View licenses on a View Connection Server instance.
Set–License	Sets a VMware View license on a View Connection Server instance.
Send–LinkedCloneRebalance	Rebalances linked-clone desktops among the available logical drives.
Send–LinkedCloneRecompose	Recomposes linked-clone desktops from a snapshot of their parent virtual machine.
Send–LinkedCloneRefresh	Refreshes the operating system disks of linked-clone desktops to their original state and size.
Get–LocalSession	Returns information about local desktops.

Table 3-3. View PowerCLI Cmdlets Ordered by Noun (Continued)

Cmdlet	Description
Send-LocalSessionRollback	Rolls back a local desktop.
Add-ManualPool	Adds a manually provisioned pool of managed desktops.
Update-ManualPool	Updates a manually provisioned pool of managed desktops.
Add-ManualUnmanagedPool	Adds a manually provisioned pool of unmanaged desktops.
Update-ManualUnmanagedPool	Updates a manually provisioned pool of unmanaged desktops.
Get-Monitor	Returns a list of health monitors for View services.
Get-Pool	Returns information about desktop pools.
Remove-Pool	Removes a desktop pool.
Add-PoolEntitlement	Creates desktop pool entitlements for users.
Get-PoolEntitlement	Returns information about the users who are entitled to use desktop pools.
Remove-PoolEntitlement	Removes desktop pool entitlement from users.
Get-ProfileDisk	Returns information about persistent user data disks.
Get-RemoteSession	Returns information about active remote sessions.
Send-SessionDisconnect	Disconnects an active remote session.
Send-SessionLogoff	Logs out an active remote session.
Get-TerminalServer	Returns information about registered Terminal Servers.
Add-TerminalServerPool	Adds a desktop pool from Terminal Server sources.
Update-TerminalServerPool	Updates a desktop pool that has Terminal Server sources.
Get-User	Returns information about users.
Remove-UserOwnership	Removes the ownership of a virtual machine.
Update-UserOwnership	Assigns a user (specified as a SID) to a virtual machine. This cmdlet does not support the assignment of users to physical machines.
Add-ViewVC	Adds a vCenter Server to VMware View.
Get-ViewVC	Returns information about vCenter Servers.
Remove-ViewVC	Removes a vCenter Server from VMware View.
Update-ViewVC	Updates the configuration of a vCenter Server in VMware View.
Send-VMReset	Resets a virtual machine.

View Administrator, View PowerCLI Cmdlet, and vdmadmin Operations

Table 3-4 compares the operations that are supported by View Administrator, View PowerCLI cmdlets, and the `vdmadmin` command on various View objects. For information about View Administrator and the `vdmadmin` command, see the *VMware View Administrator's Guide*.

Table 3-4. View Administrator, View PowerCLI Cmdlet, and vdmadmin Operations

Object	View Administrator Operations	View PowerCLI Cmdlet Operations	vdmadmin Command Operations
Desktop pool	Add	Add	
			Assign dedicated
	Assign ThinApp		
	Disable	Disable	
	Enable	Enable	
	Entitle user	Entitle user	
	Get information	Get information	
	Get unentitled policies		Get unentitled policies
	Get unentitled users		Get unentitled users
	Remove	Remove	
			Remove assignment
	Remove entitlement	Remove entitlement	
	Restrict entitlement		
	Set policy	Set policy	
	Update	Update	
Domain filter			Get information
			Remove filter
			Set filter
Events	Get list	Get list	Get list
		Get report	Get report
Folder	Add		
	Get information		
	Move		
	Remove		
Kiosk mode			Add client account
			Disable authentication
			Enable authentication
			Get information
			Get defaults
			Remove client account
			Set defaults
Linked-clone desktop	Rebalance	Rebalance	
	Recompose	Recompose	
	Recreate		
	Refresh	Refresh	
	Restore		
	Set storage overcommit	Set storage overcommit	
Local desktop			Decrypt virtual machine
	Get information	Get information	
			Lock checked-out
	Roll back	Roll back	
			Unlock checked-out
Permission	Add		
	Get information		
	Remove		

Table 3-4. View Administrator, View PowerCLI Cmdlet, and vdmadmin Operations (Continued)

Object	View Administrator Operations	View PowerCLI Cmdlet Operations	vdmadmin Command Operations
Persistent user data disk	Attach Delete Detach Get information Replace	Get information	
Physical computer (with View Agent)	Get information	Get information	Get information
Remote session	Disconnect Get information Log out	Disconnect Get information Log out	
Role	Add Modify Remove		
Terminal Server	Get information	Get information	
User	Configure policy Create administrator Get information Remove administrator	Get information	Get information Update FSP
vCenter Server	Add Get information Remove Update	Add Get information Remove Update	
View Agent			Create DCT bundle Get copy of log file Get list of log files Get logging level Get status Get version Override IP address Set logging level
View Composer domain		Get information	
View Connection Server	Back up configuration Get information Restore configuration Update	Get information Update	Remove from group
View Connection Server group			Get GUID of group Set name of group
View Global Setting	Get information Update	Get information Update	
View service health monitor	Get information	Get information	Get information

Table 3-4. View Administrator, View PowerCLI Cmdlet, and vdmadmin Operations (Continued)

Object	View Administrator Operations	View PowerCLI Cmdlet Operations	vdmadmin Command Operations
View Transfer Server	Add		
	Configure repository		
	Get information		
	Get state		
			Lock virtual machine
	Migrate repository		
	Remove		
	Replicate local desktop		
	Set maintenance mode		
			Unlock virtual machine
View Transfer Server package	Add		
	Remove		
			Get split limit
	Get status		
	Publish		
	Set path to repository		
			Set split limit
Virtual machine (with View Agent)	Get information	Get information	Get information
	Remove ownership	Remove ownership	
	Reset	Reset	
	Update ownership	Update ownership	
VMware View license	Get information	Get information	
	Set license	Set license	

View PowerCLI Cmdlet Parameters

Some View PowerCLI cmdlet parameters accept arguments that are chosen from a limited set.

Default Display Protocol Settings

Table 3-5 shows the settings that you can use with the –defaultProtocol parameter to specify the default display protocol for a desktop pool.

Table 3-5. Default Display Protocol Settings

Default Display Protocol	Description
PCOIP	Specifies VMware PCoIP.
RDP	Specifies Microsoft RDP.
RGS	Specifies HP RGS (where applicable).

Deletion Policy Settings

Table 3-6 shows the settings that you can use with the –deletePolicy parameter to specify a deletion policy for automatically provisioned floating and linked-clone desktop pools.

Table 3-6. Deletion Policy Settings

Deletion Policy	Description
Default	Specifies that the desktop is not deleted when the user logs out.
DeleteOnUse	Specifies that the desktop is deleted when the user logs out.
RefreshOnUse	Specifies that the desktop is refreshed when the user logs out. This setting applies only to linked-clone desktop pools.

Flash Quality Settings

Table 3-7 shows the settings that you can use with the `–flashQuality` parameter to specify a maximum allowable quality for Adobe Flash content. This value overrides the setting on a Web page. If the Flash quality for a Web page is higher than the maximum value allowed, the client reduces the quality to the specified maximum. Lowering the quality of Flash content causes it to use less bandwidth.

