

User Guide

CTERA Agent for Windows

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Tip



For legal information and for the end user license agreement, refer to ***Legal Information*** (on page 199) in this guide.

Contents

Introduction	5
About Cloud Attached Storage	5
About CTERA Agent	5
Contacting Technical Support	6
Installing the CTERA Agent	7
Requirements	7
Downloading CTERA Agent	8
Installing the Agent	9
Uninstalling the Agent	13
Centrally Installing CTERA Agent via Active Directory	15
Using the CTERA Agent in Gateway Mode	25
CTERA Agent Licensing in Gateway Mode	26
Supported Backup Operations	26
Workflow	28
Connecting the Agent to a Cloud Gateway	29
Disconnecting the Agent from a Cloud Gateway	31
Using the CTERA Agent Manager	31
Selecting Files and Folders for File-Level Backup	44
Manually Starting Backup	45
Stopping the Current Local Backup Operation	45
Suspending and Resuming Local Backup	46
Viewing the Agent Status	46
Viewing Agent Details	47
Restoring Files from File-Level Backup	47
Restoring Files from Disk-Level Backup	51
Accessing Files on the Cloud Gateway	67
Using the CTERA Agent in Cloud Mode	69
CTERA Agent Licensing in Cloud Mode	70
Workflow	70
Connecting the CTERA Agent to the CTERA Portal	71
Setting Up Connection via a Web Proxy	78

Disconnecting the Agent from the CTERA Portal -----	79
Using the CTERA Agent Web Interface -----	79
Performing Tasks Using Windows Explorer and Windows Taskbar -----	83
Using Cloud Backup -----	83
Using Cloud Drive Synchronization -----	108
Collaborating on Cloud Drive Folders -----	119
Sharing Files with Guest Invitations -----	126
Restoring Files from Cloud Backup -----	130
Enabling/Disabling Remote Access -----	134
Configuring Event Log Settings -----	136
Viewing Logs -----	137
Configuring Windows Explorer Integration Settings -----	147
Configuring the CTERA Agent Language -----	148
Viewing the Agent Status -----	149
Viewing Agent Details -----	149
Restoring System State Data, NTDS, and SYSVOL -----	151
Restoring from a System State Backup on Windows 2003 Server SP2 -----	151
Restoring NTDS (Active Directory) and SYSVOL Applications on Windows 2003 / 2008 Server -----	155
Backing Up and Restoring Hyper-V Virtual Machines -----	161
Backing Up and Restoring Microsoft Hyper-V VMs in Gateway Mode -----	161
Backing Up and Restoring Microsoft Hyper-V VMs in Cloud Mode -----	167
Backing Up and Restoring SQL Server Databases -----	173
Backing Up and Restoring SQL Server in Gateway Mode -----	173
Backing Up and Restoring SQL Server Databases in Cloud Mode -----	179
Backing Up and Restoring an Exchange Server -----	185
Backing Up and Restoring Microsoft Exchange in Gateway Mode -----	185
Backing Up and Restoring Microsoft Exchange in Cloud Mode -----	191
Using Pre/Post Backup Scripts -----	197
Legal Information -----	199
CTERA End User License Agreement -----	199
GNU GENERAL PUBLIC LICENSE -----	203
GNU GENERAL PUBLIC LICENSE 3 -----	206
Apache License -----	213

Index	215
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Introduction

This chapter introduces the CTERA Agent and Cloud Attached Storage technology.

In This Chapter

About Cloud Attached Storage	5
About CTERA Agent	5
Contacting Technical Support	6

About Cloud Attached Storage

CTERA's Cloud Attached Storage® combines on-premises Network Attached Storage devices (CTERA Cloud Gateways) and/or CTERA Agent software with cloud services in a single, integrated solution. File sharing is performed on the local network, while cloud storage services are used for off-site backup, file sync and share (FSS), and disaster recovery. Automated differential backup and restore functions include block-level de-duplication, compression, and encryption technologies, ensuring secure and efficient synchronization between the cloud storage service and the CTERA Cloud Gateway or CTERA Agent-installed computer.

About CTERA Agent

You can back up data from any computer on your network that is installed with the CTERA Agent. You can also use the CTERA Agent to easily backup roaming PCs or remote offices even when they are outside your network.

The CTERA Agent supports the following modes:

Gateway mode

The CTERA Agent connects to a local CTERA cloud gateway, which provides the backup and restore capabilities of a local network solution, together with the safety and manageability of a cloud backup service. Data from the CTERA Agent-installed computer is backed up to a network share on the CTERA cloud gateway and from the cloud gateway to the CTERA Portal.

The CTERA Agent can be remotely managed and monitored from the CTERA cloud gateway's Web interface. For information, refer to your CTERA cloud gateway's user guide.

Cloud mode

The CTERA Agent connects directly to CTERA Portal, without utilizing the services of an intermediate cloud gateway. Data from the CTERA Agent-installed computer is backed up to a folder on the CTERA Portal.

Cloud mode also supports Cloud Drive synchronization, also known as File Sync and Share (FSS), a subscription service that enables you to synchronize your portal cloud drive with a specific folder on the CTERA Agent.

The CTERA Agent can be remotely managed, monitored, and accessed from the CTERA Portal. For information, refer to the *CTERA Portal User Guide*.

Tip



In addition to CTERA Agent, which is intended for desktops, laptops and server, CTERA Mobile can be installed on mobile devices. For information refer to the *CTERA Mobile User Guide*.

Contacting Technical Support

If you require assistance in configuring or using your CTERA Agent, contact technical support at <http://www.ctera.com/support>.

Installing the CTERA Agent

This chapter describes how to install the CTERA Agent on a computer running Microsoft Windows.

In This Chapter

Requirements-----	7
Downloading CTERA Agent-----	8
Installing the Agent -----	9
Uninstalling the Agent-----	13

Requirements

Software Requirements

In order to install and manage the CTERA Agent, you will need the following:

- + A supported operating system
- + Either Microsoft Internet Explorer 7.0 or later, Mozilla Firefox 27 or later, Apple Safari 6 or later, or Google Chrome 30 or later

The CTERA Agent can be installed on the operating systems shown in the following table, which also shows which backup operations are supported by each operating system.

Operating System	Supports Server Application Backup	Supports Disk-Level Backup	Supports System State Backup
Workstation Agent			
Microsoft Windows XP	No	No	No
Microsoft Windows 7	Yes	Yes	No
Microsoft Windows 8	No	Yes	No
Server Agent			
Microsoft Windows Server 2003 SP1	Yes	No	Yes
Microsoft Windows Server 2008	Yes	Yes	No
Microsoft Windows Server 2008 R2	Yes	Yes	No

Microsoft Windows Server 2012	No	Yes	No
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Opening Ports on Your Firewall

In Gateway mode, the agent establishes a connection to the gateway using TCP port 995 and 873. This means that in order to allow roaming PCs and remote offices which are located *outside* your network to access the gateway for backup, you must open your firewall for the network where the CTERA cloud gateway is located, to allow incoming TCP ports 995 and 873 to the CTERA cloud gateway.

In Cloud mode, the agent establishes a connection to the CTERA Portal using TCP port 995. You do not need to open any incoming ports.

Downloading CTERA Agent

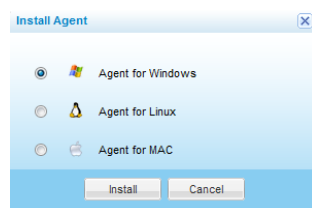
You can download CTERA Agent from CTERA Portal or from any CTERA Cloud Gateway.

Downloading CTERA Agent from CTERA Portal

» To download CTERA Agent

- 1 Log into CTERA Portal.
- 2 In the **My Account** tab, click **Install Agent**.

The **Install Agent** dialog box appears.



- 3 Select **Agent for Windows**.

The CTERA Agent installer is downloaded to your computer.

Downloading CTERA Agent from your Cloud Gateway

» To download CTERA Agent

- 1 Log into your CTERA cloud gateway.
- 2 In the **My Computers** tab, under **Download Agent**, click **Windows**.

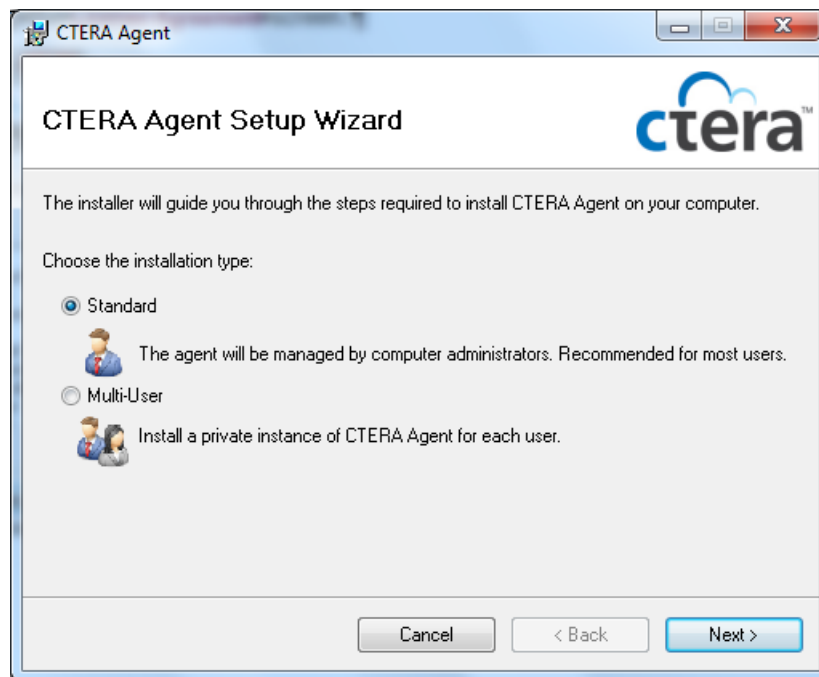
The CTERA Agent installer is downloaded to your computer.

Installing the Agent

» To install the CTERA Agent

- 1 Double-click on the installer file.

The **CTERA Agent Setup Wizard** opens.



- 2 Select one of the following:

- + **Standard.** The agent configuration will be shared by all users of the computer. Only users who have the “Backup Operator” permission can configure the agent and perform backup and restore operations.
- + **Multi-User.** The agent is installed for each user separately the first time that the user logs in to the computer. Each user has a completely independent and separate configuration and can even connect to a different device or portal than the other users. Each user has permission to manage their own agent and can perform backup and restore operations for any files for which they have read/write permissions. In other words, administrators and backup operators can back up and restore any and all files on the PC, whereas other types of users cannot. Each user’s agent remains connected to the cloud and continues to perform its scheduled backups and synchronizations in the background, even when the user is not logged in.

Tip



When the CTERA Agent is in either multi-user mode or Gateway mode, only administrators and backup operators can connect their agent to a CTERA Cloud Gateway.

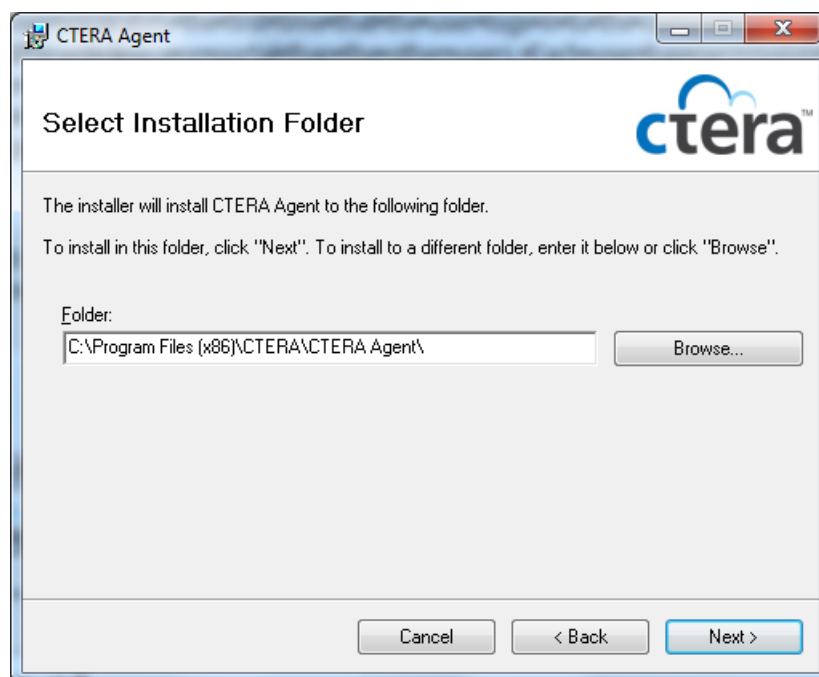
Tip



In multi-user mode, since each user has a independent agent , the agents appear as separate agent objects in the portal/gateway, and each user is licensed separately.

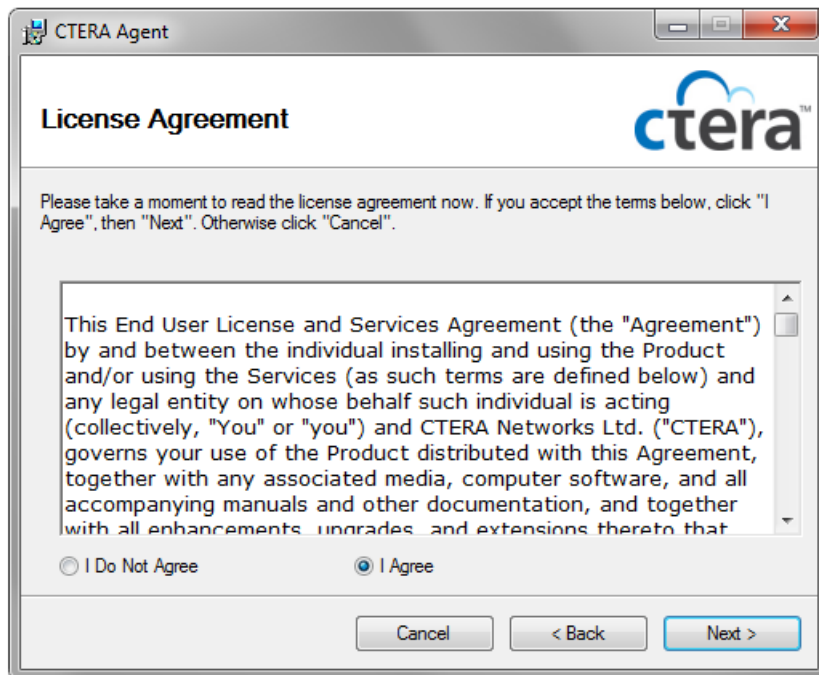
3 Click **Next**.

The **Select Installation Folder** screen appears.



4 Edit the folder path if desired, and click **Next**.

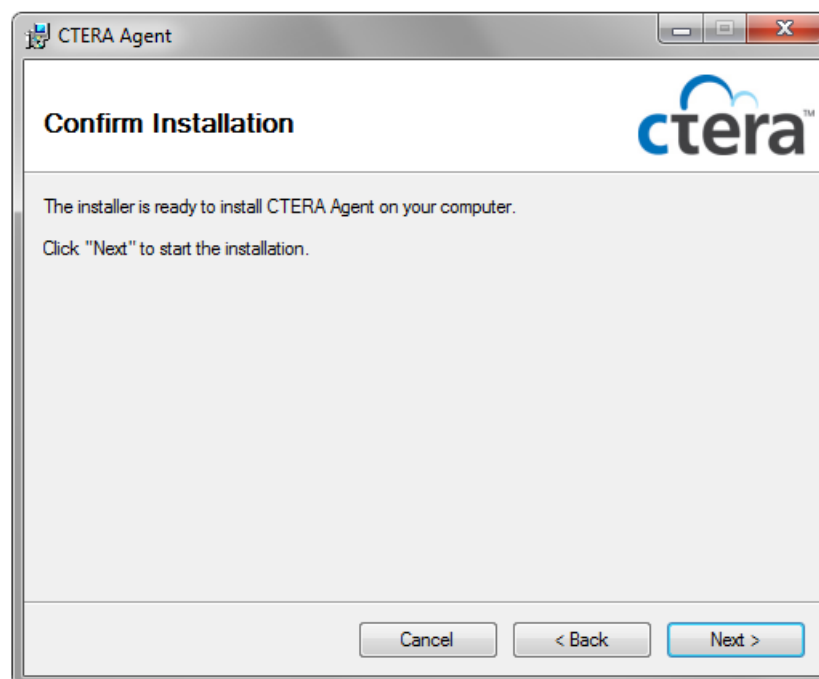
The **License Agreement** screen appears.



5 Choose **I Agree**.

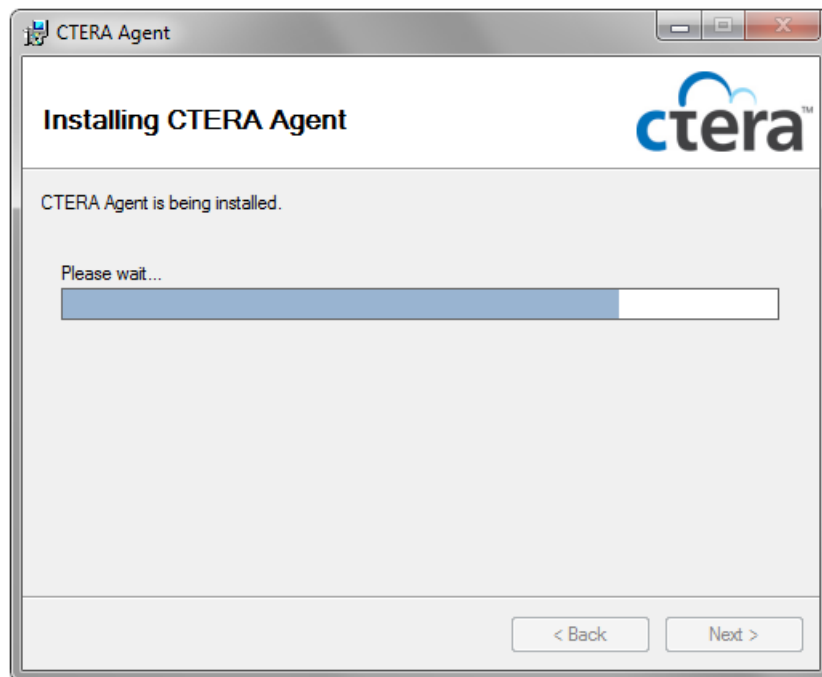
6 Click **Next**.

The **Confirm Installation** screen appears.

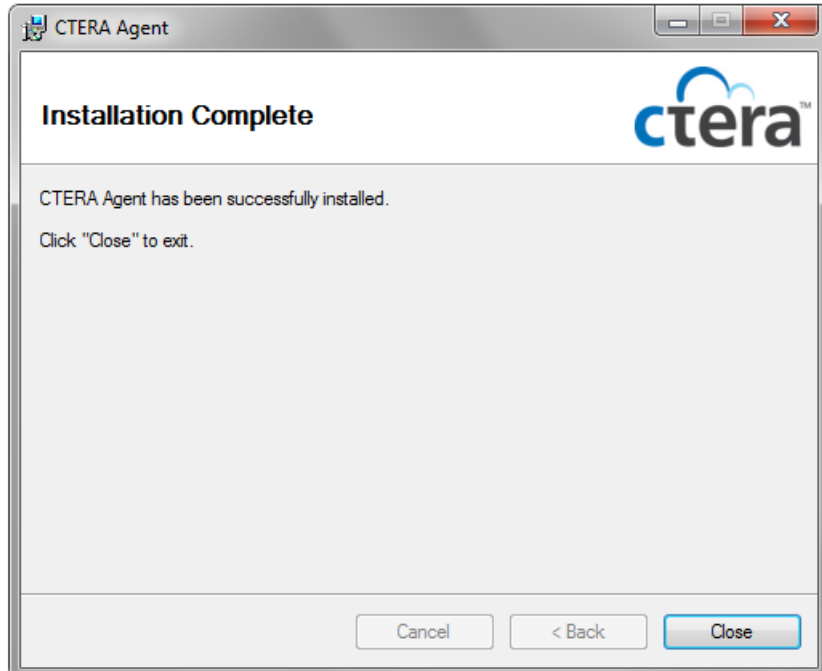


7 Click **Next**.

The **Installing CTERA Agent** screen appears with a progress bar, and the CTERA Agent is installed on your computer.



The **Installation Complete** screen appears.



8 Click **Close**.

CTERA Agent is added to the Windows Start menu, and an icon is added to the Windows taskbar.

Uninstalling the Agent

» To uninstall CTERA Agent

1 Do one of the following:

- + In the Windows Start menu, click **All Programs > CTERA > Uninstall**.
- + In the **Add or Remove Programs** window, locate **CTERA Agent**, and click **Remove**.

A confirmation message appears.

2 Click **Yes**.

The CTERA Agent is uninstalled.

Centrally Installing CTERA Agent via Active Directory

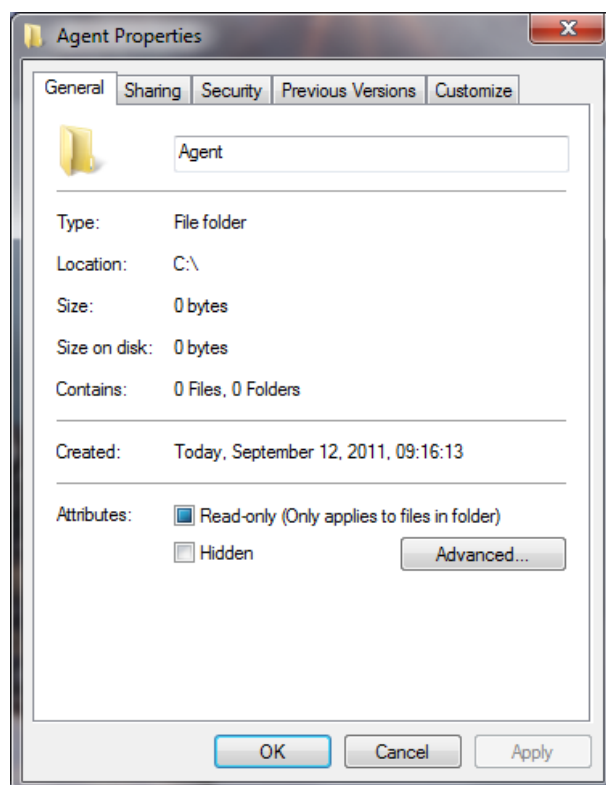
You can centrally install CTERA Agent on multiple computers via Microsoft Active Directory.

The following procedure describes installation using a Windows 2008 Active Directory domain. It is relevant for both Windows Server 2003 and Windows Server 2008.

» To centrally install CTERA Agent via Active Directory

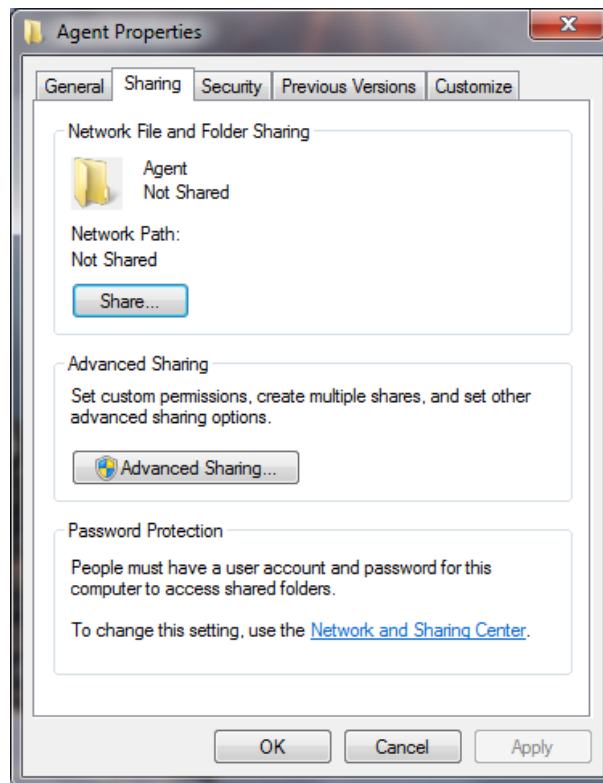
- 1 Prepare the CTERA Agent installation file for central use, by doing the following:
 - a On the Active Directory machine, create a shared folder called `Agent` under `C:\`.
 - b Copy the CTERA Agent installation file to the new folder.
 - c Right-click on the folder, then click **Properties**.

The **Properties** dialog box appears displaying the **General** tab.



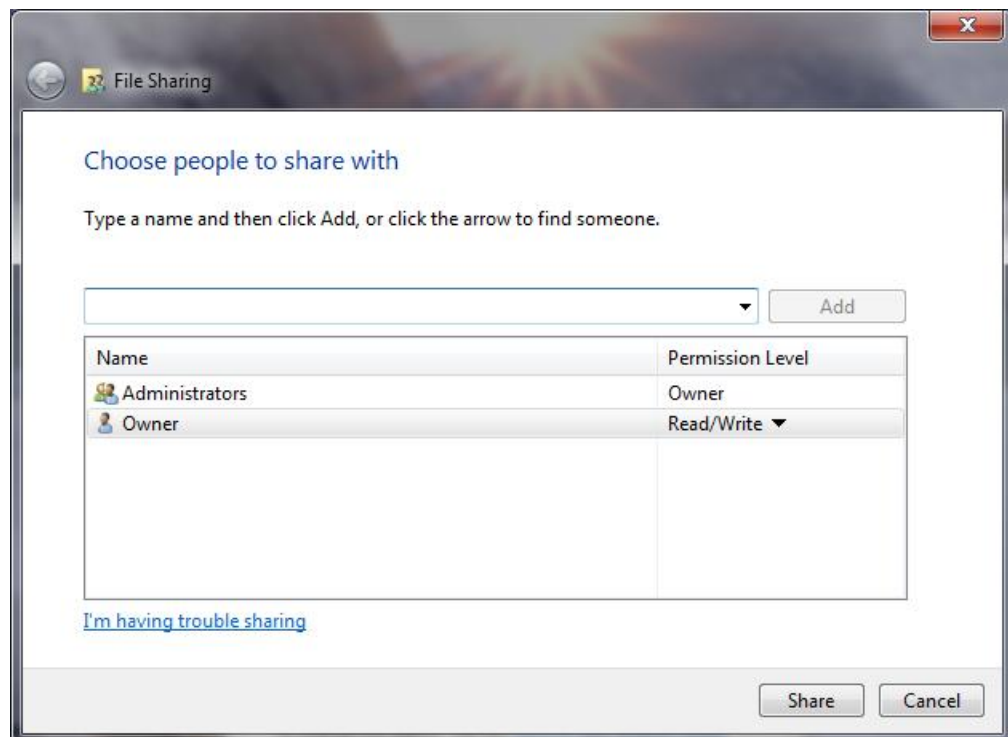
- d Click the **Sharing** tab.

The **Sharing** tab appears.



- e Click **Share**.

The **File Sharing** dialog box appears.



- f** For each user or user group for which you would like to install CTERA Agent, do the following:

- 1 Specify the desired user/group, either by typing the user/group's name in the field, or by clicking the drop-down list arrow and then clicking **Find people**.

To enable installing CTERA Agent for all users/groups, type "Everyone".

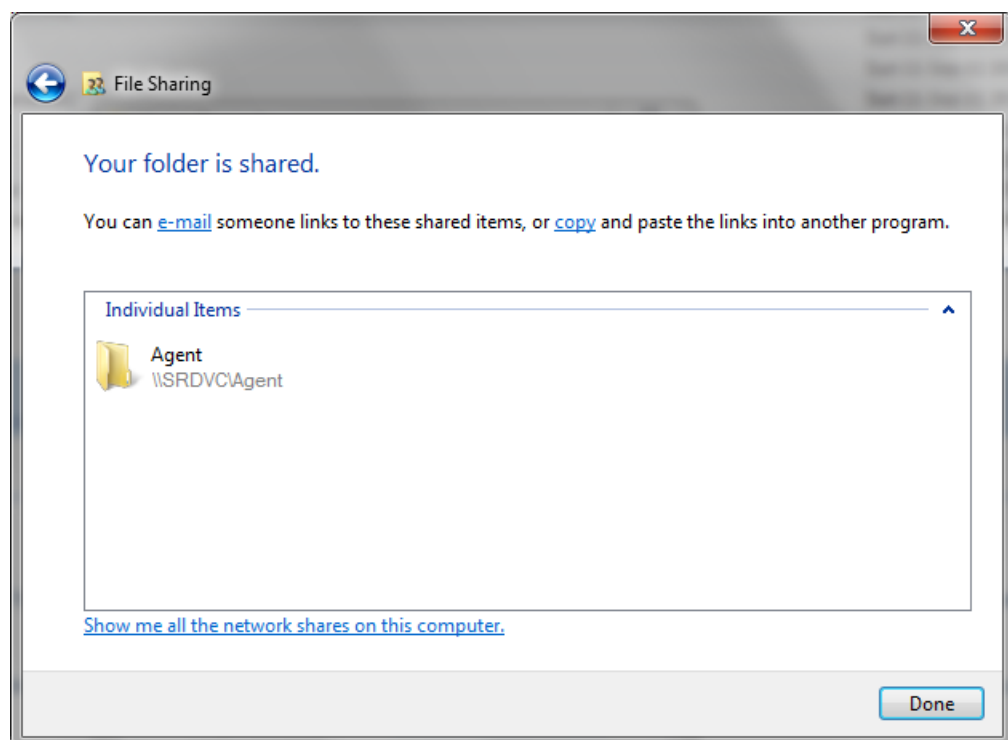
- 2 Click **Add**.

The user/group appears in the file sharing list.

- 3 In the user/group's row, click on the arrow in the **Permission Level** column, then click **Read**.

- g** Click **Share**.

The **File Sharing** dialog box displays a success message.



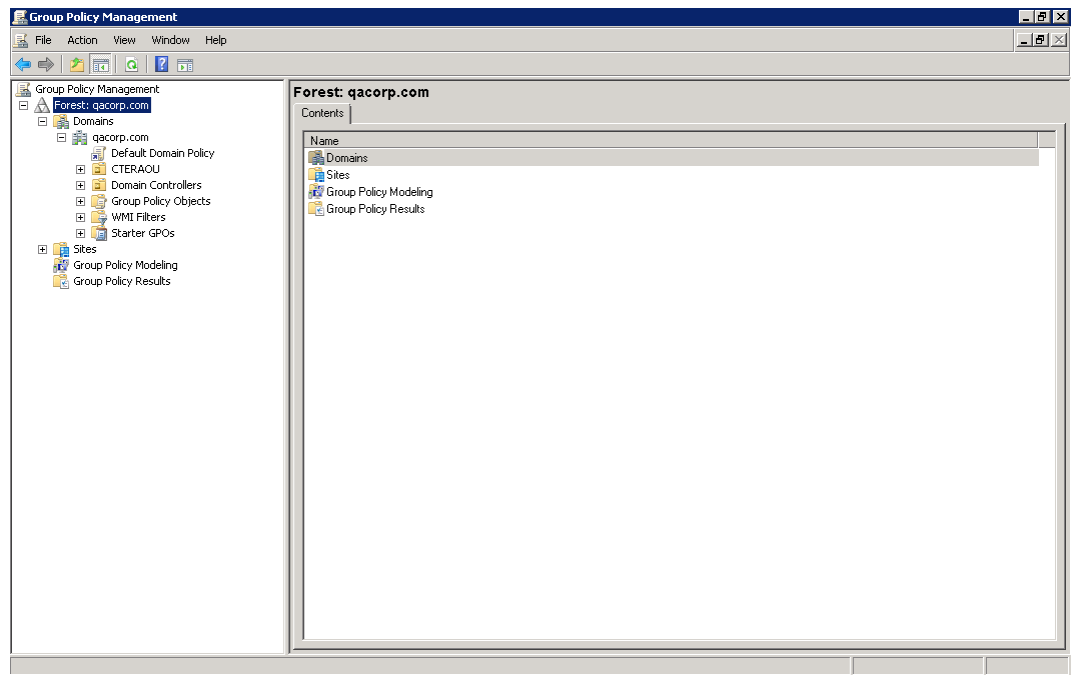
- h** Click **Done**.

- i** Click **Close**.

- 2 Create a policy that controls the installation of CTERA Agent, by doing the following:

- a** In the **START** menu, click **Administrative Tools**, and then click **Group Policy Management**.

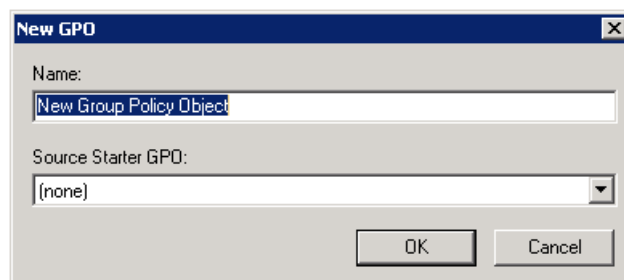
The Group Policy Management Console opens.



This console enables you to create domain-wide policies or policies for specific organizational units.

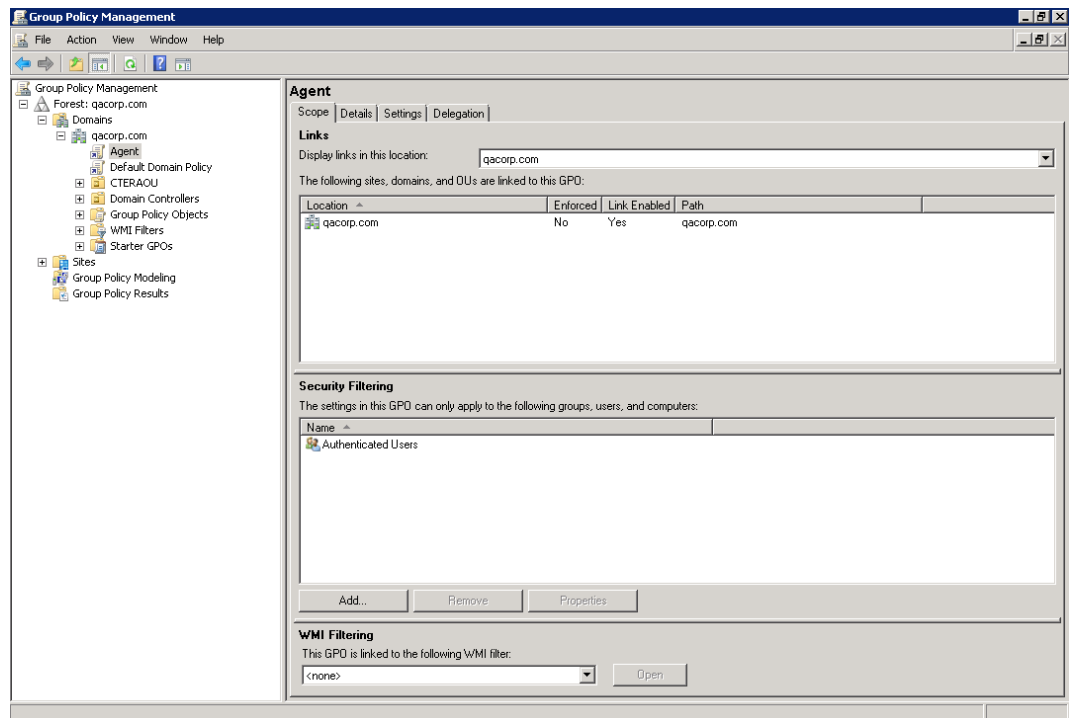
- b** In the navigation pane, right-click on the domain or organizational unit for which you want to create the policy, then click **Create a new GPO in this domain and Link it here**.

The **New GPO** dialog box appears.



- c** In the **Name** field, type a name for the policy.
For example, "Agent 3.0".
- d** Click **OK**.
- e** In the navigation pane, click on the policy you created.

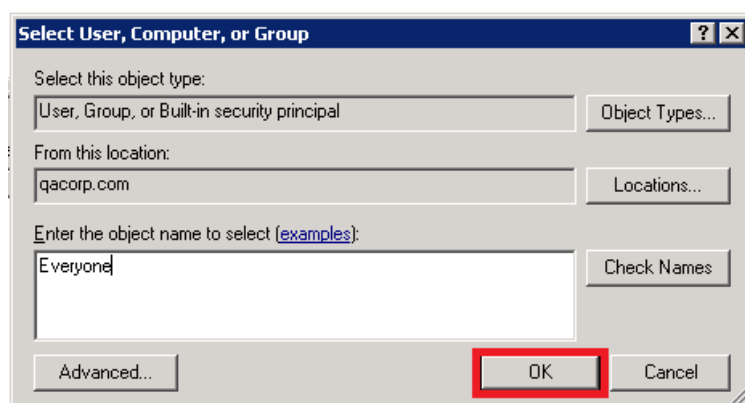
The policy appears in the right pane.



- f** In the **Security Filtering** area, for each user or user group for which you would like to install CTERA Agent, do the following:

- 1** Click **Add**.

The **Select User, Computer, or Group** dialog box appears.



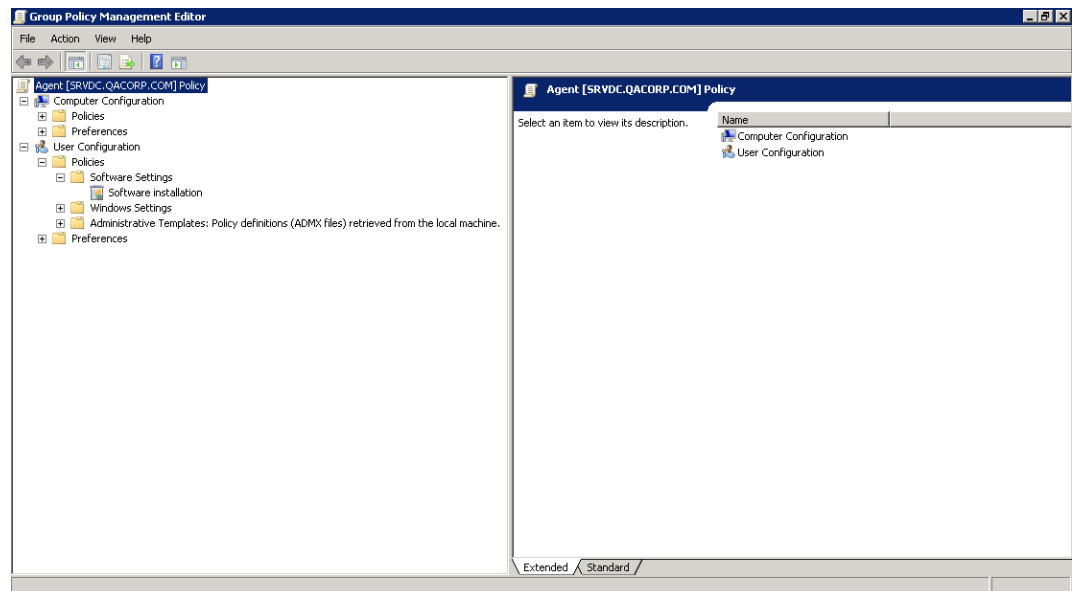
- 2** In the **Enter the object name to select** area, type the name of the user/group.

To enable installing CTERA Agent for all users/groups, type **Everyone**.

- 3** Click **OK**.

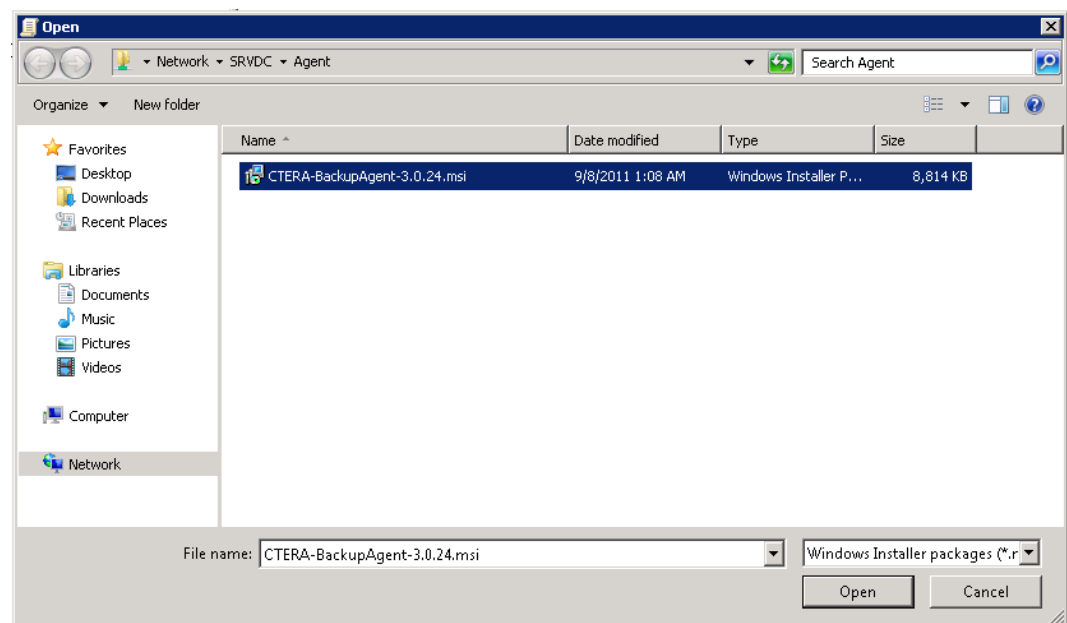
- g** In the navigation pane, right-click on the policy you created, then click **Edit**.

The **Group Policy Management Editor** opens.



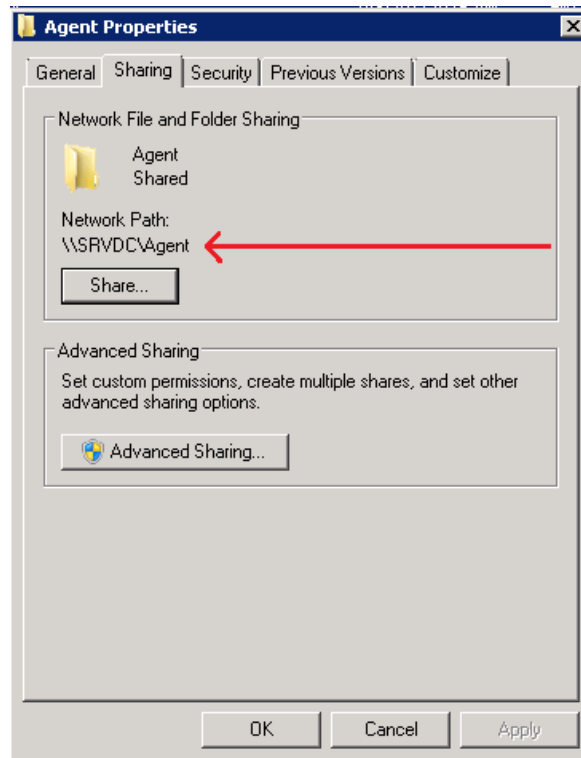
- h** In the navigation pane, expand **User Configuration > Policies > Software Settings**.
- i** Right-click **Software Installations**, then click **New > Package**.

The **Open** dialog box appears.



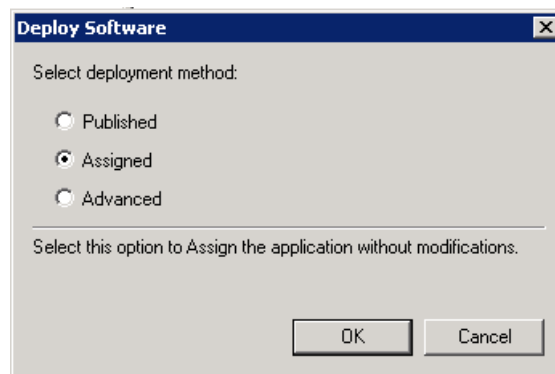
- j** Specify the network location of the shared folder containing the CTERA Agent installation file, which you created in step 1.

You can view the network location of the shared folder in the folder's **Properties** dialog box, in the **Sharing** tab.



- k** Click **Open**.

The **Deploy Software** dialog box appears.



- l** Choose **Assigned**.

This option ensures that when a user or group specified in the policy's **Security Filtering** area logs in to the domain, CTERA Agent will automatically be installed on their computer.

- m** Click **OK**.

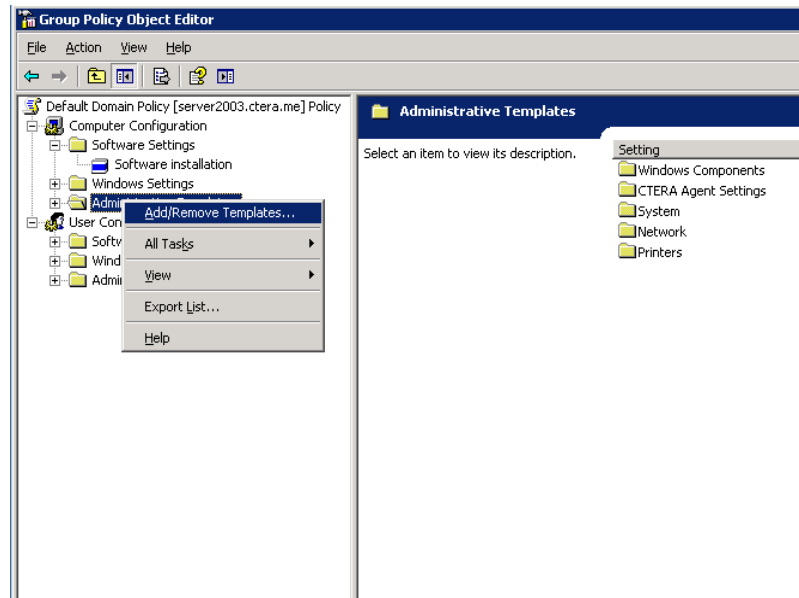
- 3** Add the `ctera-agent.adm` file to **Domain Group Policy** as an administrative template, by doing the following:

Tip

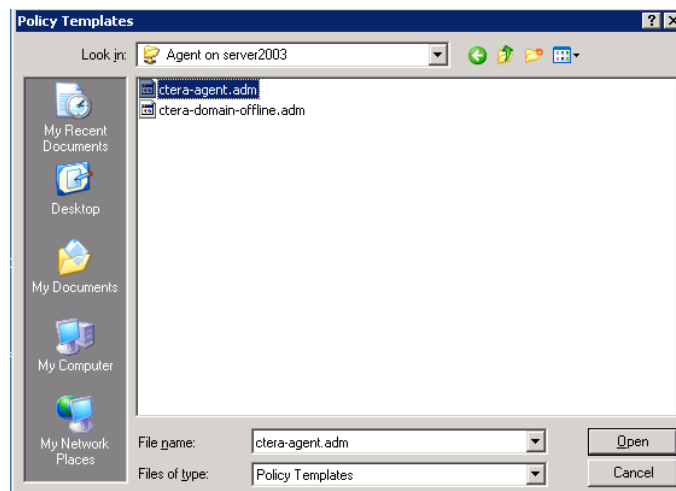


This file contains the agent deployment settings.

- a Open the **Group Policy Object Editor**.
- b In the navigation pane, right-click on **Administrative Templates**, then click **Add/Remove Templates**.

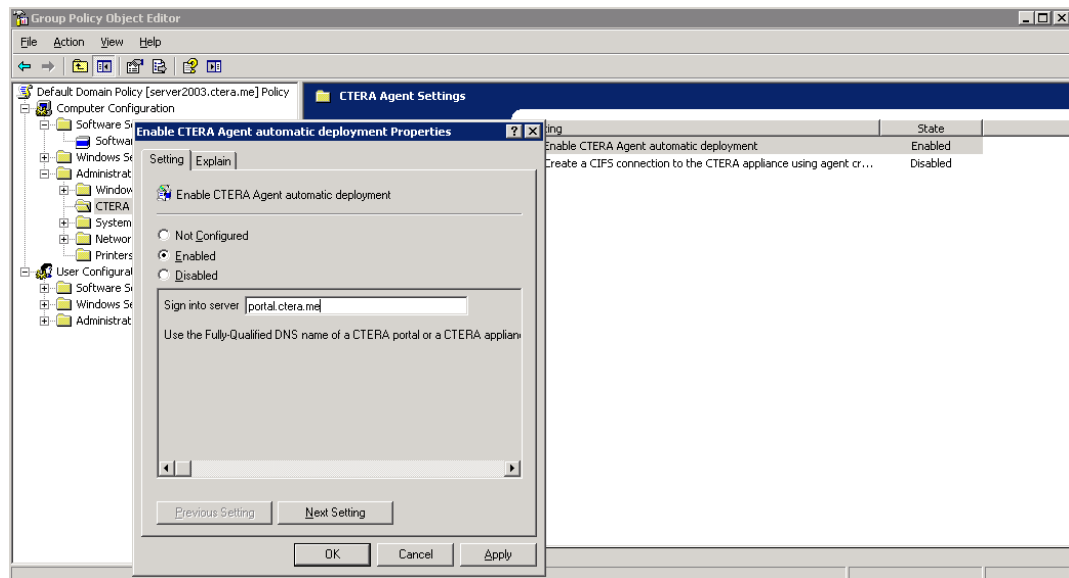


The **Policy Templates** window opens.



- c Select the `ctera-agent.adm` file and click **Open**.

The **Enable CTERA Agent automatic deployment Properties** dialog box opens.



- d In the **Sign into server** field, type the fully qualified DNS name of the CTERA Portal or cloud gateway to which the CTERA Agent should connect.
- e Click **OK**.

Using the CTERA Agent in Gateway Mode

This chapter explains how to use CTERA Agents to perform local backup by connecting them to a CTERA cloud gateway.

In This Chapter

CTERA Agent Licensing in Gateway Mode	26
Supported Backup Operations	26
Workflow	28
Connecting the Agent to a Cloud Gateway	29
Disconnecting the Agent from a Cloud Gateway	31
Using the CTERA Agent Manager	31
Selecting Files and Folders for File-Level Backup	44
Manually Starting Backup	45
Stopping the Current Local Backup Operation	45
Suspending and Resuming Local Backup	46
Viewing the Agent Status	46
Viewing Agent Details	47
Restoring Files from File-Level Backup	47
Restoring Files from Disk-Level Backup	51
Accessing Files on the Cloud Gateway	67

CTERA Agent Licensing in Gateway Mode

When the CTERA Agent is installed on a Windows Workstation operating system, it consumes one *CTERA Workstation Agent* license from the pool of workstation agents in your cloud gateway. If your cloud gateway runs out of the included number of workstation agent licenses, it requests additional licenses from the CTERA Portal *Workstation Backup* licenses pool allocated to your CTERA Portal account.

When the CTERA Agent is installed on a Windows Server operating system, it consumes one *CTERA Server Agent* license from the pool of server agents in your cloud gateway. If your cloud gateway runs out of the included number of server agent licenses, it requests additional licenses from the CTERA Portal *Server Agents* licenses pool allocated to your CTERA Portal account.

Tip



A license is taken for as long as an agent is defined in your cloud gateway. If you are no longer using an agent, you can delete the agent entry from the cloud gateway to regain its license.

Supported Backup Operations

The CTERA Agent supports the following types of backup operations:

+ File-level backup

File-level backup allows backing up files and folders from the CTERA Agent local interface to the CTERA Cloud Gateway. The CTERA Agent can back up both unlocked and locked files.

In addition, you can back up the following server applications:

- + Microsoft SQL Server
- + Microsoft Exchange
- + Microsoft Active Directory
- + Microsoft SharePoint
- + Hyper-V (Virtual PC)

**Tip**

Application backup utilizes Microsoft's Volume Shadow Copy Service (VSS). VSS enables backups that are point-in-time and application-level consistent.

**Tip**

To enable backup and restore of Microsoft SharePoint, you need to enable the Windows SharePoint Services VSS Writer service by running the following command on the SharePoint server:

```
stsadm -o registerwsswriter
```

The backed up files and applications can later be restored as needed.

Disk-level backup

Disk-level backup, also known as “bare-metal backup”, allows backing up an image of the CTERA Agent-installed computer's hard drives to the CTERA Cloud Gateway. In case of an operating system error or a hard drive failure, the computer can be restored in full from the disk-level backup, returning the system to its exact state when the backup was performed. You can also restore disk-level backups to dissimilar hardware (provided it has sufficient disk space), and even to a virtual machine (VM).

When CTERA Agent is used in conjunction with CTERA's Cloud Backup, a copy of disk-level backups is stored offsite for complete disaster protection, while maintaining a local copy for fast restore. CTERA's advanced deduplication efficiently handles the disk-level backups, ensuring that only differences are sent over the Internet.

When CTERA Agent is used in conjunction with CTERA's NEXT3 snapshots, users can easily roll back to earlier versions of their disk-level images. NEXT3 ensures that only differences are stored between versions, thus greatly reducing the required storage space.

Disk-level backups are stored using the industry-standard Virtual Hard Disk (VHD) file format. VHD files can be mounted using standard tools to allow extraction of individual files and folders, and it is even possible to run the VHD disk image on a virtual machine (VM) for immediate disaster recovery after hardware failures. For information on restoring files from disk-level backup, see ***Restoring Files from Disk-Level Backup*** (on page 51).

**Tip**

Disk-level backup operates over the Windows File Sharing protocol (CIFS). To perform disk-level backups, ensure that the computer running CTERA Agent has access to the CTERA Cloud Gateway using Windows File Sharing.

**Tip**

Disk-level backup does not support backing up volumes larger than 2TB.

**Tip**

Disk-level backup is not supported on Windows 7 Home Premium, Windows 7 Home Basic, and Windows 2003 Server.

**Tip**

Disk-level backup is supported in Gateway mode only.

+ System state backup

System state backup, available on Windows 2003 Server only, creates a backup file for critical system-related components. The system state data includes the registry, COM+ Class Registration database, files under Windows File Protection, and system boot files. Depending on the server's configuration, additional data may be included in the system state data, as well. For example, if the server is a certificate server, the system state will also contain the Certificate Services database. If the server is a domain controller, Active Directory and the SYSVOL directory are also included in the system state data.

The system state backup is stored in NTBACKUP format, and the Microsoft NTBACKUP tool can be used to recover the system state from the backup file.

For information on restoring your system from a system state backup, see ***Restoring from a System State Backup on Windows 2003 Server SP2*** (on page 151).

Traffic generated by CTERA Agent backup operations of any type is secured with Secure Socket Layer (SSL) encryption.

Workflow

To use the CTERA Agent for local backup in Gateway mode, do the following:

- 1 Install the CTERA Agent on the computer whose files you want to back up to the cloud gateway.

See ***Installing the Agent*** (on page 9).

- 2 Connect the CTERA Agent to the cloud gateway.

See ***Connecting the Agent to a CTERA Cloud Gateway*** (see "***Connecting the Agent to a Cloud Gateway***" on page 29).

- 3 If local configuration of the agent is enabled on the cloud gateway, do the following:
 - a Connect to the CTERA Agent Manager.
See **Connecting to the CTERA Agent Manager** (on page 32).
 - b Configure the agent-specific settings for the CTERA Agent.
See **Configuring the Agent** (on page 34).
 - c If you did not select files and folders for file-level backup while configuring the CTERA Agent's settings (in the previous step), then select the files and folders that should be included in local backup operations.
See **Selecting Files and Folders for File-Level Backup** (on page 44).

Local configuration is controlled by the **Allow user to configure the agent** check box in the CTERA Agent global settings. For more information, see your cloud gateway's user guide.

Connecting the Agent to a Cloud Gateway



Tip

You can use CTERA Agent for backing up remote sites or roaming employees. To do so you must perform the following steps:

1. Open your firewall for incoming TCP ports 995 and 873 to the CTERA cloud gateway.
2. If you do not have a fixed IP address, you need to use the Dynamic DNS (DDNS) Service. Go to the **Cloud Services > Status** page in your CTERA Cloud Gateway's Web interface, and make sure that you are subscribed to the DDNS service. Note the DNS address that was allocated to your cloud gateway. Enter this address in the **Server** field.

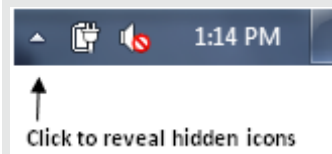
» To connect the CTERA Agent to the Cloud Gateway

- 1 Click the CTERA Agent tray icon  in the notification area of the Windows taskbar.

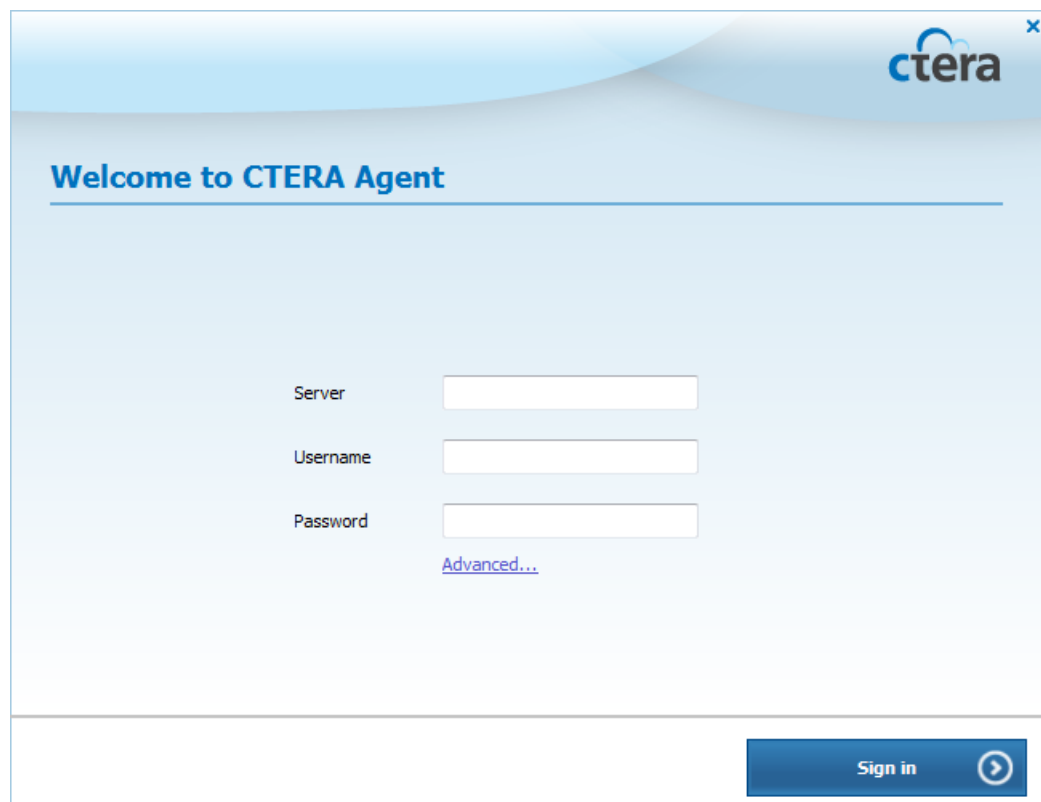
Tip



In Windows 7, the CTERA Agent tray icon may be hidden. In this case, click on the white arrow in the notification area of the taskbar to reveal hidden icons:



The **Sign In** window opens.



The image shows the 'Welcome to CTERA Agent' sign-in window. It has a light blue header with the CTERA logo. Below the header, the title 'Welcome to CTERA Agent' is underlined. The main area contains three input fields labeled 'Server', 'Username', and 'Password'. Below the 'Password' field is a link that says 'Advanced...'. At the bottom right, there is a blue 'Sign in' button with a right-pointing arrow icon.

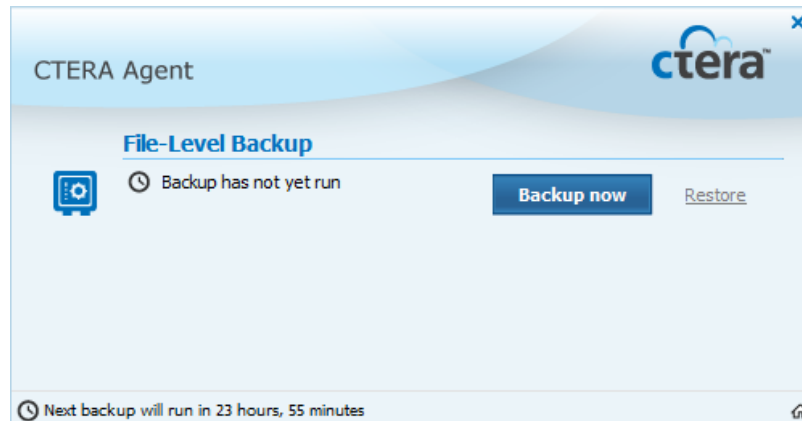
- 2 In the **Server** field, do one of the following:
 - + Type the cloud gateway's IP address.
 - + Type the cloud gateway's host name, as it appears in the Web interface's **Main > This Device** page.

If your cloud gateway is connected to CTERA Portal and subscribed to the Dynamic DNS service, enter the cloud gateway DNS name as it appears in the **Services** page, in this field. If you opened the appropriate ports on your firewall, this will enable the CTERA Agent to back up from anywhere on the Internet. See **Opening Ports on Your Firewall** (on page 8).

- 3 In the **Username** and **Password** fields, type your user name and password on this cloud gateway.
- 4 Click **Sign in**.

The following things happen:

- + The CTERA Agent connects to the cloud gateway.
- + The CTERA Agent tray icon changes to , and the **CTERA Agent** screen opens.



- + A shortcut to the files on the cloud gateway is automatically created on your desktop



Disconnecting the Agent from a Cloud Gateway

If desired, you can disconnect the CTERA Agent from a CTERA Cloud Gateway.

» To disconnect the CTERA Agent from a CTERA Cloud Gateway

- 1 Right-click the CTERA Agent tray icon in the system tray, and click **Sign out**.

A confirmation message appears.

- 2 Click **OK**.

The CTERA Agent disconnects from the cloud gateway.

Using the CTERA Agent Manager

By default, the CTERA Agent inherits settings from the global settings for all CTERA Agents. If desired, you can override the global settings, as well as configure the following agent-specific settings, via the CTERA Agent Manager:

- + Enable file-level backup for the agent
- + Files and folders to back up during file-level backup

- + Applications to back up during file-level backup
- + Volumes to back up during disk-level backup
- + Configure system state backup
- + Configure integration with Windows Explorer

Connecting to the CTERA Agent Manager

To allow end users to connect to the CTERA Agent Manager, where they can modify their own CTERA Agent's settings and select files or folders to backup without assistance from an administrator, select the **Allow user to configure the agent** check box in the global settings for all agents, in the cloud gateway Web interface. For more information, see your cloud gateway's user guide.

To manage the agent, a user must have the "Back up files and directories" privilege. On Windows, users in the groups "Administrators", "Backup Operators", and "Domain Administrators" have this privilege by default. To allow a user who does not belong to one of these groups to manage the agent, do the following: Open the Microsoft Management Console (MMC), and in the **Local Security Policy** snap-in under **User Rights Assignment**, assign the user the "Backup files and directories" privilege.

If the **Allow user to configure the agent** option is not enabled, or if the CTERA Agent user does not have "Back up files and directories" privileges on Windows, then agent settings can only be configured by administrators via the cloud gateway Web interface. For more information, see your cloud gateway's user guide.

» To connect to the CTERA Agent Manager

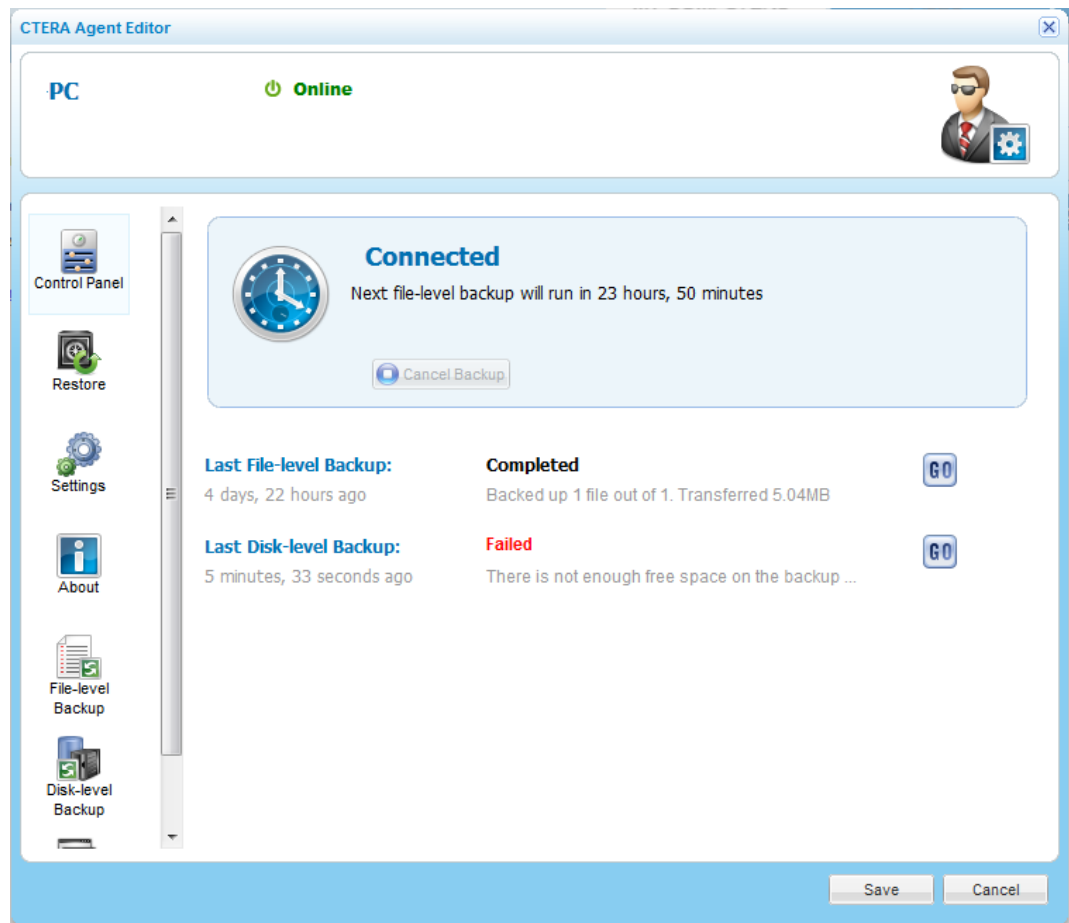
- + Right-click the CTERA Agent tray icon in the notification area of the Windows taskbar, and click **Settings**.

The following things happen:

- + If you are not yet logged in to the cloud gateway Web interface, the **Log In** page appears.

Enter your username and password, then click **Log In**.

- The cloud gateway Web interface opens displaying the CTERA Agent Manager.



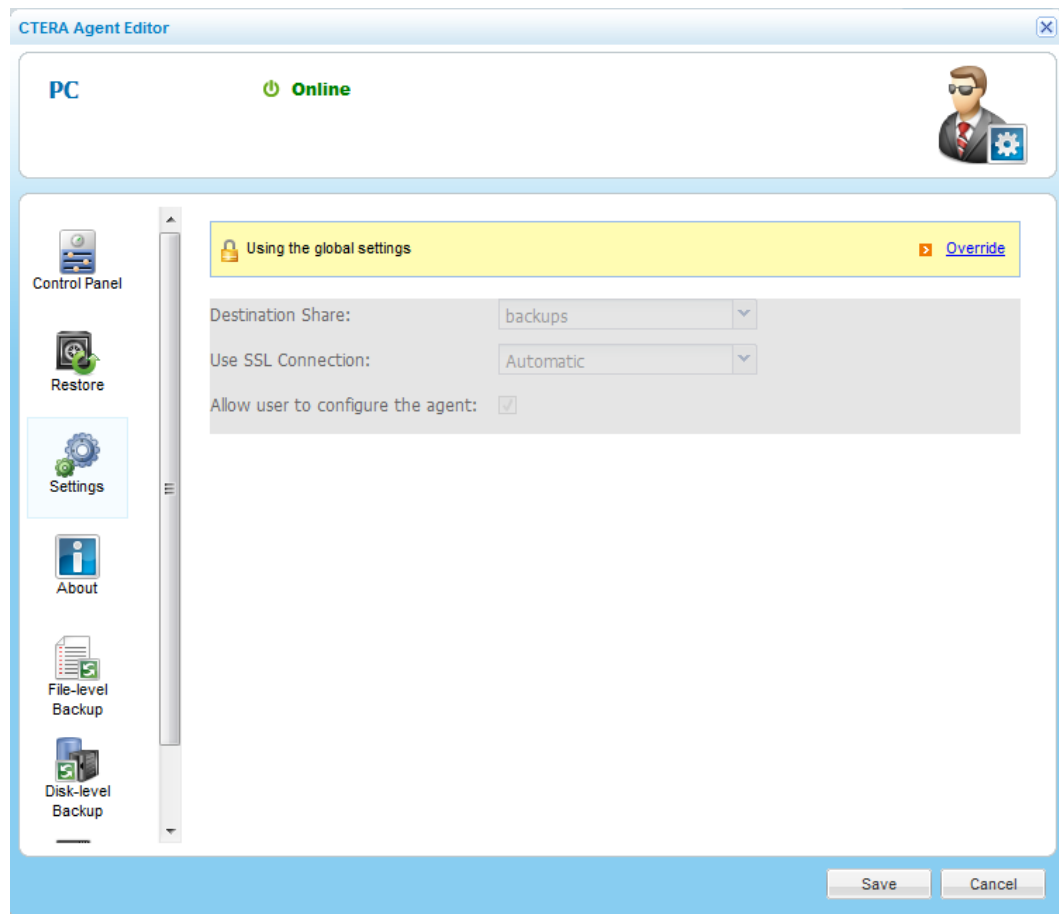
Configuring the Agent

Configuring General Settings

» To configure general settings

- 1 In the CTERA Agent Manager, click the **Settings** tab.

The **Settings** tab appears.



- 2 Click **Override**, to override the global general settings.

Tip



You can revert to global general settings at any time, by clicking **Use global settings**.

- 3 Complete the fields using the information in the following table.
- 4 Click **Save**.

In this field...	Do this...
Destination Share	Select the local cloud gateway network share with which the files and folders from the CTERA Agent-enabled computer should be backed up. Subdirectories will automatically be created under this network share for each backed up folder.
Use SSL Connection	Specify whether to use Secure Socket Layer (SSL) encryption for connections from the CTERA Agent to the CTERA Cloud Gateway:  Enabled. The CTERA Agent will use SSL.  Disabled. The CTERA Agent will not use SSL.  Automatic. The CTERA Agent will not use SSL when in the same LAN as the cloud gateway, and will use SSL when they are not in the same LAN as the cloud gateway. The default value is Automatic.

Allow user to configure the agent

Select this option to allow CTERA Agent users to configure their own agent.

In order for CTERA Agent users to manage their own agents, this option must be selected, *and* the CTERA Agent users must have the "Back up files and directories" privilege on Windows.

By default, Windows grants this privilege to users belonging to the "Backup Operators" and "Administrators" groups. If the computer is in an Active Directory domain, the "Domain Administrators" group also has this privilege by default.

To assign "Back up files and directories" privileges to a user, do one of the following:

-  Add the user to the "Backup Operators", "Administrators", or "Domain Administrators" group on the CTERA agent-installed computer.
-  Open the Microsoft Management Console (MMC), and in the **Local Security Policy** snap-in under **User Rights Assignment**, assign the user the "Backup files and directories" privilege.

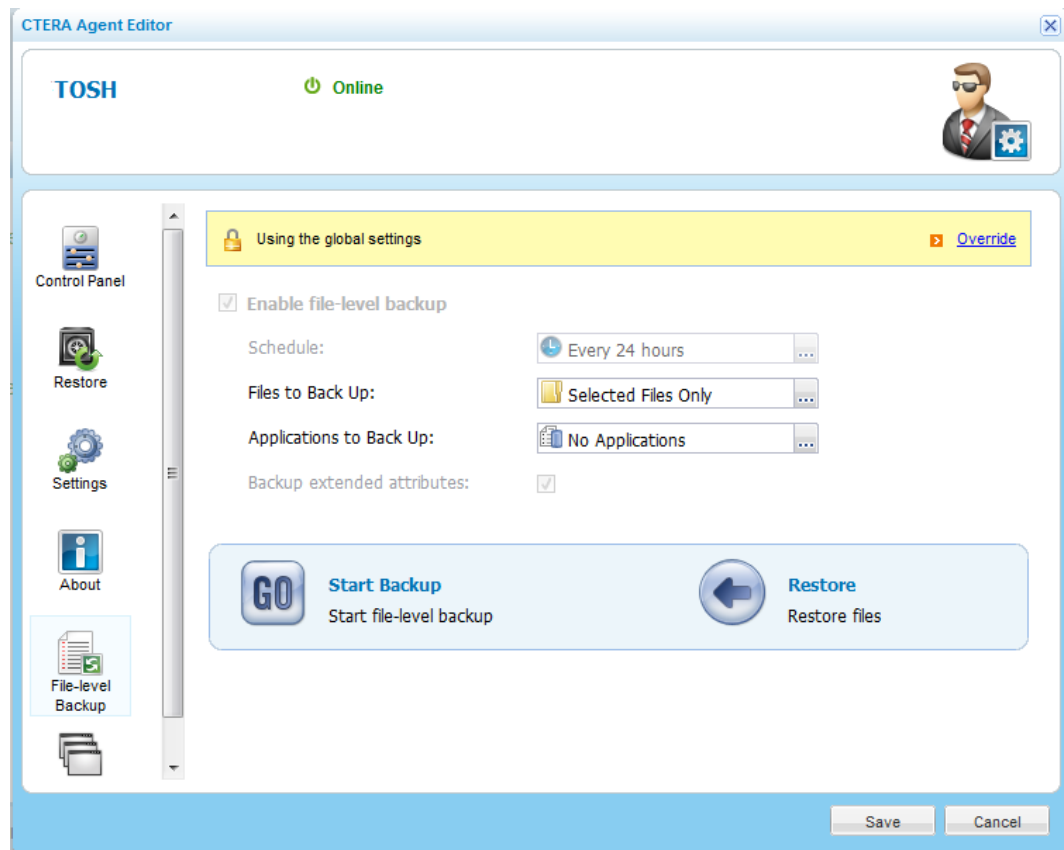
Note: When this option is cleared, selecting files for local backup can only be done by an administrator in the cloud gateway Web interface. The CTERA Agent user cannot select files for backup locally, nor can they configure agent settings via the cloud gateway Web interface. However, the user can still initiate backup and restore operations.

Configuring File-Level Backup Settings

» To configure file-level backup settings

- 1 In the CTERA Agent Manager, click the **File-level Backup** tab.

The **File-level Backup** tab appears.



- 2 To override the general settings for file-level backup, click **Override**.

General settings include the file-level backup schedule.

Tip



You can revert to general file-level backup settings at any time, by clicking **Use global settings**.

- 3 To enable file-level backup, select the **Enable file-level backup** check box.

- 4 To schedule file-level backup, do the following:

- a In the **Schedule** field, click .

The **Schedule** dialog box appears.

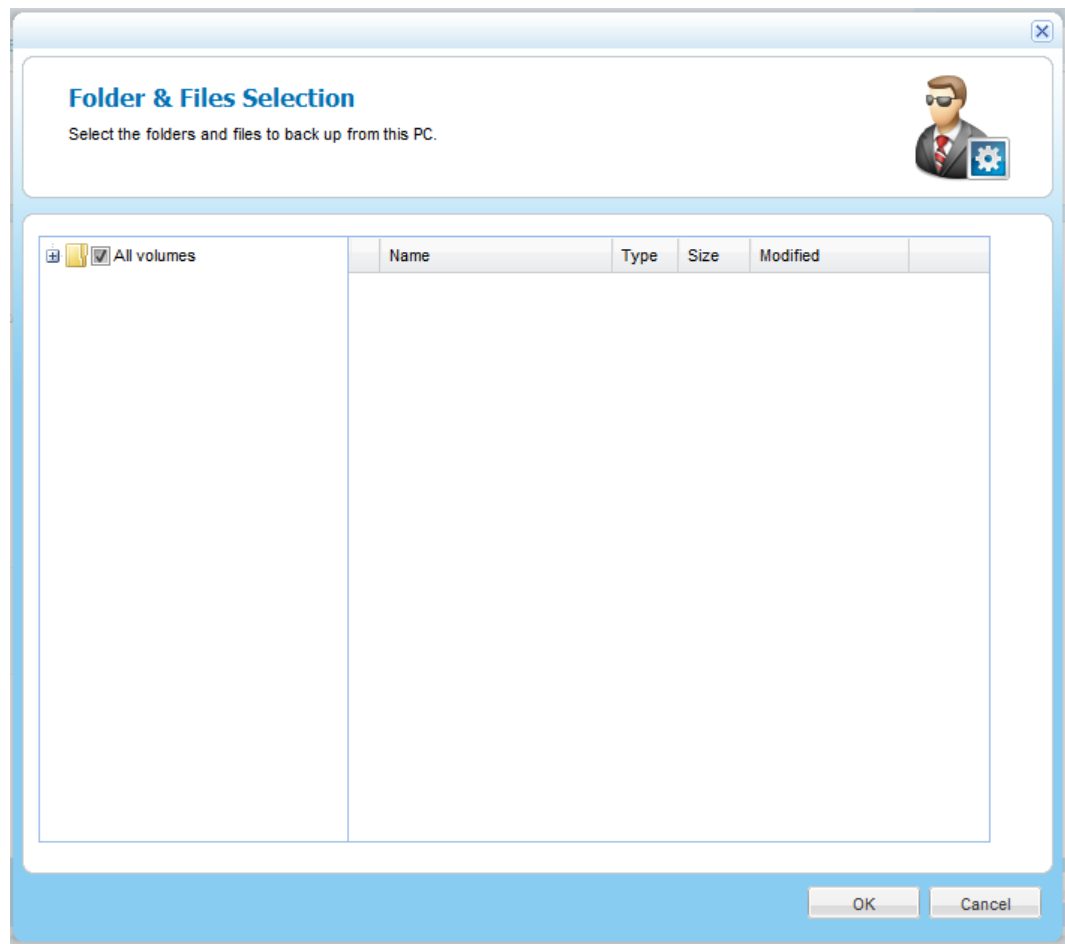
- b Complete the fields using the information in **Schedule Fields** (page 40).
- c Click **OK**.

The default file-level backup value is **Every 24 hours**.

- 5 To select files and folders for backup, do the following:

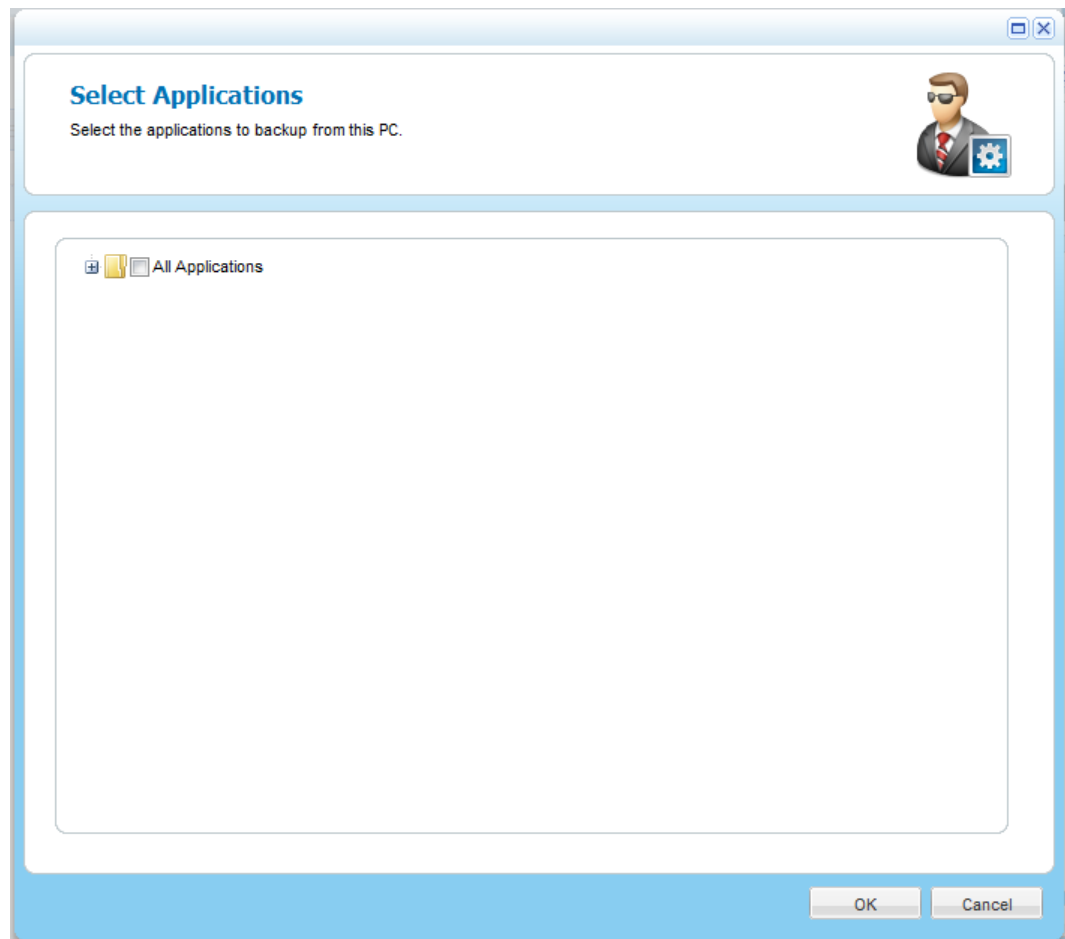
- a In the **Files to Back Up** field, click .

The **Folder & Files Selection** window opens.



- b** Expand the tree nodes and select the check boxes next to the folders and files you want to back up.
 - c** Click **OK**.
 - d** To back up special file permissions and metadata, check **Backup extended attributes**.
- 6** To select applications for backup, do the following:
- a** In the **Applications to Back Up** field, click .

The **Select Applications** window opens.



- b** Expand the tree nodes and select the check boxes next to the applications you want to back up.
- c** Click **OK**.
- 7** Click **Save**.

At the bottom of the workspace, the **Destination** field indicates the folder on the cloud gateway to which files will be backed up. The **Local Disk Space Usage** field indicates the amount of used space on the disk after the next local backup operation, out of the total amount of space available on the disk.

Table 1: File-Level Backup Tab Fields

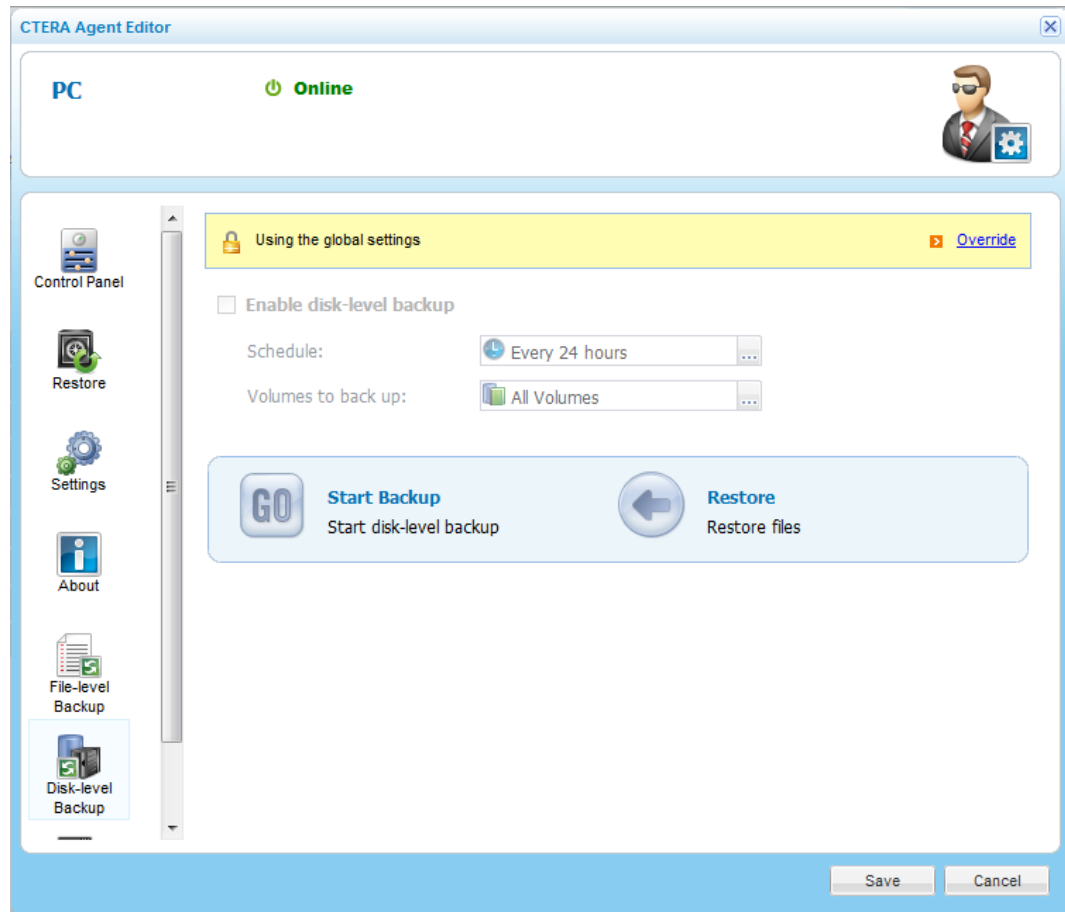
In this field...	Do this...
Manual Only	Choose this option to disable automatic backups.
Periodically	Choose this option to specify that automatic backups should be performed every certain number of hours. The Start Every field is enabled, and you must complete it.
Start Every	Use the arrows to specify the interval between backups, in hours.
Specific Time	Choose this option to specify that automatic backups should be performed at a certain hour on certain days. The Start Time and On Days fields are enabled, and you must complete them.
Start Time	Select the hour at which backups should start.
On Days	Specify on which days backups should occur, by selecting the relevant check boxes or clicking Every Day .

Configuring Disk-Level Backup Settings

» To configure disk-level backup settings

- 1 In the CTERA Agent Manager, click the **Disk-level Backup** tab.

The **Disk-level Backup** tab appears.



- 2 Click **Override**, to override the general settings for disk-level backup.

General settings include whether disk-level backup is enabled, as well as the disk-level backup schedule.

Tip



You can revert to global disk-level backup settings at any time, by clicking **Use global settings**.

- 3 Select the **Enable disk-level backup** check box.
- 4 To schedule disk-level backup, do the following:

- a In the **Schedule** field, click

The **Schedule** dialog box appears.

- b Complete the fields using the information in **Schedule Fields** (page 40).