Table 3-7. Flash Quality Settings

Flash Quality	Description
HIGH	Specifies that low, medium, or high quality Flash content is allowed.
LOW	Specifies that only low quality Flash content is allowed.
MEDIUM	Specifies that low or medium quality Flash content is allowed.
NO_CONTROL	Allows the Web page settings to determine quality.

Flash Throttling Settings

Table 3-8 shows the settings that you can use with the `–flashThrottling` parameter to specify how often Adobe Flash should refresh what it shows onscreen. Throttling Flash to increase the refresh interval reduces the frame rate. This reduction causes Flash content to use less bandwidth, but it might also cause Flash to drop frames.

Table 3-8. Flash Throttling Settings

Flash Throttling	Description
AGGRESSIVE	Sets the interval to 2500 milliseconds. This results in the highest number of dropped frames. The speed of audio transmission is unaffected.
CONSERVATIVE	Sets the interval to 100 milliseconds. This results in the lowest number of dropped frames. The speed of audio transmission is unaffected.
DISABLED	Disables Flash content entirely including the audio component.
MODERATE	Sets the interval to 500 milliseconds. The speed of audio transmission is unaffected.

LDAP Backup Frequency

Table 3-9 shows the settings that you can use with the `–ldapBackupFrequency` parameter to specify the LDAP backup frequency for a View Connection Server instance.

Table 3-9. LDAP Backup Frequency Settings

LDAP Backup Frequency	Description
Every12Hour	Backs up the LDAP database once every 12 hours.
Every2Day	Backs up the LDAP database once every two days.
Every2Week	Backs up the LDAP database once every two weeks.
Every6Hour	Backs up the LDAP database once every six hours.
EveryDay	Backs up the LDAP database once per day.
EveryHour	Backs up the LDAP database once per hour.
EveryWeek	Backs up the LDAP database once per week.
Never	Turns off backup for the LDAP database.

Pool Type Settings

Table 3-10 shows the settings that you can use with the –poolType parameter to specify the type of a desktop pool.

Table 3-10. Pool Type Settings

Pool Type	Description
IndividualUnmanaged	Specifies a pool containing an individual unmanaged desktop.
IndividualVC	Specifies a pool containing an individual desktop that is managed and configured by a vCenter Server.
Manual	Specifies a pool of manually configured floating (nonpersistent) desktops that are managed and configured by a vCenter Server.
ManualUnmanagedNonPersistent	Specifies a pool of manually configured floating (nonpersistent) desktops that are not managed.
ManualUnmanagedPersistent	Specifies a pool of manually configured dedicated (persistent) desktops that are not managed.
ManualVCPersistent	Specifies a pool of manually configured dedicated (persistent) desktops that are managed by a vCenter Server.
NonPersistent	(AutomaticPool) Specifies a pool of automatically configured floating (nonpersistent) desktops that are provisioned, managed, and configured by a vCenter Server.
OnRequestSviNonPersistent	(AutomaticPool) Specifies a pool of floating (nonpersistent) desktops that are provisioned, managed, and configured by a vCenter Server and View Composer when requested.
OnRequestSviPersistent	(AutomaticPool) Specifies a pool of dedicated (persistent) desktops that are provisioned, managed, and configured by a vCenter Server and View Composer when requested.
OnRequestVcNonPersistent	(AutomaticPool) Specifies a pool of floating (nonpersistent) desktops that are provisioned, managed, and configured by a vCenter Server when requested.
OnRequestVcPersistent	(AutomaticPool) Specifies a pool of dedicated (persistent) desktops that are provisioned, managed, and configured by a vCenter Server when requested.
Persistent	(AutomaticPool) Specifies a pool of automatically configured dedicated (persistent) desktops that are provisioned, managed, and configured by a vCenter Server.
SVINonPersistent	(AutomaticPool) Specifies a pool of floating (nonpersistent) desktops that are provisioned, managed, and configured by a vCenter Server and View Composer.
SVIPersistent	(AutomaticPool) Specifies a pool of dedicated (persistent) desktops that are provisioned, managed, and configured by a vCenter Server and View Composer.
TerminalService	Specifies a pool of desktops that are managed and configured by a terminal server.
TransferServer	Specifies a pool of desktops that are managed and configured by a transfer server.

Power Policy Settings

Table 3-11 shows the settings that you can use with the –powerPolicy parameter to specify the power policy for a desktop pool.

Table 3-11. Power Policy

Power Policy Setting	Description
AlwaysOn	Configures a desktop to remain powered on, even when no one is using it. If you shut down the desktop, it restarts immediately.
RemainOn	Starts a desktop when required if it is powered down. The desktop then remains powered on until you shut it down.
PowerOff	Shuts down a desktop when no one is using it.
Suspend	Suspends a desktop when no one is using it.

Refresh Policy Settings

Table 3-13 shows the settings that you can use with the −refreshPolicyType parameter to specify a refresh policy for the OS disks of automatically provisioned dedicated and linked-clone desktop pools.

Table 3-12. Refresh Policy Settings

Refresh Policy	Description
Always	Specifies that an OS disk is always refreshed when the user logs out.
Conditional	Specifies that an OS disk is refreshed when the user logs out if certain conditions are met. Use the −refreshpolicyDays and −refreshPolicyUsage parameters to specify the refresh interval in days and the percentage of the maximum allowable size for the disk.
Never	Specifies that an OS disk is never refreshed when the user logs out.

Smart Card Authentication Settings

Table 3-13 shows the settings that you can use with the −smartCardSetting parameter to specify how users with smart cards are authenticated. These settings apply to Update−ConnectionBroker, and do not have any effect unless you also specify −UseSSLClient $true with Update−GlobalSetting.

Table 3-13. Smart Card Authentication Settings

Refresh Policy	Description
NotAllowed	Specifies that smart card authentication is disabled.
Optional	Specifies that users can use smart card authentication or password authentication to connect to the View Connection Server instance. If smart card authentication fails, the user must provide a password.
Required	Specifies that users must use smart card authentication when connecting to the View Connection Server instance. Smart card authentication replaces Windows password authentication only. If SecureID is enabled, users are required to authenticate by using both SecureID and smart card authentication.

View Composer Maintenance Task Types

Table 3-14 shows the settings that you can use with the −composerTask parameter to specify a View Composer maintenance task type that is scheduled on a virtual machine.

Table 3-14. View Composer Maintenance Task Types

Task Type	Description
attachUdd	Specifies a scheduled task to attach a persistent disk.
detachUdd	Specifies a scheduled task to detach a persistent disk.
mkChkPoint	Specifies a scheduled task to create a checkpoint snapshot.
rebalance	Specifies a scheduled task to rebalance a linked-clone desktop.
refresh	Specifies a scheduled task to refresh a linked-clone desktop.
replaceUdd	Specifies a scheduled task to replace a persistent disk.
resync	Specifies a scheduled task to recompose a linked-clone desktop.

Examples of Using View PowerCLI Cmdlets

The View PowerCLI cmdlets allow you to perform View operations from the command line or from scripts instead of using View Administrator. The following sections contain examples that you can adapt and apply to your own systems.

Displaying Information About a View Connection Server Instance

Display the configuration settings of a View Connection Server instance.

```
Get-ConnectionBroker -displayName connsvr1
```

Updating the Configuration of a View Connection Server Instance

Update the settings for direct connections and secureID on a View Connection Server instance.

```
Update-ConnectionBroker -displayName connsvr1 -directConnect $false -secureIdEnabled $true
-ldapBackupFrequency EveryWeek
```

Managing the Configuration of vCenter Servers in VMware View

Add an entry for a vCenter Server to the View configuration.

```
Add-ViewVC -serverName vc01.mydom.int -username Administrator -password clydenw
-displayName "VC-01" -createRampFactor 5 -deleteRampFactor 5
```

Return information about a vCenter Server.

```
Get-ViewVC -serverName vc01.mydom.int
```

Return information about all vCenter Servers in a specified DNS domain.

```
Get-ViewVC -serverName *.mycorp.com
```

Change the values of the ramp factors for the vCenter Server that is configured on server svr11.

```
Get-ViewVC -serverName svr11.mycorp.com | Update-ViewVC -createRampFactor 5 -deleteRampFactor 10
```

Change the value of the create ramp factor for the vCenter Servers that are configured in the DNS domain mycorp.com.

```
Get-ViewVC -serverName *.mycorp.com | Update-ViewVC -createRampFactor 5
```

Remove an entry for a vCenter Server from the configuration.

```
Get-ViewVC -serverName vc02.mydom.int | Remove-ViewVC
```

Managing Desktop Pools

Return information about the desktop pool mypool.

```
Get-Pool -poolDisplayName mypool
```

Return information about all desktop pools with the prefix mypool-.

```
Get-Pool -pool_id mypool-*
```

Return information about all desktop pools that are configured to use the PCoIP protocol.

```
Get-Pool -protocol PCOIP
```

Return information about all individual unmanaged desktop pools.

```
Get-Pool -poolType IndividualUnmanaged
```

Remove the desktop pool dtpool-10.

```
Remove-Pool -pool_id dtpool-10
```

Remove the desktop pool dtpool-12, terminating any active session, but without deleting the image from disk.

```
Remove-Pool -pool_id dtpool-12 -TerminateSession $true -DeleteFromDisk $false
```

Remove the desktop pool mydesktop, and delete its image from disk.

```
Get-Pool -pool_id mydesktop | Remove-Pool -DeleteFromDisk $true
```

Creating and Updating Automatically Provisioned Desktop Pools

Add the automatically provisioned desktop pool auto1, which is managed by the vCenter Server vc.mydom.int.

```
Get-ViewVC -serverName vc.mydom.int | Add-AutomaticPool -pool_id auto1 -displayName "ADP1"
-namePrefix "adp1-{n:fixed=4}" -vmFolderPath /AutoConfig/vm
-resourcePoolPath /AutoConfig/host/Resources -templatePath /AutoConfig/vm/ADP_template
-dataStorePaths /host/datastore_1/lun10 -customizationSpecName "Windows 7 Variation 3"
-minimumCount 4 -maximumCount 10
```

NOTE   To provision all the desktops in advance of their use, set −minimumCount and −maximumCount to the same value.

Update the configuration of the automatically provisioned desktop pool auto1.

```
Update-AutomaticPool -pool_id auto1 -displayName "Automatic Desktop Pool 1"
-isProvisioningEnabled $false -dataStorePaths /host/datastore_1/lun10;/host/datastore_1/lun12
```

The datastores that you specify as arguments to −datastorePaths override the previous setting. You must specify the existing datastores to retain them for use by the pool.

Creating and Updating Linked-Clone Desktop Pools

Add the linked-clone desktop pool lcdpool_1, which is managed by View Composer on the vCenter Server vc.mydom.int.

```
Get-ViewVC -serverName vc.mydom.int | Get-ComposerDomain -domain VCDOM |
Add-AutomaticLinkedCLonePool -pool_id lcdpool_1 -displayName "LCD Pool 1"
-namePrefix "lcp1-{n}-dt" -parentVMPath /AutoPoolVMs/parent
-parentSnaphotPath /AutoPoolSnapshots/parent1_snapshot -vmFolderPath /AutoConfig/VM_folder
-resourcePoolPath /AutoConfig/host/Resources
-datastoreSpecs [Aggressive,os,data]/host/datastore_1/lun04;/host/datastore_2/lun16
-dataDiskLetter "D" -dataDiskSize 100 -minimumCount 4 -maximumCount 10
```

NOTE   To provision all the desktops in advance of their use, set −minimumCount and −maximumCount to the same value.

If you specify a persistent data disk, use an uppercase letter for the drive. Do not use a letter that already exists on the parent virtual machine for a drive such as A, B, or C, or that conflicts with a network-mounted drive.

Update the configuration of the linked-clone desktop pool lcdpool_1.

```
Get-ViewVC -serverName vc.mydom.int | Get-ComposerDomain -domain VCDOM |
Update-AutomaticLinkedCLonePool -pool_id lcdpool_1 -datastoreSpecs
[Conservative,os,data]/host/datastore_1/lun04;/host/datastore_2/lun16;/host/datastore_2/lun22
-minimumCount 4 -maximumCount 20 -headroomCount 2 -powerPolicy Suspend -defaultProtocol PCOIP
-isUserResetAllowed $true
```

The datastores that you specify as arguments to −datastoreSpecs override the previous setting. You must specify the existing datastores to retain them for use by the pool.

Rebalance desktops in the linked-clone desktop pool lcdpool_2 among the available datastores.

```
Get-DesktopVM -pool_id lcdpool_2 | Send-LinkedCloneRebalance -schedule 2011-05-10:01:00:00
-forceLogoff $false -stopOnError $true
```

Refresh the operating system disk of each linked-clone desktop by restoring it to its original state and size.

```
Get-DesktopVM -pool_id lcdpool_2 | Send-LinkedCloneRefresh -schedule "May 12 2011 01:15"
-forceLogoff $true -stopOnError $true
```

Recompose all linked-clone desktops from a snapshot of their parent virtual machine.

```
Get-DesktopVM -pool_id lcdpool_2 | Send-LinkedCloneRecompose -schedule ((Get-Date).AddHours(8))
-parentVMPath /AutoPoolVMs/parent2 -parentSnapshotPath /AutoPoolSnapshots/parent2_snapshot
-forceLogoff $true -stopOnError $true
```

Creating and Updating Manually Provisioned Desktop Pools

Create the manually provisioned desktop pool man1 from the desktops listed by the vCenter Server vc.mydom.int.

```
Get-ViewVC -serverName vc.mydom.int | Get-DesktopVM | Add-ManualPool -pool_id man1
-isUserResetAllowed $true
```

Update the configuration of the manually provisioned desktop pool man1.

```
Update-ManualPool -pool_id man1 -displayName "Manual Desktop 1" -isUserResetAllowed $false
```

Creating Manual Unmanaged Desktop Pools

Create the unmanaged desktop pool unman1 that contains the physical machines pm01 and pm02.

```
Add-ManualUnmanagedPool -pool_id unman1 -pm_id_list pm01;pm02 -isUserResetAllowed $true
```

Update the configuration of the unmanaged desktop pool unman1.

```
Update-ManualUnmanagedPool -pool_id unman1 -displayName "Unmanaged Desktop 1"
-isUserResetAllowed $false
```

Creating and Updating Desktops Provisioned by Terminal Servers

Return information about a terminal server.

```
Get-TerminalServer -hostname tsvr01
```