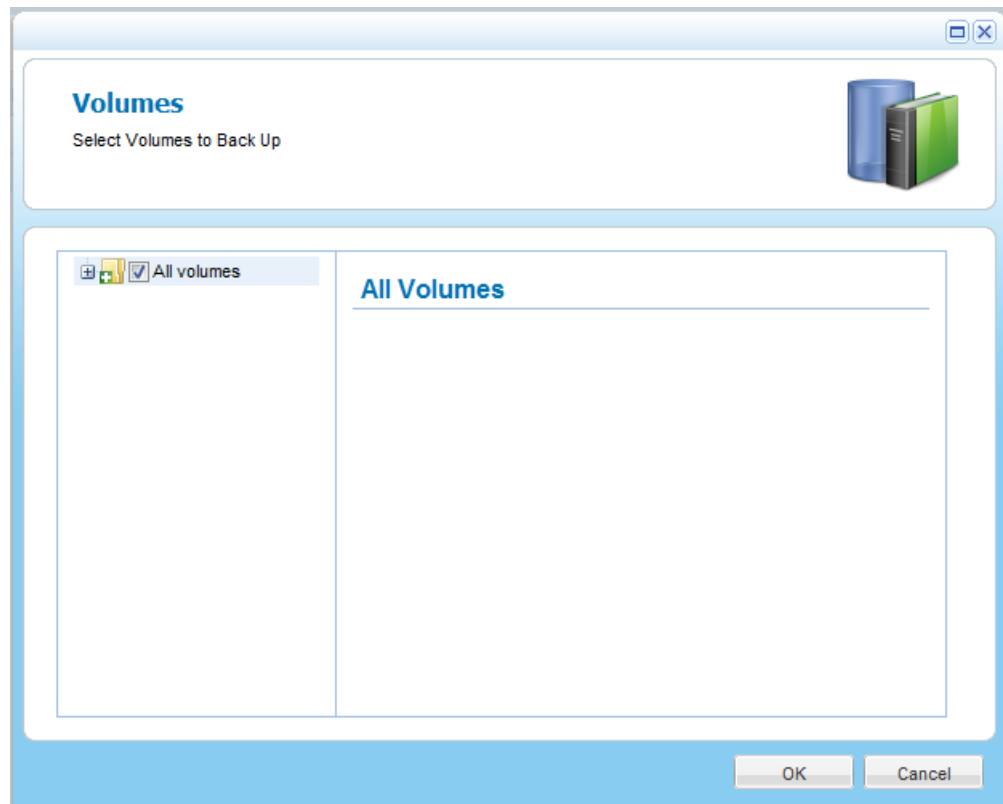
- c Click **OK**.

The default disk-level backup value is **Every 24 hours**.

- 5 To select volumes for backup, do the following:

- a In the **Volumes to back up** field, click .

The **Volumes** window opens.



- b Expand the tree nodes and select the check boxes next to the volumes you want to back up.

For an explanation of the icons and check boxes next to each folder, see **Folder Icons** (page 88).

- c Click **OK**.

- 6 Click **Save**.

Configuring System State Backup Settings

System state backup is performed as a type of file-level backup.

» To configure system state backup settings

-  Perform file-level backup, and select **System State** as a backup application.

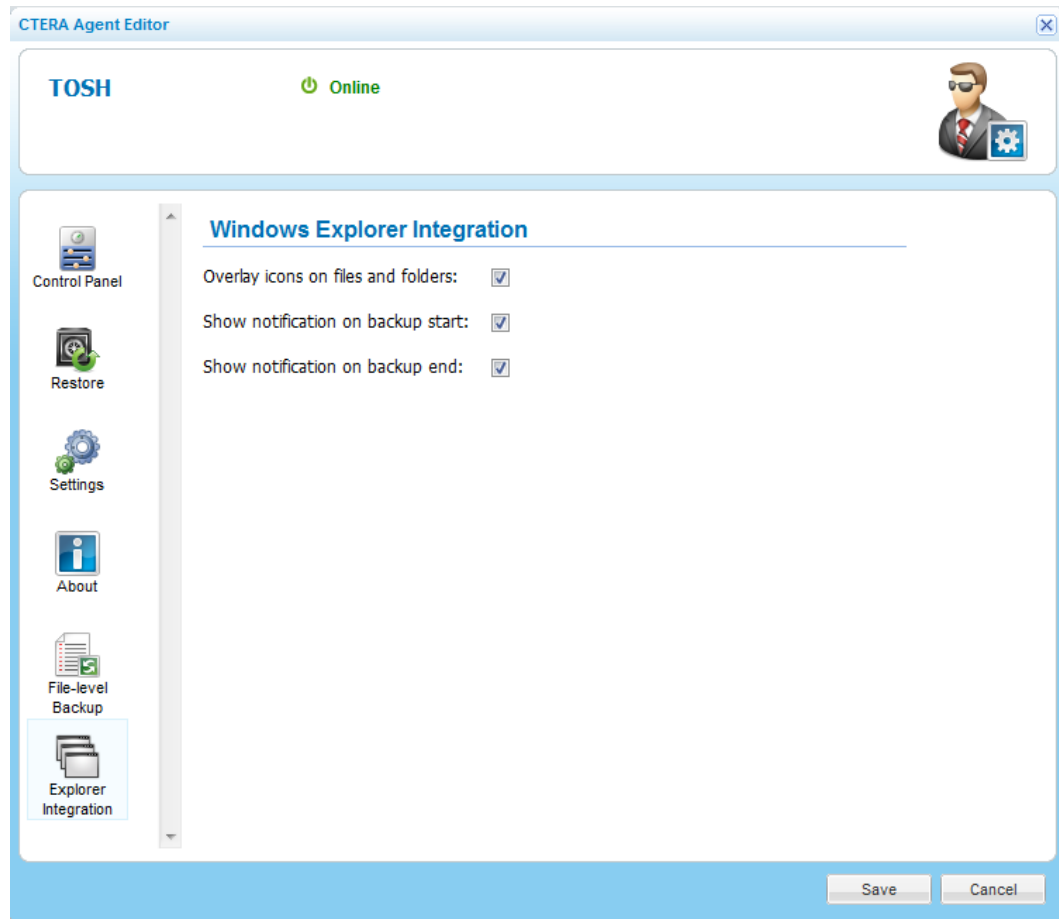
See **Configuring File-Level Backup Settings** (on page 36).

Configuring Windows Explorer Integration Settings

» To configure Windows Explorer integration settings

- 1 In the CTERA Agent Manager, click the **Explorer Integration** tab.

The **Explorer Integration** tab appears.



- 2 Complete the fields using the information in the following table.
- 3 Click **Save**.

Table 2: CTERA Agent Explorer Integration Fields

In this field...	Do this...
Overlay icons on files and folders	Select this option to overlay CTERA backup icons on files and folders in Windows Explorer. Files and folders that are selected for backup will be overlaid with the  icon in Windows Explorer. Folders for which only part of the contents are selected for backup will be marked with the  icon.
Show notification on backup start	Select this option to display a pop-up notification above the CTERA Agent tray icon, when backup starts.
Show notification on backup end	Select this option to display a pop-up notification above the CTERA Agent tray icon, when backup ends.

Selecting Files and Folders for File-Level Backup

Tip



To allow end users to select files or folders to backup without assistance from an administrator, select the **Allow user to configure the agent** check box in the global settings. See your cloud gateway's user guide.

If this option is not enabled, files and folders for backup can only be configured by cloud gateway administrators, via the cloud gateway web interface. See your cloud gateway's user guide.

» To select files and folders for file-level backup using Windows Explorer

- 1 Open Windows Explorer, and browse to the desired files and/or folders.
- 2 Do any of the following:

-  To specify that a file or folder should be backed up, right-click on the desired file/folder, and click **CTERA Agent > Add to backup**.

If the **Overlay icons on files and folders** check box is selected in the agent's Windows Explorer Integration settings, the file/folder is marked with the  icon. For information on configuring Windows Explorer Integration settings, see **Configuring Windows Explorer Integration Settings** (on page 43).

-  To specify that a file or folder should not be backed up, right-click on the desired file/folder, and click **CTERA Agent > Remove from backup**.

The  icon is removed from the file/folder.

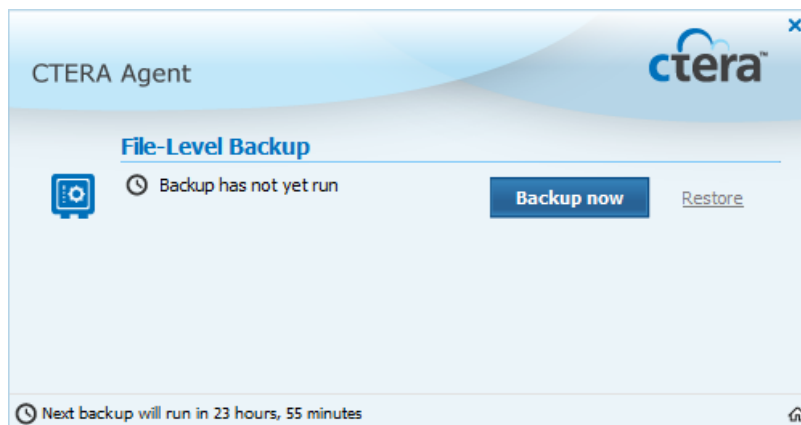
Manually Starting Backup

The CTERA Agent will automatically back up files, applications, and volumes to the cloud gateway according to the configured schedule. If desired, you can manually trigger backup at any time.

» To manually start backup

- 1 Click the CTERA Agent tray icon in the system tray.

The **CTERA Agent** screen appears.



- 2 Next to the desired backup type, click **Backup now**.

A progress bar appears, and the number of files and bytes remaining for local backup are displayed.

The CTERA Agent backs up files to the cloud gateway.

Stopping the Current Local Backup Operation

» To stop the current backup operation

- 1 Click the CTERA Agent tray icon in the system tray.

The **CTERA Agent** screen appears with a progress bar.

- 2 Click **Cancel**.

The current backup operation is stopped.

Suspending and Resuming Local Backup

You can suspend local backup for a CTERA Agent, including:

- + The currently running local backup for the CTERA Agent
- + All scheduled automatic local backups for the CTERA Agent

» To suspend local backup

- + Right-click the CTERA Agent tray icon in the system tray, and click **Suspend Backup**.

If local backup is currently running, it is paused. All future automatic backups for the CTERA Agent are suspended.

» To resume local backup

- + Right-click the CTERA Agent tray icon in the system tray, and click **Unsuspend Backup**.

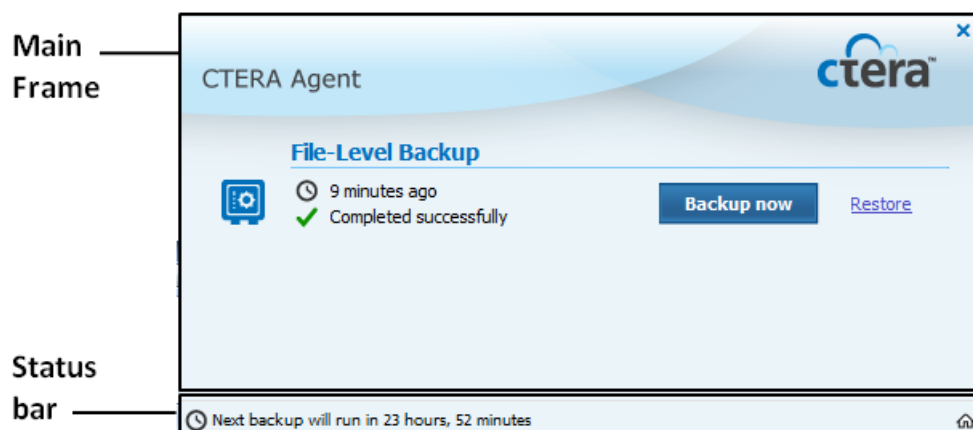
Local backup resumes.

Viewing the Agent Status

» To view the CTERA Agent's status

- + Click the CTERA Agent tray icon in the system tray.

The **CTERA Agent** screen appears.



The screen is composed of the following parts:

- + **Main frame.** Displays the available types of backup, along with controls for performing these backups and restoring from the created backup files. Under each type of backup, the amount of time since the last backup is displayed, as well as an indication of whether the backup was successful. Mousing over the backup result displays a tooltip with additional details about the backup.
- + **Status bar.** Displays the amount of time remaining until the next automatic backup. The  icon indicates that the CTERA Agent is in Gateway mode.

Viewing Agent Details

You can view CTERA Agent details, including its version, the operating system on which it is installed, and copyright information.

» To view CTERA Agent details

- 1 Right-click the CTERA Agent tray icon in the system tray, and click **About**.

The **About CTERA Agent** screen appears.



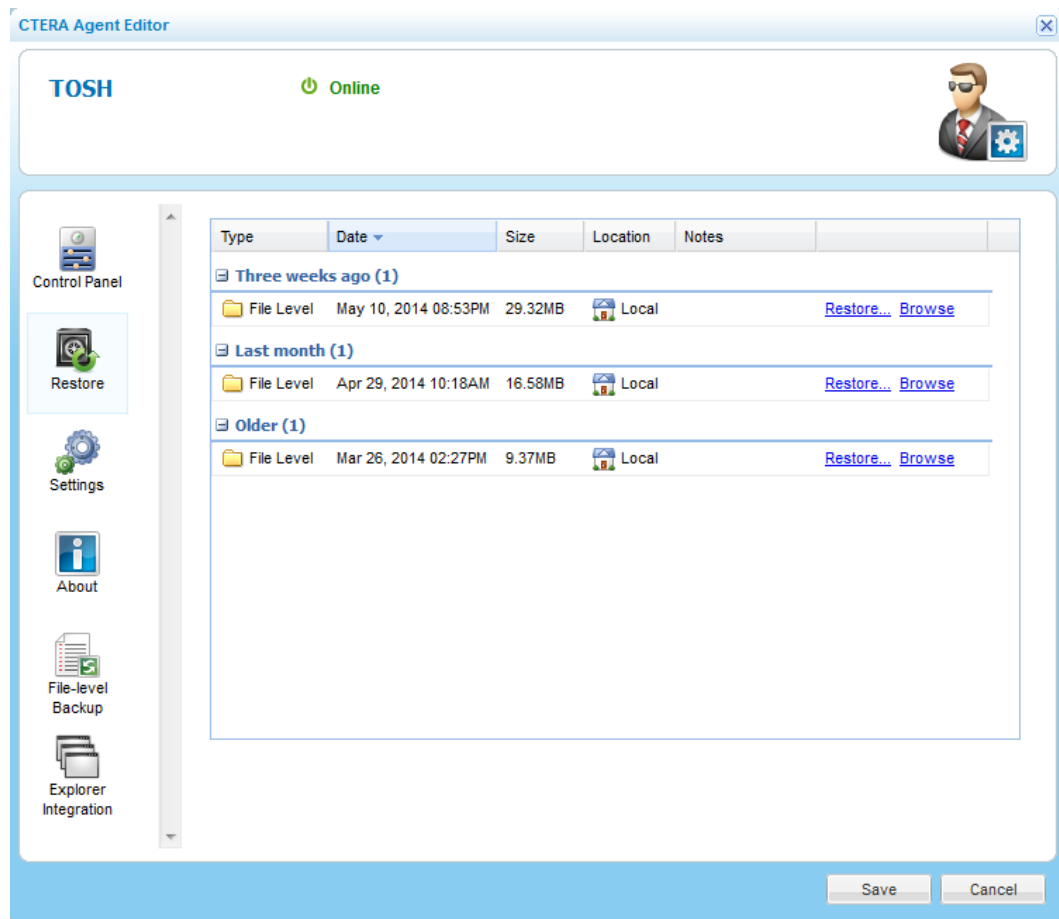
- 2 To view the end user license agreement and services agreement, click **Legal Information**.
- 3 To close the window, click **OK**.

Restoring Files from File-Level Backup

» To restore files from file-level backup

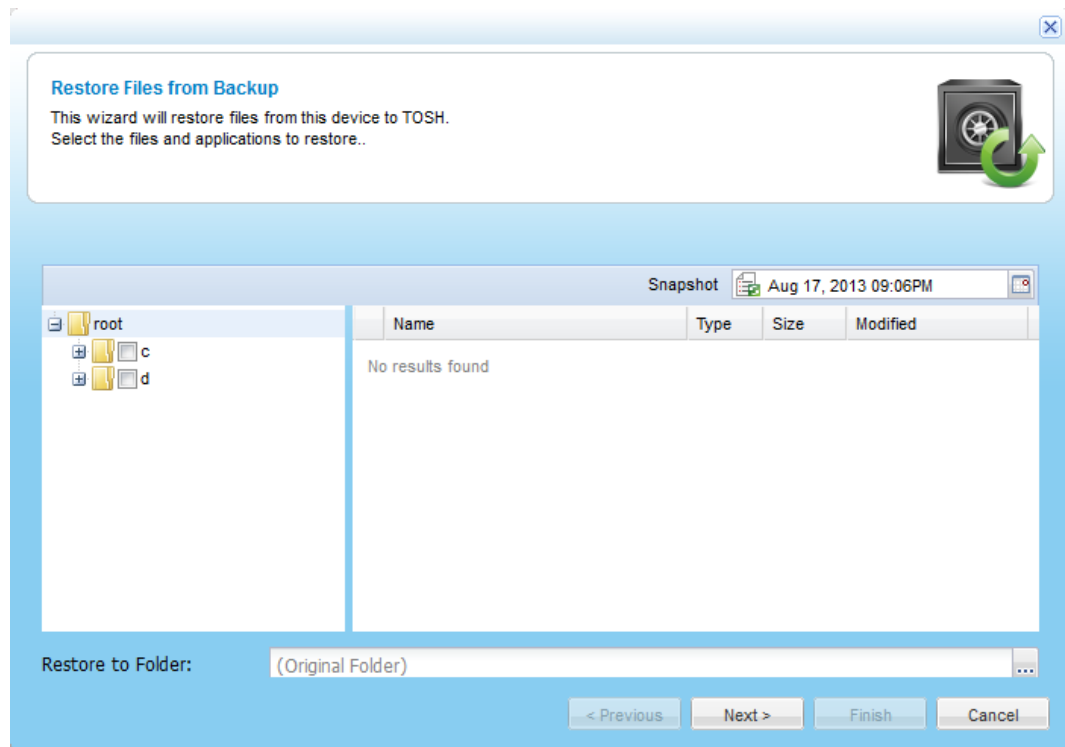
- 1 Do one of the following:
 - + Connect to the CTERA Agent Manager, then click the **Restore** tab.
See Connecting to the CTERA Agent Manager.
 - + Right-click on the CTERA Agent tray icon in the system tray, and click **Restore**.

The CTERA Agent Manager opens displaying the **Restore** tab.



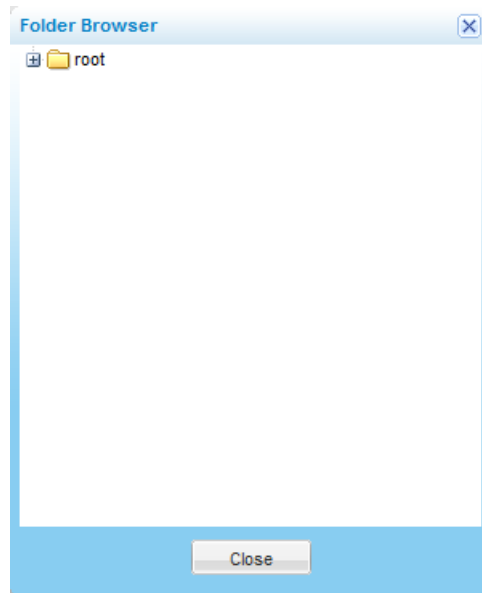
- 2 Next to the desired snapshot, click **Restore**.

The **Restore Files from Backup** dialog box opens.



- 3 To view a folder's contents, select the folder in the left pane.
The selected folder's contents appear in the right pane.
- 4 In either pane, select the check boxes next to the files and folders you want to restore.
For an explanation of the icons and check boxes next to each folder, see **Folder Icons** (page 88).
- 5 If you want to restore files to a location other than the original location:

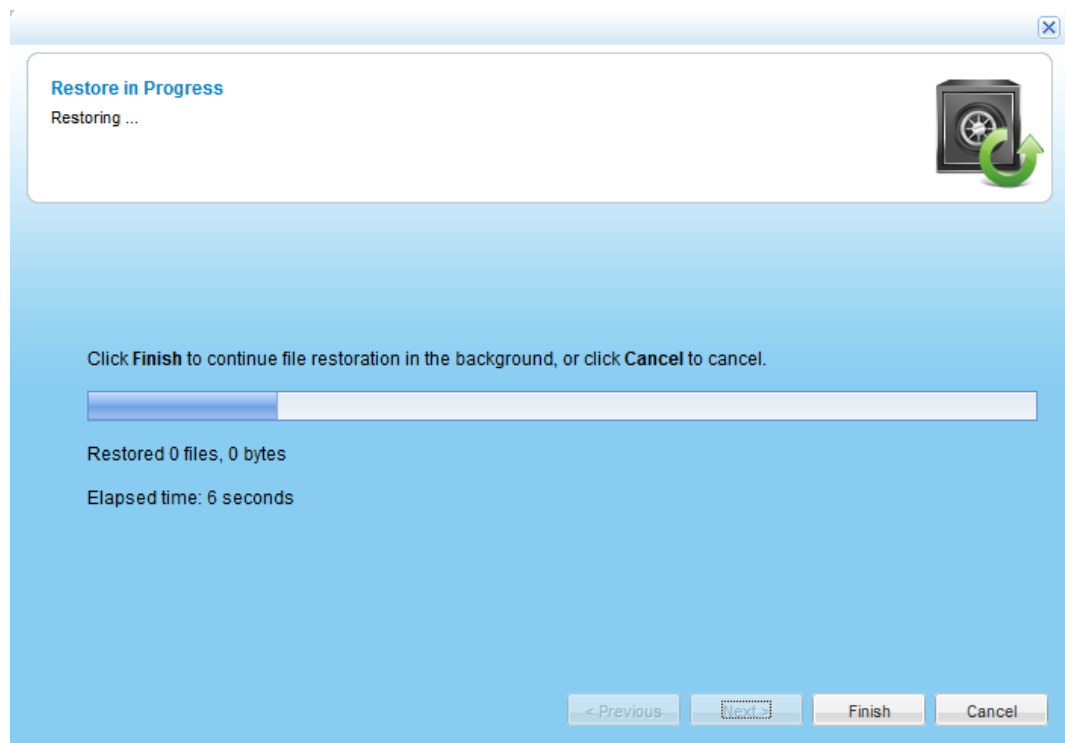
- a** Click in the **Restore to Folder** field. The **Folder Browser** dialog box appears.



- b** Select the folder to which you would like to restore the files.
- c** Click **Close**.

- 6** Click **Next**.

The **Restore In Progress** screen appears with a progress bar.



The selected files and folders are restored.

- 7** Click **Finish**.

Restoring Files from Disk-Level Backup

There are a number of ways to restore files from disk-level backup:

+ Restore individual files

See *Restoring Individual Files from Disk-Level Backup* (on page 51).

+ Restore your entire computer

See *Restoring the Entire Computer from Disk-Level Backup* (on page 51).

Restoring Individual Files from Disk-Level Backup

When Windows File Sharing (CIFS) is enabled, you can use WinImage shareware to restore individual files from disk-level backup.

» To restore an individual file

- 1 Download and install WinImage from <http://www.winimage.com>.
- 2 Use WinImage to open the disk-level backup file (a VHD file).
- 3 Copy the desired file from the disk-level backup to your computer.

Restoring the Entire Computer from Disk-Level Backup

You can restore your computer from disk-level backup, using any of the following methods:

+ Recovery via the Recovery Control Panel

This option can be used to restore your system image to the same computer or a different one. It can only be used if the Control Panel is accessible.

+ Recovery using a system repair or Windows installation disk

If your computer is configured to start from a CD or DVD, and you have a system repair or Windows installation disk, then you can use the disk to restore your computer.

Tip



On Windows Vista, only a Windows installation disk is supported.

+ Recovery using preinstalled recovery options

Many computer manufacturers install preinstalled recovery options on your PC. This option should be used if the Control Panel is inaccessible, and preinstalled recovery options are already installed on your PC.

Warning



This procedure will replace all existing files, settings, and programs with those in the disk-level backup.

» **To restore your computer via the Recovery Control Panel**

Tip



Use this procedure, if you are able to access the Windows Control Panel.

- 1 Click **Start > Control Panel**.
- 2 In the search box, type "recovery".
- 3 In the search results that appear, click **Recovery**.
- 4 Click **Advanced recovery methods**.
- 5 Click **Use a system image you created earlier to recover your computer**.
- 6 Do one of the following:
 - + If you want to backup your computer before starting the restore, click the **Back Up Now** button and you will be walked through creating a new backup.
 - + Otherwise, click **Skip**.
- 7 Click **Restart**.

The system restarts.
- 8 Choose your language settings.
- 9 Click **Next**.
- 10 If you are using a Windows installation disk, click **Repair your computer**. Continue with *Re-imaging Your Computer* (on page 53).

» **To restore your computer using a system repair or Windows installation disk**

- 1 Insert the installation disk or system repair disk.
- 2 Boot the computer from the inserted disk.
- 3 Choose your language settings.
- 4 Click **Next**.
- 5 If you are using a Windows installation disk, click **Repair your computer**. Continue with *Re-imaging Your Computer* (on page 53).

» To restore your computer using pre-installed recovery options

Tip



Use this procedure, if your PC manufacturer pre-installed recovery options on your PC.

- 1 Restart your computer.

On operating systems other than Windows Vista, this step must be performed by pressing the computer's power button.

- 2 Do one of the following:

- + If your computer has only one operating system installed, press the F8 key while your computer is restarting.

You must press this key *before* the Windows logo appears. It is recommended to press it repeatedly, to ensure that you press it in time.

If you do not succeed in pressing the key before the Windows logo appears, restart your computer and try again.

- + If your computer has more than one operating system installed, select the desired operating system, and then press F8.

- 3 In the advanced boot options, select **Repair your computer**.

- 4 Press Enter.

- 5 Select a keyboard layout.

- 6 Click **Next**.

- 7 Specify a user name.

- 8 Type the password.

- 9 Click **OK**. Continue with *Re-imaging Your Computer* (on page 53).

Re-imaging Your Computer

This procedure is performed in the context of restoring your entire computer from disk-level backup. See *Restoring the Entire Computer from Disk-Level Backup* (on page 51) for information on the necessary steps preceding this procedure.

» To re-image your computer in Windows Vista:

- 1 Select the operating system.

If more than one operating system is installed, *and* the number of bits in the system and installation differ from one another (that is, if one is 32-bit and one is 64-bit), do not select an operating system.

- 2 Click **Next**.

- 3 In the system recovery options, click **Windows Complete PC Restore**.
- 4 Follow the instructions that appear.

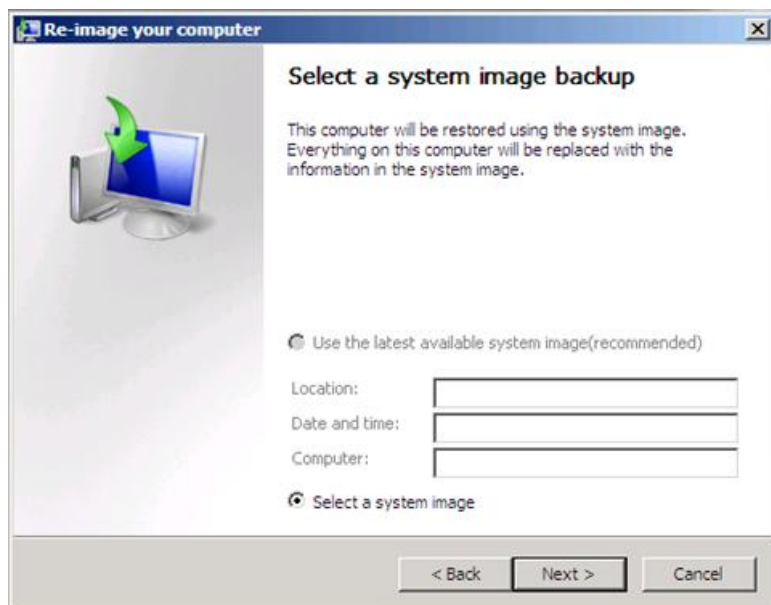
» To re-image your computer in Windows 7 / 2008 / 2008 R2

- 1 When you click **Repair your computer** (see *Restoring the Entire Computer from Disk-Level Backup* (on page 51)), the System Recovery Options dialog box appears.



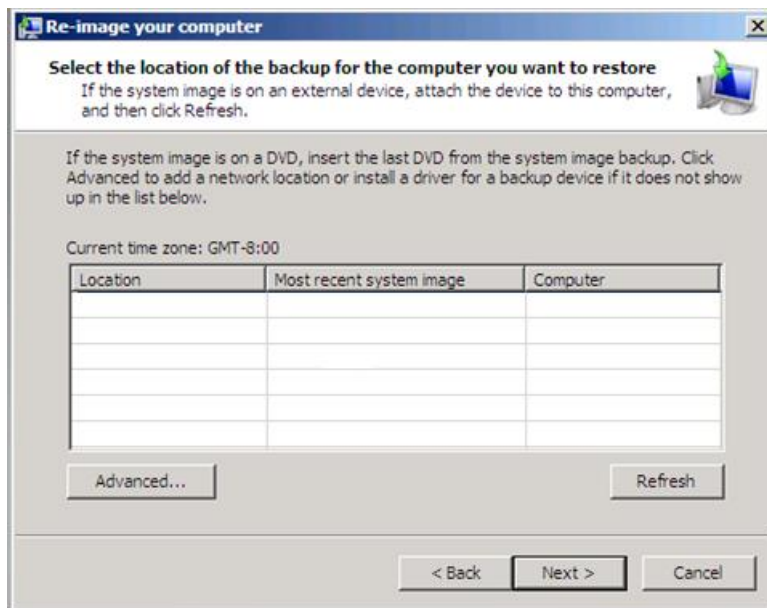
- 2 In the **System Recovery Options** dialog box, choose **Restore your computer using a system image that you created earlier**.
- 3 Click **Next**.

The **Re-image your computer** wizard opens displaying the **Select a system image backup** dialog box.



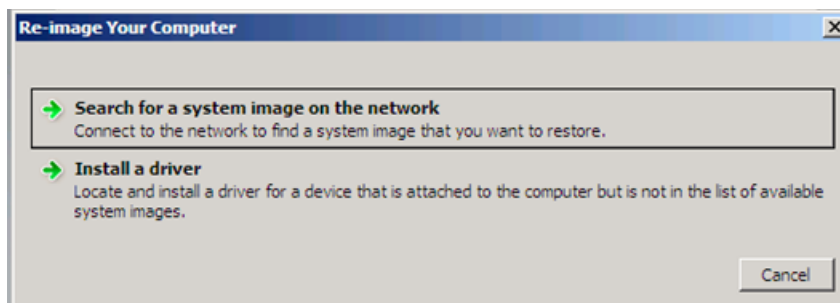
- 4 Choose **Select a system image**.
- 5 Click **Next**.

The **Select the location of the backup for the computer you want to restore** dialog box appears.



- 6 Click **Advanced**.

The **Advanced** dialog box opens.

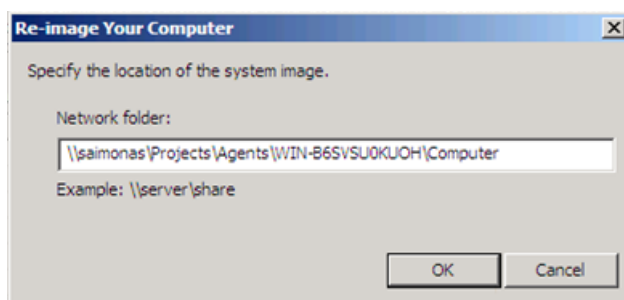


- 7 Click **Search for a system image on the network**.

A confirmation message appears.

- 8 Click **Yes**.

The **Specify the location of the system image** dialog box appears.



- 9 In the **Network Folder** field, type the UNC path of the folder where the disk-level backup is stored.

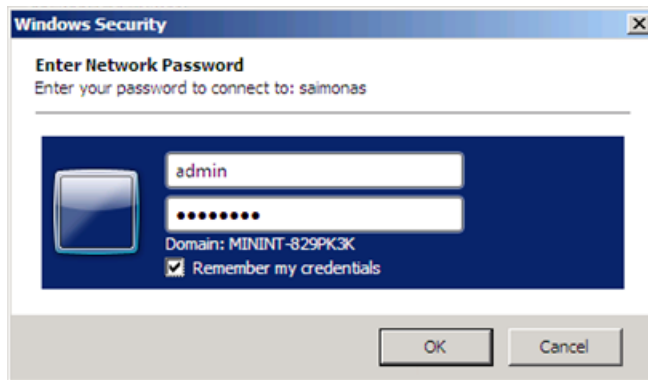
Tip



The UNC path of the folder where the drive-level backup is stored is:
`\\{devicename}\\{share name}\\agents\\{agentname}\\computer.`

- 10 Click **OK**.

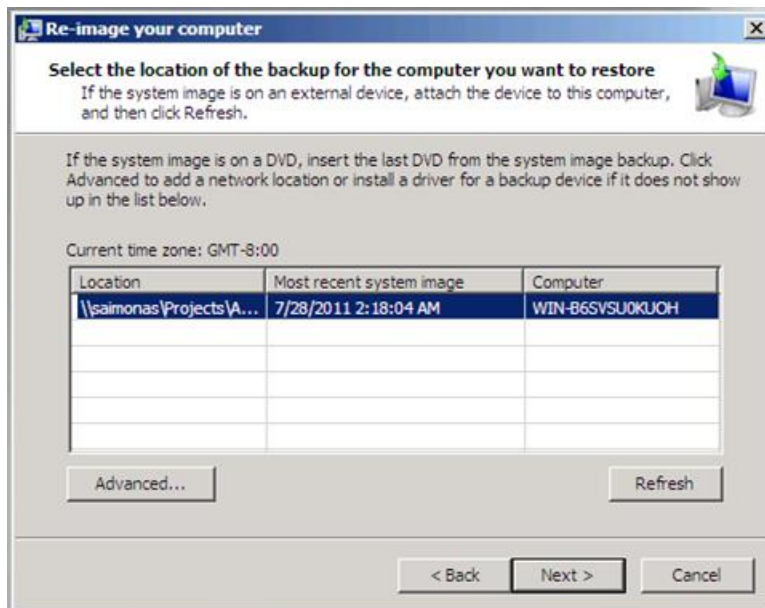
The **Enter Network Password** dialog box opens.



- 11 Enter your user name and password for authenticating to the CTERA cloud gateway.

- 12 Click **OK**.

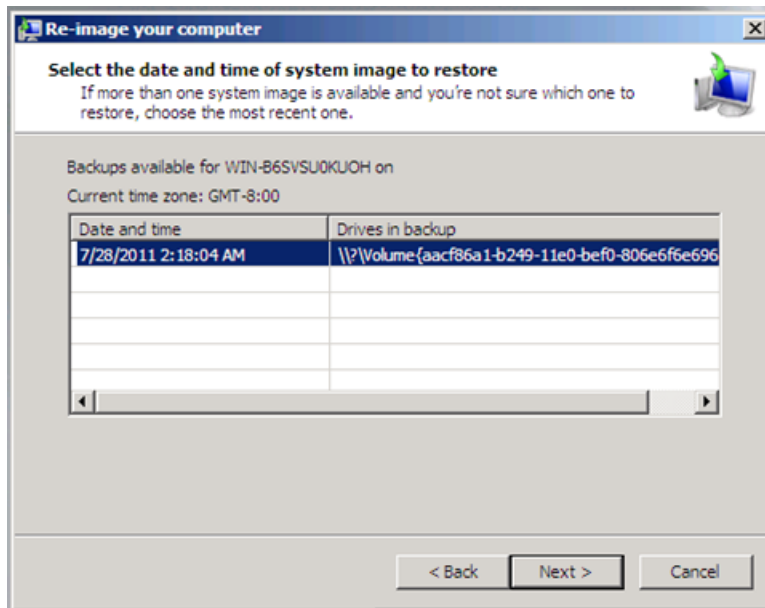
The disk-level backup image you specified appears in the **Select the location of the backup for the computer you want to restore** dialog box.



- 13 Select the disk-level backup image.

- 14 Click **Next**.

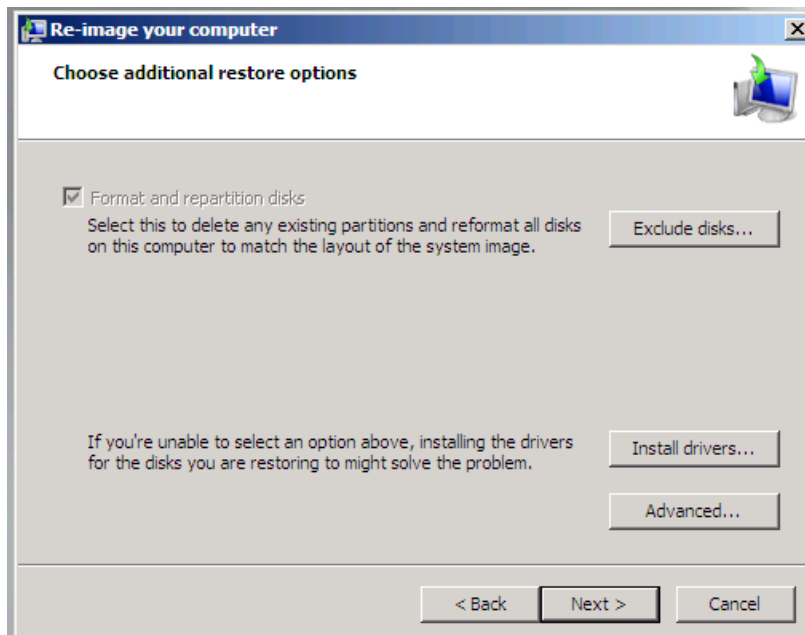
The **Select the date and time of system image to restore** dialog box appears.



15 Select the desired date and time.

16 Click **Next**.

The **Choose additional restore options** dialog box appears.



17 To format and repartition disks to match the source disk-level backup image, select the **Format and repartition disks** check box.

18 To exclude specific disks from reformatting and repartitioning, do the following:

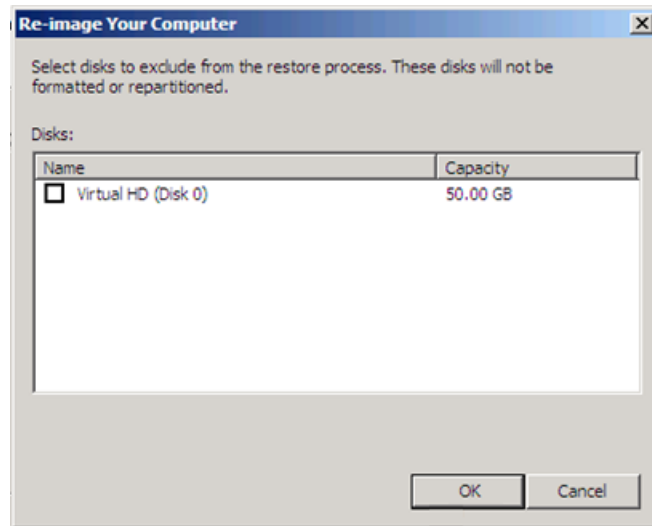
Tip



This step is optional and not recommended, as it is preferable to reformat and repartition all disks.

- a Click **Exclude disks**.

A dialog box appears.

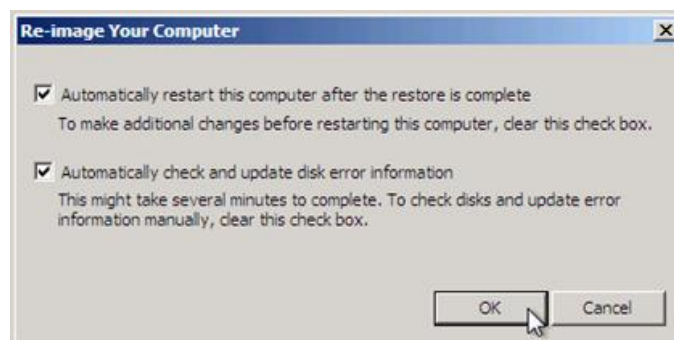


- b Select the disks to exclude.
- c Click **OK**.

19 To configure advanced options, do the following:

- a Click **Advanced**.

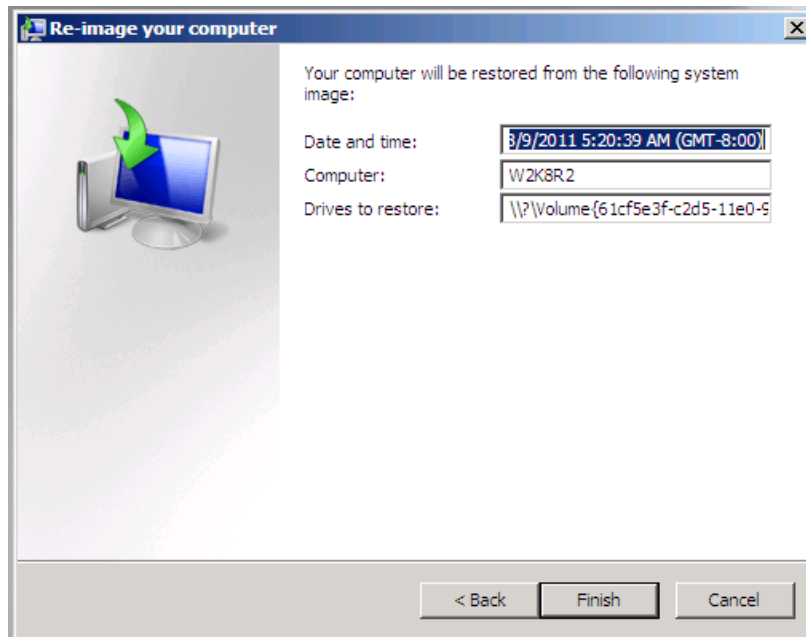
A dialog box appears.



- b Select the desired options.
- c Click **OK**.

20 Click **Next**.

The final dialog box appears.



- 21** Click **Finish**.

A warning message appears.

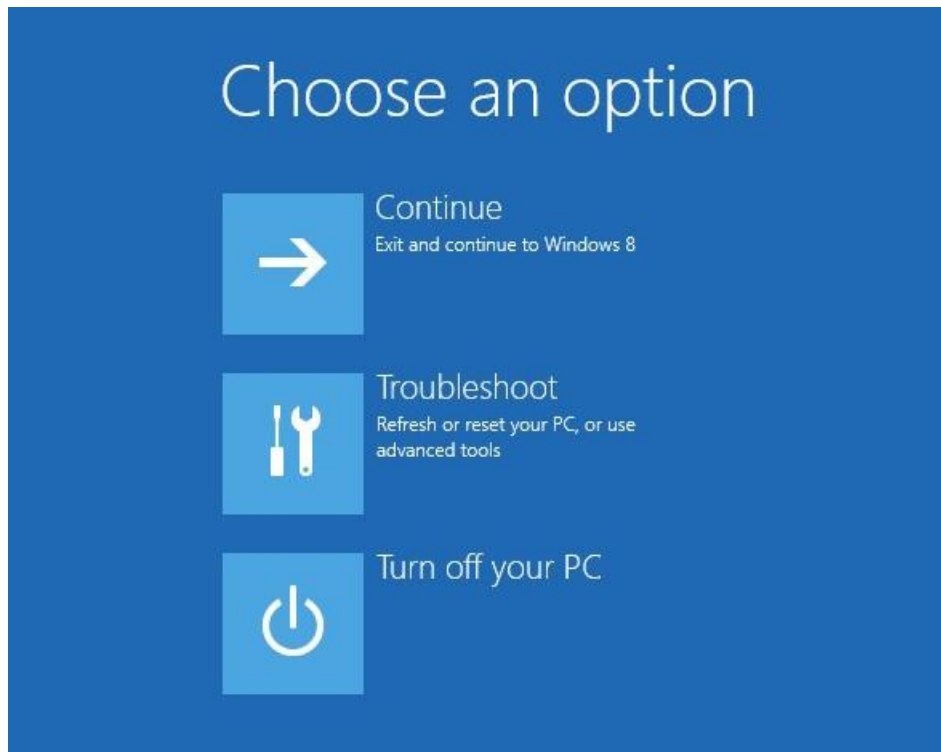
- 22** Click **Yes**.