Add the desktop pool tsd1 using a machine that is provided by the terminal server at a specified IP address.

```
Get-TerminalServer -hostname tsvr01 | Add-TerminalServerPool -id tsd1 -displayName "Terminal
Server Desktop 1" -allowProtocolOverride $true
```

Update the configuration of the desktop pool tsd1, which uses a machine provided by a terminal server.

```
Get-TerminalServer -hostname tsvr01 | Update-TerminalServerPool -id tsd1 -displayName "Terminal
Server Desktop 1" -allowProtocolOverride $false -autoLogoffTime 1
```

Obtaining Information About Users and Groups from Active Directory

Return information about users in the domain mydom.

```
Get-User -domain mydom
```

Return information about the user fred in the domain mydom and exclude any information about the user's group.

```
Get-User -name fred -domain mydom -includeGroup $false
```

Managing Desktop Entitlements

Add an entitlement for the user fred in the domain mydom to use desktop pool dtop-12.

```
Get-User -name mydom\fred | Add-PoolEntitlement -pool_id dtop-12
```

Add an entitlement to all desktop pools for a user specified by an SID.

```
Get-Pool | Add-PoolEntitlement -sid S-1-5-21-7623811015-3361044348-030300820-1512
```

Return information about all entitlements to desktop pools.

```
Get-PoolEntitlement
```

Return information about the users who are entitled to use desktop pool dtop-1.

```
Get-PoolEntitlement -pool_id dtop-1
```

Return information about the users who are entitled to use desktop pools whose IDs start with dtpool-.

```
Get-Pool -pool_id dtpool-* | Get-PoolEntitlement
```

Remove the entitlement to use desktop pool dtpool-11.

```
Get-PoolEntitlement -pool_id dtpool-11 | Remove-PoolEntitlement
```

If you want to remove all entitlements from the system, specify the `-forceRemove` parameter set to `$true`.

```
Get-PoolEntitlement | Remove-PoolEntitlement -forceRemove $true
```

If you do not specify the `-forceRemove` parameter, you can use the command to find out information about the entitlements that would be removed.

Managing Local Desktops

Return information about the local desktop for the specified IP address.

```
Get-LocalSession -hostIP 10.20.54.65
```

Return information about the local desktops for a range of IP addresses.

```
Get-LocalSession -hostIP 10.20.222.*
```

Roll back the local desktop with a specified host IP address.

```
Get-LocalSession -host_ip 10.20.54.36 | Send-LocalSessionRollback
```

Roll back the local desktops for a range of host IP addresses.

```
Get-LocalSession -hostIP 10.20.222.* | Send-LocalSessionRollback
```

Roll back the local desktop with the virtual machine ID vmcn11.

```
Send-LocalSessionRollback -machine_id vmcn11
```

Managing Remote Sessions

Return the list of active remote sessions for the user fred in the domain mydom.

```
Get-RemoteSession -username mydom\fred
```

Disconnect the active remote sessions on which the user fred is logged in.

```
Get-RemoteSession -username mydom\fred | Send-SessionDisconnect
```

Log out the active remote sessions on which the user fred is logged in.

```
Get-RemoteSession -username mydom\fred | Send-SessionLogoff -session_id
```

Log out the active remote sessions that are using the RDP protocol.

```
Get-RemoteSession -protocol RDP | Send-SessionLogoff
```

Managing Virtual Machines

NOTE   View Agent must be running on the virtual machines.

Return information about the virtual machine for the desktop pool dtpool-3.

```
Get-DesktopVM -pool_id dtpool-3
```

Return information about the virtual machines that are configured on the vCenter Server vc03.

```
Get-DesktopVM -vc_id vc03
```

Return information about the virtual machines that are managed by the same vCenter Server that provisions the desktop pool dtpool-1.

```
Get-ViewVC -pool_id dtpool-1 | Get-DesktopVM
```

Return information about all virtual machines that are managed by the vCenter Server that is configured on the server vc01.mydom.int.

```
Get-ViewVC -serverName vc01.mydom.int | Get-DesktopVM
```

Return information about the virtual machines that are configured as manual desktop pools, and which are managed by vCenter Servers that are configured on servers in the DNS domain mycorp.com.

```
Get-ViewVC -serverName *.mycorp.com -DesktopType Manual | Get-DesktopVM
```

Return a list of active persistent user data disks for the virtual machine vm01.

```
Get-ProfileDisk -VMname vm01
```

Reset the virtual machines for the desktop pool dtpool-05.

```
Get-Pool -pool_id dtpool-05 | Get-DesktopVM | Send-VMReset
```

Reset the virtual machine for the desktop pool with the display name dtp1.

```
Get-Pool -displayName dtp1 | Get-DesktopVM | Send-VMReset
```

Displaying Information About Physical Computers

NOTE   View Agent must be running on the computers.

Return information about the computer at a specified IP address.

```
Get-DesktopPhysicalMachine -hostname myhost01
```

Updating the Ownership of Machines

Update the ownership of the virtual machine vm04.

```
Update-UserOwenership -machine_id vm04 -sid S-1-5-21-7623811015-3361044348-030300820-1013
```

Remove the ownership of a virtual machine.

```
Remove-UserOwenership -machine_id vm22
```

Displaying Information About Events

Display the views that are available for reporting events.

```
Get-EventReportList
```

Display configuration change events that have occurred since the specified date.

```
Get-EventReport -viewName config_changes -startDate 2011-05-20:00:00:00
```

Display user events that occurred between two specified dates.

```
Get-EventReport -viewName user_events -startDate 2011-12-01:00:00:00 -endDate 2011-12-02:00:00:00
```

Display user events for the last 24 hours.

```
Get-EventReport -viewName user_events -startDate ((Get-Date).AddDays(-1))
```

Display user events for the current year.

```
Get-EventReport -viewName user_events -startDate (Get-Date -Day 01 -Month 01 -Hour 0 -Minute 0 -Second 0)
```

Managing the Global Configuration of VMware View

Display the global configuration settings.

```
Get-GlobalSetting
```

Set the session timeout to 30 minutes.

```
Update-GlobalSetting -SessionTimeout 30
```

Set the forced logout warning message and delay period.

```
Update-GlobalSetting -DisplayLogoffWarning $true -ForcedLogoffAfter $logoutdelay
-ForcedLogoffMessage "Forced log out will occur in $logoutdelay minutes"
```

Require clients to use SSL to connect and set the prelogin message.

```
Update-GlobalSetting -UseSSLClient $true -PreLoginMessage "Insert disclaimer and other notices
here."
```

Managing View Licenses

Display the installed View license keys.

```
Get-License
```

Add a license key.

```
Set-License -key "08A25-0212B-0212C-4D42E"
```

Customizing LDAP Data

4

You can use VMware and Microsoft command tools to export and import LDAP configuration data in LDAP Data Interchange Format (LDIF) files from and into VMware View. These commands are intended for use by advanced administrators who want to use scripts to update configuration data without using View Administrator. If you want to create scripts to update the View configuration, VMware recommends that you use View PowerCLI rather than LDAP commands.

This chapter includes the following topics:

- "LDAP Configuration Data" on page 45

- "Export LDAP Configuration Data" on page 46

- "Modify LDAP Configuration Data" on page 46

- "Import LDAP Configuration Data" on page 49

- "Import LDAP Configuration Data Using the LDIFDE Command" on page 50

LDAP Configuration Data

All View configuration data is stored in an LDAP directory. Each View Connection Server standard or replica instance contains a local LDAP configuration repository and a replication agreement between each of the View Connection Server instances. This arrangement ensures that changes to one repository are automatically replicated to all the other repositories.

When you use View Administrator to modify the configuration of VMware View, the appropriate LDAP data in the repository is updated. For example, if you add a desktop pool, VMware View stores information about users, user groups, and entitlements in LDAP. The View Connection Server instances manage other LDAP configuration data automatically, and they use the information in the repository to control View operations.

You can use LDIF files to perform a number of tasks.

- To transfer configuration data between View Connection Server instances.

- To define a large number of View objects, such as desktop pools, and add these to your View Connection Server instances without using View Administrator to do this manually.

- To back up your View configuration so that you can restore the state of a View Connection Server instance.

In View Manager 3.1 and later, regular backups of the LDAP repository are made automatically.

LDAP configuration data is transferred as plain ASCII text and conforms to the Internet Engineering Task Force (IETF) RFC 2849 standard.

Export LDAP Configuration Data

You can export configuration data from a standard or replica View Connection Server instance to an LDIF file by running the `vdmexport` command-line utility.

By default, the `vdmexport` command-line utility is installed in the `C:\Program Files\VMware\VMware View\Server\tools\bin` directory.

In View Manager 3.1 and earlier, you must be logged into a standard or replica instance View Connection Server instance as an administrator and be a member of the Local Administrators user group.

In VMware View 4.5, you must be logged in to a View Connection Server instance as a user in the Administrators or Administrators (Read only) role to export configuration data successfully from the View configuration repository.

To export configuration data from a View Connection Server instance

1   Select **Start > Command Prompt**.

2   At the command prompt, type the `vdmexport` command and redirect the output to a file.

    vdmexport > myexport.LDF

    In VMware View 4.5, you can specify the output file name as an argument to the `-f` option.

    vdmexport -f myexport.LDF

    The command writes the configuration of your View Connection Server instance to the file that you specify. The command displays errors if your role has insufficient privileges to view the data in the configuration repository.

Modify LDAP Configuration Data

You can modify the LDAP configuration data that you have exported from a View Connection Server instance to an LDIF file and use the modified file to perform automatic bulk configuration operations on View Connection Server instances.

You can obtain an example of the LDIF syntax for any item of LDAP configuration data in VMware View. For example, you can extract the data for a desktop pool and use this as a template to create a large number of desktop pools.

To modify LDAP configuration data

1   Use View Administrator to add a single desktop pool with the default attribute values that you require.

    If required, you can modify these values when you create your customized configuration file.

2   Use the `vdmexport` command to export the configuration data as an LDIF file.

    See "Export LDAP Configuration Data" on page 46.

3   Examine the contents of the LDIF file to find the entry definitions of the desktop pool that you created.

    You can use this entry as a template for adding a large number of desktop pools.

Use the `vdmimport` command to import your customized LDIF file and update the configuration of the View Connection Server instance. See "Import LDAP Configuration Data" on page 49.

You must add the following entries to an LDIF file to define a desktop pool:

■   A Virtual Desktop VM entry for each virtual desktop in the desktop pool.

■   A VM Pool entry for each desktop pool.

■   A Desktop Application entry that defines the entitlement of the desktop pool.

Each VM Pool entry must be associated with one Desktop Application entry in a one-to-one relationship. A Desktop Application entry cannot be shared between VM Pool entries, and a VM Pool entry can only be associated with one Desktop Application entry.

The following extract from an LDIF file shows sample entries for a desktop pool named Pool1, which contains two virtual desktops named VM1 and VM2. The desktop pool entry is paired with the Desktop Application entry, which is also named Pool1.

```
#
# Virtual Desktop VM entry VM1
#

DN: CN=vm1,OU=Servers,DC=vdi,DC=vmware,DC=int
changetype: add
objectClass: top
objectClass: pae-Server
objectClass: pae-WinServer
objectClass: pae-ThinWinServer
objectClass: pae-VM
cn: vm1
description: sample virtual desktop entry
pae-VmSuspended:: IA==
pae-OptIgnoreProcessList: 0
pae-MOID: vm-1
pae-VmState: READY
pae-ServerManaged: 1
pae-SSOEnabled: 1
pae-DisplayName: virtual desktop 1
pae-TunneledConnection: 1
pae-pwdEncryption: KERB5
ipHostNumber: vm1
pae-ClientProtVersion: 1
pae-WinDomain: NULL
pae-thinProto: XP_RDP
pae-Services: SESSION |, HEARTBEAT |, EVENTS |, USED |
pae-VmPath: /New Datacenter/vm/vm-1
pae-OptSuspendTimeout: 0
pae-OptDisconnectLimitTimeout: 0
pae-OptMaximumSessions: 0
pae-Disabled: 0

#
# Virtual Desktop VM entry VM2
#

DN: CN=vm2,OU=Servers,DC=vdi,DC=vmware,DC=int
changetype: add
objectClass: top
objectClass: pae-Server
objectClass: pae-WinServer
objectClass: pae-ThinWinServer
objectClass: pae-VM
cn: vm2
description: sample virtual desktop entry
pae-VmSuspended:: IA==
pae-OptIgnoreProcessList: 0
pae-MOID: vm-2
pae-VmState: READY
pae-ServerManaged: 1
pae-SSOEnabled: 1
pae-DisplayName: virtual desktop 2
pae-TunneledConnection: 1
pae-pwdEncryption: KERB5
ipHostNumber: vm2
pae-ClientProtVersion: 1
pae-WinDomain: NULL
pae-thinProto: XP_RDP
pae-Services: SESSION |, HEARTBEAT |, EVENTS |, USED |
pae-VmPath: /New Datacenter/vm/vm-2
pae-OptSuspendTimeout: 0
pae-OptDisconnectLimitTimeout: 0
pae-OptMaximumSessions: 0
```

```
        pae-Disabled: 0

        #
        # Further Virtual Desktop VM entries as required
        #

        #
        # VM Pool entry Pool1
        #

        DN: CN=Pool1,OU=Server Groups,DC=vdi,DC=vmware,DC=int
        changetype: add
        objectClass: top
        objectClass: pae-ServerPool
        cn: Pool1
        pae-VCDN: CN=b180b93b-2dd3-4b58-8a81-b8534a4b7565,OU=VirtualCenter,OU=Properties,DC=vdi,
        DC=vmware,DC=int
        pae-MemberDN: CN=vm1,OU=Servers,DC=vdi,DC=vmware,DC=int
        pae-MemberDN: CN=vm2,OU=Servers,DC=vdi,DC=vmware,DC=int
        pae-VmPowerPolicy: remainon
        pae-VmProvEnabled: 1
        pae-VmProvSuspendOnError: 1
        pae-VmStartClone: 1
        pae-VmPoolCalculatedValues: 1
        pae-ServerPoolType: 0
        pae-VmMinimumCount: 0
        pae-VmHeadroomCount: 0
        pae-VmMaximumCount: 0
        pae-Disabled: 0

        #
        # Desktop Application entry Pool1 -- one entry is required for each VM Pool
        #

        DN: CN=Pool1,OU=Applications,DC=vdi,DC=vmware,DC=int
        changetype: add
        objectClass: top
        objectClass: pae-Entity
        objectClass: pae-App
        objectClass: pae-WinApp
        objectClass: pae-ThinWinApp
        objectClass: pae-DesktopApplication
        cn: Pool1
        member:: PFNJRD1TLTEtMi0zLTQ+IA==
        pae-Icon: /thinapp/icons/desktop.gif
        pae-URL: \
        pae-Servers: CN=Pool1,OU=Server Groups,DC=vdi,DC=vmware,DC=int
        pae-ServerProtocolLevel: OSX_NETOP
        pae-ServerProtocolLevel: OS2_NETOP
        pae-ServerProtocolLevel: NT4_NETOP
        pae-ServerProtocolLevel: WIN2K_NETOP
        pae-ServerProtocolLevel: NT4_RDP
        pae-ServerProtocolLevel: WIN2K_RDP
        pae-ServerProtocolLevel: XP_RDP
        pae-Disabled: 0
```

Table 4-1 lists the attributes that are important when you modify a desktop pool definition.