The re-imaging process begins.

Once the process has finished, the machine reboots to Windows.

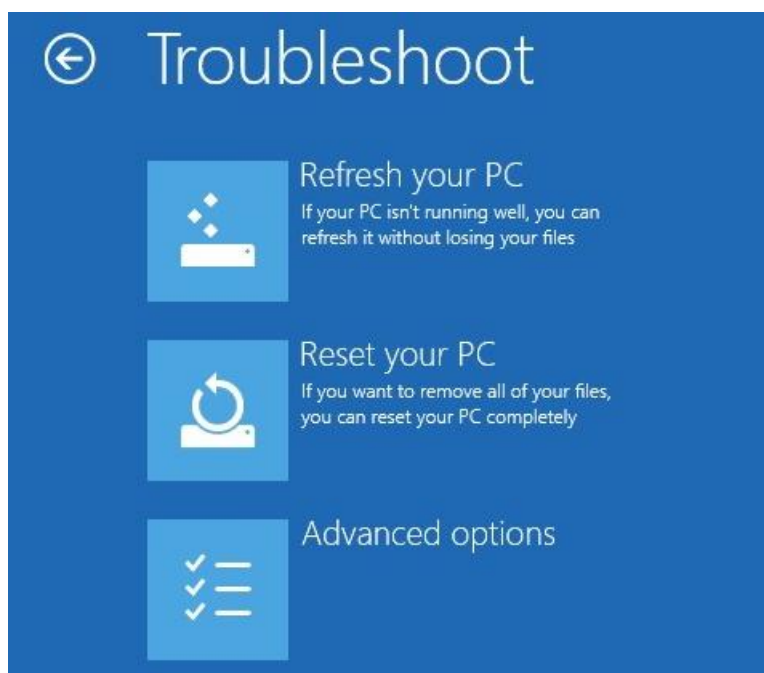
» **To re-image your computer in Windows 8 / 2012**

- 1 When you click **Repair your computer** (see *Restoring the Entire Computer from Disk-Level Backup* (on page 51)), the Advanced Startup options menu appears.



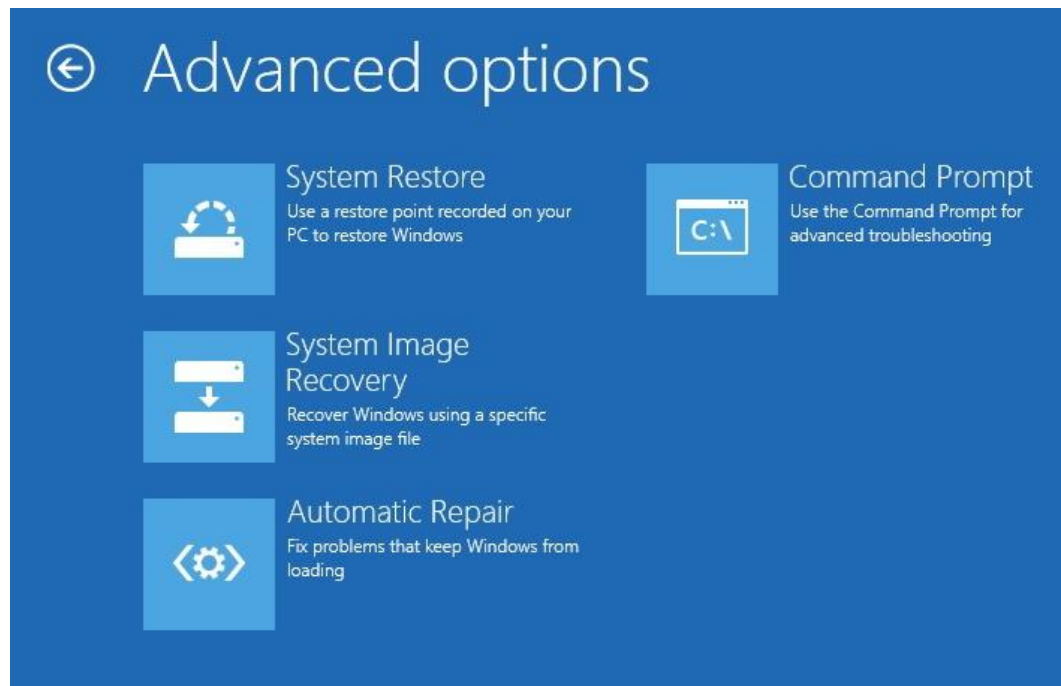
- 2 Click **Troubleshoot**.

The Troubleshoot menu appears.



- 3 Click **Advanced options**.

The Advanced options menu appears.



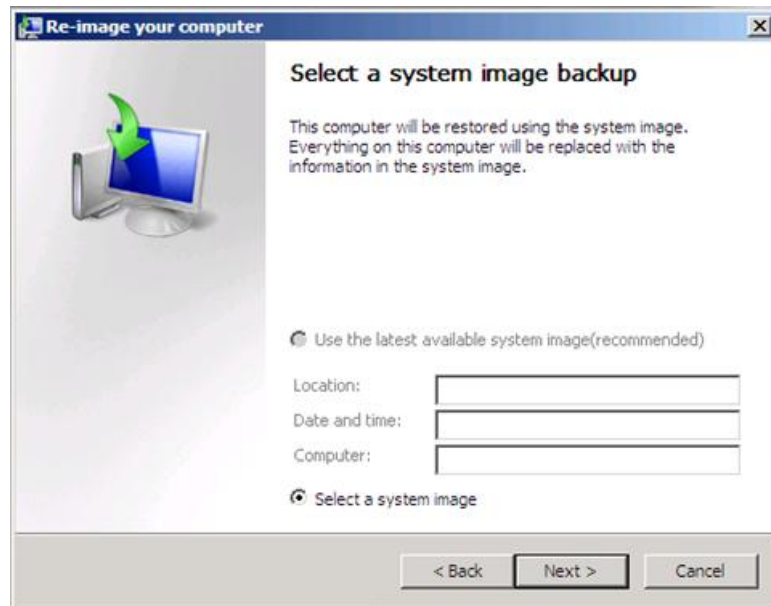
4 Click **System Image Recovery**.

A repair process searches for all Windows 8 / 2012 installations on your computer and then displays them.



5 Select the operating system.

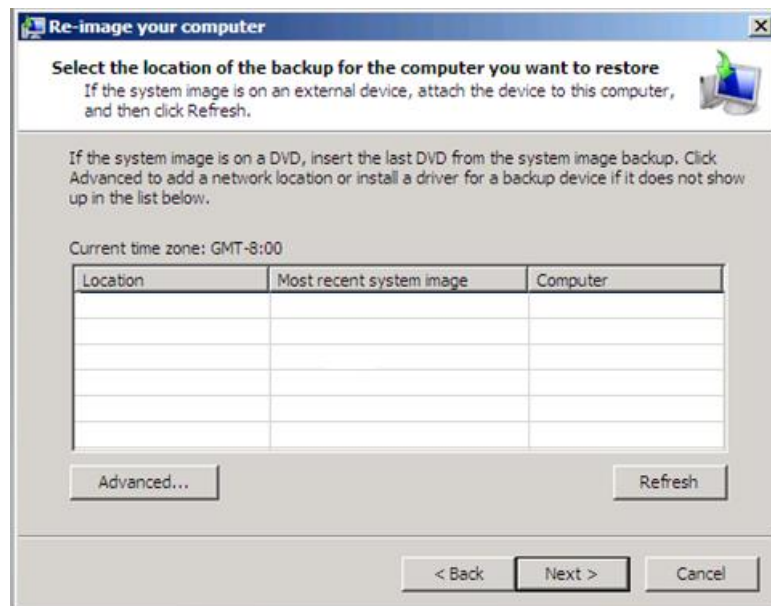
The **Re-image your computer** wizard opens displaying the **Select a system image backup** dialog box.



6 Choose **Select a system image**.

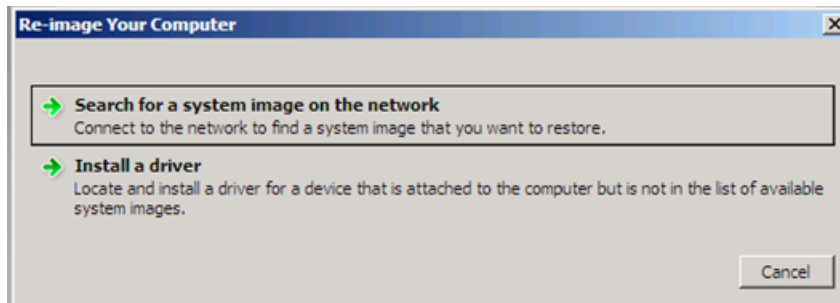
7 Click **Next**.

The **Select the location of the backup for the computer you want to restore** dialog box appears.



8 Click **Advanced**.

The **Advanced** dialog box opens.

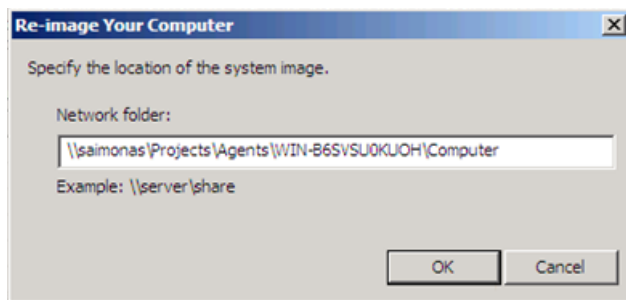


- 9 Click **Search for a system image on the network**.

A confirmation message appears.

- 10 Click **Yes**.

The **Specify the location of the system image** dialog box appears.



- 11 In the **Network Folder** field, type the UNC path of the folder where the disk-level backup is stored.

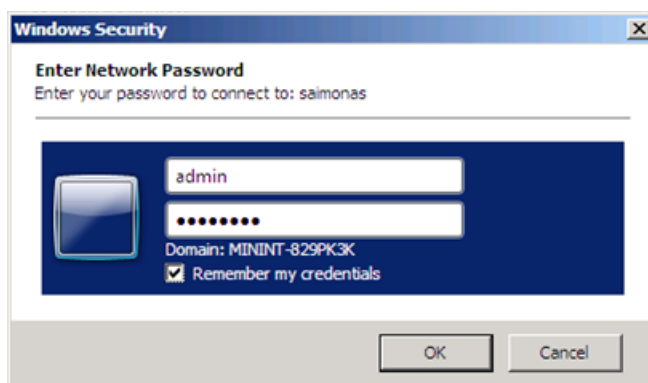
Tip



The UNC path of the folder where the drive-level backup is stored is:
 \\{devicename}\\{share name}\\agents\\{agentname}\\computer.

- 12 Click **OK**.

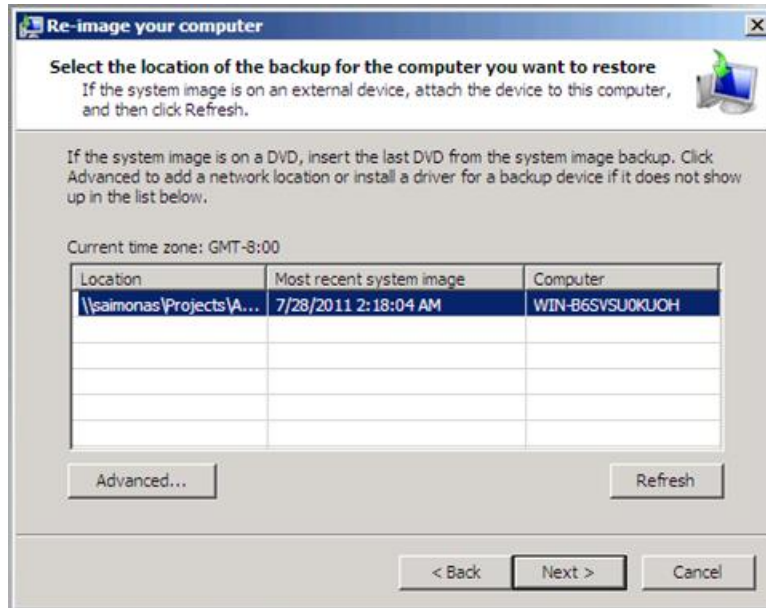
The **Enter Network Password** dialog box opens.



- 13 Enter your user name and password for authenticating to the CTERA cloud gateway.

14 Click **OK**.

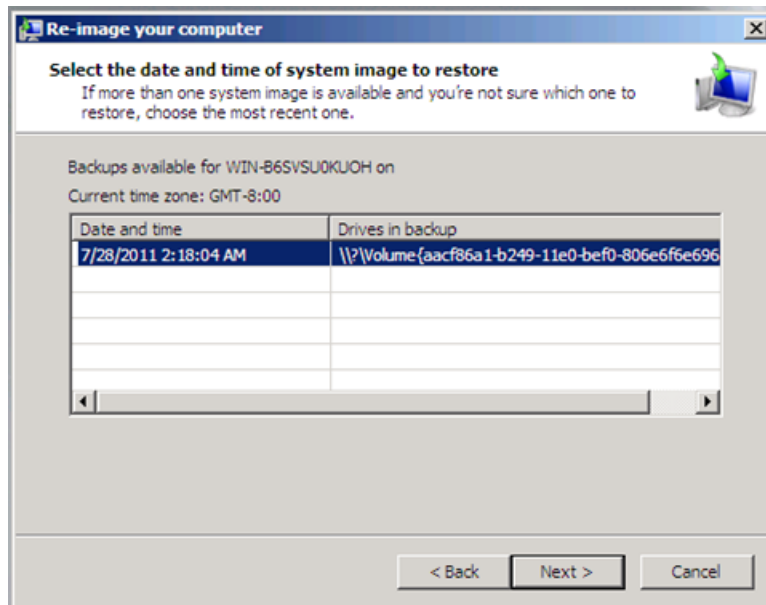
The disk-level backup image you specified appears in the **Select the location of the backup for the computer you want to restore** dialog box.



15 Select the disk-level backup image.

16 Click **Next**.

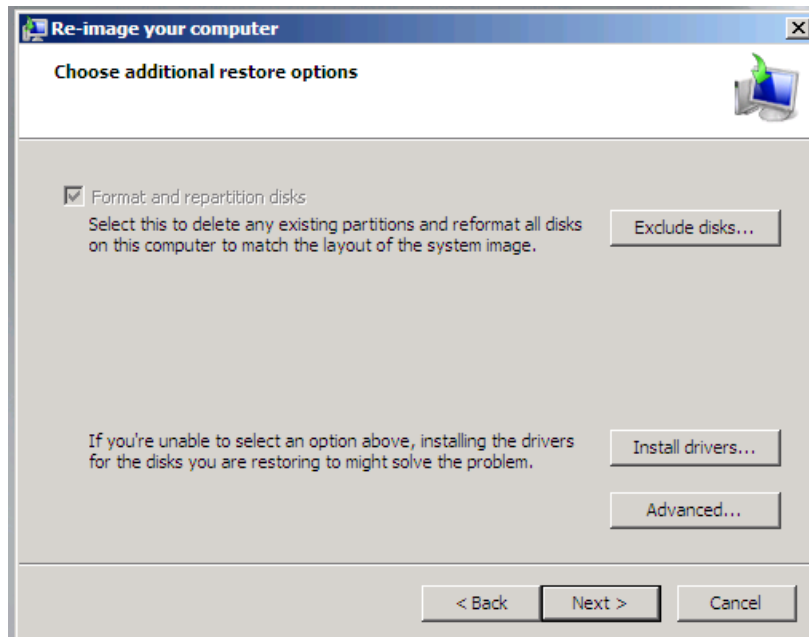
The **Select the date and time of system image to restore** dialog box appears.



17 Select the desired date and time.

18 Click **Next**.

The **Choose additional restore options** dialog box appears.



19 To format and repartition disks to match the source disk-level backup image, select the **Format and repartition disks** check box.

20 To exclude specific disks from reformatting and repartitioning, do the following:

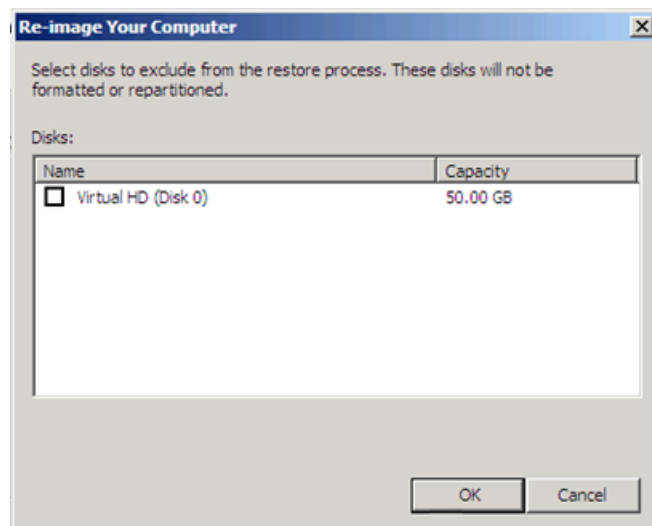
Tip



This step is optional and not recommended, as it is preferable to reformat and repartition all disks.

a Click **Exclude disks**.

A dialog box appears.



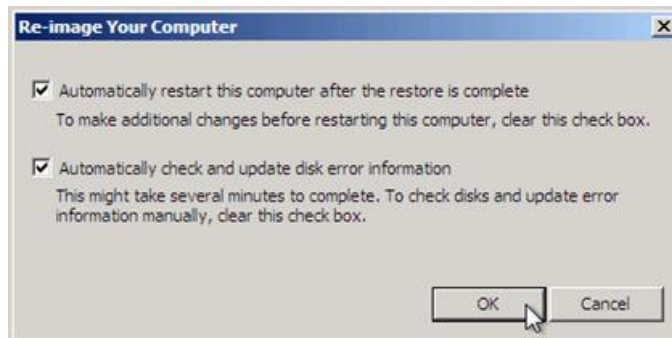
b Select the disks to exclude.

c Click **OK**.

21 To configure advanced options, do the following:

a Click **Advanced**.

A dialog box appears.

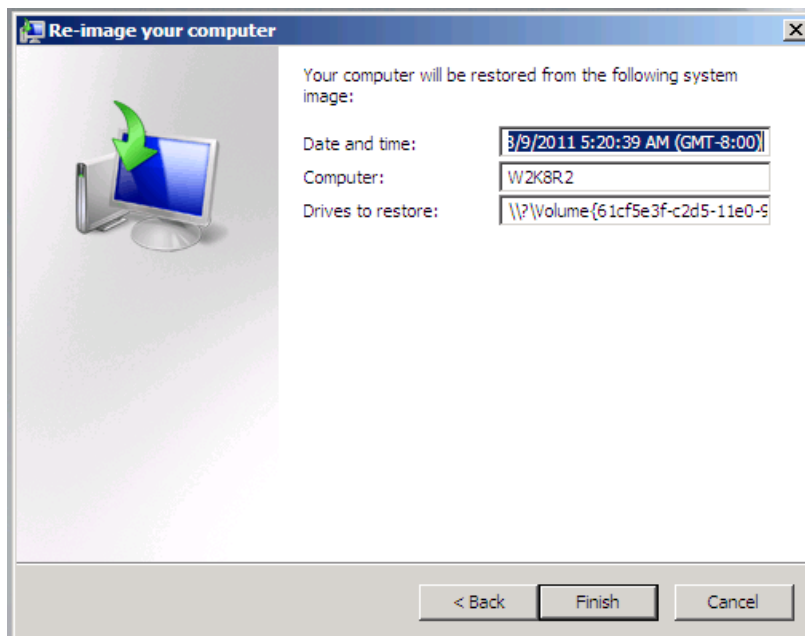


b Select the desired options.

c Click **OK**.

22 Click **Next**.

The final dialog box appears.



23 Click **Finish**.

A warning message appears.

24 Click **Yes**.

The re-imaging process begins.

Once the process has finished, the machine reboots to Windows.

Accessing Files on the Cloud Gateway

You can access files on the cloud gateway using the following procedure.

» To access files on the cloud gateway

+ Do one of the following:

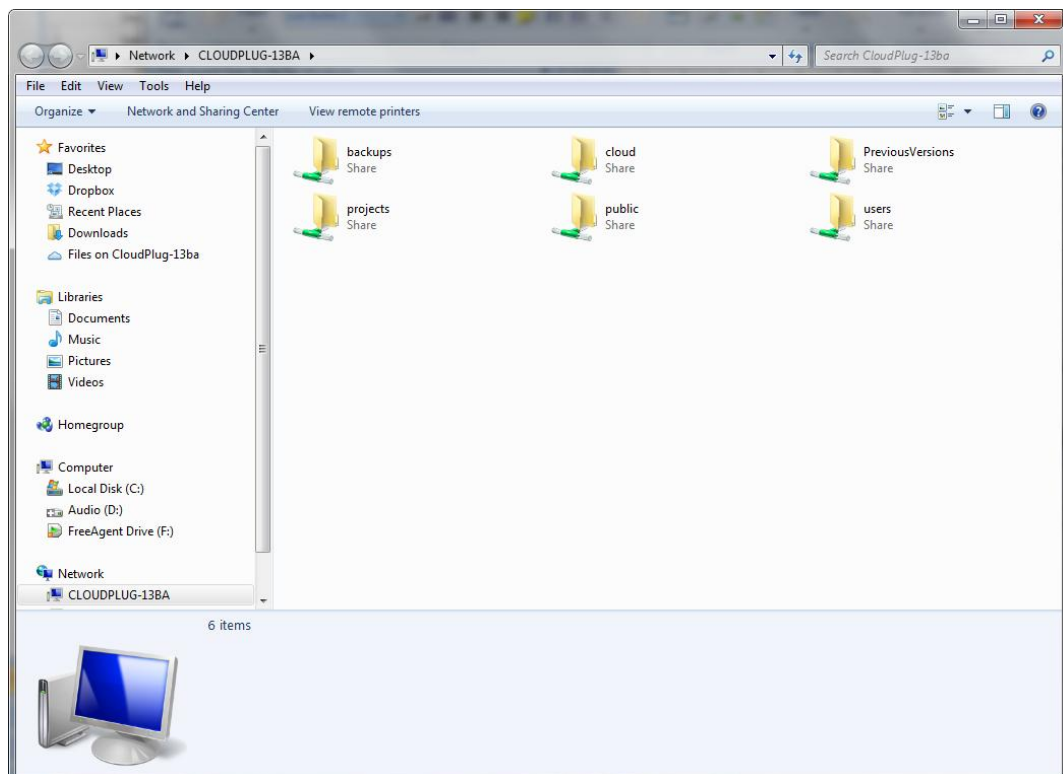
- + Right-click the CTERA Agent tray icon in the notification area of the Windows taskbar, and click **Access Files**.
- + Double-click on the shortcut on your desktop named "Files on *gateway name*", where

gateway name is the name of the cloud gateway. For example: **C200-2518**.



**Files on
C200-2518**

Windows Explorer opens displaying the shares on the cloud gateway.



Using the CTERA Agent in Cloud Mode

This chapter explains how to use CTERA Agents to perform cloud backup and cloud synchronization by connecting them to the CTERA Portal.

In This Chapter

CTERA Agent Licensing in Cloud Mode-----	70
Workflow -----	70
Connecting the CTERA Agent to the CTERA Portal -----	71
Setting Up Connection via a Web Proxy -----	78
Disconnecting the Agent from the CTERA Portal -----	79
Using the CTERA Agent Web Interface -----	79
Performing Tasks Using Windows Explorer and Windows Taskbar -----	83
Using Cloud Backup -----	83
Using Cloud Drive Synchronization-----	108
Collaborating on Cloud Drive Folders-----	119
Sharing Files with Guest Invitations-----	126
Restoring Files from Cloud Backup -----	130
Enabling/Disabling Remote Access-----	134
Configuring Event Log Settings-----	136
Viewing Logs -----	137
Configuring Windows Explorer Integration Settings -----	147
Configuring the CTERA Agent Language -----	148
Viewing the Agent Status -----	149
Viewing Agent Details -----	149

CTERA Agent Licensing in Cloud Mode

When the CTERA Agent is installed on a Windows Workstation operating system, if you are subscribed to the Cloud Backup service, the agent consumes one *Workstation Backup* license from your CTERA Portal quota. If you are only subscribed to the Cloud Drive service, and not to the Cloud Backup service, your agent does not consume *Workstation Backup* licenses.

When the CTERA Agent is installed on a Windows Server operating system, the agent consumes one *CTERA Server Agent* license from your CTERA Portal quota.

Tip



A license is taken for as long as an agent is defined in your CTERA Portal Account. If you are no longer using an agent, you can delete the agent entry from your CTERA Portal Account to regain its license.

Workflow

To use the CTERA Agent for backup in Cloud mode, do the following:

- 1 Install the CTERA Agent on the computer whose files you want to back up to the CTERA Portal.

See ***Installing the Agent*** (on page 9).

- 2 Connect the CTERA Agent to the CTERA Portal.

See ***Connecting the Agent to the CTERA Portal*** (see "***Connecting the CTERA Agent to the CTERA Portal***" on page 71).

- 3 If you are subscribed to the cloud backup service, use the CTERA Agent setup wizard to initialize and configure cloud backup.

- 4 Optionally, configure advanced CTERA Agent settings, by connecting to the CTERA Agent Web Interface.

See ***Connecting to the CTERA Agent Web Interface*** (on page 80).

- 5 Optionally, if needed, select additional folders to synchronize to your Cloud Drive

See ***Syncing Local Folders to the Cloud Drive*** (on page 113).

Connecting the CTERA Agent to the CTERA Portal

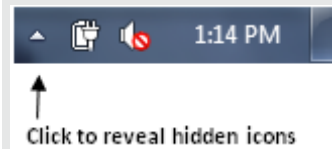
» To connect the CTERA Agent to the CTERA Portal

- 1 Click the CTERA Agent tray icon  in the notification area of the Windows taskbar.

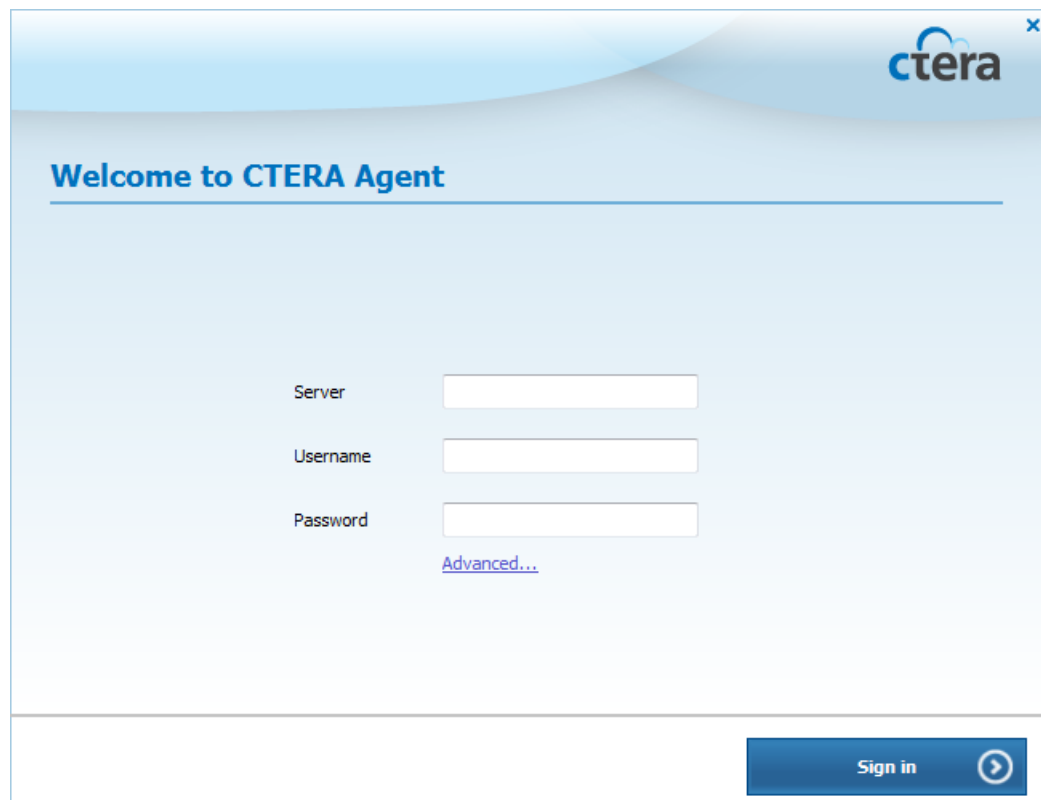
Tip



In Windows 7, the CTERA Agent tray icon may be hidden. In this case, click on the white arrow in the notification area of the taskbar to reveal hidden icons:



The **Welcome to CTERA Agent** window opens.



- 2 In the **Server** field, type the CTERA Portal's DNS name.
- 3 In the **Username** and **Password** fields, type your user name and password for accessing the CTERA Portal.
- 4 If you want to configure the CTERA agent to connect to the portal via a proxy, see **Setting Up Connection via a Web Proxy** (on page 78).
- 5 Click **Sign in**.

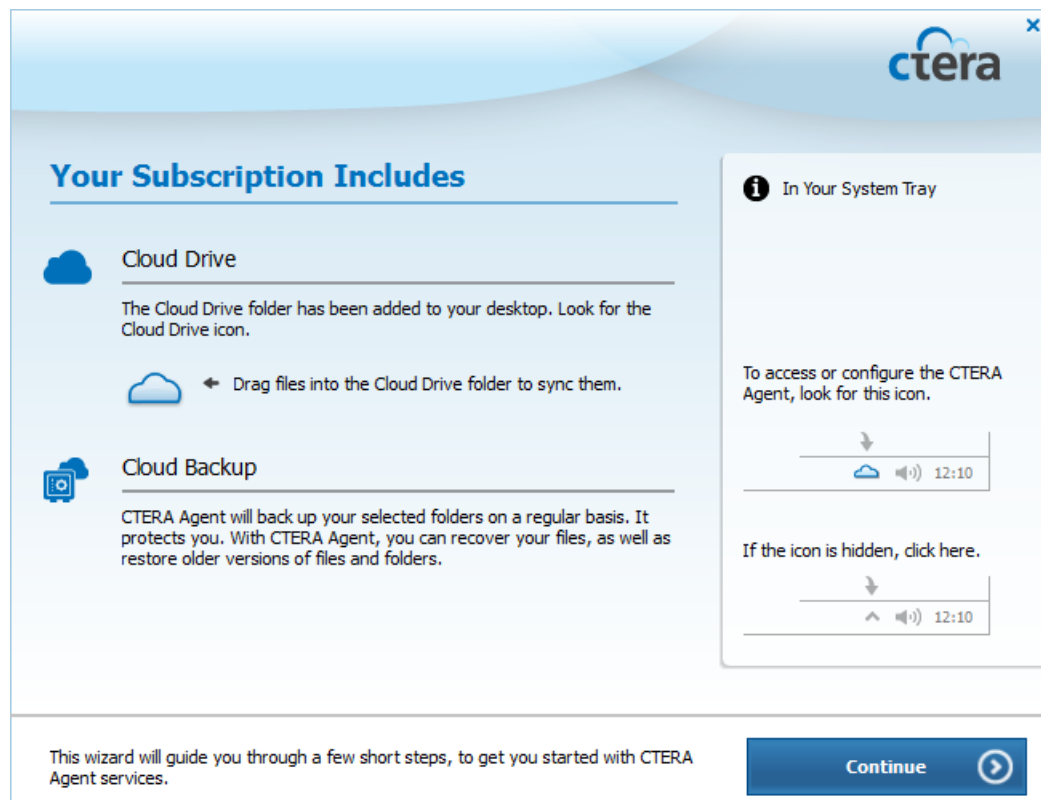
Assuming that you are subscribed to the cloud backup and cloud drive services, the following things happen:

- + The CTERA Agent connects to the CTERA Portal.
- + A backup folder is automatically created for this agent on the CTERA Portal.
- + A shortcut to the cloud drive folder is automatically created on your desktop



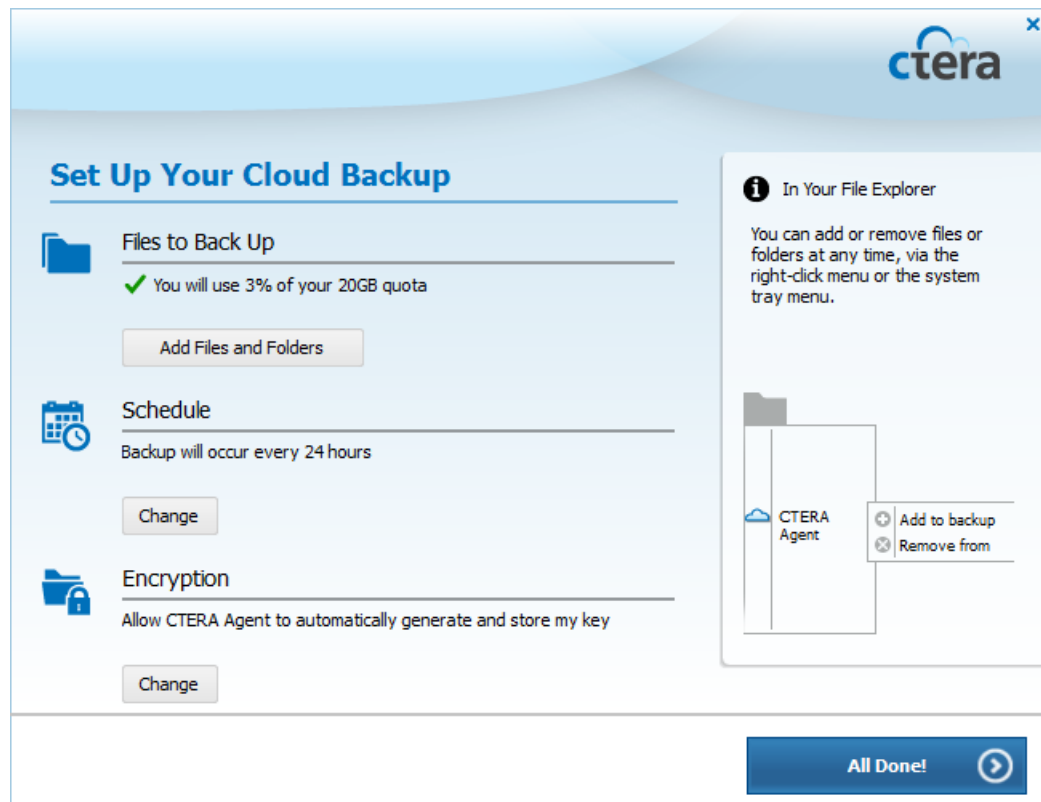
- + The CTERA Agent tray icon changes to .

- 6 If you are connecting the CTERA agent for the first time, the **Your Subscription Includes** screen opens, showing the services you are subscribed to.



- 7 Click **Continue**.

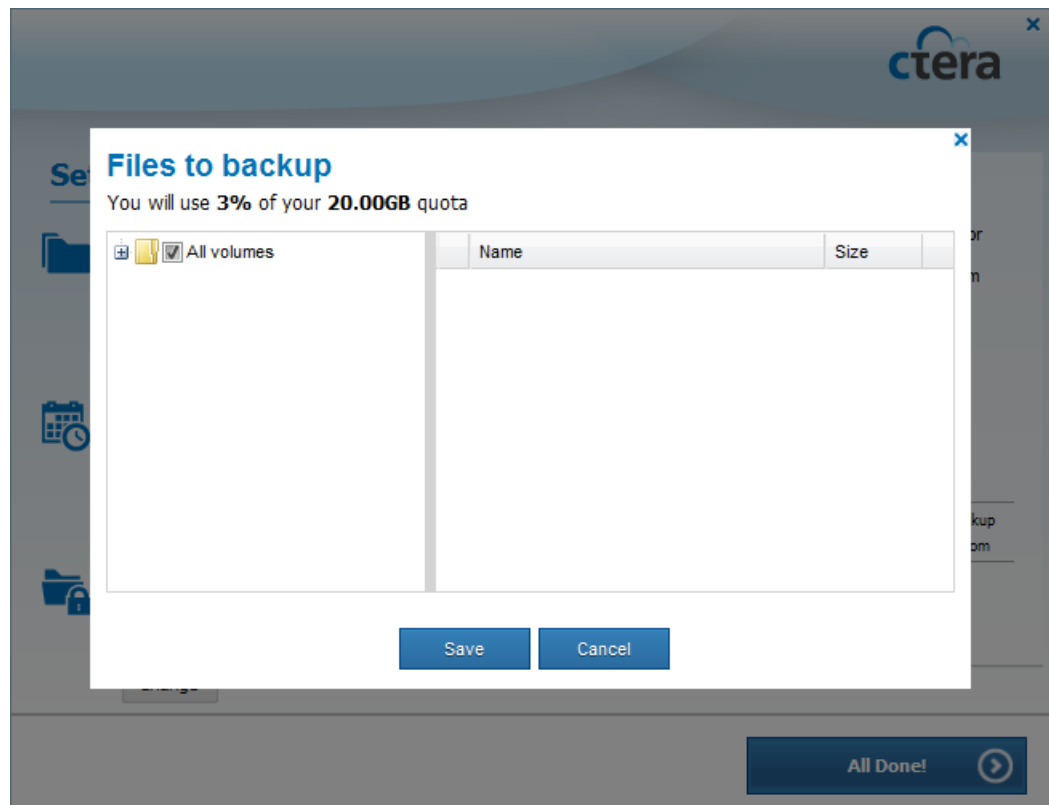
If you are subscribed to the cloud backup service, the **Set Up Your Cloud Backup** screen appears.



8 (Optional) To add files to be backed up to the cloud:

- a Click **Add Files and Folders**.

The **Files to backup** dialog box opens.



- b** Expand the tree nodes to reveal the folders.

For an explanation of the icons and check boxes next to each folder, see **Folder Icons** (page 88).

The folder contents appear in the right pane.

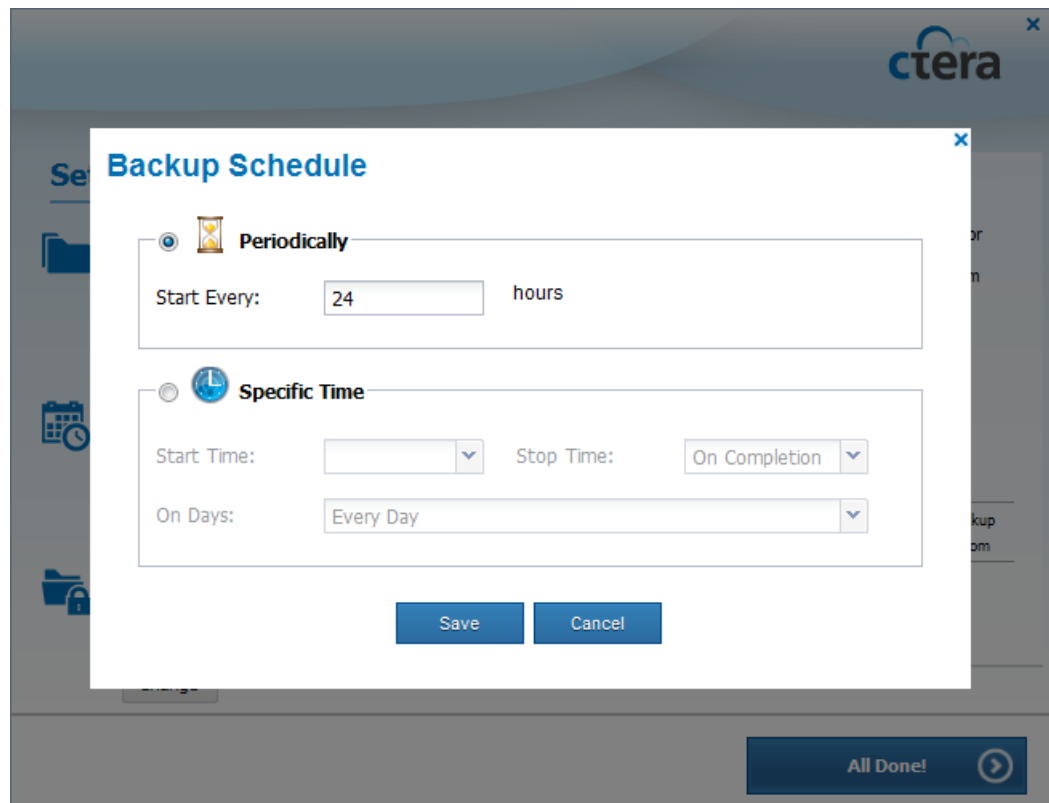
- c** Select the check boxes next to the files and folders you want to back up.
- d** Click **Save**.

The **Files to backup** dialog box closes.

- 9** (Optional) To override portal settings and configure a schedule for automatic cloud backup:

- a** Click the **Change** button in the **Schedule** area.

The **Backup Schedule** dialog box opens.

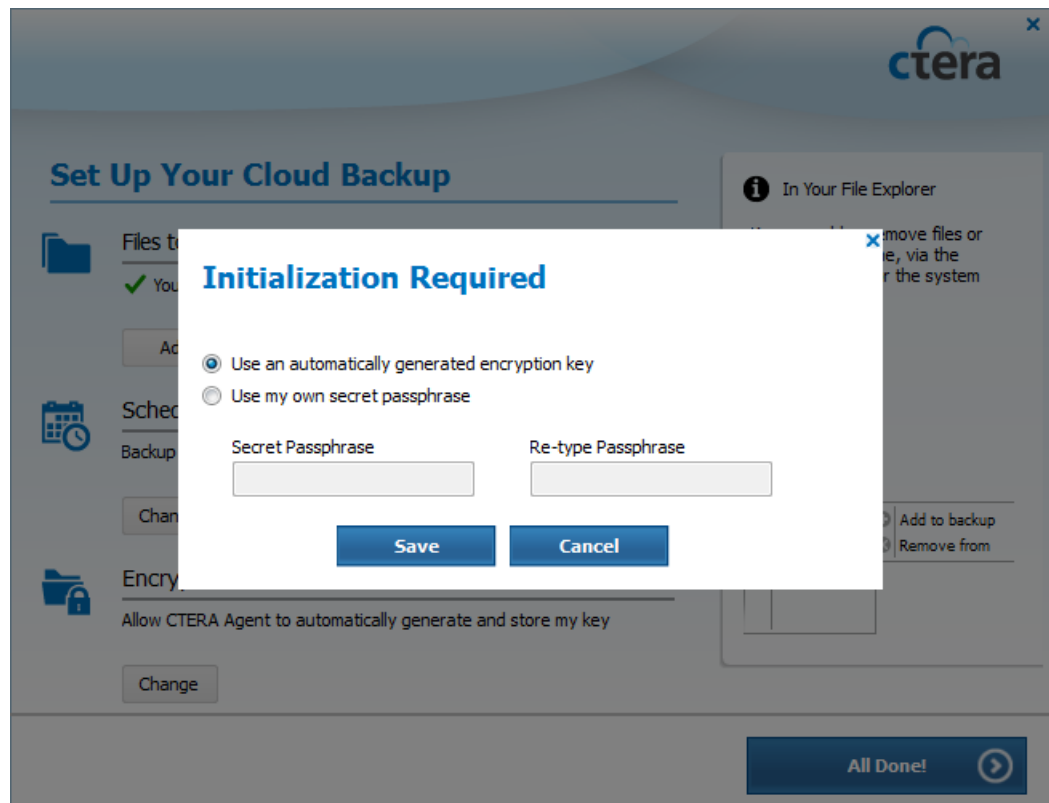


- b** Click **Override**.
- c** Complete the fields using the information in the following table.
- d** Click **Save**.

The **Backup Schedule** dialog box closes.

- 10** (Optional) To secure the backup folder with your own secret passphrase, click the **Change** button in the **Encryption** area. (By default, CTERA Agent will use an automatically generated encryption key to protect the created backup folder.)

The **Initialization Required** dialog box opens.



- a Select **Use my own secret passphrase**, enter the desired passphrase in the **Secret Passphrase** and **Re-type Passphrase** fields.
- b Click **Save**.

The **Initialization Required** dialog box closes. Each time the agent connects to CTERA Portal, you will need to enter this passphrase.

11 Click **All Done!**

The CTERA Agent tray icon changes to , and the **CTERA Agent** screen opens.

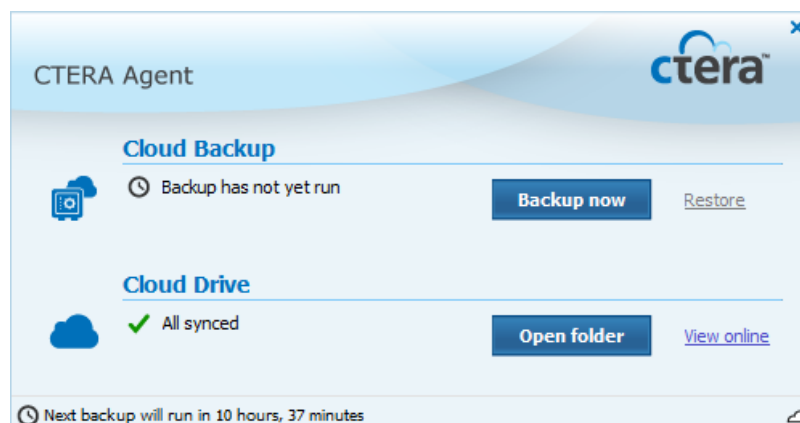


Table 3: Backup Schedule Fields

In this field...	Do this...
Periodically	Choose this option to automatically back up files every specified number of hours. The Start Every field is enabled, and you must complete it.
Start Every	Type the amount of time between automatic cloud backups, in hours. The default value is 24 hours.
Specific Time	Choose this option to automatically back up files according to a specified daily schedule. The Start Time, Stop Time, and On Days fields are enabled, and you must complete them.
Start Time	Select the time at which cloud backup should start. Note: If a given backup extends past the scheduled time for the next automatic backup, the next automatic backup will commence immediately upon completion of the prior backup.
Stop Time	Select the time at which cloud backup must end. This can be any of the following:  A specific hour  On Completion. The backup operation will only end when cloud backup is complete. The default value is On Completion. Note: If the amount of changed data to back up is large, the backup process can take several hours or days. Therefore, if a stop time is configured, the backup process may not be completed within the time frame. For example, if you specify that data should be backed up between 12 AM - 2 AM, and the backup requires 3 hours, the backup will not be completed.
On Days	Select the days on which cloud backup should be performed. This can be any of the following:  One or more specific days  Every Day. Cloud backup will occur every day. The default value is Every Day.

Setting Up Connection via a Web Proxy

The CTERA agent supports HTTPS proxies that support the CONNECT method. If you want CTERA agent to connect to the portal via a proxy, you can configure the proxy before you sign into the CTERA agent.

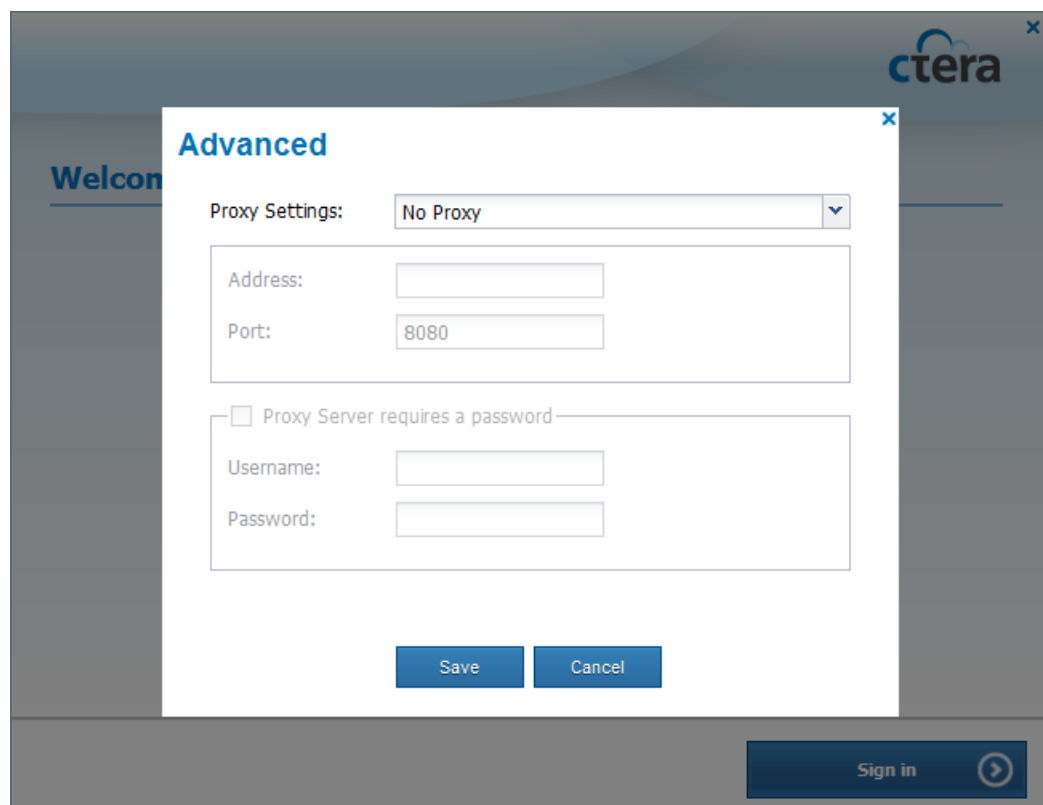
The following proxy authentication schemes are supported:

- + Basic
- + NTLM
- + NTLMv2

» To set up a connection to the portal via a web proxy

- 1 In the **Welcome to CTERA Agent** window, click **Advanced**.

The **Advanced** dialog box opens.



- 2 In the **Proxy Settings** dropdown box, select one of the following:
 - + **Use HTTP Proxy.** The CTERA agent will use the proxy (which you will configure) to connect to the portal server.
 - + **Auto.** The CTERA agent will attempt to automatically determine your proxy settings according to your Windows settings.

**Tip**

Automatic proxy detection is based on the system-wide proxy settings, which are not the same as the Internet Explorer settings. In 64 bit Windows versions prior to Windows 8, the system proxy settings can be configured using the command **%WINDIR%\SysWOW64\netsh winhttp set proxy <settings>**.

In all other Windows versions, the system proxy settings can be configured using the following command **netsh winhttp set proxy <settings>**.

3 Complete the fields using the information in the following table.

4 Click **Save**.

Table 4: Proxy Settings Fields

In this field...	Do this...
Address	Type the address of the proxy server.
Port	Type the proxy server port number.
Proxy server requires a password	Check this box to specify that the proxy server requires authentication via a username and password. If checked, the username and password must be entered into the remaining fields.
Username	Type the username for authenticating to the proxy server.
Password	Type the password for authenticating to the proxy server.

Disconnecting the Agent from the CTERA Portal

If desired, you can disconnect the CTERA Agent from the CTERA Portal.

» To disconnect the CTERA Agent from the CTERA Portal

1 Right-click the CTERA Agent tray icon in the system tray, and click **Sign out**.

A confirmation message appears.

2 Click **OK**.

The CTERA Agent disconnects from the CTERA Portal.

Using the CTERA Agent Web Interface

In Cloud mode, the CTERA Agent includes a web interface, in which you can do the following:

- Configure and use the Cloud Backup service for file-level backup and system state backup
- Configure and use the Cloud Drive service for cloud drive synchronization
- Enable/disable remote access

- + Monitor your CTERA Agent via logs

Connecting to the CTERA Agent Web Interface

In order to access the CTERA Agent Web interface, a user must have the "Back up files and directories" privilege. On Windows, users in the groups "Administrators", "Backup Operators", and "Domain Administrators" have this privilege by default.

To allow a user who does not belong to one of these groups to access the CTERA Agent Web interface, do the following: Open the Microsoft Management Console (MMC), and in the **Local Security Policy** snap-in under **User Rights Assignment**, assign the user the "Backup files and directories" privilege.

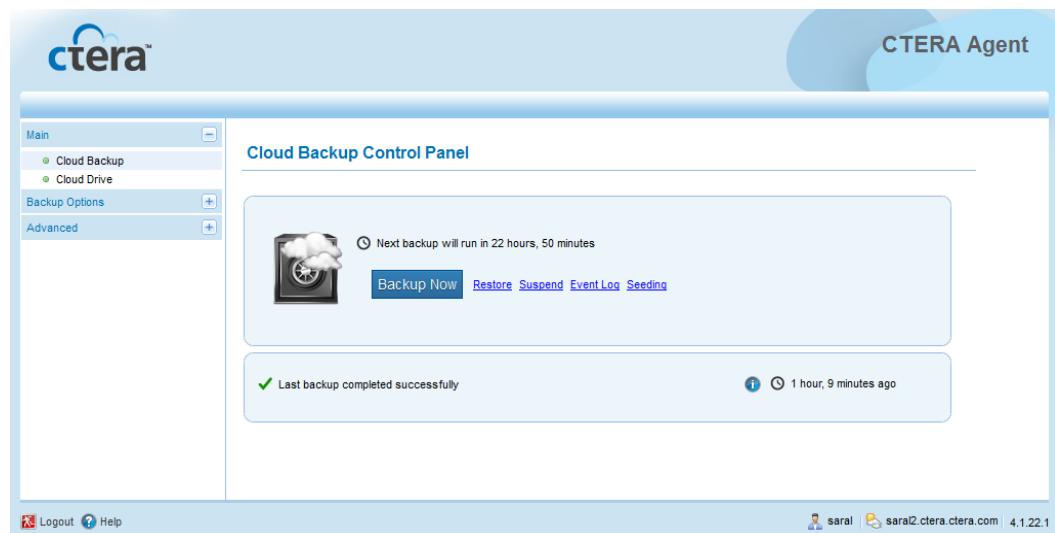
» To connect to the CTERA Agent Web interface

- + Right-click the CTERA Agent tray icon in the notification area of the Windows taskbar, and click **Settings**.

- + If the currently logged in user account does not have sufficient credentials to manage the CTERA Agent, a **Login** page appears.

Enter the user name and password of an administrator or backup operator on this machine.

- + The CTERA Agent Web interface opens in your Web browser, displaying the **Control Panel** page.

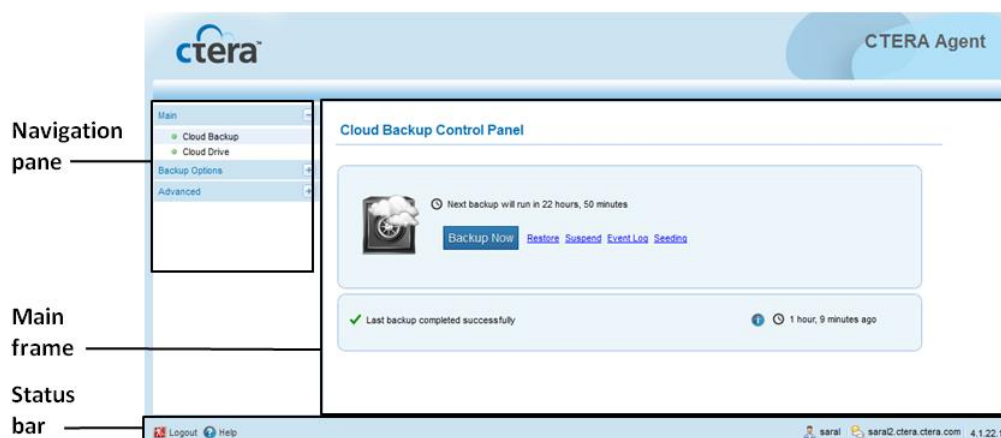


The CTERA Agent Web Interface

The CTERA Agent Web interface consists of the following elements:

- + **Navigation pane.** Used for navigating between pages.
- + **Main frame.** Displays information and controls for the menu item selected in the navigation pane.

- Status bar.** Displays general and session-specific controls and information, including controls for logging out of the Web interface, your user name, and the firmware version



Sorting Tables

You can sort a table according to a specific column, in ascending or descending order.

» To sort a table according to a column

- 1 Click on the desired column's heading.

The table is sorted according to the column. An arrow in the column's heading indicates that the table is sorted according to the column. The arrow's direction indicates the sort order.

System

Select Topic: System Minimum Severity:

Type ▾	Date	User
	2014/04/26 01:00:01	
	2014/04/25 17:12:50	
	2014/04/28 16:59:01	
	2014/04/28 16:58:45	
	2014/04/28 16:43:34	

In this example, the table is sorted according to the **Type** column, in descending order.

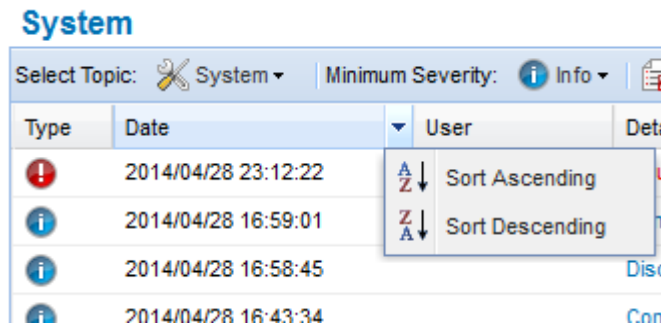
- 2 To reverse the column's sort order, click on the column's heading again.

The sort order is reversed.

- 3 To select the desired sort order from a list, do the following:

- a Mouse-over the column's heading.

An arrow appears in the right side of the column heading.



- b** Click on the arrow, then click on the desired sort order in the drop-down list.

The column is sorted accordingly.

Navigating Between Table Pages

When a table contains multiple pages, you can navigate between the pages by using the controls at the bottom of the table.

» To navigate between pages

- + Do any of the following:
 - + To navigate to the next page, click .
 - + To navigate to the previous page, click .
 - + To navigate to page 1, click .
 - + To navigate to a specific page, in the **Page** field, type the desired page number.

Refreshing Table Contents

You can refresh the contents of various tables in the main frame.

» To refresh a table's contents

At the bottom of the table or list, click .

The table's contents are refreshed.

Logging Out of the CTERA Agent Web Interface

» To log out of the CTERA Agent Web interface

- + In the status bar, click **Logout**.

You are logged out of the CTERA Agent Web interface.

Tip



You will be automatically logged out after a period of inactivity.

Performing Tasks Using Windows Explorer and Windows Taskbar

CTERA Agent is integrated with Windows Explorer, enabling you to perform several Cloud mode tasks very easily. Several tasks are also easily performed by clicking the CTERA icon in the Windows taskbar.

If you are subscribed to the Cloud Backup Service and Cloud Drive service, you can add and remove files and folders for backup and sync using the right-click menu in Windows Explorer. You can also share files and folders from the right-click menu.

The Windows Explorer integration also features icons overlayed on file and folder icons and notifications. These features can be enabled and disabled. For more information, see ***Configuring Windows Explorer Integration Settings*** (on page 147).

Methods for performing Cloud mode tasks through Windows Explorer or the Windows taskbar are described in the following sections where relevant.

Using Cloud Backup

About the CTERA Cloud Backup Service

Why Should I Use Cloud Backup?

Backing up your important files enables you to protect them against future data loss. If the original data becomes corrupted or is accidentally deleted, or if your hard drive fails, you can restore the lost data from the backup. Traditional backup methods include CD/DVDs, external hard drives, tape units, and more. All of these methods are effective, though not necessarily efficient or convenient.

CTERA agent provides cloud backup, in which your files are automatically backed up to the cloud and stored remotely. Cloud backup offers numerous advantages over traditional backup methods:

Simplicity

Traditional backup methods require user intervention, complicating the backup process. You may have to insert CDs into drives, change tapes, or even manually initiate the backup.

In contrast, cloud backup requires only a simple, one-time configuration. Once configured, cloud backup runs automatically according to your desired schedule, without any need for user intervention.

Time Efficiency

Due to cloud backup's simplicity of use, there is no need to waste time or effort backing up data. Your valuable time can be spent on other matters.

Security

In cloud backup, your data is automatically encrypted and fingerprinted. For even stronger security, you can configure a secret passphrase for accessing the backed up data.

Versioning

When using traditional backup, users often choose to maintain only the most recent version of their files, due to storage space restrictions. Cloud backup preserves multiple versions of your data, enabling you to restore the version of your choice.

Storage Locations

With traditional backup, your backed up data is usually stored in a single location (for example, in a stack of CDs in your office). This means that if a natural disaster strikes at that location (for example, a fire in your office), your data, along with all of the backups, will be lost. Cloud backup ensures that your data is stored in multiple locations.

Restore Options

When using traditional backup, you must have access to the backup medium, in order to restore your data. In contrast, cloud backup offers multiple restore options, including restoring your data from anywhere by downloading it from the cloud backup site. For additional restore options, see ***What Restore Options Are Available?*** (on page 85).

How Does the Cloud Backup Service Work?

The first time cloud backup runs, the CTERA agent performs a full cloud backup for the selected folders. This may take a long time, depending on the size of your data set. Subsequent backups are performed incrementally and normally take much less time than the initial backup. Only data that has actually changed is uploaded.

CTERA uses data compression and data deduplication techniques, to ensure the backup happens as quickly and efficiently as possible.

In addition to backing up your files, when cloud backup runs, the configuration of your CTERA agent is automatically backed up to the CTERA Portal, from where it can be easily downloaded and used to restore your configuration settings, as needed.

Is My Data Secure?

In addition to using AES encrypted TLS (Transport Level Security) connections, the same security mechanism used by banks, all your data is encrypted using 256-bit AES encryption and fingerprinted by 160 bit SHA-1 digest, to ensure your data is protected against eavesdroppers.

For even stronger security, you can use a secret passphrase. If you use a secret passphrase, your data will not be readable by anyone without knowledge of your secret passphrase (not even by CTERA).

How Can I Control Which Files Will Be Backed Up?

The CTERA agent offers the following options for controlling the scope of backup operations:

Selecting entire folders for backup

When you select an entire folder for backup, all of the folders in it are automatically selected for backup.

Selecting specific file types for inclusion in or exclusion from backup, by using backup sets

A *backup set* represents a group of files of a certain type and/or located in certain folders, which should either be included in or excluded from backup operations. For more information on backup sets, see ***Working with Backup Sets*** (on page 95).

These options can be used in conjunction.

When all options are used, the CTERA agent determines the final set of files to include in a backup operation, by performing the following checks for each file:

- 1 Checks whether the file is contained in an Exclude Set. If so, the file is skipped.
- 2 Checks whether the file is contained in an Include Set. If so, the file is backed up.
- 3 Checks whether the file is contained in a folder that was selected for backup in the folder selection page. If so, the file is backed up.

What Restore Options Are Available?

The CTERA agent enables you to restore files from backup in the following ways:

-  By restoring some or all files and folders to a previous version via the CTERA agent Web interface
-  By restoring individual files or folders using Microsoft Windows Shadow Copy
-  By restoring individual files or folders using the Virtual Cloud Drive
-  By downloading files from your CTERA Portal account

Cloud Backup Configuration Workflow

The following is a typical workflow for configuring cloud backup.

» To configure cloud backup

- 1 Specify the data that should be included or excluded from backup operations, by doing one or more of the following:

- + To choose specific files and folders to include in the back up, select the desired files and folders.

See **Selecting Files and Folders for Cloud Backup** (on page 86).

- + To choose specific file types to include in or exclude from backup operations, define and enable backup sets.

See **Working with Backup Sets** (on page 95).

- + To choose specific applications to include in the backup, select the desired applications.

See **Selecting Applications for Cloud Backup** (on page 88).

- 2 Do one or more of the following:

- + Schedule automatic backup of the selected folders.

See **Scheduling Automatic Cloud Backup** (on page 89).

The files will be backed up according to the configured schedule.

- + Perform a manual backup of the selected folders.

See **Manually Starting Cloud Backup** (on page 91).

The files will be backed up immediately.

Selecting Files and Folders for Cloud Backup

» To select files and folders for cloud backup using Windows Explorer

- 1 Open Windows Explorer, and browse to the desired files and/or folders.

- 2 Do any of the following:

- + To specify that a file or folder should be backed up to the CTERA Portal, right-click on the desired file/folder, and click **CTERA Agent > Add to backup**.

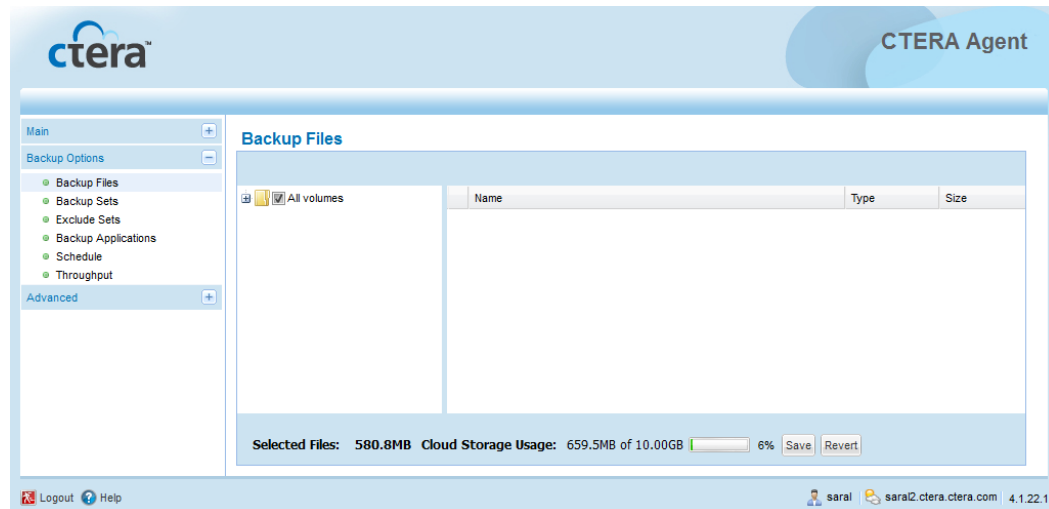
- + To specify that a file or folder should not be backed up to the CTERA Portal, right-click on the desired file/folder, and click **CTERA Agent > Remove from backup**.

The  icon is removed from the file/folder.

» To select files and folders for cloud backup using the Web interface

- 1 In the navigation pane, click **Backup Options > Backup Files**.

The **Backup Files** page appears.



- 2 Expand the tree nodes to reveal the folders.

For an explanation of the icons and check boxes next to each folder, see **Folder Icons** (page 88).

The folder contents appear in the right pane.

- 3 Select the check boxes next to the files and folders you want to back up.
- 4 Click **Save**.

At the bottom of the workspace, the **Selected Files** field indicates the size of the files selected for backup. The **Cloud Storage Usage** field indicates the amount of used space in your account after the next cloud backup operation (including backups from any other CTERA devices included in your account).

For example, let's say your account includes two devices, and each device will back up 100 MB worth of files in the next cloud backup operation, for a total of 200 MB. Your account already has 350 MB worth of files stored online. In this case, the **Cloud Storage Usage** field will display "550MB".

Table 5: Folder Icons

This icon...	Indicates...
	Existing files in this folder are selected for backup. New files and folders in this folder will be backed up.
	This folder and all of its sub-folders are selected for backup. Note that the check box has a white background.
	Some (but not all) of the folder's sub-folders are selected for backup. Note that the check box has a gray background.
	This folder and all of its sub-folders will not be backed up.

Selecting Applications for Cloud Backup

Tip

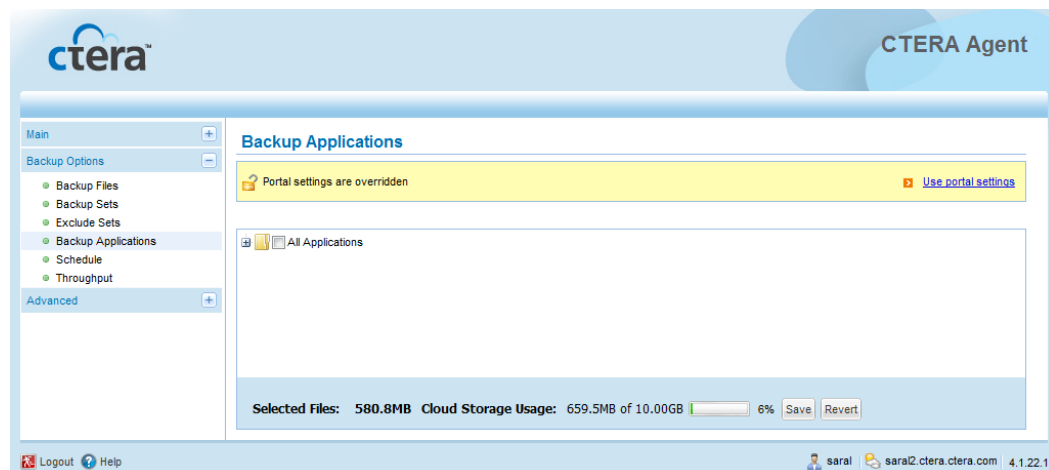


If a selected application is not installed on the target device, it will be ignored.

» To select applications for backup

- 1 In the navigation pane of the Web interface, click **Backup Options > Backup Applications**.

The **Backup Applications** page appears.



- 2 Click **Override**, to override the portal settings.

Tip



You can revert to portal settings at any time, by clicking **Use portal settings**.

The Applications tree pane becomes active.

- 3 Expand the tree nodes and select the check boxes next to the applications you want to back up.
- 4 Click **Save**.

Scheduling Automatic Cloud Backup

» To schedule automatic cloud backup

- 1 In the navigation pane of the Web interface, click **Backup Options > Schedule**.

The **Schedule** page appears.

- 2 Click **Override**, to override the portal settings.

Tip



You can revert to portal settings at any time, by clicking **Use portal settings**.

- 3 Complete the fields using the information in the following table.
- 4 Click **Save**.

Table 6: Backup Schedule Fields

In this field...	Do this...
Periodically	Choose this option to automatically back up files every specified number of hours. The Start Every field is enabled, and you must complete it.
Start Every	Type the amount of time between automatic cloud backups, in hours. The default value is 24 hours.
Specific Time	Choose this option to automatically back up files according to a specified daily schedule. The Start Time, Stop Time, and On Days fields are enabled, and you must complete them.
Start Time	Select the time at which cloud backup should start. Note: If a given backup extends past the scheduled time for the next automatic backup, the next automatic backup will commence immediately upon completion of the prior backup.
Stop Time	Select the time at which cloud backup must end. This can be any of the following:  A specific hour  On Completion. The backup operation will only end when cloud backup is complete. The default value is On Completion. Note: If the amount of changed data to back up is large, the backup process can take several hours or days. Therefore, if a stop time is configured, the backup process may not be completed within the time frame. For example, if you specify that data should be backed up between 12 AM - 2 AM, and the backup requires 3 hours, the backup will not be completed.
On Days	Select the days on which cloud backup should be performed. This can be any of the following:  One or more specific days  Every Day. Cloud backup will occur every day. The default value is Every Day.

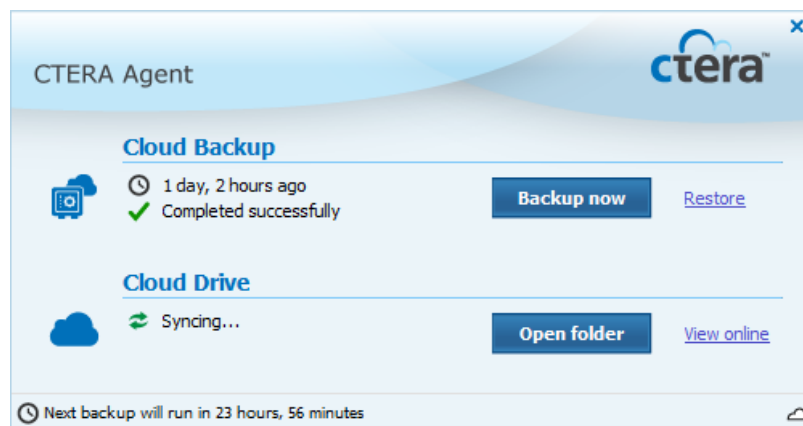
Manually Starting Cloud Backup

The CTERA Agent will automatically back up files, applications, and volumes to the CTERA Portal according to the schedule you configured in the CTERA Agent Web interface (see ***Scheduling Automatic Cloud Backup*** (on page 89)). If desired, you can manually trigger backup at any time.

» To manually start backup from the system tray

- 1 Click the CTERA Agent tray icon in the system tray.

The **CTERA Agent** screen appears.



- 2 Under Cloud Backup, click **Backup now**.

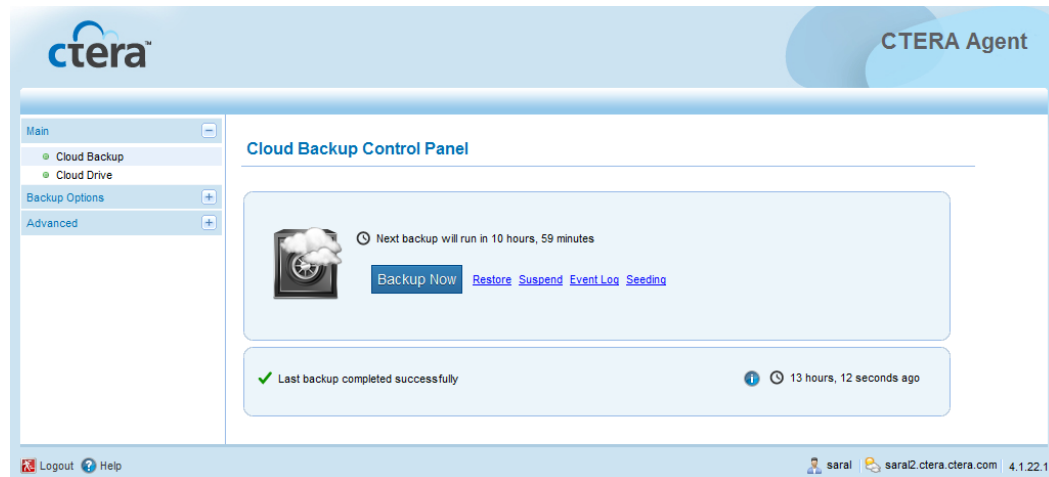
A progress bar appears, and the number of files and bytes remaining for upload or download is displayed, and the current transfer speed. If a single file is being uploaded/downloaded, then the file name is displayed, as well.

The CTERA Agent backs up files to the CTERA Portal.

» To manually start cloud backup from the Web interface

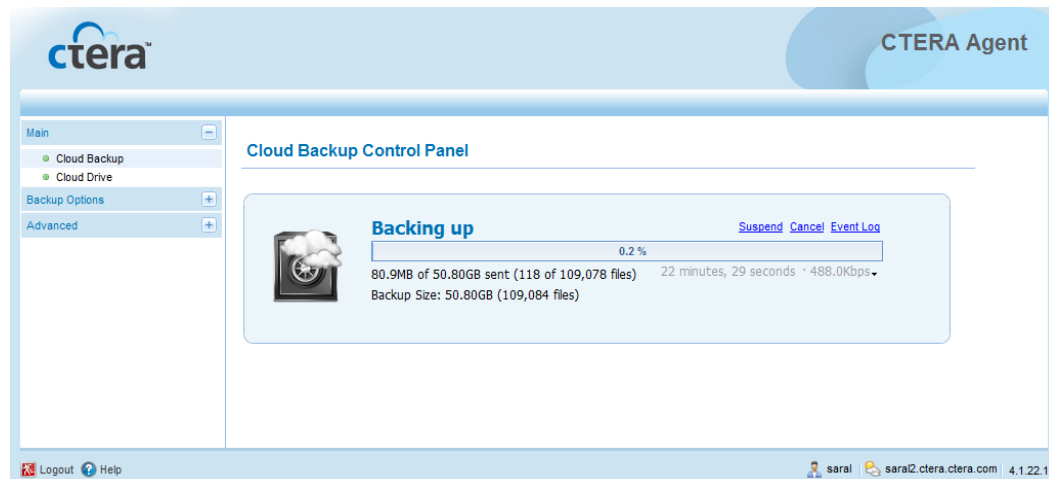
- 1 In the navigation pane, click **Main > Cloud Backup**.

The **Cloud Backup Control Panel** page appears.



2 Click **Backup Now**.

A progress bar appears, and the files are backed up to cloud storage.



3 To toggle the information displayed under the progress bar, do one of the following:

- To display the effective throughput (in Kbit/sec), click the ▼ icon, and then click **Show effective throughput**.
- To display the bandwidth usage (in bit/sec), click the ▼ icon, and then click **Show bandwidth usage**.

Stopping the Current Backup Operation

» To cancel the current backup using the system tray

1 Click the CTERA Agent tray icon in the system tray.

The **CTERA Agent** screen appears with a progress bar.

2 Click **Cancel**.

The current backup operation is stopped.

» To cancel the current cloud backup using the Web interface

- 1 In the navigation pane, click **Main > Cloud Backup**.

The **Cloud Backup Control Panel** page appears.

- 2 Click **Cancel**.

The current backup is canceled.

Suspending and Resuming Cloud Backup

You can suspend backup for a CTERA Agent, including:

- + The currently running backup for the CTERA Agent
- + All scheduled automatic backups for the CTERA Agent

» To suspend cloud backup from the system tray

- + Right-click the CTERA Agent tray icon in the system tray, and click **Suspend**.

If backup is currently running, it is paused. All future automatic backups are suspended.

» To suspend cloud backup from the Web interface

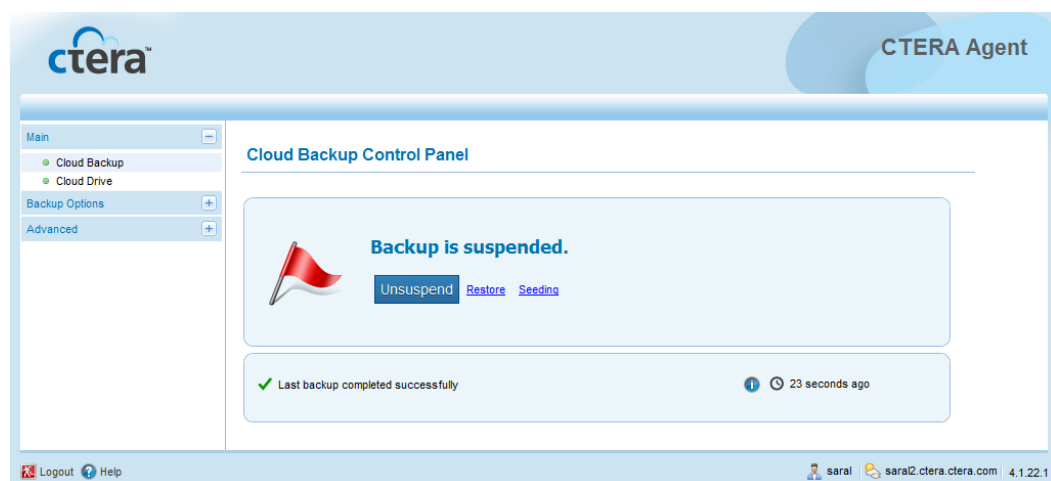
- 1 In the navigation pane, click **Main > Cloud Backup**.

The **Cloud Backup Control Panel** page appears.

- 2 Click **Suspend**.

If a backup is currently running, it is paused. All future automatic backups are suspended.

A message appears, indicating that backup has been suspended.



» To resume backup from the system tray

- + Right-click the CTERA Agent tray icon in the system tray, and click **Unsuspend**.

If a backup was running at the time when backups were suspended, that backup is resumed.

Otherwise, cloud backup will occur at the next scheduled time.

» To resume cloud backup from the Web interface

- 1 In the navigation pane, click **Main > Cloud Backup**.

The **Cloud Backup Control Panel** page appears.

- 2 Click **Unsuspend**.

If a backup was running at the time when backups were suspended, that backup is resumed.

Otherwise, cloud backup will occur at the next scheduled time.

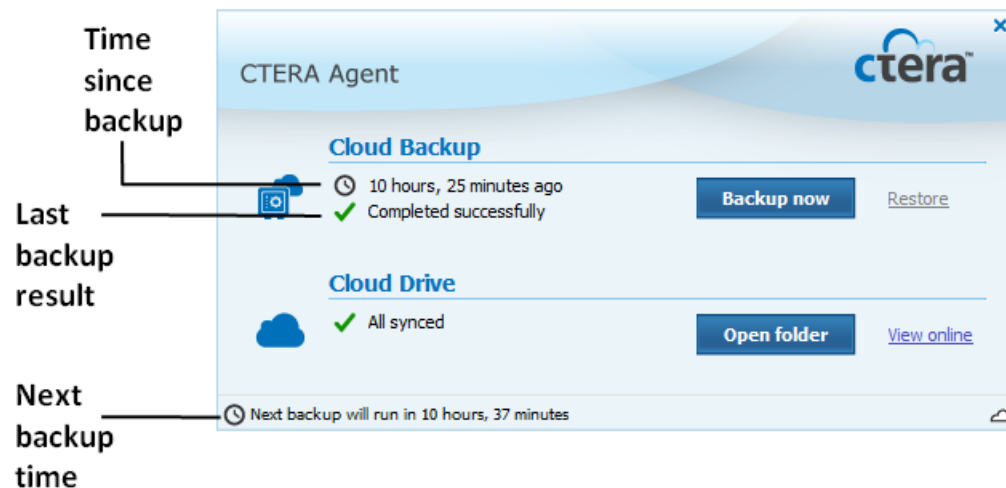
Viewing Cloud Backup Information

You can view information on the last backup performed and the next scheduled back up.

» To view cloud backup information from the system tray

- + Click the CTERA Agent tray icon in the system tray

The **CTERA Agent** screen opens.



The CTERA Agent screen displays:

- + The amount of time since the last backup ended
- + The last backup result
- + The time of the next backup appears at the bottom of the window

» To view cloud backup information, in the Web interface

- + In the navigation pane, click **Main > Cloud Backup**.

The **Cloud Backup Control Panel** page appears.

The following information is displayed:

Table 7: Cloud Backup Information

This field...	Displays...
Next backup will run in	The amount of time until the next scheduled automatic backup.
The last backup result	The status of the last backup: Completed successfully Backup in Progress The last backup has failed, followed by the reason it failed If an error occurred during backup, refer to the backup logs for details. See Viewing Cloud Backup Logs (on page 139).
	Mouse-over this icon to view the following information about the last backup: - The total size of the files that you selected for backup - The total number of files that you selected for backup - The amount of time the backup took
	The amount of time since the last backup ended.

Working with Backup Sets

A *backup set* represents a group of files with certain file extensions and/or located in certain folders. For example, a set called "My Music" may include all files with the extensions *.wav and *.mp3 that are located in the folder **My Documents > Music**.

There are two types of backup sets:

- Include Sets.** Files that should be included in each backup
- Exclude Sets.** Files that should be excluded from each backup

You can use backup sets to fully customize backup operations. For example, if you did not select the **My Documents** folder for backup, but you want to back up all of the PDF files in this folder, you would define an *Include Set* that includes all files that are located in the **My Documents** folder and have the file extension *.pdf. Conversely, if you selected the **My Documents** folder for backup, but you do *not* want to back up PDF files in this folder, you would define an *Exclude Set* that includes all files that are located in the **My Documents** folder and have the file extension *.pdf.

Tip



For information on the order in which the CTERA agent processes Include Sets, Exclude Sets, and selected folders, see **How Can I Control Which Files Will Be Backed Up?** (on page 85).

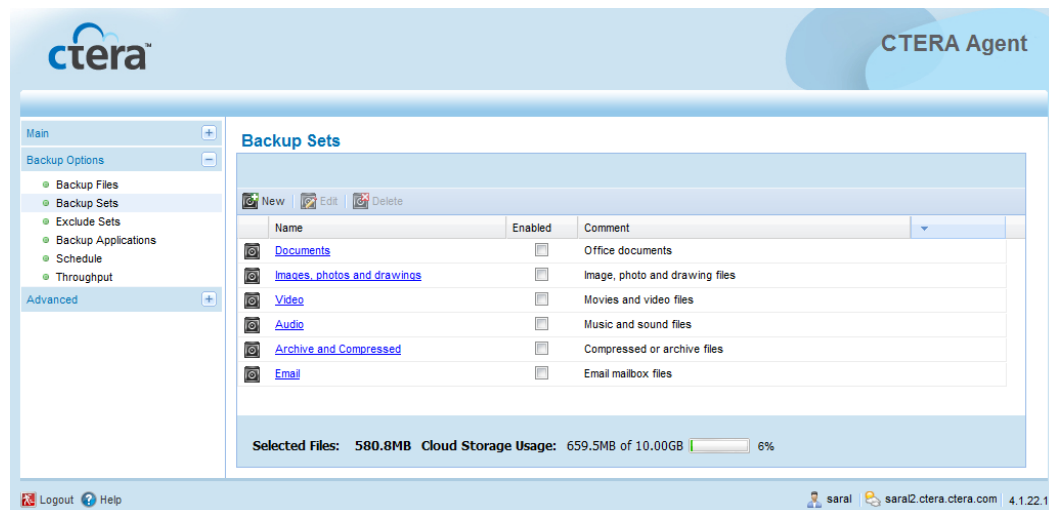
Enabling/Disabling Include Sets

In order for an Include Set to be used during backup operations, it must be enabled.

» To enable an Include Set

- 1 In the navigation pane, click **Backup Options > Backup Sets**.

The **Backup Sets** page appears.



- 2 Next to the desired Include Set, in the **Enabled** column, select the check box.

The Include Set is enabled.

At the bottom of the workspace, the **Selected Files** field indicates the size of the files selected for backup. The **Cloud Storage Usage** field indicates the amount of used space in your account after the next cloud backup operation (including backups from any other devices included in your account).

» To disable an Include Set

- 1 In the navigation pane, click **Backup Options > Backup Sets**.

The **Backup Sets** page appears.

- 2 Next to the desired Include Set, in the **Enabled** column, clear the check box.

The Include Set is disabled.

At the bottom of the workspace, the **Selected Files** field indicates the size of the files selected for backup. The **Cloud Storage Usage** field indicates the amount of used space in your account after the next cloud backup operation (including backups from any other devices included in your account).

Adding and Editing Include Sets

» To add or edit an Include Set

- 1 In the navigation pane, click **Backup Options > Backup Sets**.

The **Backup Sets** page appears.

- 2 Do one of the following:

- + To add a new Include Set, click **New**.
- + To edit an existing Include Set, click on its name.

The **Backup Set Details Wizard** opens, displaying the **Backup Set Details** dialog box.