Table 4-1. Important Attributes for Defining a Desktop Pool

Entry	Attribute	Description
Virtual Desktop VM VM Pool Desktop Application	cn	Specifies the common name of an entry. If you require names to be generated automatically, specify globally unique identifier (GUID) strings. You can use any reliable GUID generator, such as the mechanism provided by .NET (for example, by calling `System.Guid.NewGuid().ToString()` in Visual Basic).
Desktop Application	member	Specifies a list of Active Directory (AD) users and groups who are entitled to access the desktop pool. The attribute is specified in the form of a Windows Security Identifier (SID) reference. A member value of `<SID=S–1–2–3–4>` represents an AD user or group with the SID value S–1–2–3–4. In LDIF format, the left angle (<) character is reserved, so you must place two colons (::) after the attribute name and specify the SID value in base 64 format (for example, `PFNJRD1TLTEtMi0zLTQ+IA==`). Because this attribute is multivalued, you can use it on multiple lines to represent each entry in a list of SIDs.

In a similar manner to desktop pools, you can create customized LDIF files for other objects that are defined in the LDAP repository, for example:

■ Global configuration settings.

■ Configuration settings for a specific View Connection Server instance or security server.

■ Configuration settings for a specific user.

Import LDAP Configuration Data

You can import configuration data from an LDIF file into a standard or replica View Connection Server by running the vdmimport command.

The vdmimport command is available fromVMware View 4.5. In previous releases, you must use the LDIFDE command instead. See "Import LDAP Configuration Data Using the LDIFDE Command" on page 50.

By default, the vdmimport command-line utility is installed in the `C:\Program Files\VMware\VMware View\Server\tools\bin` directory.

The vdmimport command does not update, create, or delete any LDAP records that are not defined in the LDIF file. This allows you to customize an LDIF file so that only selected records are affected when you import the file.

You must be logged into a View Connection Server instance as a user in the Administrators role to import configuration data successfully into the View configuration repository.

To import configuration data into a View Connection Server instance

1   Select **Start > Command Prompt**.

2   At the command prompt, type the vdmimport command and specify an existing LDIF file as an argument to the –f option.

```
vdmimport –f myexport.LDF
```

The configuration of your View Connection Server instance is updated with the data from the file, and the number of records that have been successfully updated is displayed. Errors are displayed if some records could not be updated because your role has insufficient privileges.

Import LDAP Configuration Data Using the LDIFDE Command

You can import configuration data from an LDIF file into a standard or replica View Connection Server by running the Microsoft `LDIFDE` command.

In release 4.5, you should use the `vdmimport` command to import configuration data. The `vdmimport` command does not display the large number of error messages that are produced by running the `LDIFDE` command. See "Import LDAP Configuration Data" on page 49.

The `LDIFDE` command does not update, create, or delete any LDAP records that are not defined in the LDIF file. This allows you to customize an LDIF file so that only selected records are affected when you import the file.

For more information about using the LDIFDE command, go to http://support.microsoft.com/kb/237677.

In View Manager 3.1 or earlier, you must be logged into a View Connection Server instance as an administrator, and be a member of the Local Administrators user group.

In VMware View 4.5, you must be logged into a View Connection Server instance as a user in the Administrators role to import configuration data successfully into the View configuration repository.

To import configuration data into a View Connection Server instance using LDIFDE

1   Select **Start > All Programs > ADAM > ADAM Tools Command Prompt**.

2   At the command prompt, type the `LDIFDE` command and specify an existing LDIF file as an argument to the `-f` option.

    LDIFDE -i -f myexport.LDF -s 127.0.0.1 -z

Enter the other options to the `LDIFDE` command as shown in the example.

The configuration of your View Connection Server instance is updated with the data from the file, and the number of records that have been successfully updated is displayed. A large number of error messages are displayed that indicate whenever an existing entry in the repository has been overwritten. Such errors can be ignored. Errors are also displayed if some records could not be updated because your role has insufficient privileges.

Integrating with SCOM

<div style="text-align: right; font-size: xx-large;">5</div>

You can use Microsoft System Center Operations Manager (SCOM) to monitor the state of VMware View components, including View Connection Server instances and security servers and View services running on these hosts.

This chapter includes the following topics:

View Management Packs

The View management packs (MPs) require the default System MP that is installed with Microsoft SCOM and the MP for Microsoft Windows Server Base OS System Center Operations Manager 2007.

The View MPs consists of four individual MPs:

- `VMware.View.Discovery.mp` contains the agent that discovers instances of View Server installations. See "View Discovery Script" on page 52.

- `VMware.View.Monitoring.mp` contains the views and monitors that you can use with View in the Operations Manager console. See "Views and Monitors" on page 53.

- `VMware.View.Library.mp` contains class and relationship definitions for the managed objects in View. See "Class and Relationship Definitions" on page 57.

- `VMware.View.Image.Library.mp` contains the graphics that represent the classes that are defined in `VMware.View.Library.mp`.

Name a View Connection Server Group

You can assign a name to a group of one or more View Connection Server hosts and security servers. The Operations Manager console displays this name to help you identify the group within SCOM.

To name the View Connection Server group

On one of the View Connection Server hosts in the group, use the –C and –c options with the `vdmadmin` command.

```
vdmadmin –C –c <group>
```

For example, set the name of a View Connection Server group to VCSG01.

```
vdmadmin –C –c VCSG01
```

Import the View MPs

When you install the View Connection Server software, the View MPs are also loaded onto the View Connection Server instance or security server. You can copy the View MPs to a SCOM server and use the Import Management Packs wizard from the Operations Manager console to import them.

> **NOTE** There is a known problem with McAfee VirusScan Enterprise 8.0i blocking the operation of Visual Basic scripts that are used by SCOM. For more information and details of the available patch, go to http://support.microsoft.com/kb/890736/en-us.

To import the View MPs on a SCOM server

1 Copy the View MPs from their installation directory (usually `C:\Program Files\VMware\VMware View\Server\extras\ManagementPacks`) on a View Connection Server instance or security server to the SCOM server.

2 In the Operations Manager console, right click **Administration\Management Packs**, and select **Import Management Packs**.

3 Use the Import Management Packs wizard to import the View MPs.

4 (Optional) Run the discovery script manually for the systems on which the VMware View software is installed.

More more information, see "Run the Discovery Script" on page 53.