- 3 In the **Backup Set Name** field, type the name of the backup set.
- 4 In the **Comment** field, type a description of the backup set.
- 5 In the **If** field, do one of the following:
 - + To specify that all of the conditions must be met in order for a file to be included in the backup set, select **all of the conditions are true**.
 - + To specify that one or more of the conditions must be met in order for a file to be included in the backup set, select **at least one of the conditions is true**.

- 6 Define the desired conditions for a file to be included in the backup set, by doing the following for each condition:

- a Click **Add condition**.

A row appears in the table.

- b Click **Select**, then select the desired condition parameter from the drop-down list.
- c In the second column, click **Select**, then select the desired condition operator from the drop-down list.

See **Backup Set Condition Operators** (page 101).

- d Click in the third column, and complete the condition:

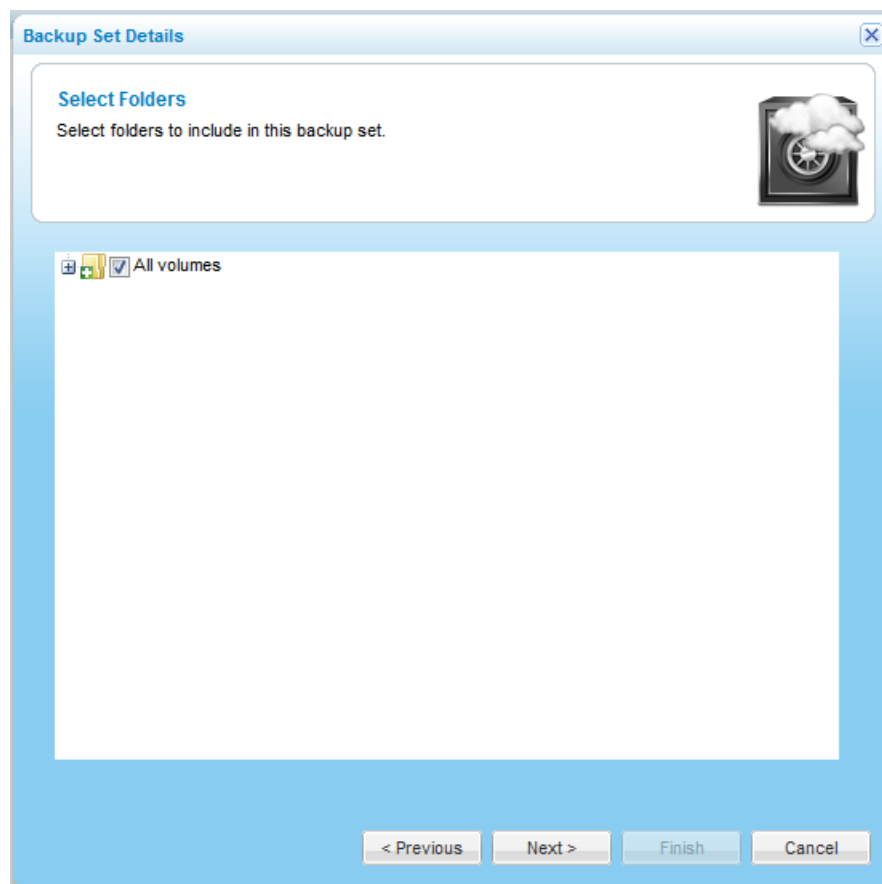
- + If the parameter is **File Size**, type the desired file size and unit.
- + If the parameter is **File Modified**, click  and choose the desired date.
- + For all other parameters, type the desired free-text value.

For example, if you select **File Name** as the condition parameter in the first column, select **begins** with as the condition operator in the second column, and type "Work-123-" in the third column, then the backup set will include all files whose names begin with "Work-123-".

Likewise, if you select **File Type** as the condition parameter in the first column, select **is one of** with as the condition operator in the second column, and type "avi, mov, mpg" in the third column (without the quotation marks), then the backup set will include all files with the extension *.avi, *.mov, and *.mpg.

- 7 To delete a condition, click  in its row.
- 8 Click **Next**.

The **Select Folders** dialog box appears.



This dialog box enables you to select the folders to which this backup set applies. By default, the root folder is selected, meaning that the backup set applies to all files in all folders. If desired, you can select specific folders to which this backup set should apply.

For example, you can create an backup set that contains all files that have the extension *.txt and reside in the folder /share1/textfiles by entering "txt" in the previous dialog box, and then choosing the folder /share1/textfiles in this dialog box.

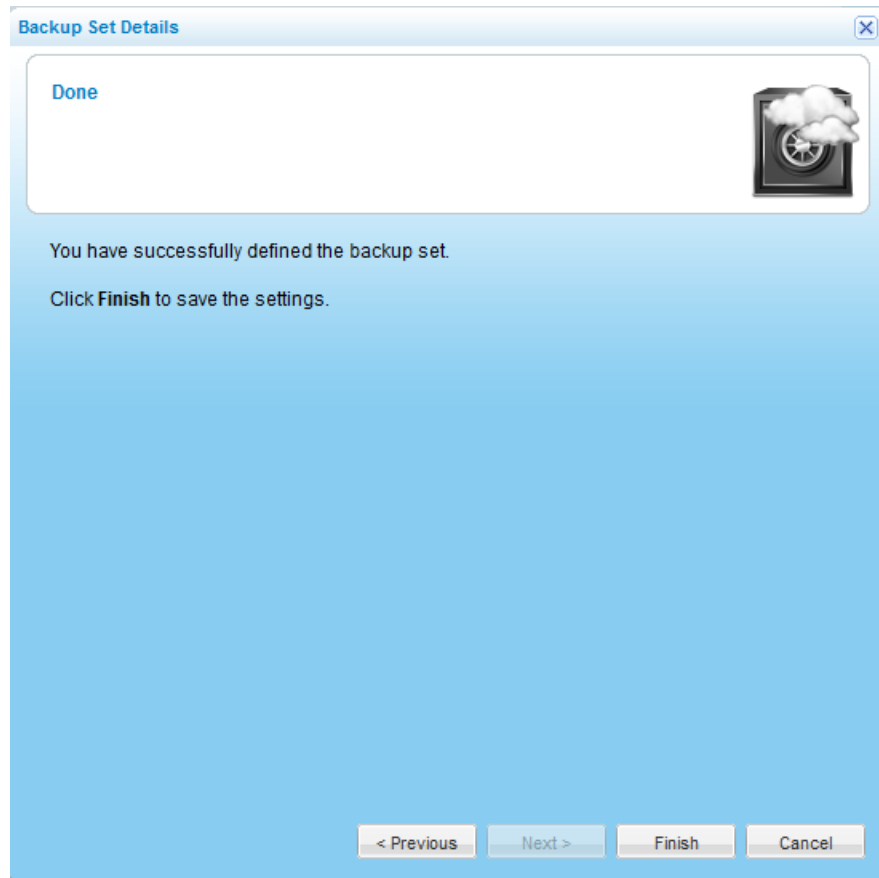
- 9 Expand the tree nodes to reveal the folders.

For an explanation of the icons and check boxes next to each folder, see **Folder Icons** (page 88).

- 10 Select the check boxes next to the folders you want to include in the Include Set.

11 Click **Next**.

The **Done** screen appears.



12 Click **Finish**.

Tip



If you added a new Include Set, it is automatically enabled.

Table 8: Backup Set Condition Operators

Use this operator...	To do this...
equals	Include all files for which the parameter in the first column matches the string in the third column. This operator is relevant for the File Name, File Path, and File Type parameters only.
begins with	Include all files for which the parameter in the first column begins with the string in the third column. This operator is relevant for the File Name, File Path, and File Type parameters only.
ends with	Include all files for which the parameter in the first column ends with the string in the third column. This operator is relevant for the File Name, File Path, and File Type parameters only.
contains	Include all files for which the parameter in the first column contains the string in the third column. This operator is relevant for the File Name, File Path, and File Type parameters only.
is one of	Include all files for which the parameter in the first column is included in the set specified in the third column. This operator is relevant for the File Name, File Path, and File Type parameters only.
less than	Include all files whose size is less than the amount specified in the third column. This operator is relevant for the File Size parameter only.
more than	Include all files whose size is more than the amount specified in the third column. This operator is relevant for the File Size parameter only.
before	Include all files whose last modification date is before the date specified in the third column. This operator is relevant for the File Modified parameter only.
after	Include all files whose last modification date is after the date specified in the third column. This operator is relevant for the File Modified parameter only.

Deleting Include Sets

» To delete an Include Set

- 1 In the navigation pane, click **Backup Options > Backup Sets**.

The **Backup Sets** page appears.

- 2 Select the desired Include Set's name and click **Delete**.

A confirmation message appears.

- 3 Click **Yes**.

The Include Set is deleted.

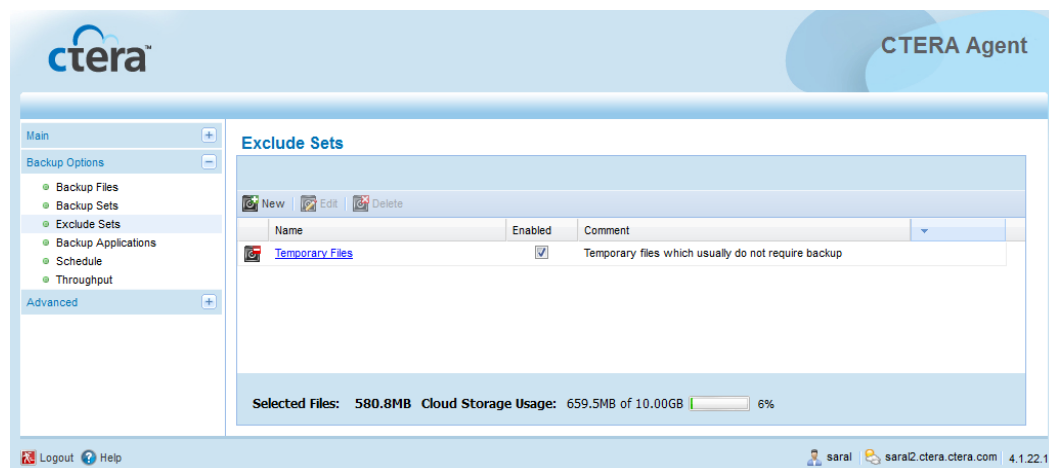
Enabling/Disabling Exclude Sets

In order for an Exclude Set to be used during backup operations, it must be enabled.

» To enable an Exclude Set

- 1 In the navigation pane, click **Backup Options > Exclude Sets**.

The **Exclude Sets** page appears.



- 2 Next to the desired Exclude Set, in the **Enabled** column, select the check box.

The Exclude Set is enabled.

At the bottom of the workspace, the **Selected Files** field indicates the size of the files selected for backup. The **Cloud Storage Usage** field indicates the amount of used space in your account after the next cloud backup operation (including backups from any other CTERA devices included in your account).

» To disable an Exclude Set

- 1 In the navigation pane, click **Backup Options > Exclude Sets**.

The **Exclude Sets** page appears.

- 2 Next to the desired Exclude Set, in the **Enabled** column, clear the check box.

The **Exclude Set** is disabled.

At the bottom of the workspace, the **Selected Files** field indicates the size of the files selected for backup. The **Cloud Storage Usage** field indicates the amount of used space in your account after the next cloud backup operation (including backups from any other CTERA devices included in your account).

Adding and Editing Exclude Sets

» To add or edit an Exclude Set

- 1 In the navigation pane, click **Backup Options > Exclude Sets**.

The **Exclude Sets** page appears.

- 2 Do one of the following:

-  To add a new Exclude Set, click **New**.
-  To edit an existing Exclude Set, click on its name.

The **Backup Set Details Wizard** opens, displaying the **Backup Set Details** dialog box.

- 3 In the **Backup Set Name** field, type the name of the backup set.
- 4 In the **Comment** field, type a description of the backup set.
- 5 In the **If** field, do one of the following:
 -  To specify that all of the conditions must be met in order for a file to be included in the backup set, select **all of the conditions are true**.
 -  To specify that one or more of the conditions must be met in order for a file to be included in the backup set, select **at least one of the conditions is true**.
- 6 Define the conditions that must be met in order for a file to be included in the backup set, by doing the following for each condition:

- a Click **Add condition**.

A row appears in the table.

- b Click **Select**, then select the desired condition parameter from the drop-down list.
- c In the second column, click **Select**, then select the desired condition operator from the drop-down list.

See **Backup Set Condition Operators** (page 101).

- d Click in the third column, and complete the condition:

-  If the parameter is **File Size**, type the desired file size and unit.
-  If the parameter is **File Modified**, click  and choose the desired date.

-  For all other parameters, type the desired free-text value.

For example, if you select **File Name** as the condition parameter in the first column, select **begins with** as the condition operator in the second column, and type "Work-123-" in the third column, then the backup set will include all files whose names begin with "Work-123-".

Likewise, if you select **File Type** as the condition parameter in the first column, select **is one of** with as the condition operator in the second column, and type "avi, mov, mpg" in the third column, then the backup set will include all files with the extension *.avi, *.mov, and *.mpg.

- 7** To delete a condition, click  in its row.
- 8** Click **Next**.

The **Select Folders** dialog box appears.

This dialog box enables you to select the folders to which this backup set applies. By default, the root folder is selected, meaning that the backup set applies to all files in all folders. If desired, you can select specific folders to which this backup set should apply.

For example, you can create an backup set that contains all files that have the extension *.txt and reside in the folder /share1/textfiles by entering "txt" in the previous dialog box, and then choosing the folder /share1/textfiles in this dialog box.

- 9** Expand the tree nodes to reveal the folders.
- For an explanation of the icons and check boxes next to each folder, see **Folder Icons** (page 88).
- 10** Select the check boxes next to the folders you want to include in the Exclude Set.
- 11** Click **Next**.
- The **Done** screen appears.
- 12** Click **Finish**.

Tip



If you added a new Exclude Set, it is automatically enabled.

Deleting Exclude Sets

» To delete an Exclude Set

- 1** In the navigation pane, click **Backup Options > Exclude Sets**.
- The **Exclude Sets** page appears.
- 2** Select the desired Exclude Set's name and click **Delete**.

A confirmation message appears.

- 3 Click **Yes**.

The Exclude Set is deleted.

Preparing a Backup Seeding Hard Drive

When you have a lot of information to back up, the initial backup to the cloud can take a long time. If your CTERA service provider offers a backup seeding service, then you can speed up the initial backup by preparing a backup seeding hard drive, that is, is a drive that contains all of the files you want to include in your initial backup. You then deliver the seeding drive to the service provider, and the service provider uses the seeding drive to create the initial backup.

The seeding drive can optionally be encrypted using AES-256 and RSA public key encryption, so even if the drive is lost, there is very little risk to your sensitive information.

» To prepare a backup seeding hard drive

- 1 Select the files and folders you want to include in the initial backup.

See *Selecting Files and Folders for Cloud Backup* (on page 86).

These files and folders will be written to the seeding drive.

- 2 In the navigation pane, click **Main > Cloud Backup**.

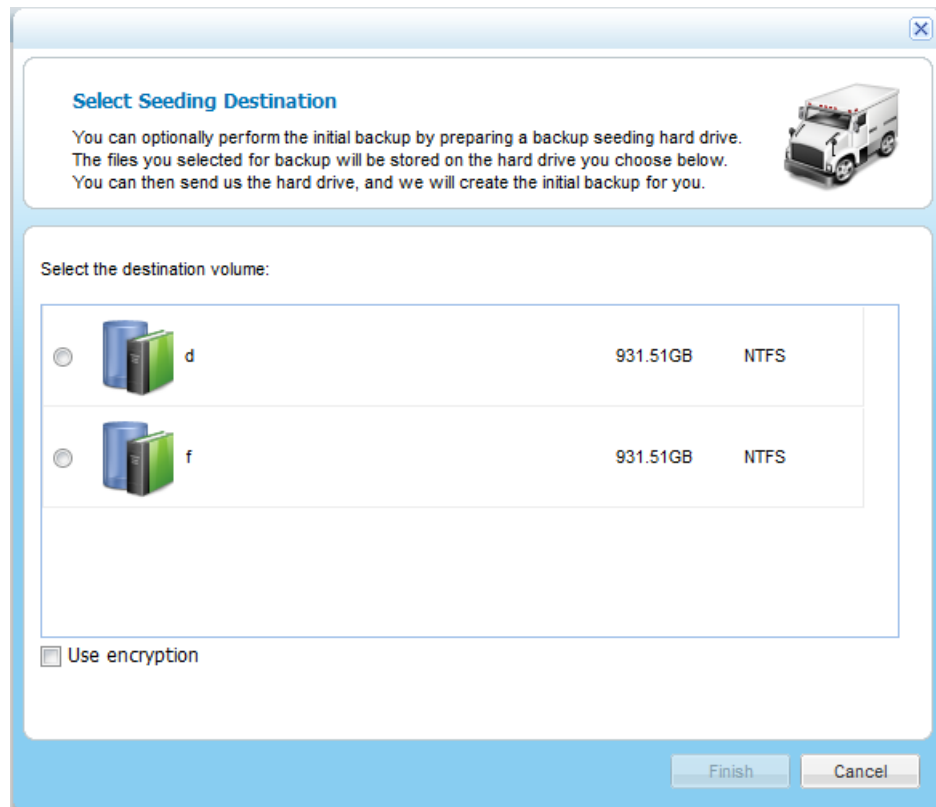
The **Cloud Backup Control Panel** page appears.

- 3 Click **Seeding**.

Tip

This option will appear only if the backup seeding service is supported by your service provider.

The **Select seeding destination** dialog box appears.



- 4 Choose the drive to use as the seeding drive.

Warning

The contents of this drive will be deleted.

- 5 To encrypt the seeding drive, select the **Use encryption** check box.
- 6 Click **Finish**.

A confirmation message appears.

- 7 Click **Yes**.

The selected files and folders are written to the seeding drive.

You can now deliver the seeding drive to your service provider.

Tip

During the time your service provider is loading the backup seeding drive to your account, the backup service will be temporarily disabled for your CTERA agent.

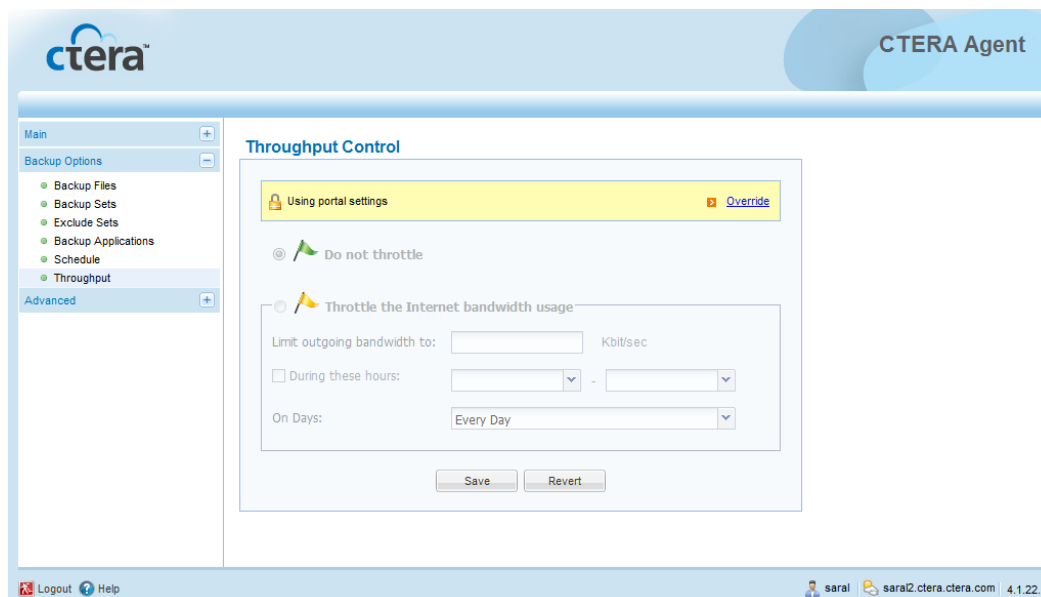
Restricting Throughput

If desired, you can restrict the amount of bandwidth used for backing up files online.

» To restrict throughput

- 1 In the navigation pane, click **Backup Options > Throughput**.

The **Throughput Control** page appears.



- 2 Click **Override**, to override the portal settings.
- 3 Complete the fields using the information in the following table.
- 4 Click **Save**.

Table 9: Throughput Control Fields

In this field...	Do this...
Do not throttle	Choose this option to specify that throughput should not be restricted.
Throttle the Internet bandwidth usage	Choose this option to restrict the bandwidth used for cloud backups. The rest of the fields on the page are enabled, and you must complete them.
Limit outgoing bandwidth to	Type the maximum bandwidth to use for cloud backups in kilobytes per second.
During these hours	Select this option to specify that the bandwidth used for cloud backups should be restricted only at specific times of the day. Then use the drop-down lists to specify the time range during which the bandwidth should be restricted.
On Days	Select to specify that the bandwidth used for cloud backups should be restricted only on specific days. This can be any of the following: ☐ One or more specific days ☐ Every Day. Bandwidth used for cloud backup will be restricted every day. The default value is Every Day .

Using Cloud Drive Synchronization

If you are subscribed to the Cloud Drive service, you can synchronize (sync) your portal cloud drive with one or more CTERA cloud gateways and CTERA agents in cloud mode. You can sync any folder on your portal cloud drive with any folder on your CTERA Cloud Gateway or CTERA Agent. You can exclude specific subfolders.

Synchronization is bi-directional. Conflicts that may occur when a file has been modified on multiple sources are detected and automatically resolved by choosing the most recent version of the file. The older version of the file is renamed.

Tip



In order for conflict resolution to be performed correctly, your computer clock must be synchronized with the CTERA Portal clock. If there is more than one hour difference between the two clocks (after taking into account timezone differences), the agent will not synchronize the cloud drive folder.

Cloud Drive Synchronization Overview

Synchronizing, or 'syncing', folders with each other means keeping the folder contents identical at all times. Whenever any change of any kind is made to any file in any of the synced folders, the same change is made immediately in the other folders that are synced with that folder. For example, if a file is deleted from one of the folders, the same file is deleted from the other synced folder(s). It makes no difference which user made the change or in which of the synced folders the change was made.

Benefits of Syncing your Cloud Drive Folder

Cloud Drive syncing helps you:

-  Sync files across your own devices. If you have several personal devices, such as a desktop computer, a laptop, and a smartphone, syncing files between them helps you effortlessly take your files with you wherever you go with the confidence that the files you are working with are always current. You do not even need to remember which device you were working on when you last modified a file. For example, you can create a file on your laptop and later open and modify it from your desktop.
-  Collaborate easily with others. Cloud drive syncing lets you sync any number of shared folders. That means you can sync a folder with folders on other people's devices. Everyone who syncs the shared folder can view, update, and delete the files in the shared folder.

What Happens to Simultaneous File Changes?

With cloud drive syncing, different people can work on the same files at the same time, which means that conflicts can occur. CTERA keeps track of who is making updates and when, detects file conflicts when updates occur simultaneously, and resolves those conflicts.

CTERA records the history of file events. The changes made in the most recent update are always saved to the original file. Changes that are lost due to conflict are retained in a renamed version of the file.

Can I Use File Syncing as a Backup?

File syncing is sometimes confused with file backup, but is very different. Syncing does not protect data. It is not a substitute for file backup, because:

-  Syncing is bidirectional. For example, files deleted in the cloud are automatically deleted locally. This is not a desirable feature for backup, which should produce a stable, read only copy of your data.
-  Syncing is continuous. Backup should run at scheduled intervals and preserve an accurate point-in-time snapshot of your data.
-  Syncing should not transfer locked files. Backup should transfer files which are locked by applications.

- ✚ Syncing allows you to share file access with other users. Backup should protect your data from other users.
- ✚ Syncing supports standard files and documents. Backup should support applications, such as databases, in addition to standard documents.

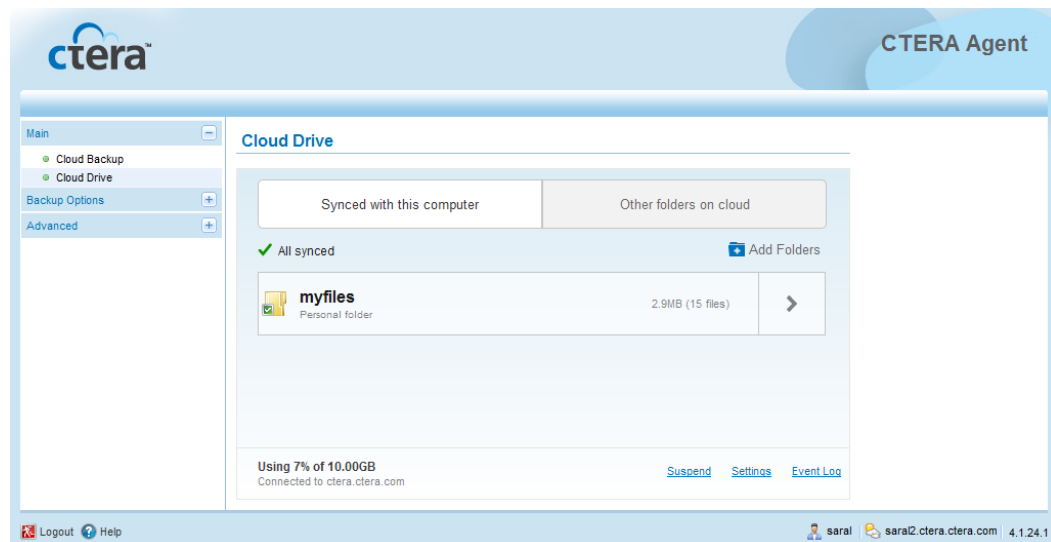
Viewing Cloud Drive Folders

Through the Cloud Drive page, you can see which folders are on your cloud drive, which of them are synced with your CTERA agent, view any of them on the portal, and switch easily to viewing any local synced folders in the **Files** tab.

» To view Cloud Drive folders

- 1 In the navigation pane, click **Main > Cloud Drive**.

The **Cloud Drive** page appears.

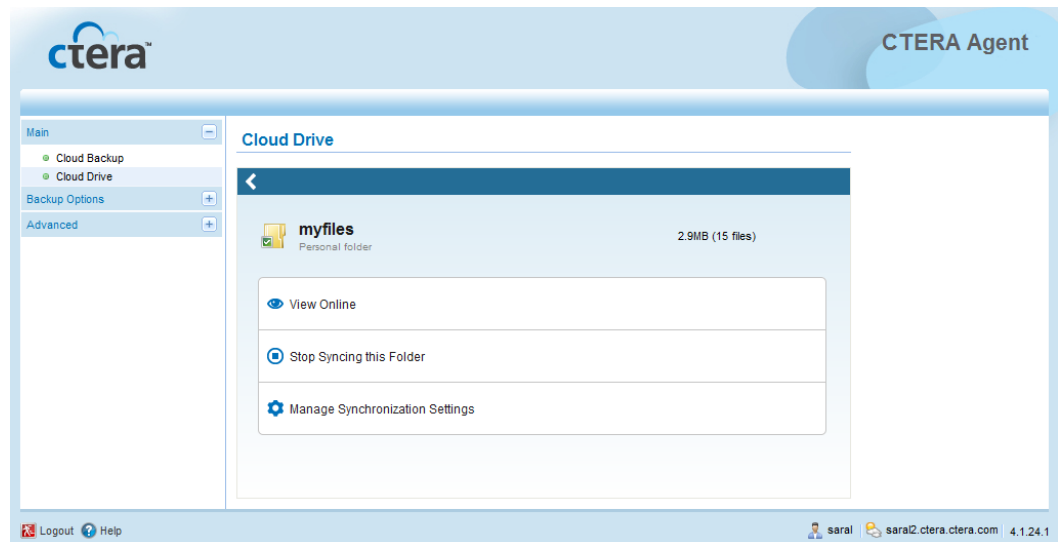


By default, **Synced with this computer** is selected. This tab displays all the Cloud Drive folders that are currently synced with folders on the CTERA agent computer.

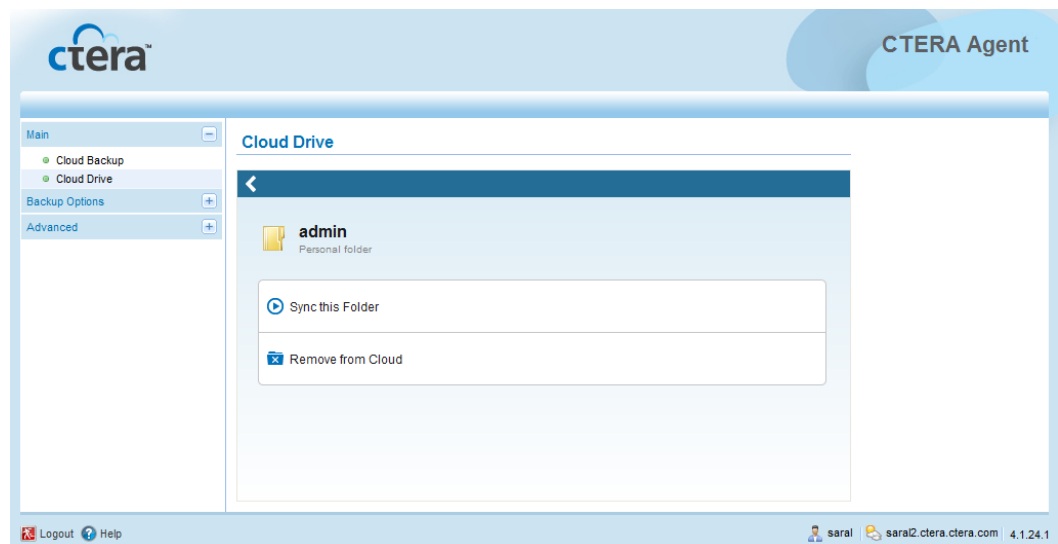
You can:

- ✚ View any other (not synced) folders on your cloud drive, by selecting **Other folders on cloud**.

- See folder-specific options, by clicking the  button for a folder. The following folder-specific options are available for a synced folder:



The following folder-specific options are available for a Cloud Drive folder that is not synced to this computer:



- View the local version of a synced folder in the files tab, by clicking  and then **Show Folder**. The **Files** tab is displayed, showing the synced folder. To switch back to the **Cloud Drive** page, click the **Configuration** tab.
- View a synced folder in the Cloud Drive, by clicking  and then **View Online**. CTERA portal opens in a separate browser tab. When you have logged in, the portal displays the folder in the **Cloud Drive** tab.

Accessing the Cloud Drive Folder

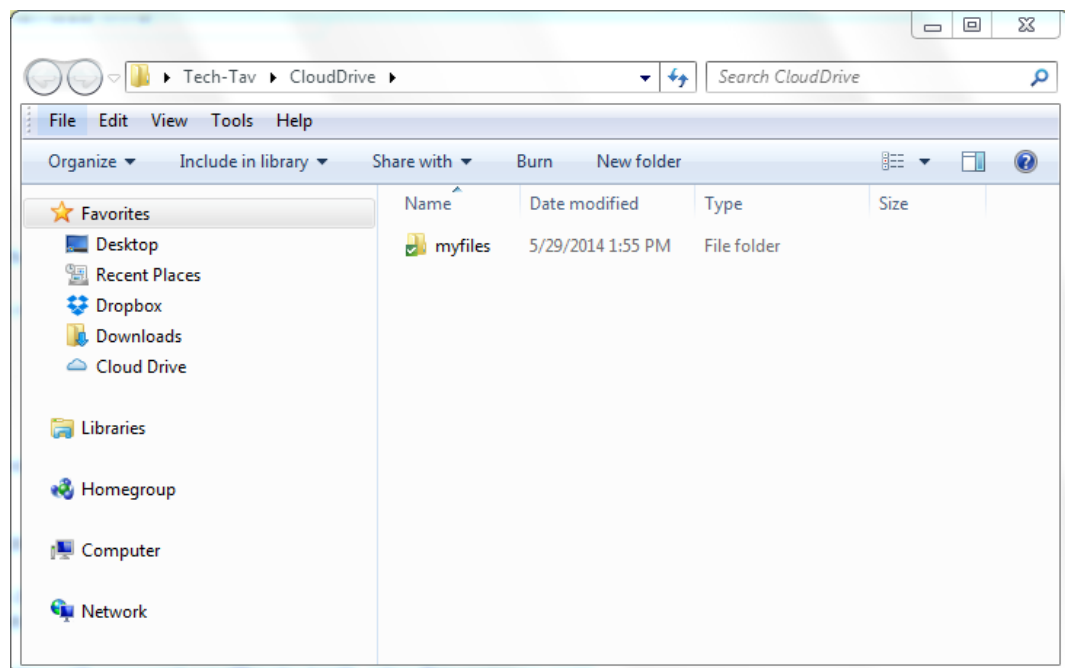
If you are subscribed to the Cloud Drive service, your cloud drive will automatically be mapped as a network drive. You can access the cloud drive and its contents using the following procedure.

» To access the cloud drive

- + Do one of the following:
 - + Click the CTERA Agent tray icon in the notification area of the Windows taskbar, and click **Open Folder** in the **CTERA Agent** screen.
 - + Right-click the CTERA Agent tray icon in the notification area of the Windows taskbar, and click **Cloud Drive**.
- + Double-click on the **Cloud Drive** shortcut on your desktop .

Windows Explorer opens displaying the contents of the cloud drive.

Each file is marked with an icon indicating its current synchronization status. Files and folders that are in sync are marked with the  icon, and files that are currently synchronizing, or are waiting to be synchronized, are marked with the  icon.



Browsing the Cloud Drive Folder Online

You can browse the contents of your cloud drive online.

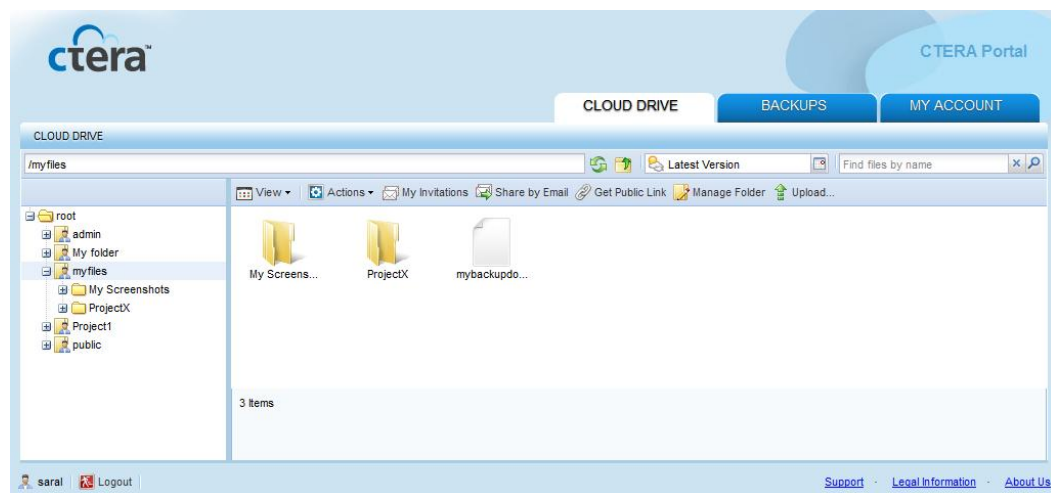
» To browse a cloud drive folder online

- 1 Access the cloud drive folder.

See **Accessing the Cloud Drive Folder** (on page 112).

- 2 Right-click anywhere in the cloud drive folder, and click **CTERA Agent > View online**.

If prompted to login, enter your login credentials. The CTERA Portal opens in your browser displaying the **Cloud Drive** tab and the contents of the cloud drive folder.



Syncing Local Folders to the Cloud Drive

This procedure adds a synced folder to your Cloud Drive. The new folder can be synced with any pre-existing local folder on your CTERA agent computer or with a new local folder that you create.

» To sync a new or existing CTERA agent folder with your cloud drive from Windows Explorer

- 1 In Windows Explorer, right-click the folder.
- 2 Select **CTERA Agent > Sync this folder**.

A folder is created in the Cloud Drive and synced with the local folder you selected. While the folder is being created, a progress window appears at the bottom right of your screen.

If the **Overlay icons on files and folders** check box is selected in the agent's Windows Explorer Integration settings, the folder is overlaid with the  icon. For information on configuring Windows Explorer Integration settings, see **Configuring Windows Explorer Integration Settings** (on page 43).

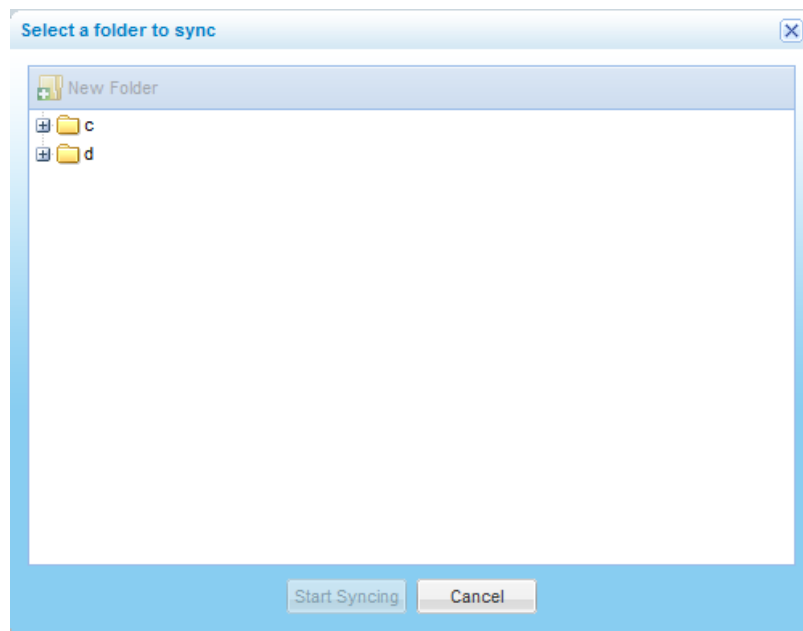
» **To sync a new or existing CTERA agent folder with your cloud drive from the Web interface**

- 1 In the navigation pane, click **Main > Cloud Drive**.

The **Cloud Drive** page appears, with **Synced with this computer** selected. All folders on your Cloud Drive that are currently synced with folders on the CTERA agent computer are displayed.

- 2 Click **Add Folders**.

The **Select a folder to sync** dialog box appears:



The dialog box displays the folders on the CTERA agent computer. You can use the **New Folder** button to add a subfolder if you wish.

- 3 Select the folder or subfolder you want to sync to the cloud.
- 4 Click **Start Syncing**. A folder is created in the Cloud Drive and synced with the local folder you selected. The newly synced folder is now displayed in the **Cloud Drive** page under **Synced with this Computer**.

Syncing Cloud Drive Folders to Your Computer

This procedure starts syncing a selected folder on your CTERA Portal cloud drive with a local CTERA agent folder. This can be any non-synced folder on the CTERA agent computer.

» To start syncing a Cloud Drive folder to your computer

- 1 In the navigation pane, click **Main > Cloud Drive**.

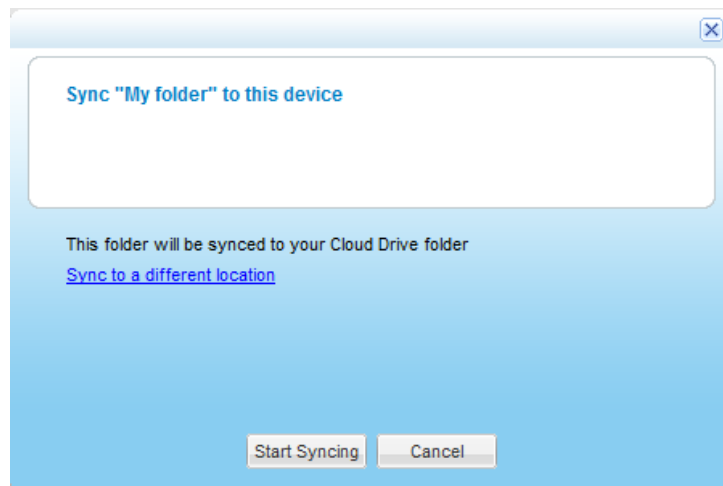
The **Cloud Drive** page appears, with **Synced with this computer** selected. All folders on your Cloud Drive that are currently synced with folders on the CTERA agent computer are displayed.

- 2 Select **Other folders on cloud**. The **Cloud Drive** page displays any cloud drive folders that are not currently synced with the CTERA agent.

- 3 Click the  button for the folder you want to sync.

Folder-specific options appear.

- 4 Click **Sync this Folder**.



- 5 Do one of the following:

- + If you want to sync the folder as a subfolder of the designated Cloud Drive folder (normally, this folder is the share `/cloud` of the cloud gateway) with the CTERA agent Cloud Drive folder, click **Start Syncing**.

A synced copy of the folder is created in the Cloud Drive folder of your CTERA agent.

- + If you want to sync the folder to a folder other than the Cloud Drive folder:

- 1 Click **Sync to a different location**.
- 2 The **Select a local folder to sync with "<foldername>"** dialog box appears (**<foldername>** is the name of the folder you are syncing).

- 3 Select the local CTERA agent folder you want to sync with the folder. If you need to create a new subfolder, select the folder under which you want to create it, and click **New Folder**.
- 4 Click **Start Syncing**.

A synced copy of the folder is created at the location you selected.

Stopping Syncing (of a Folder)

» To stop syncing a folder from Windows Explorer

- 1 In Windows Explorer, right-click the folder.
- 2 Select **CTERA Agent > Stop syncing this folder**.

» To stop syncing a folder from the Web interface

- 1 In the navigation pane, click **Main > Cloud Drive**.

The **Cloud Drive** page appears. **Synced with this computer** is selected. All folders on your Cloud Drive that are currently synced with folders on the CTERA agent computer are displayed.

- 2 Click  next to the folder you want to stop syncing.
- 3 Click **Stop Syncing this Folder**. The folder is no longer synced with the CTERA agent folder.

Managing Synchronization Settings of a Synchronized Folder

Each Cloud Drive folder can be synced independently of other folders. You can manage synchronization settings for any synced Cloud Drive folder when you need to change the location of the synced folder on the CTERA agent computer or exclude a sub-folder from syncing.

» To manage synchronization settings for a synced Cloud Drive folder:

- 1 In the navigation pane, click **Main > Cloud Drive**.

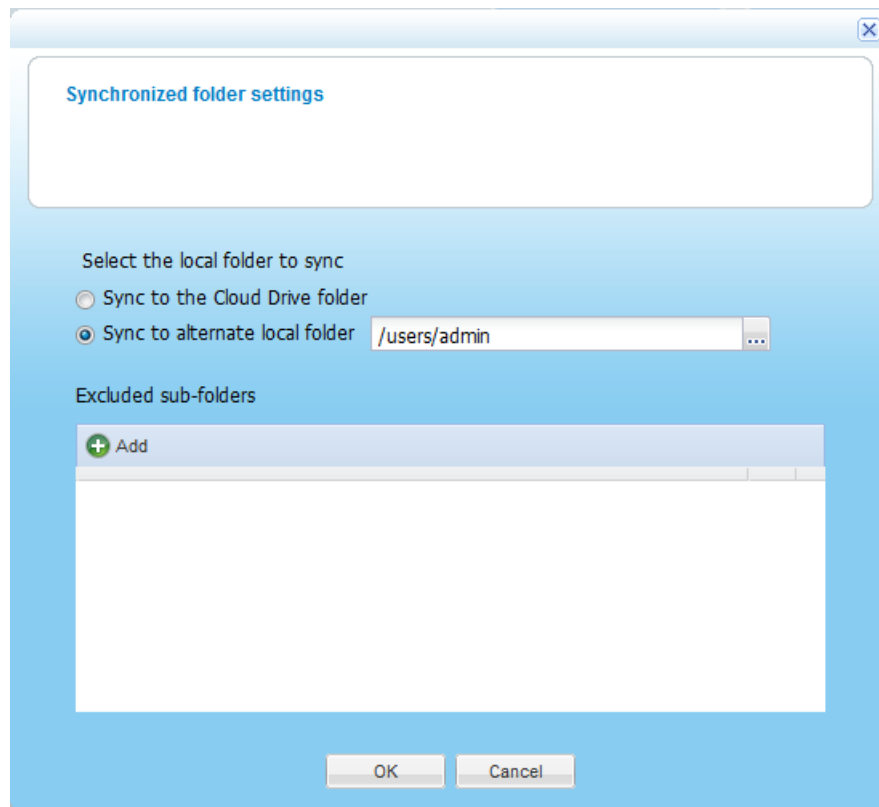
The **Cloud Drive** page appears, with **Synced with this computer** selected. All folders on your Cloud Drive that are currently synced with folders on the CTERA agent computer are displayed.

- 2 Click the  button for the folder you want to manage.

Some folder-specific options appear.

- 3 Click **Manage Synchronization Settings**.

The **Synchronized folder settings** dialog box appears.



4 Do one of the following:

- + If you want to sync the folder to a subfolder of the Cloud Drive folder, select **Sync to the Cloud Drive folder**.**

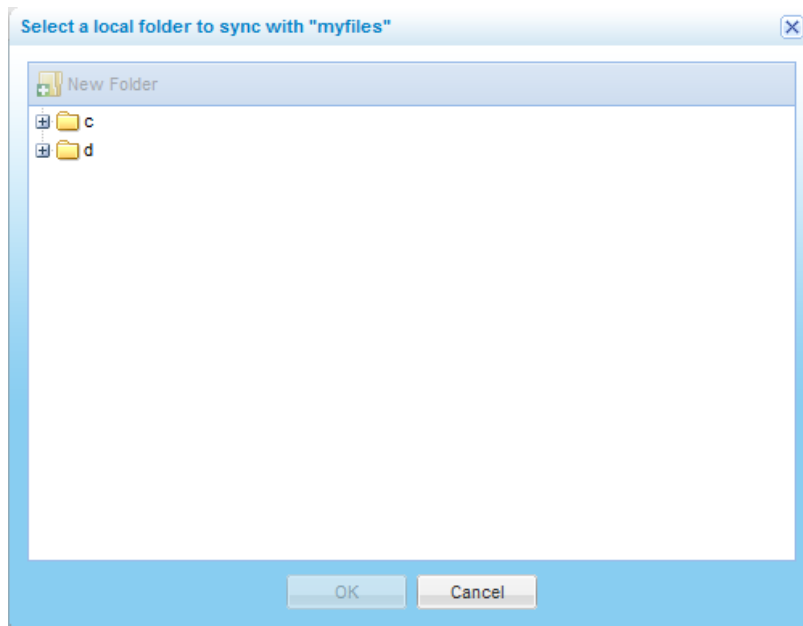
The local synced copy of the folder you selected is moved to the Cloud Drive folder.

- + If you want to sync the folder to a folder other than the Cloud Drive folder:**

1 Select **Sync to alternate local folder**.

2 Click .

- 3 The **Select a local folder to sync with "<foldername>"** dialog box appears (<foldername> is the name of the folder you are syncing).



- 4 Select the local CTERA agent folder you want to sync with the folder. If you need to create a new subfolder, select the folder under which you want to create it, and click **New Folder**.
- 5 Click **OK**.
- 5 To exclude sub-folders, click **Add** in the **Excluded sub-folders** section.
A row is added to the **Excluded sub-folders** list.
- 6 Click in the row and type the name of a sub-folder you want to exclude from syncing.
- 7 Repeat the previous steps to add more sub-folders as necessary until all the folders you want to exclude are listed.
- 8 Click **OK**.

Your changes are applied.

Suspending/Unsuspending Cloud Drive Synchronization

» To suspend all cloud drive synchronization

- 1 In the navigation pane, click **Main > Cloud Drive**.

The **Cloud Drive** page appears.

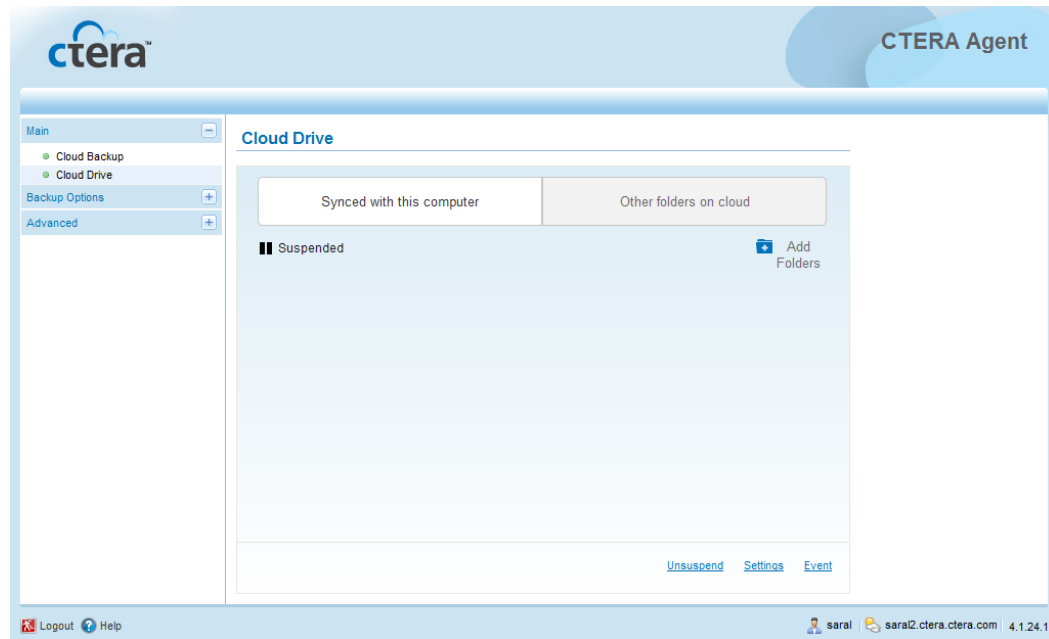
- 2 Click **Suspend**.

Cloud drive synchronization is suspended.

» To unsuspend cloud drive synchronization

- 1 In the navigation pane, click **Main > Cloud Drive**.

The **Cloud Drive** page appears.



- 2 Click **Unsuspend**.

Cloud drive synchronization is no longer suspended, and you can now configure the desired settings.

Collaborating on Cloud Drive Folders

If you are connected to a team portal, you can share a cloud drive folder and invite co-workers to access the folder.

Tip



If you are connected to a reseller portal and you want to share folders, see ***Sharing Files with Guest Invitations*** (on page 126).

Cloud Folder Collaboration Overview

Team portals support two types of cloud drive folders (depending on portal settings):

- Personal.** These folders are created under the owner's namespace and can be shared by the owner with other portal users. Personal folders may be used for personal use and can be used for ad-hoc collaboration.

- Project.** These folders are created under the **/projects** folder in the team portal's cloud folders hierarchy. They are ideal for storing and sharing organization or team wide projects. Only users who are team portal administrators and have project administration permissions may create projects or convert a personal folder into a project and control who can access each project.

Tip



Personal folders and projects are features that are enabled or disabled on the portal level by portal administrators.

You can add co-workers to the sharing settings for a shared project or personal folder. Those co-workers receive an email notification inviting them to collaborate on the project or personal folder. They can then view files in the project or personal folder and/or add files and folders to the project, depending on their permissions.

Organization and Naming of Shared Cloud Folders

Personal folders owned by you appear directly under the root in your cloud drive folder hierarchy.

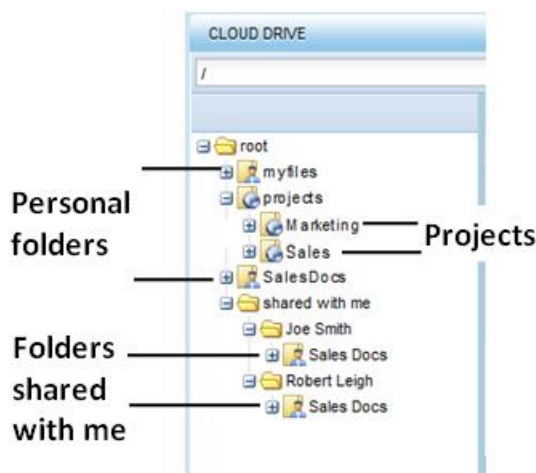
Personal folders that other users share with you appear in your cloud drive under the folder owner's name, under the **Shared with me** node of the folder hierarchy.

Project folders appear under the **projects** folder in the team portal folders hierarchy

There is no restriction on the names of personal folders, even if they are shared, since they are located under their owner's namespace. Two users may have and share with others a personal folder with the same name. Project folders must have unique names.

By default, each user has an automatically created personal folder called “myfiles” which is synchronized to the cloud by default (the name of this folder can be changed by the team portal administrator).

Following is an example of a cloud drive folder hierarchy including personal folders, project folders, and folders shared with the user by other users.



Creating Projects

Creating a project in a team portal requires project administration permissions.

» To create a project

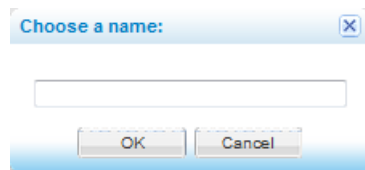
- 1 Browse the cloud drive folder online.

See *Browsing the Cloud Drive Folder Online* (on page 113).

- 2 Navigate to the `/projects` folder.

- 3 Click **New Folder**.

The **Choose a name** dialog box appears.



- 4 Type a name for the project.

- 5 Click **OK**.

A new folder with the name you chose appears in the projects share. The folder is defined as a project, by default, and you are the project owner. To modify these details and/or share the project, see *Sharing Cloud Drive Folders* (on page 121).

Sharing Cloud Drive Folders

Any cloud drive folder can be shared with other users.

» To share a cloud drive folder

- 1 Browse the cloud drive folder online.

See *Browsing the Cloud Drive Folder Online* (on page 113).

- 2 Select the folder you want to share.

- 3 From the **Actions** menu, select **Manage Sharing**.

The folder's sharing management dialog box appears.

Project2 Online

Files: 0 Size: 0 Bytes

Name: Project2

Description (Optional):

Folder type: Project

Owner: Local Users saral

Who has access:

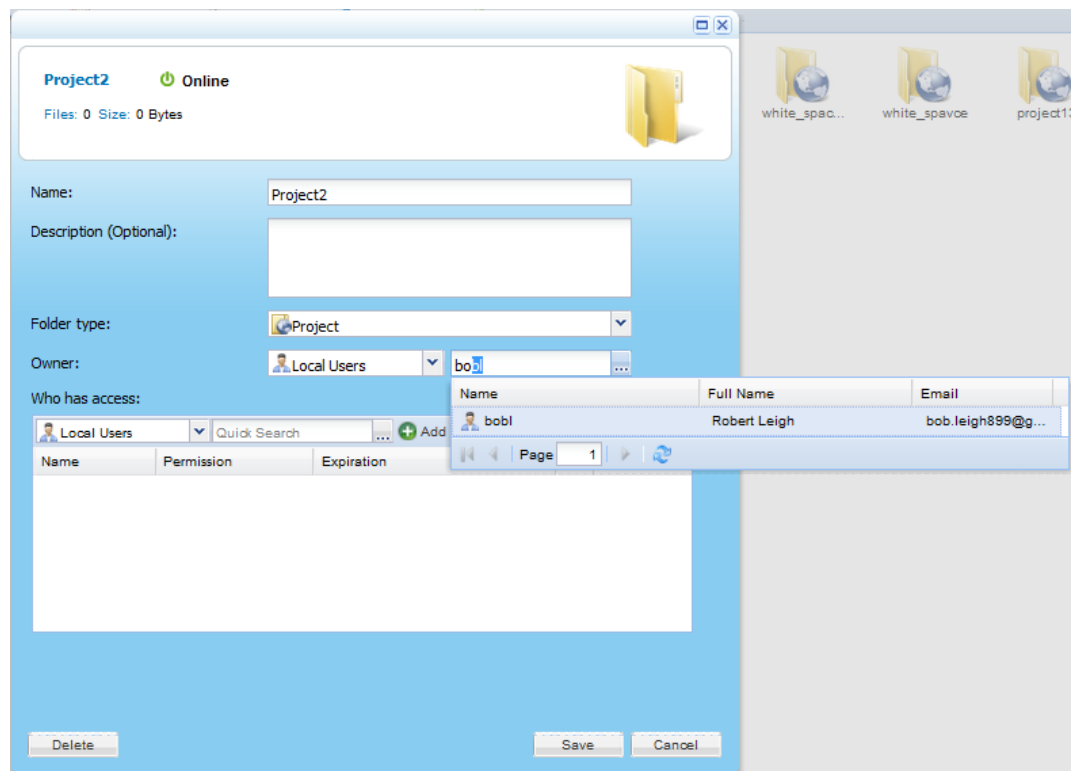
Name	Permission	Expiration

Buttons: Delete, Save, Cancel

- 4 In the **Name** field, modify the project name if desired.
- 5 (Optional) In the **Description** field, type a description of the project.
- 6 In the **Folder type** field, select the type of folder:
 - + **Personal**. The folder will appear under the owner's namespace (see next step) and can be shared by the owner with other portal users.
 - + **Project**. The folder will appear under the **/projects** folder in the team portal's cloud folders hierarchy. Only users who are team portal administrators and have project administration permissions may create projects or convert a personal folder into a project.
- 7 Specify the project owner, by doing the following in the **Owner** area:
 - a In the **Local Users** drop-down list, select one of the following:
 - + **Local Users**. Search the user accounts defined locally on the portal.
 - + **Domain *domain* Users**. Search the user accounts belonging to the domain called *domain*.

- b** In the **Quick Search** field, type a string that appears anywhere within the name of the user account you want to add, then click .

A table of user accounts matching the search string appears.



- c** Select the desired user account in the table.

The user account appears in the **Quick Search** field.

- 8** To add a member to the project, do the following in the **Who has access** area:

- a** In the **Local Users** drop-down list, select one of the following:
-  **Local Users.** Search the user accounts defined locally on the portal.
 -  **Domain *domain* Users.** Search the user accounts belonging to the domain called *domain*.
 -  **Local Groups.** Search the user groups defined locally on the portal.
 -  **Domain *domain* Groups.** Search the user groups belonging to the domain called *domain*.
- b** In the **Quick Search** field, type a string that appears anywhere within the name of the user account or user group you want to add, then click .

A table of user accounts or user groups matching the search string appears.

- c** Select the desired user account or user group in the table.

The user account or user group appears in the **Quick Search** field.

- d** Click **Add**.

The user account or user group appears in the list.

- 9** In the project member's row, click the **Permission** field, and do one of the following:

- +** To specify that the member should be able to add, edit, and delete files and folders in this project, select **Read-Write**.

- +** To specify that the member should only be able to view files and folders in this project, select **Read-Only**.

- 10** To specify an expiration date for a member, do the following:

- a** In the project member's row, click the **Expiration** field, and then click .

A calendar appears.

- b** Select the date on which the member's access should end.

The **Expiration** column is updated accordingly.

- 11** To delete a project member, click  in the desired project member's row.

- 12** Click **Save**.

The project is saved with the new sharing settings.

If the mail server is set up, and email addresses are defined for the users you added as project members, the CTERA Portal will send email notifications to the new project members, inviting them to collaborate on the project.

Modifying Cloud Drive Folder Sharing Settings

You can modify the cloud drive folder sharing settings, such as who has access to the folder, the folder type, and the folder owner.

» To modify a cloud drive folder's sharing settings

- 1** Browse the cloud drive folder online.

See ***Browsing the Cloud Drive Folder Online*** (on page 113).

- 2** Select the folder you want to modify.

- 3** From the **Actions** menu, select **Manage Sharing**.

The folder's sharing management dialog box appears.

- 4** In the **Name** field, modify the project name if desired.

- 5** (Optional) In the **Description** field, type a description of the project.

- 6** In the **Folder type** field, select the type of folder:

- 

-  To specify that the member should be able to add, edit, and delete files and folders in this project, select **Read-Write**.
-  To specify that the member should only be able to view files and folders in this project, select **Read-Only**.
- 10** To specify an expiration date for a member, do the following:
 - a** In the project member's row, click the **Expiration** field, and then click .
A calendar appears.
 - b** Select the date on which the member's access should end.
The **Expiration** column is updated accordingly.
- 11** To delete a project member, click  in the desired project member's row.
- 12** Click **Save**.
The project is saved with your changes.

If the mail server is set up, and email addresses are defined for the users you added as project members, the portal will send email notifications to the new project members, inviting them to collaborate on the project.

Sharing Files with Guest Invitations

You can share files and folders in your cloud drive folder with other people, both inside and outside your network, by sending them a guest invitation for the desired files/folders.

The guest invitation includes a URL, which when clicked allows the invitee to view or edit the files/folders from anywhere, using a Web-based file manager. Upon clicking the URL or path, invitation recipients are granted read-only or read-write access to the shared files/folders.

Sending Guest Invitations

» To send a guest invitation for a file or folder

- 1** Access the cloud drive folder.

See **Accessing the Cloud Drive Folder** (on page 112).
- 2** Right-click in the desired folder or a file/folder in it, and click **CTERA Agent > Invite guest**.

The CTERA Portal opens in your browser. After you log in, CTERA Portal displays the **Cloud Drive** tab with the **Share by Email** dialog box open.

- 3 In the **Email addresses** field, fill in the email address of the person with whom you want to share the file/folder.
- 4 In the **Custom Message** field, enter any custom message you want to include in the email.
- 5 In the **Type** field, select one of the following:
 - + To grant the invitation recipient read-only access to the file/folder, choose **Read Only**.
 - + To grant the invitation recipient read-write access to the file/folder, choose **Read/Write**.
- 6 In the **Protection Level** field, select which protection level to apply to protect the invitation from being accessed by unintended recipients. Any of the following options may be available:
 - + **Public Link** - A public link is a time limited link containing a secret access code to the folder or file. Public links can be freely forwarded by the recipient to any other person, and can also be posted on public websites and so on.
 - + **Verify with Email** - This level applies two factor authentication. The recipient receives a time limited authenticated link to the file or folder. On every access, a new 6 digit passcode challenge is sent to the recipient by email to the invitation. The recipient must enter the passcode before accessing the file or folder. This ensures that the invitation is not usable in case the invitation link is accidentally forwarded to another person, or posted on a public website.
 - + **Registered Users** - This is the highest protection level. The recipient receives a time limited authenticated link to the file or folder and is required to authenticate to the portal using a valid username and password before accessing the file or folder.
- 7 In the **Expires** field, select the date on which you want the invitation to expire.

- 8 Click **Invite**. A message box appears, indicating that the invitation was created successfully.
- 9 Click **OK**. The invitation is sent to the specified email address.

Viewing Active Guest Invitations

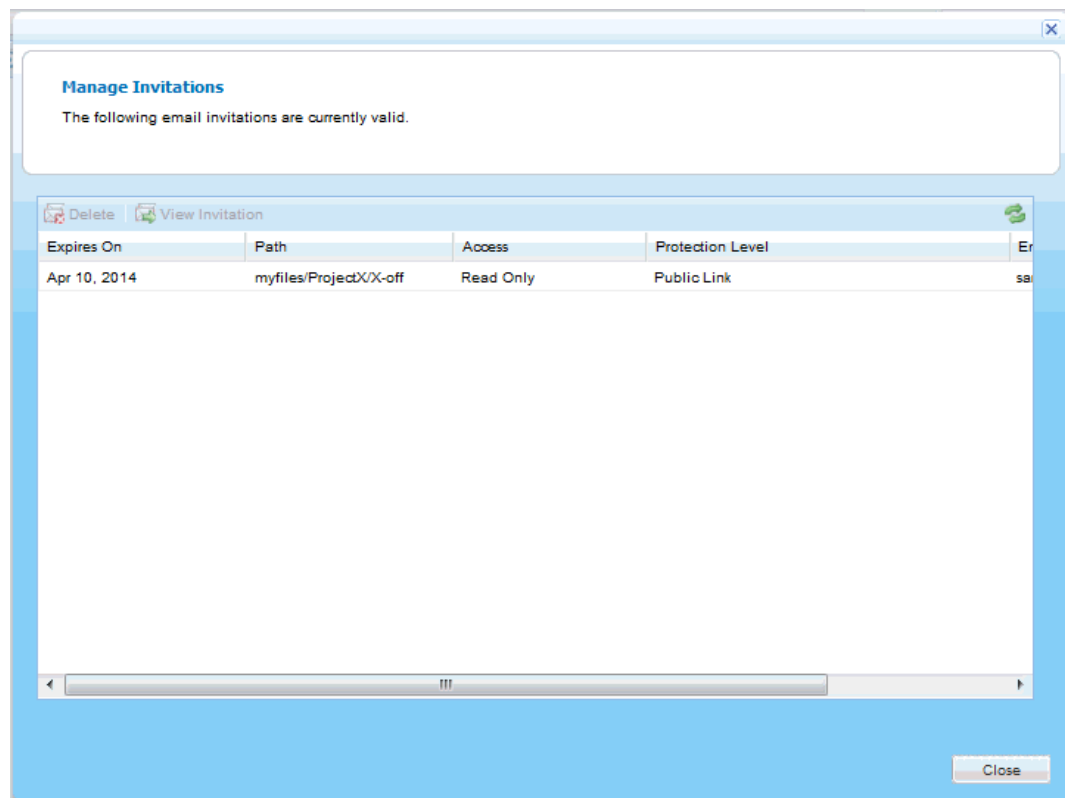
» To view active guest invitations

- 1 Browse the cloud drive folder online.

See ***Browsing the Cloud Drive Folder Online*** (on page 113).

- 2 Click **My Invitations**.

The **Manage Invitations** window opens.



For each invitation the information in the following table is displayed.

- 3 To view an individual invitation, select the desired invitation, and then click **View Invitation**.

The **Send Invitation** dialog box opens displaying the invitation.

- 4 Click **Close**.

Table 10: Active Guest Invitations Information

This field...	Displays...
User	The name of the user who sent the guest invitation. This field only appears when viewing all guest invitations in the system.
Expires On	The date on which the guest invitation expires.
Path	The path to the shared file/folder on the cloud drive.
Access	The type of access granted to the invitation recipient (Read Only or Read/Write).
Protection Level	The protection level used for protecting the invitation from unauthorized access. Possible values:  Public Link - A public link is a time limited link containing a secret access code to the folder or file. Public links can be freely forwarded by the recipient to any other person, and can also be posted on public websites and so on.  Verify with Email - This level applies two factor authentication. The recipient receives a time limited authenticated link to the file or folder. On every access, a new 6 digit passcode challenge is sent to the recipient by email to the invitation. The recipient must enter the passcode before accessing the file or folder. This ensures that the invitation is not usable in case the invitation link is accidentally forwarded to another person, or posted on a public website.  Registered Users - This is the highest protection level. The recipient receives a time limited authenticated link to the file or folder and is required to authenticate to the portal using a valid username and password before accessing the file or folder.
Email addresses	The email addresses to which the invitation was sent.

Deleting Active Guest Invitations

» To delete an active guest invitation

- 1 Browse the cloud drive folder online.

See ***Browsing the Cloud Drive Folder Online*** (on page 113).
- 2 Click **My Invitations**.

The **My Invitations** window opens.
- 3 Select the desired invitation, and then click **Delete**.

A confirmation message appears.

- 4 Click **Yes**.

The guest invitation is deleted.

- 5 Click **Close**.

Restoring Files from Cloud Backup

Restoring Files and Folders from the Cloud Backup Control Panel

You can restore individual files or folders that were backed up to cloud storage. Alternatively, you can simultaneously restore *all* backed up files and folders, in order to roll back your disk contents to a previous point in time.

Note that if the same files already exist on your computer, they will be overwritten with the files you selected for restoration. Files that have been deleted since the date of the selected files will be recreated. Files that exist on your computer, but which do not exist in cloud storage or were not selected for restoration, will not be affected.

To restore files, the CTERA Agent must be connected to the CTERA Portal.

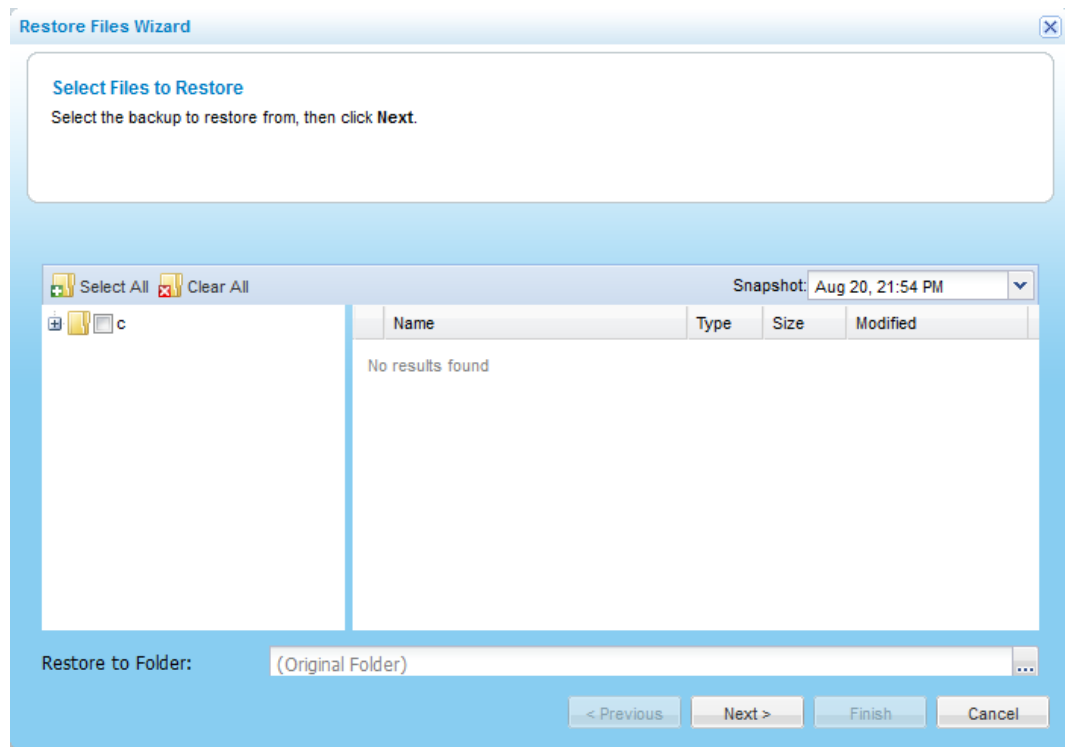
» To restore backed up files from the Cloud Backup Control Panel

- 1 In the navigation pane, click **Main > Cloud Backup**.

The **Cloud Backup Control Panel** page appears.

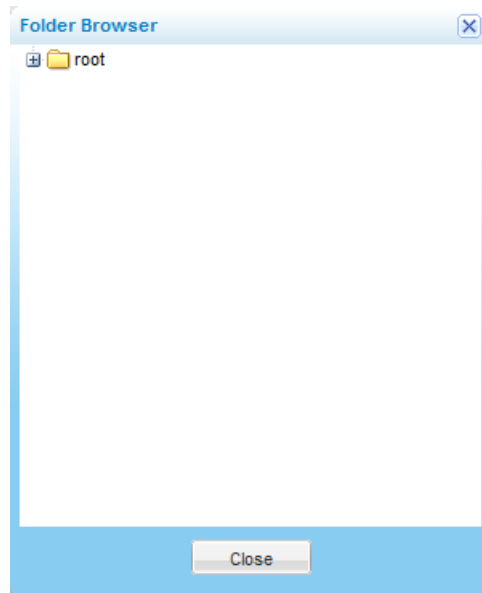
- 2 Click **Restore**.

The **Restore Files Wizard** opens, displaying the **Select Files to Restore** dialog box.



- 3 In the **Snapshot** drop-down list, select the date and time of the snapshot from which you want to restore files.
- 4 Specify which files and folders you want to restore, by doing any of the following:
 - + To select individual files and folders:
 - 1 In the left pane, expand the nodes and click on the desired folders.
The folder contents appear in the right pane.
 - 2 Select the check boxes next to the desired folders and files.
For an explanation of the icons and check boxes next to each folder, see **Folder Icons** (page 88).
 - + To select all files, click **Select All**.
 - + To un-select all files, click **Clear All**.
- 5 If you want to restore files to a location other than the original location:

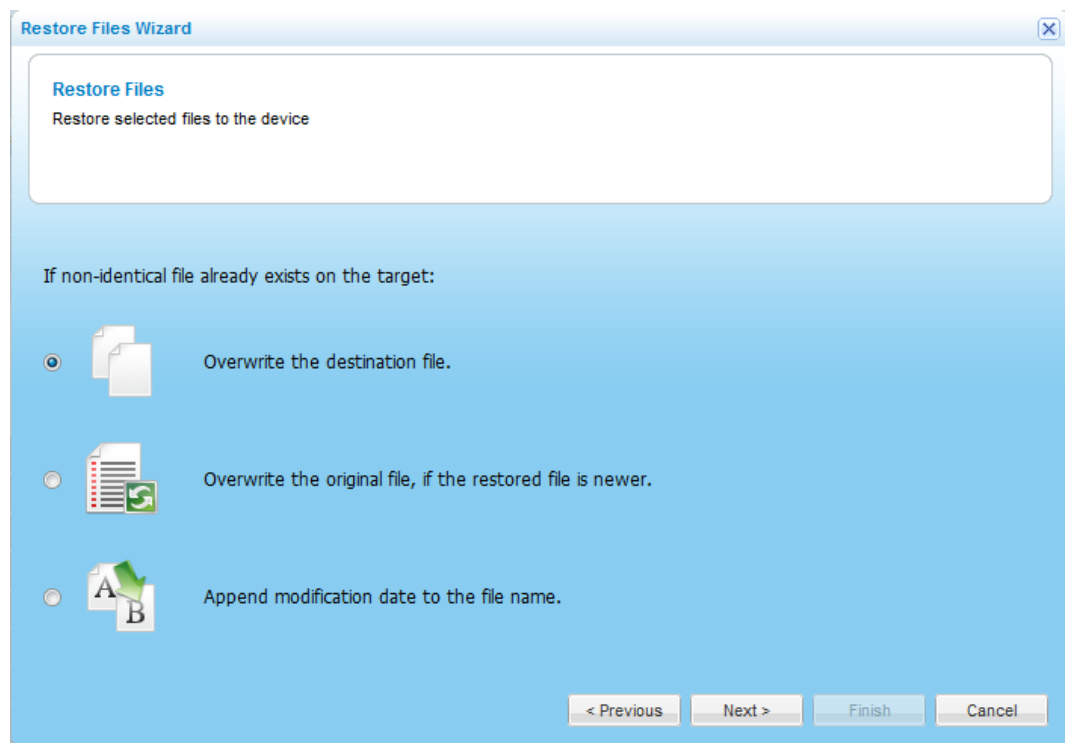
- a** Click in the **Restore to Folder** field. The **Folder Browser** dialog box appears.



- b** Select the folder to which you would like to restore the files.
- c** Click **Close**.

- 6** Click **Next**.

The **Restore Files** dialog box appears.

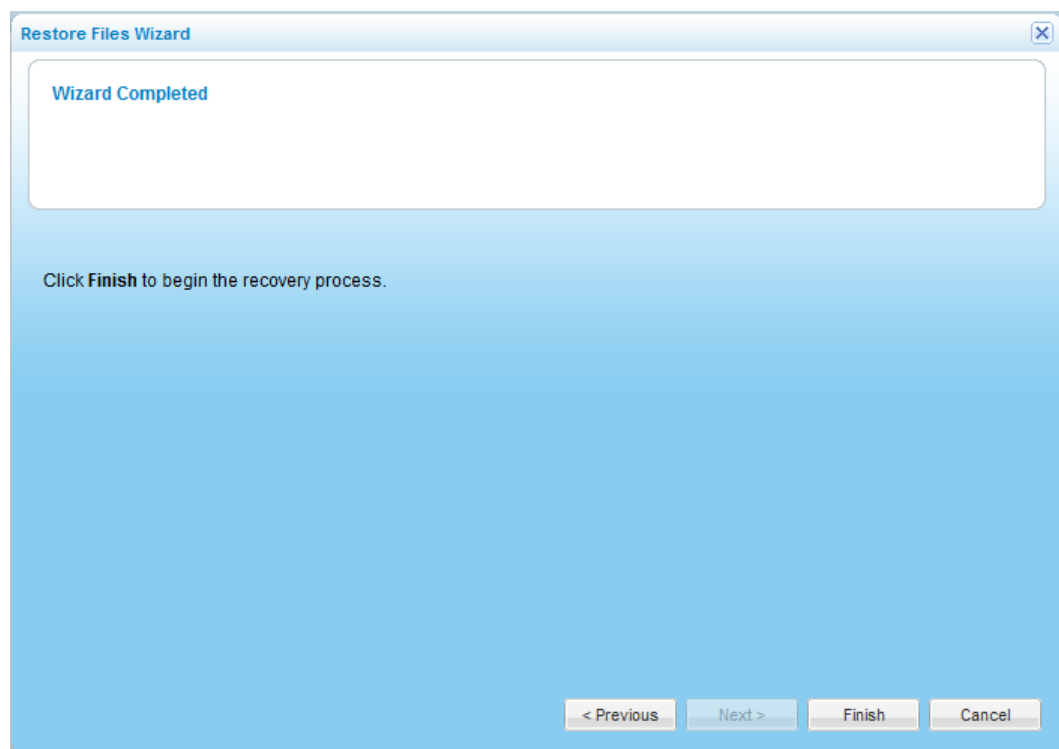


- 7** Specify how the CTERA Portal should handle files that exist both on your drive and in the selected backup, by doing one of the following:

- + To specify that the files on the local computer should be overwritten by the files in the cloud backup, choose **Overwrite the destination file**.
- + To specify that the files on the local computer should be overwritten by the files in the cloud backup only if the file in the cloud backup is newer, select **Overwrite the original file, if the restored file is newer**.
- + To specify that the files on the local computer should have the modification date appended to their name, choose **Append modification date to the file name**.

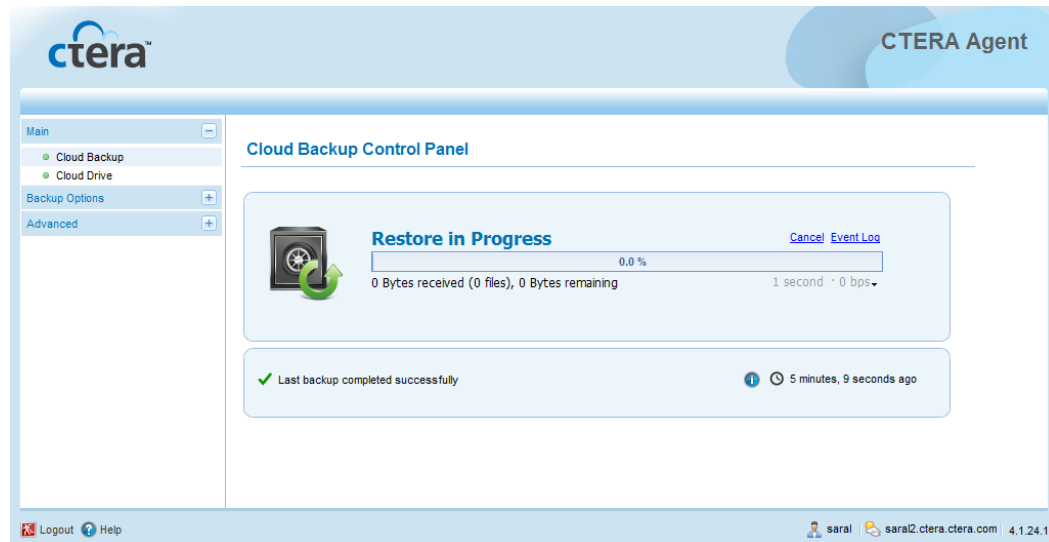
8 Click **Next**.

The **Wizard Completed** screen appears.



9 Click **Finish**.

A progress bar appears, and the files are restored from the selected backup.



- 10** To toggle the information displayed under the progress bar, do one of the following:
- + To display the effective throughput (in Kbit/sec), click the  icon, and then click **Show effective throughput**.
 - + To display the bandwidth usage (in bit/sec), click the  icon, and then click **Show bandwidth usage**.

Canceling the Current Restore Process

When restoring files from the Cloud Backup Control Panel, you can cancel a running file restore process.

» To cancel the current restore process

- 1** In the navigation pane, click **Main > Cloud Backup**.

The **Cloud Backup Control Panel** page appears.

- 2** Click **Cancel**.

The current restore process is canceled.

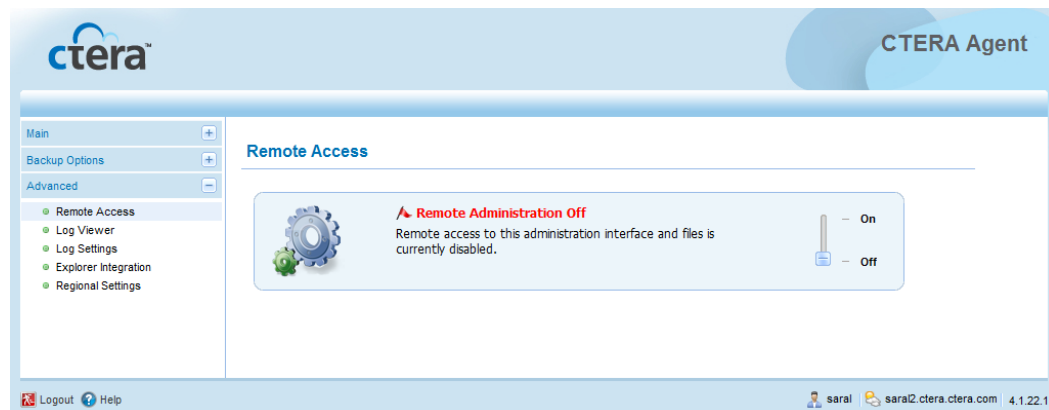
Enabling/Disabling Remote Access

You can enable and disable administration of the CTERA agent from the portal.

» To enable remote access

- 1** In the **Configuration** tab's navigation pane, click **Cloud Services > Remote Access**.

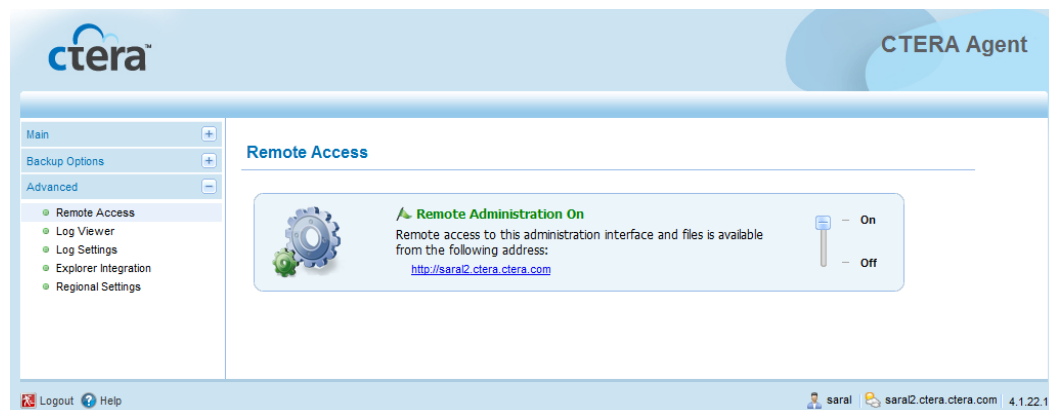
The **Remote Access** page appears.



- 2 Slide the lever to the **On** position.

Remote access is enabled.

A link appears, which you can click on to view a remote management page. You can keep this link in your browser bookmarks, for remote access to this CTERA agent.



» To disable remote access

- 1 In the **Configuration** tab's navigation pane, click **Cloud Services > Remote Access**.

The **Remote Access** page appears.

- 2 Slide the lever to the **Off** position.

Remote access is disabled.

Configuring Event Log Settings

You can configure settings for the CTERA agent Event Log, including log storage and the log level to display.

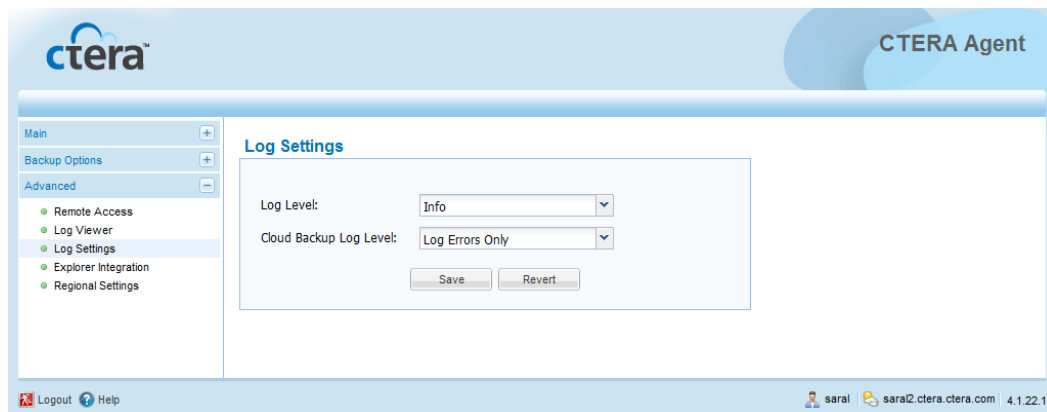
» To configure Event Log settings

1 Do one of the following:

- + In the navigation pane, click **Advanced > Log Settings**.
- + When viewing any log category, click **Settings**.

See **Viewing Logs** (on page 137).

The **Log Settings** page appears.



2 Complete the fields using the information in the following table.

3 Click **Save**.

Table 11: Log Settings Fields

In this field...	Do this...
Log Level	Select the minimum log level to display in the CTERA Agent Web interface. For example, if you select Critical, then only Alert, Critical, and Emergency logs will appear in the CTERA Agent Web interface. The default value is Info.
Cloud Backup Log Level	CTERA Agent logs all backup and restore operations. Specify whether CTERA Agent should display additional information about files that are backed up and restored, by selecting one of the following:  Log Every File. Provide additional information about all backed up and restored files.  Log Errors Only. Only provide additional information about files for which errors occurred during backup and restore operations.  No Logging. Do not provide additional information about backed up and restored files. The additional information includes file name, deduplication ratio, and more. See Viewing Backup Logs (see "Viewing Cloud Backup Logs" on page 139). The default level is Log Errors Only.