View Discovery Script

The `VMware.View.Discovery` MP contains a script that finds View installed systems. The discovery script probes the registries of Windows servers for entries that indicate the version of the View software, the type of server, and the name and ID of the View Connection Server group. If the script detects that a View server is installed on a computer, it creates instances of the object classes that are defined in the `VMware.View.Library` MP and establishes the relationships between these managed objects.

The script can only discover a Windows server if you have used the Operations Manager console to enable the proxy agent for the server. See "Enable a Proxy Agent on a Server" on page 55.

The discovery script is scheduled to run once every hour. You can also perform the discovery manually from the Operations Manager console. See "Run the Discovery Script" on page 53.

You can verify the objects that the discovery agent has created for a server by viewing them in the Operations Manager console. See "Display Discovered Objects" on page 53.

The agent discovers the following managed objects for a Connection Server.

- `VMware.View.Cluster`

- `VMware.View.Cluster.Node.V0405`

- `VMware.View.ConnectionServerRole.V0405`

- `VMware.View.Component.ConnectionServer.V0405`

- `VMware.View.Component.Framework.V0405`

- `VMware.View.Component.Web.V0405`

- `VMware.View.Component.Directory.V0405`

- `VMware.View.Component.SecureGateway.V0405`

- `VMware.View.Component.MessageBus.V0405`

The agent discovers the following managed objects for a Security Server.

- `VMware.View.Cluster`

- `VMware.View.Cluster.Node.V0405`

- `VMware.View.SecurityServerRole.V0405`

- `VMware.View.Component.SecurityServer.V0405`

- `VMware.View.Component.Framework.V0405`

- `VMware.View.Component.SecureGateway.V0405`

For a description of View object classes and their relationships, see "Class and Relationship Definitions" on page 57.

Run the Discovery Script

The discovery script is scheduled to run once every hour. You can run the script manually to discover a system that you have added.

To run the discovery script

In the Operations Manager console, go to **Monitoring\Windows Computers**, select a computer system, and click the **VMware View Run Discovery Probe** action.

Display Discovered Objects

You can display the View objects that the discovery script has created for a server.

To display the objects that the discovery script has created for a server

In the Operations Manager console, go to **Monitoring\Discovery Inventory**.

Display Managed Objects

You can display the View objects that SCOM manages, and the relationships between these objects.

To display managed objects in View and their relationships

In the Operations Manager console, go to **Monitoring\VMware View**, and select the required view.

Views and Monitors

The `VMware.View.Monitoring` MP contains the views and monitors that you can use with View in the Operations Manager console. Table 5-1 lists the views that you can use to examine discovered View objects.

Table 5-1. Views Available for View

View	Description
Active Alerts	Displays critical View alerts.
Node State	Displays the state of all discovered members of all View Connection Server groups.
Group State	Displays the state of the discovered View Connection Server groups.
Groups	Displays a diagram of all discovered View Connection Server groups, members, roles, and components. You can obtain details about objects and their relationships by clicking the icons and the connectors.
Connection Server Role Performance Data	Displays the following data sets: ■ All Sessions ■ All Sessions High ■ Checked out VMs ■ Checked out VMs High ■ SVI Sessions ■ SVI Sessions High
Secure Gateway Role Performance Data	Displays the following data sets: ■ Secure Gateway Sessions ■ Secure Gateway Sessions High

You can find the Active Alerts, Group State, Groups, and Node State views under **Monitoring\VMware View** and the Connection Server Role Performance Data and Secure Gateway Role Performance Data views under **Monitoring\VMware View\Performance** in the Operations Manager console.

The `VMware.View.Monitoring` MP provides the following monitor types:

■ Performance monitor – collects system data and return this data to the SCOM performance database and data warehouse. You can examine the data graphically in the Connection Server Role Performance Data and Secure Gateway Role Performance Data views. See "Performance Data Collection Settings" on page 55 and "Display Performance Data" on page 56.

■ Service component monitors – collect information about the state of the View component services. If a monitored service is not running, SCOM sets its state to error and raises an alert. If a component is in the error state, the affected View Connection Server group and its members also enter the error state. See "Display Information About an Alert" on page 56, "Restart a Service" on page 56, and "Close Alerts" on page 57.

Table 5-2 shows the service component monitors that are provided for a View Connection Server instance.

Table 5-2. View Service Component Monitors for a View Connection Server instance

Monitor	Display Name	Monitored Service
ConnectionServerServiceCheck	Connection Server Service Health	VMware View Connection Server
FrameworkServiceCheck	Base Framework Service Health	VMware View Framework Component
MessageBusServiceCheck	Message Bus Service Health	VMware View Message Bus Component
SecureGatewayCheck	Security Gateway Service Health	VMware View Security Gateway Component
WebServiceCheck	Web Service Health	VMware View Web Component
DirectoryServiceCheck	Directory Service Health	VMwareVDMDS

Table 5-3 shows the service component monitors that are provided for a security server.

Table 5-3. View Service Component Monitors for a Security Server

Monitor	Display Name	Monitored Service
SecureGatewayServerServiceCheck	Security Server Service Health	VMware View Security Server
FrameworkServiceCheck	Base Framework Service Health	VMware View Framework Component
SecureGatewayCheck	Security Gateway Service Health	VMware View Security Gateway Component

- Domain connectivity monitor – verifies that a Connection Server can bind to all the domains of which it is a member. The monitor queries the status of the Web component on a Connection Server every 3 minutes. If a Connection Server cannot bind to a domain, SCOM sets its state to error and raises an alert. See "Display Information About an Alert" on page 56, "Exclude a Domain from Connectivity Monitoring" on page 56, and "Close Alerts" on page 57.

- Event database connectivity monitor – checks that the event database is configured and that events are writable to the database. The monitor queries the Web component every 3 minutes for this information and raises an alert if the event database is not connected.

- Virtual Center (vCenter) connectivity monitor – checks that a View Connection Server instance can connect to the configured vCenter servers. The monitor queries the Web component every 3 minutes for this information and raises an alert if a vCenter server is not available.

Performance Data Collection Settings

To save storage space, the `System.Performance.OptimizedDataProvider` module is configured to store performance data in the SCOM database when the value of a sampled item has changed by more than a specified tolerance. For more information, see http://msdn.microsoft.com/en-us/library/ee809318.aspx.

Table 5-4 shows the performance data collection settings for the data sets.

Table 5-4. Performance Data Collection Settings

Data set	Frequency	Tolerance	Maximum Sample Separation
All Sessions	15 minutes	5%	4
All Sessions High	60 minutes	5%	4
Checked Out VMs	15 minutes	5%	4
Checked Out VMs High	60 minutes	5%	4
Secure Gateway Sessions	15 minutes	5%	4
Secure Gateway Sessions High	60 minutes	5%	4
SVI Sessions	15 minutes	5%	4
SVI Sessions High	60 minutes	5%	4

Enable a Proxy Agent on a Server

You must enable the proxy agent on each View Connection Server host or security server that you want to monitor.

To enable the proxy agent on a server

1 In the Operations Manager console, go to **Administration\Agent Managed**, select the server, and click **Properties**.

2 Under the **Security** tab, select the option **Allow this agent to act as a proxy and discover managed objects on other computers**.

3 Click **OK**.

Display Performance Data

You can display graphical information about the performance of a View Connection Server instance or security server.

To display performance data for a View Connection Server instance or security server

In the Operations Manager console, go to **Monitoring\VMware View\Performance**, select the **Connection Server Role Performance Data** or **Secure Gateway Role Performance Data** view, and select the required data sets.

Display Information About an Alert

You can use the Health Explorer to display information about alerts that the health monitors have raised for a View Connection Server group.

To display active alerts for View components

1   In the Operations Manager console, go to **Monitoring\VMware View** and select the **Active Alerts** view.

2   Select an alert (🔴) to display the knowledge article for that alert.

Restart a Service

The service component monitors alert you if a View component service stops working. You can restart a service from the Health Explorer.

To restart a service following an alert

1   In the Operations Manager console, go to **Monitoring\VMware View** and select the **Group State** view or the **Group Node State** view.

2   Right click on a View Connection Server group or member that is in the alert state (🔴) and select **Open > Health Explorer**.

3   In the Health Explorer, select the alert and click **Restart the service** in the knowledge article.

Exclude a Domain from Connectivity Monitoring

The Domain Connectivity Health monitor checks the connectivity between a View Connection Server host's domain and any trusted domains. To avoid seeing alerts for a domain, you can exclude the domain from being monitored.

To exclude a domain from being monitored for connectivity

1   In the Operations Manager console, go to **Monitoring\VMware View**, and select the **Group State** view or the **Group Node State** view.

2   Right click on the connection server, and select **Open > Health Explorer**.

3   Right click on the **Domain Connectivity Health** entry for the Connection Server in the Health Explorer and select **Monitor Properties**.

4   Under the **Overrides** tab, click **Override** and select the option for all objects of the same class.

5   In the Override Properties window, select the **Override** check box for the DomainExcludeList parameter, enter the name of the excluded domain in the **Override Setting** field, and select the **Enforced** check box. If you want to exclude more than one domain, use spaces to separate the domain names.

6   Click **Apply** and **OK**.

Close Alerts

You can close an alert without taking any action. This method does not prevent the alert from being raised again if the underlying cause persists.

To close alerts

1   In the Operations Manager console, go to **Monitoring\VMware View** and select the **Active Alerts** view.

2   Select the alert and click the **Close Alert** action.

Class and Relationship Definitions

The `VMware.View.Library` MP contains the class and relationship definitions for the View MPs. A class can have properties, such as a name or an ID. The relationships between classes describe their hierarchy. For example, the relationship `contains` exists between `VMware.View.Clusters` and `VMware.View.Cluster`, and between `VMware.View.Cluster` and `VMware.View.Cluster.Node`

Table 5-5 shows the View Connection Server group classes that are defined in the `VMware.View.Library` MP.

Table 5-5. View Library View Connection Server Group Classes

Class Name	Description
VMware.View.Cluster	Represents a View Connection Server group. This class has the properties `ClusterID` and `DisplayName` (the name of the group).
VMware.View.Clusters	Represents a singleton class that contains instances of `VMware.View.Cluster`.

Table 5-6 shows the abstract base classes that are defined in the `VMware.View.Library` MP.

Table 5-6. View Library Base Classes

Class Name	Description
VMware.View.Cluster.Node	Represents a member of a View Connection Server group. This class has the properties `ClusterID`, `ClusterName`, `ProductVersion`, and `InstallPath`.
VMware.View.Component	Represents a View component that has been installed on a member of a View Connection Server group. This class has the property `Name`.
VMware.View.Component.ConnectionServer	Represents the Connection Server component that has been installed on a member of a View Connection Server group. This class inherits its properties from `VMware.View.Component`.
VMware.View.Component.Directory	Represents the Directory component that has been installed on a member of a View Connection Server group. This class inherits its properties from `VMware.View.Component`.
VMware.View.Component.Framework	Represents the Framework component that has been installed on a member of a View Connection Server group. This class inherits its properties from `VMware.View.Component`.
VMware.View.Component.MessageBus	Represents the Message Bus component that has been installed on a member of a View Connection Server group. This class inherits its properties from `VMware.View.Component`.
VMware.View.Component.SecurityGateway	Represents the Security Gateway component that has been installed on a member of a View Connection Server group. This class inherits its properties from `VMware.View.Component`.

Table 5-6. View Library Base Classes (Continued)

Class Name	Description
VMware.View.Component.SecurityServer	Represents the Security Server component that has been installed on a member of a View Connection Server group. This class inherits its properties from VMware.View.Component.
VMware.View.Component.Web	Represents the Web component that has been installed on a member of a View Connection Server group. This class inherits its properties from VMware.View.Component.
VMware.View.ConnectionServerRole	Represents a member of a View Connection Server group with the Connection Server installed on it. This class inherits its properties from VMware.View.NodeRole.
VMware.View.NodeRole	Represents the role of a member of a View Connection Server group.
VMware.View.SecurityServerRole	Represents a member of a View Connection Server group with the Security Server installed on it. This class inherits its properties from VMware.View.NodeRole.

Only version 4.5 instances that are derived from these classes are currently supported. shows the version 4.5 concrete classes that are defined in the VMware.View.Library MP.

Table 5-7. View Library version 4.5 Concrete Classes

Class Name	Description
VMware.View.Cluster.Node.V0405	Represents a View Connection Server group member that has version 4.5 of View installed. This class inherits its properties from VMware.View.Cluster.Node.
VMware.View.Component.ConnectionServer.V0405	Represents version 4.5 of the Connection Server component that has been installed on a member of a View Connection Server group. This class inherits its properties from VMware.View.Component.Connection Server.
VMware.View.Component.Directory.V0405	Represents version 4.5 of the Directory component that has been installed on a member of a View Connection Server group. This class inherits its properties from VMware.View.Component.Directory.
VMware.View.Component.Framework.V0405	Represents version 4.5 of the Framework component that has been installed on a member of a View Connection Server group. This class inherits its properties from VMware.View.Component.Framework.
VMware.View.Component.MessageBus.V0405	Represents version 4.5 of the Message Bus component that has been installed on a member of a View Connection Server group. This class inherits its properties from VMware.View.Component.MessageBus.
VMware.View.Component.SecurityGateway.V0405	Represents version 4.5 of the Security Gateway component that has been installed on a member of a View Connection Server group. This class inherits its properties from VMware.View.Component.SecureGateway.
VMware.View.Component.SecurityServer.V0405	Represents version 4.5 of the Security Server component that has been installed on a member of a View Connection Server group. This class inherits its properties from VMware.View.Component.SecurityServer.
VMware.View.Component.Web.V0405	Represents version 4.5 of the Web component that has been installed on a member of a View Connection Server group. This class inherits its properties from VMware.View.Component.Web.

Table 5-7. View Library version 4.5 Concrete Classes (Continued)

Class Name	Description
`VMware.View.ConnectionServerRole.V0405`	Represents a member of a View Connection Server group with version 4.5 of the Connection Server installed on it. This class inherits its properties from `VMware.View.NodeRole`.
`VMware.View.SecurityServerRole.V0405`	Represents a member of a View Connection Server group with version 4.5 of the Security Server installed on it. This class inherits its properties from `VMware.View.NodeRole`.

The `VMware.View.Library` MP also contains friendly name strings for classes and properties. The SCOM console displays friendly names in preference to class and property names.

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