Viewing Logs

The CTERA Agent Event Log includes the following log categories:

Table 12: Log Categories

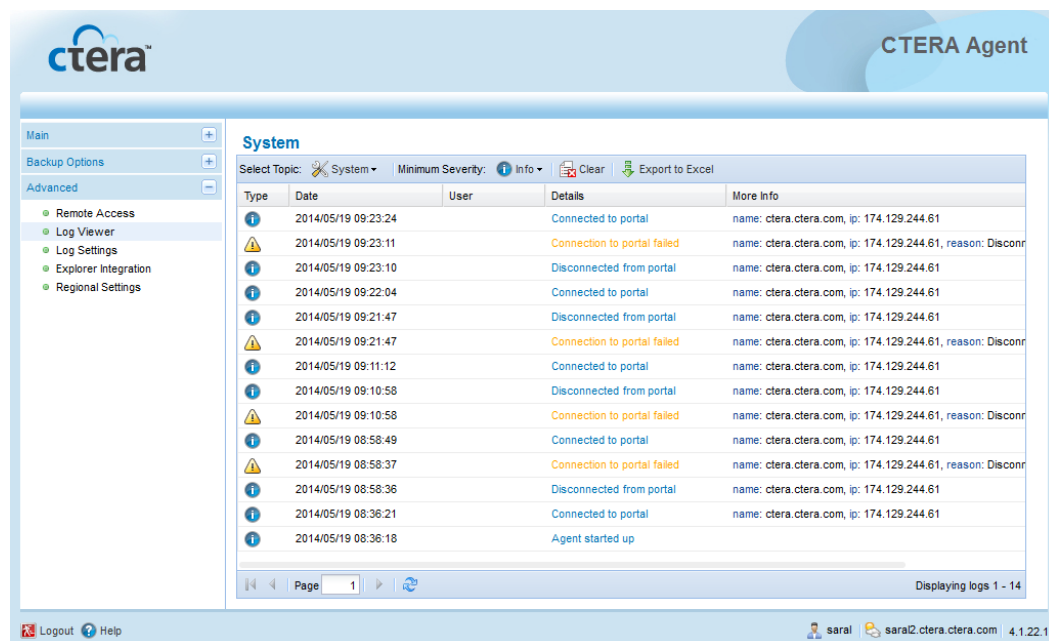
This log category...	Displays...
System	General CTERA Agent events, including connecting to the CTERA Portal, disconnecting from the CTERA Portal, and so on
Cloud Backup	Events related to cloud backup or restore operations
Cloud Sync	Events related to cloud drive synchronization operations
Access	Events related to user access to the CTERA Agent Web interface
Audit	Changes to the CTERA Agent configuration

Viewing System Logs

» To view System logs

- + In the navigation pane, click **Advanced > Log Viewer**.

The **Log Viewer** page appears displaying the system logs.



Tip



If the **Log Viewer** is already open and a different log category is displayed, in the **Select Topic** drop-down list, select **System**.

The following information is displayed:

Table 13: System Log Fields

This field...	Displays...
Type	An icon indicating the log level. See Log Levels (page 138).
Date	The date and time at which the event occurred.
User	The user who triggered the event.
Details	A description of the event.
More Info	Additional information about the event.

Table 14: Log Levels

Icon	Log Level
	+ Emergency

	+ Alert + Critical + Error
	+ Warning
	+ Notice + Info
	+ Debug

Viewing Cloud Backup Logs

» To view Cloud Backup logs

1 Do one of the following:

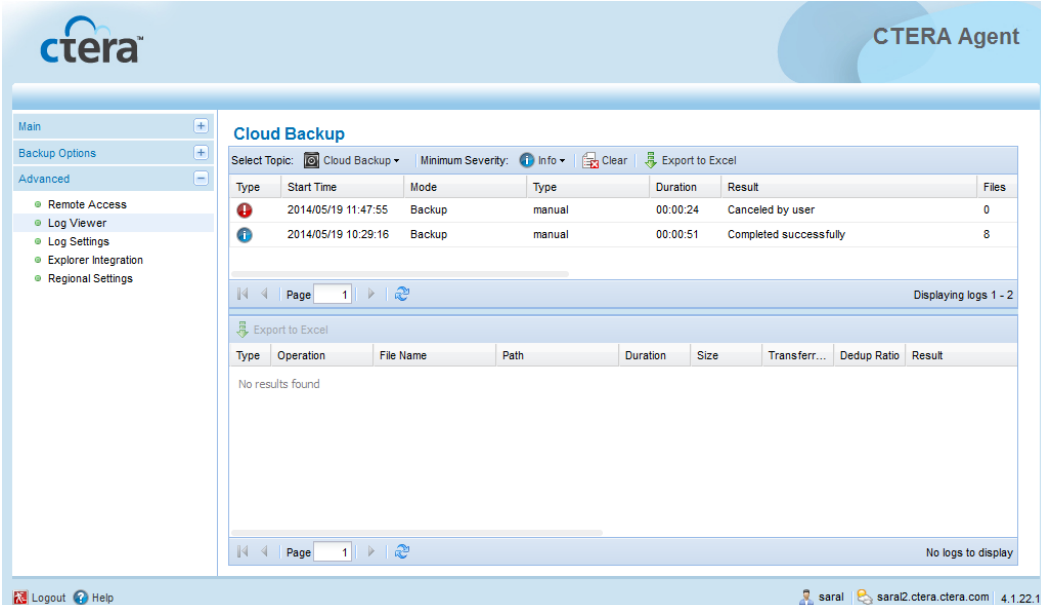
-  To access Cloud Backup logs from the **Cloud Backup Control Panel** page, click **History**.
-  To access Cloud Backup logs from the **Log Viewer**:

1 In the navigation pane, click **Advanced > Log Viewer**.

The **Log Viewer** page appears.

2 In the **Select Topic** drop-down list, select **Cloud Backup**.

The Cloud Backup logs appear. For information on the displayed fields, see the following tables.



The screenshot shows the CTERA Agent Log Viewer interface. The left navigation pane has 'Advanced' expanded, showing 'Log Viewer' selected. The main area is titled 'Cloud Backup' and displays a table of logs. The table has columns: Type, Start Time, Mode, Type, Duration, Result, and Files. Two log entries are shown: one with a red error icon (Canceled by user) and one with a blue info icon (Completed successfully). Below the table, there is an 'Export to Excel' button and a section for detailed log data, which currently shows 'No results found'.

Type	Start Time	Mode	Type	Duration	Result	Files
	2014/05/19 11:47:55	Backup	manual	00:00:24	Canceled by user	0
	2014/05/19 10:29:16	Backup	manual	00:00:51	Completed successfully	8



Tip

By default, the lower pane will appear displaying all files for which an error occurred during backup. However, if you disabled additional logging for backup operations, the lower pane will not appear. For information on configuring the logging level, see ***Configuring Event Log Settings*** (on page 136).

- 2 To view additional logging information for a backup operation, click on the desired operation in the upper pane.

Information about files included in the backup operation appears in the lower pane.

Table 15: Cloud Backup Log Upper Pane Fields

This field...	Displays...
Type	An icon indicating the log level. See Log Levels (page 138).
Start Time	The date and time at which the backup operation started.
Mode	The operation mode, Backup or Restore .
Type	The type of backup, Manual or Scheduled .
Duration	The amount of time the backup operation took.
Result	The result of the backup operation.
Files	The number of files to be backed up.
Size	The total size of the files to be backed up.
Transferred Files	The number of files transferred to cloud storage during the backup operation.
Transferred Size	The size of the files transferred to cloud storage during the backup operation.
Changed Files	The number of files that changed since the last backup operation.
Changed Size	The total size of the files that changed since the last backup operation.
More Info	Additional information about the event.

Table 16: Cloud Backup Log Lower Pane Fields

This field...	Displays...
Type	An icon indicating whether backup was successful () or not ().
Operation	The operation performed (create , delete , modify , or rename).
File Name	The name of the backed up file.
Path	The path to the backed up file.
Duration	The amount of time backup took for the file.
Size	The size of the file.
Transferred Size	The size of the file transferred to cloud storage.
Dedup Ratio	The deduplication ratio for the file.
Result	The result of the backup operation.
More Info	Additional information about the event.

Viewing Cloud Sync Logs

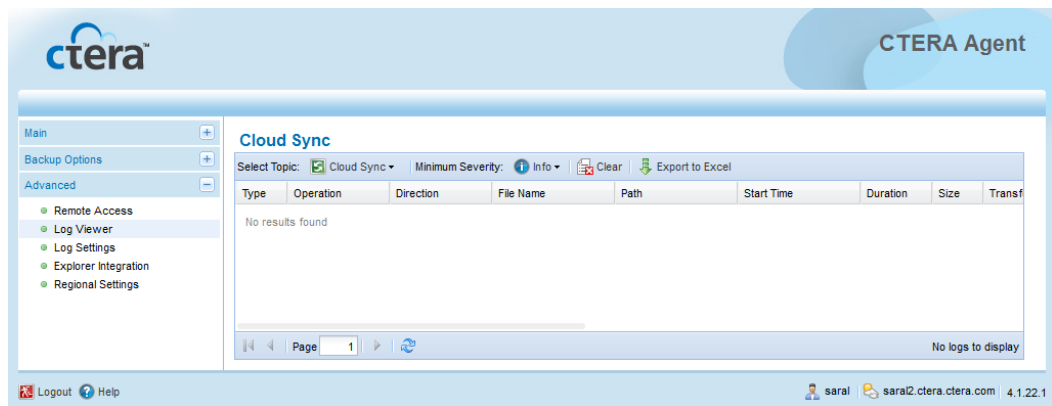
» To view Cloud Sync logs

- 1 In the navigation pane, click **Advanced > Log Viewer**.

The **Log Viewer** page appears.

- 2 In the **Select Topic** drop-down list, select **Cloud Sync**.

The Cloud Sync logs appear.



The following information is displayed:

Table 17: Cloud Sync Log Fields

This field...	Displays...
Type	An icon indicating the log level. See Log Levels (page 138).
Operation	The synchronization operation performed:  New. A new file or directory was created.  Updated. A file or directory was updated.
Direction	The synchronization operation's direction:  In. From the cloud drive to the local drive.  Out. From the local drive to the cloud drive.
File Name	The name of the file transferred during the synchronization operation.
Path	The path to the file transferred during the synchronization operation.
Start Time	The date and time at which the synchronization operation started.
Duration	The amount of time the synchronization operation took.
Size	The size of the synchronized file.
Transferred Size	The actual amount of data transferred.
Dedup Ratio	The deduplication ratio for the file transferred during the synchronization operation.
Result	The result of the synchronization operation.
More Info	Additional information about the event.

Viewing Access Logs

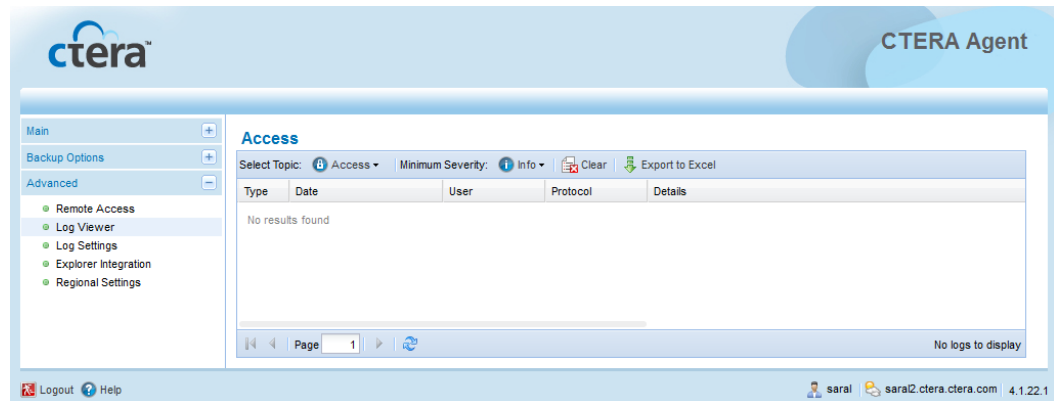
» To view Access logs

- 1 In the navigation pane, click **Advanced > Log Viewer**.

The **Log Viewer** page appears.

- 2 In the **Select Topic** drop-down list, select **Access**.

The Access logs appear.



The following information is displayed:

Table 18: Access Log Fields

This field...	Displays...
Type	An icon indicating the log level. See <i>Log Levels</i> (page 138).
Date	The date and time at which the event occurred.
User	The user that triggered the event.
Protocol	The protocol used when triggering the event: - GUI - CIFS (Windows File Sharing) - AFP - FTP - NFS - RSync - CTERA Agent - WebDAV
Details	A description of the event.
Client IP	The IP address from which the user triggered the event.
More Info	Additional information about the event.

Viewing Audit Logs

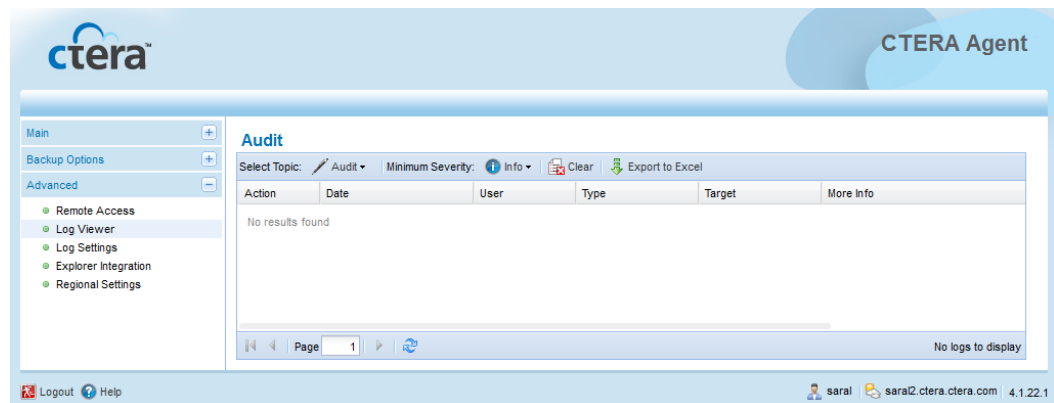
» To view Audit logs

- 1 In the navigation pane, click **Advanced > Log Viewer**.

The **Log Viewer** page appears.

- 2 In the **Select Topic** drop-down list, select **Audit**.

The Audit logs appear.



The following information is displayed:

Table 19: Audit Log Fields

This field...	Displays...
Action	The action type. See Audit Log Action Types (page 145).
Date	The date and time at which the event occurred.
User	The user who performed the action.
Type	The type of setting that was affected by the action. For example, if user JohnS was deleted, this column displays "Users".
Target	The object that was affected by the action. For example, if user JohnS was deleted, this column displays "JohnS".
More Info	Additional information about the event.

Table 20: Action Types

Icon	Label	Description
	Added	An object was added to the CTERA agent Web interface.
	Deleted	An object was deleted from the CTERA agent Web interface.
	Modified	An object was modified.
	Formatted	A disk was formatted.
	Expanded	An array was enlarged.

	Disabled	A setting was disabled.
	Enabled	A setting was enabled.

Filtering Logs

In any log category, you can filter the logs so that only those with a certain minimum log level are displayed.

Tip



For information on configuring the default minimum log level to display in *all* log pages, see **Configuring Event Log Settings** (on page 136).

» To filter logs in a log category

- 1 View the desired log category.

See **Viewing Logs** (on page 137).

- 2 In the **Minimum Severity** drop-down list, select the minimum log level to display in this category.

For example, if you select Critical, then only Alert, Critical, and Emergency logs will be displayed.

The logs are filtered accordingly.

Clearing Logs

You can clear logs for any log category.

» To clear logs for a log category

- 1 View the desired log category.

See **Viewing Logs** (on page 137).

- 2 Click **Clear**.

A confirmation message appears.

- 3 Click **Yes**.

The logs in this category are cleared.

Exporting Logs

You can export logs in any category to a Comma-Separated Values (*.csv) file on your computer, which you can view in Microsoft Excel as a worksheet.

» To export logs in a log category

- 1 View the desired log category.

See **Viewing Logs** (on page 137).

- 2 Click **Export to Excel**.

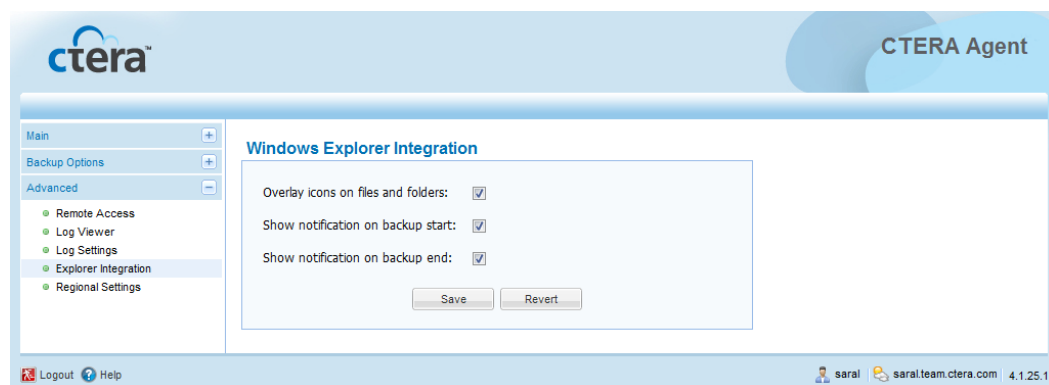
The logs are exported.

Configuring Windows Explorer Integration Settings

» To configure Windows Explorer integration settings

- 1 In the navigation pane, click **Advanced > Explorer Integration**.

The **Windows Explorer Integration** page appears.



- 2 Complete the fields using the information in **CTERA Agent Explorer Integration Fields** (page 44).
- 3 Click **Save**.

Configuring the CTERA Agent Language

You can configure the language to be displayed in the CTERA Agent's interface.

The following languages are supported: English, French, German, Hebrew, Italian, Polish, Spanish, and Portuguese.

Tip



When you install CTERA agent for Windows, the CTERA agent automatically uses the language defined on the PC. If the language is not supported, then English is used by default.

» To configure the CTERA Agent language

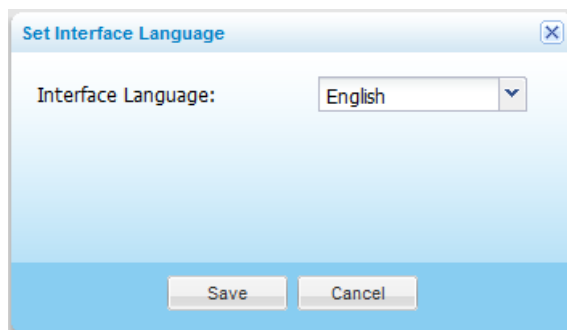
- 1 In the navigation pane, click **Advanced > Regional Settings**.

The **Regional Settings** page appears, displaying the date, time, and time zone currently configured on the CTERA Agent.



- 2 Click **Change Language**.

The **Set Interface Language** dialog box appears.



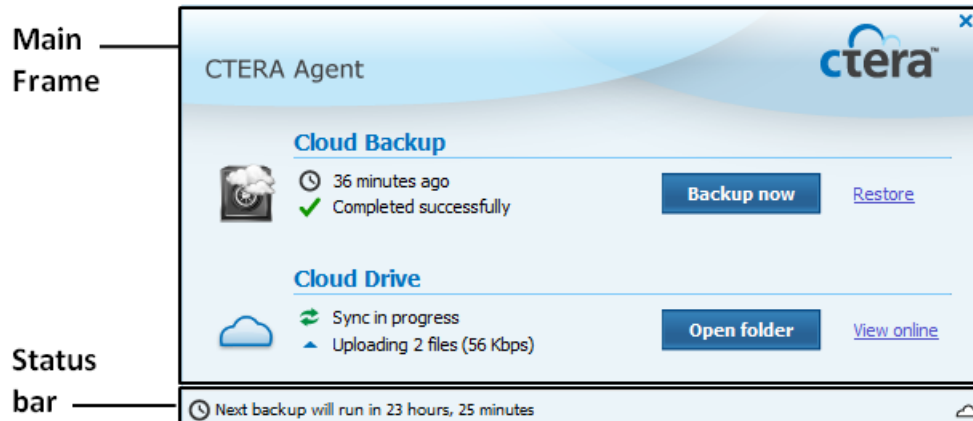
- 3 In the **Interface Language** drop-down list, select your language.
- 4 Click **Save**.

Viewing the Agent Status

» To view the CTERA Agent's status

- Click the CTERA Agent tray icon in the system tray.

The **CTERA Agent** screen appears.



The screen is composed of the following parts:

- **Main frame.** Displays the available types of backup, along with controls for performing these backups and restoring from the created backup files. Under each type of backup, the amount of time since the last backup is displayed, as well as an indication of whether the backup was successful. Mousing over the backup result displays a tooltip with additional details about the backup.
If cloud sync is in process, the number of files remaining for upload or download, and the current transfer speed, are displayed. If a single file is being uploaded/downloaded, then the file name is displayed as well.
- **Status bar.** Displays the amount of time remaining until the next automatic backup. The  icon indicates that the CTERA Agent is in Cloud mode.

Viewing Agent Details

You can view CTERA Agent details, including its version, the operating system on which it is installed, and copyright information.

» To view CTERA Agent details

- 1 Right-click the CTERA Agent tray icon in the system tray, and click **About**.

The **About CTERA Agent** screen appears.



- 2 To view the end user license agreement and services agreement, click **Legal Information**.
- 3 To close the window, click **OK**.

Restoring System State Data, NTDS, and SYSVOL

This chapter explains how to restore a server's system state data, NTDS (Active Directory), and SYSVOL.

In This Chapter

Restoring from a System State Backup on Windows 2003 Server SP2 ----- 151
Restoring NTDS (Active Directory) and SYSVOL Applications on Windows 2003 / 2008 Server155

Restoring from a System State Backup on Windows 2003 Server SP2

This procedure restores a server's system state data, including the following:

- + The computer name
- + IP address
- + Registry
- + COM+ Class Registration database
- + Files under Windows File Protection

Tip



Depending on the server's configuration, the system state data may include the following, as well:

- + The Certificate Services database, if the server is a certificate server
- + Active Directory directory service, if the server is a domain controller
- + The SYSVOL directory, if the server is a domain controller
- + Cluster service information, if the server is part of a cluster
- + IIS Metadirectory, if the ISS is installed

Any other role which was previously installed and is not listed above must be manually installed, for example roles such as DNS, DHCP, and so on.

» To prepare for system state restoration

1 Install the following on your computer:

- + Windows 2003 Server SP2

CTERA Agent

2 Obtain the system state backup file, by doing one of the following:

In Gateway mode, do the following:

1 Connect the CTERA Agent to the cloud gateway.

See **Connecting the Agent to a Cloud Gateway** (on page 29).

2 Restore the system state backup file from the CTERA agent to your computer.

See *your CTERA cloud gateway's user guide, Restoring Files from File-Level Backup* (on page 47).

In Cloud mode, do the following:

1 Connect the CTERA Agent to the CTERA Portal.

See **Connecting the Agent to the CTERA Portal** (see "**Connecting the CTERA Agent to the CTERA Portal**" on page 71).

2 Ask the portal administrator to associate the old CTERA Agent's backup folder with your new CTERA Agent.

3 Restore the system state backup file from the CTERA Portal to your computer.

See *your CTERA cloud gateway's user guide, Restoring Files and Folders from the Cloud Backup Control Panel* (on page 130).

» To restore from a system state backup

1 Restart the computer.

2 Press the F8 key.

The boot menu appears.

3 Choose **Directory Services Restore Mode (Domain Controllers Only)**.

4 Login using the local administrator account.

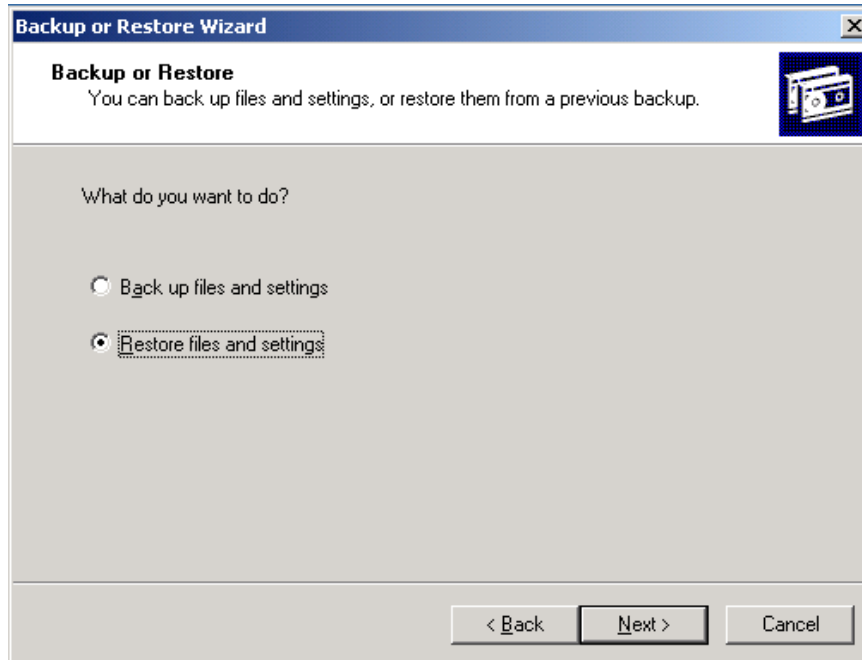
5 In the **START** menu, click **Programs > Accessories > System Tools > Backup**.

The **Backup or Restore Wizard** opens.



- 6 Click **Next**.

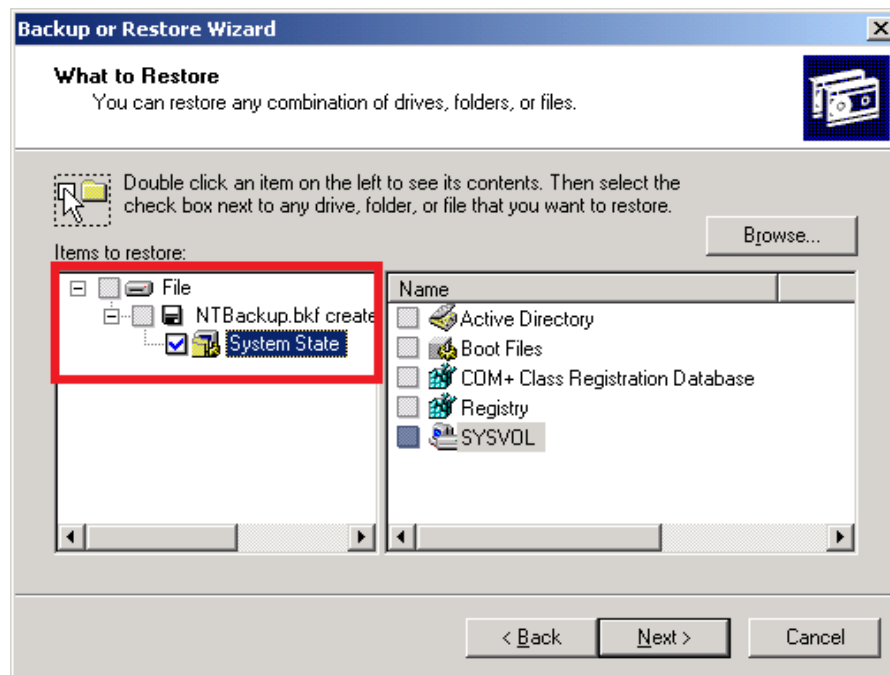
The **Backup or Restore** dialog box appears.



- 7 Choose **Restore files and settings**.

- 8 Click **Next**.

The **What to Restore** dialog box appears.

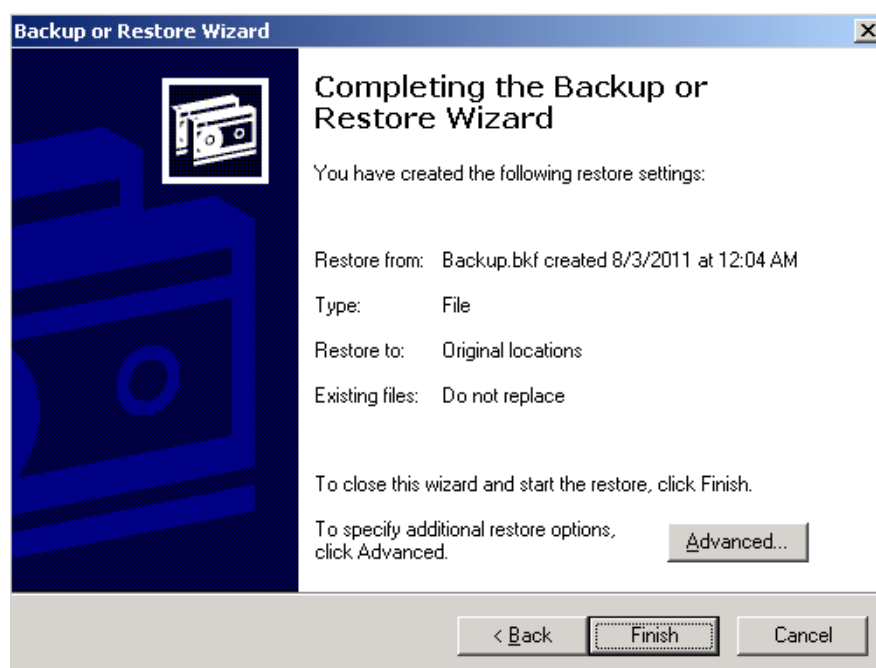


- 9 Click **Browse**, and browse to the system state backup file.

The file appears in the **Items to restore** pane.

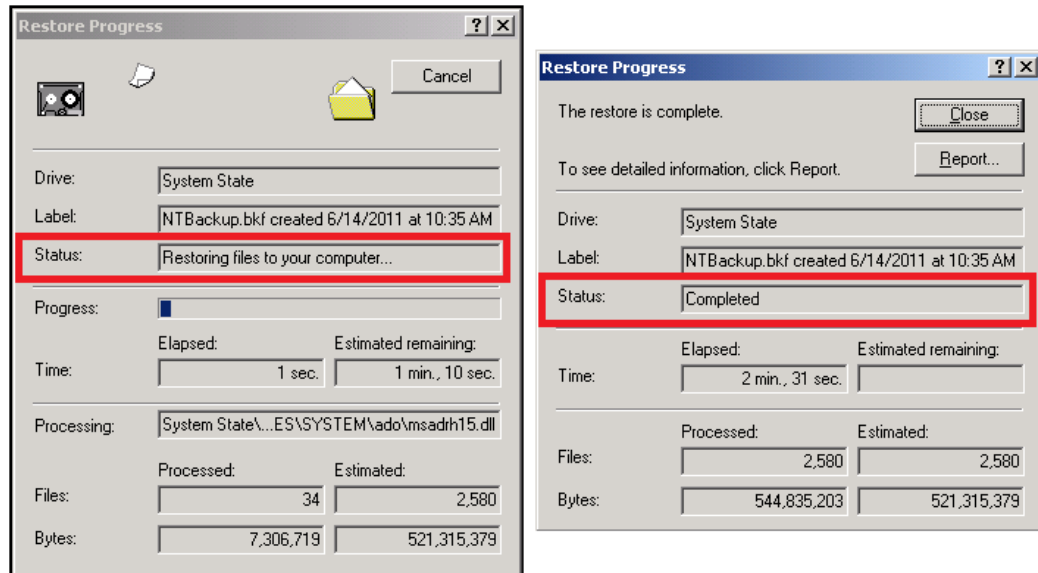
- 10 In the **Items to restore** pane, select **System State**.
- 11 Click **Next**.

The **Completing the Backup or Restore** dialog box appears.



- 12 Click **Finish**.

The **Restore Progress** window opens and tracks the progress of system state restoration.



- 13** Once restoration is complete, click **Close**.

A message appears asking whether you want to restart the computer.

- 14** Click **Yes**.

- 15** Allow the computer to boot normally, and log in with the domain administrator account.

Once Windows has finished starting up, a message appears asking whether you want to restart the computer.

- 16** Click **Yes**.

Restoring NTDS (Active Directory) and SYSVOL Applications on Windows 2003 / 2008 Server

The following procedure can be used to restore NTDS (Active Directory), SYSVOL, or both simultaneously, to the same server.

» To restore NTDS and/or SYSVOL in Gateway mode

- 1** Restart the computer.
- 2** Press the F8 key.

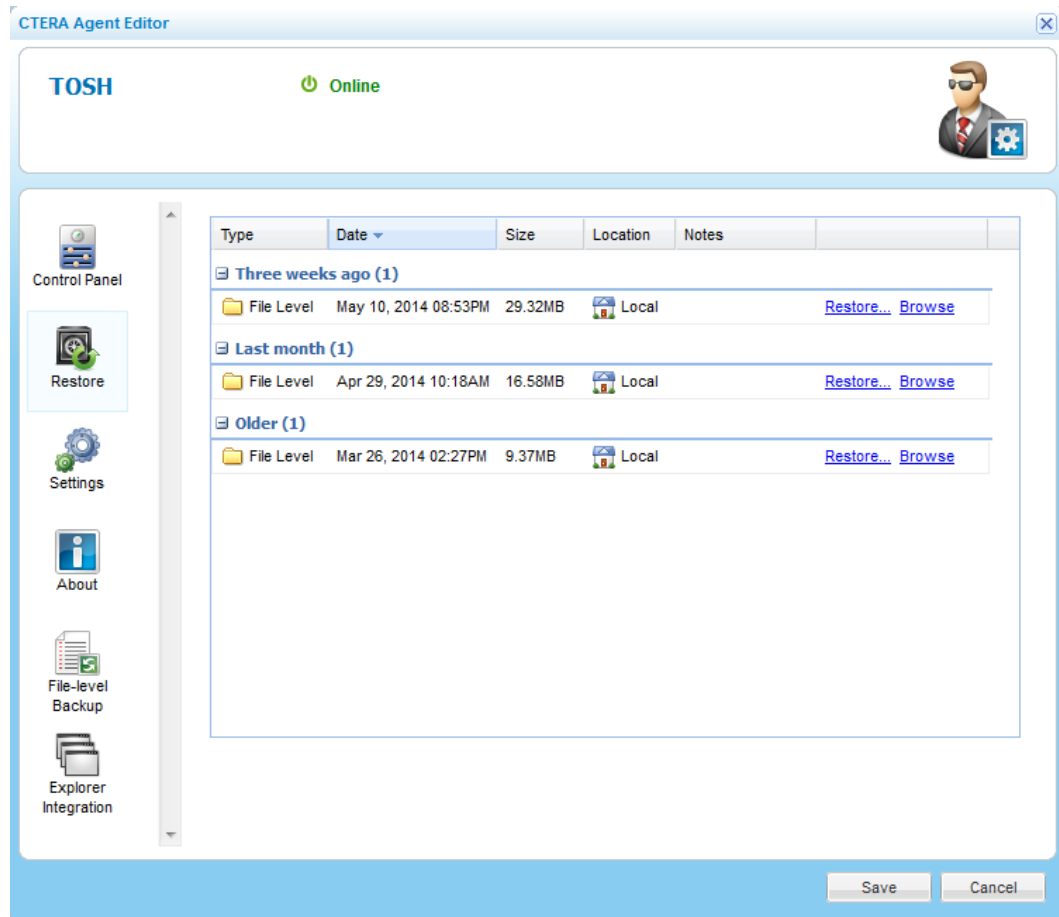
The boot menu appears.

- 3** Choose **Directory Services Restore Mode (Domain Controllers Only)**.
- 4** Do one of the following:

- + In Windows 2003 Server, log in using the restore mode administrator account.

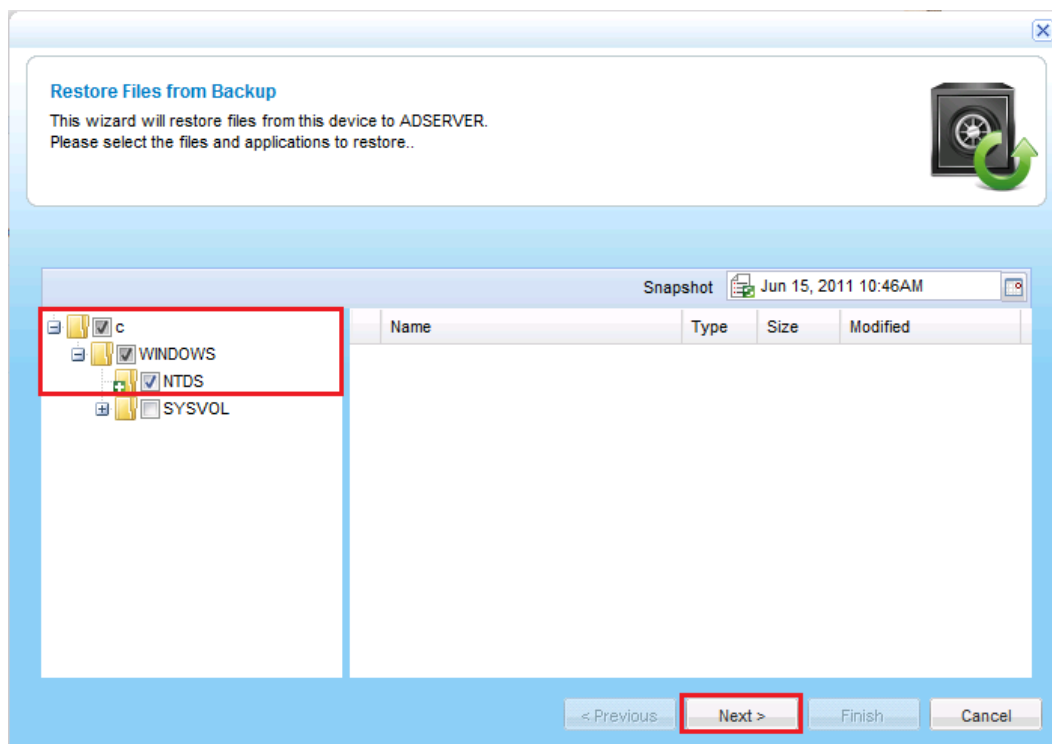
- + In Windows 2008 Server, log in using the local administrator account, by specifying the following user name: <ComputerName>\Administrator.
- 5** Right-click on the CTERA Agent tray icon in the notification area of the Windows taskbar, and click **Restore**.

The CTERA Agent Manager opens displaying the **Restore** tab.



- 6** Next to the desired snapshot, click **Restore**.

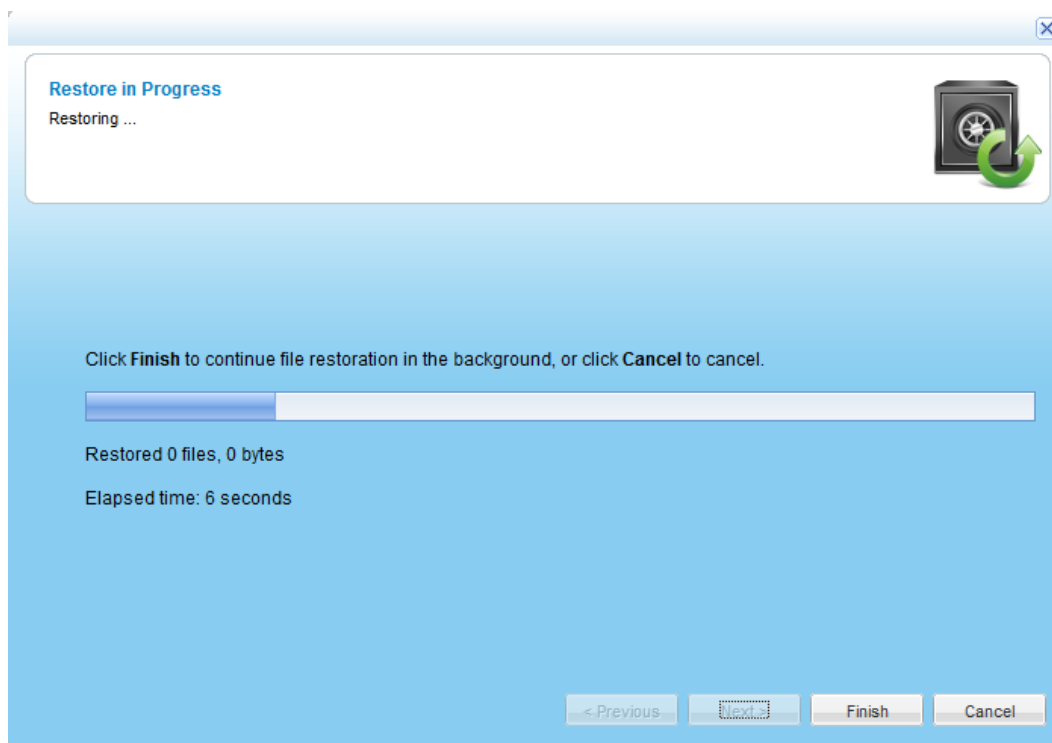
The **Restore Files from Backup** dialog box opens.



7 Select the **NTDS** and/or **SYSVOL** folder(s).

8 Click **Next**.

The **Restore In Progress** screen appears with a progress bar.



9 Click **Finish**.

10 Restart the computer and allow it to boot normally.

» **To restore NTDS and/or SYSVOL in Cloud mode**

1 Restart the computer.

2 Press the F8 key.

The boot menu appears.

3 Choose **Directory Services Restore Mode (Domain Controllers Only)**.

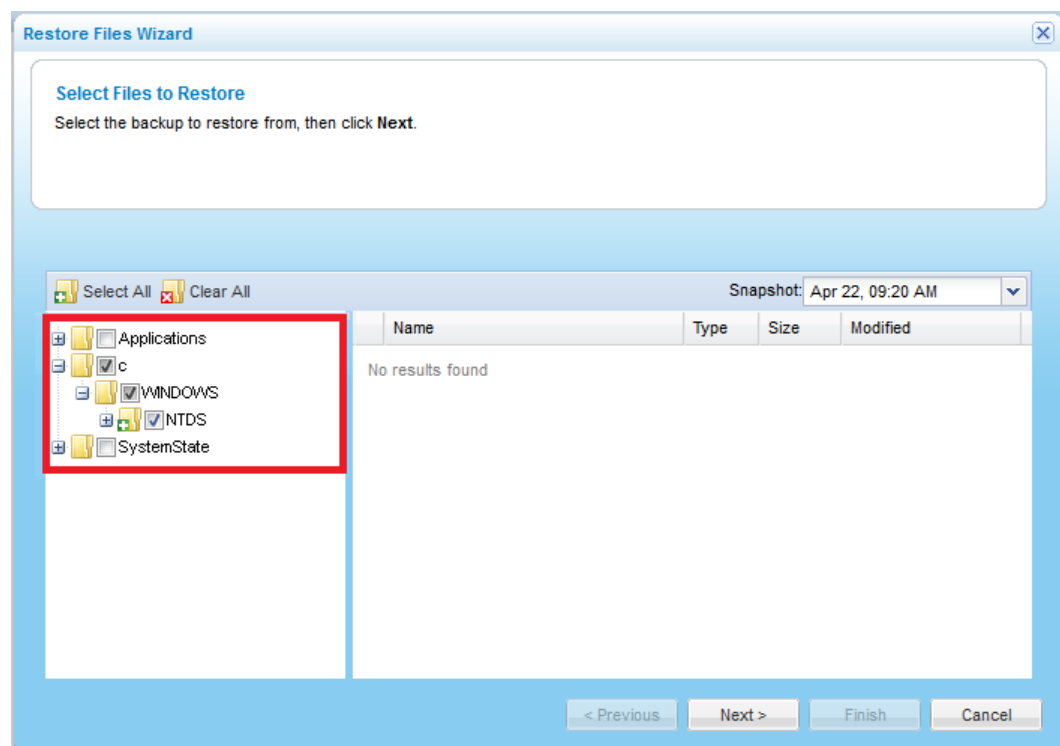
4 Do one of the following:

+ In Windows 2003 Server, log in using the restore mode administrator account.

+ In Windows 2008 Server, log in using the local administrator account, by specifying the following user name: <ComputerName>\Administrator.

5 Right-click on the CTERA Agent tray icon in the notification area of the Windows taskbar, and click **Restore**.

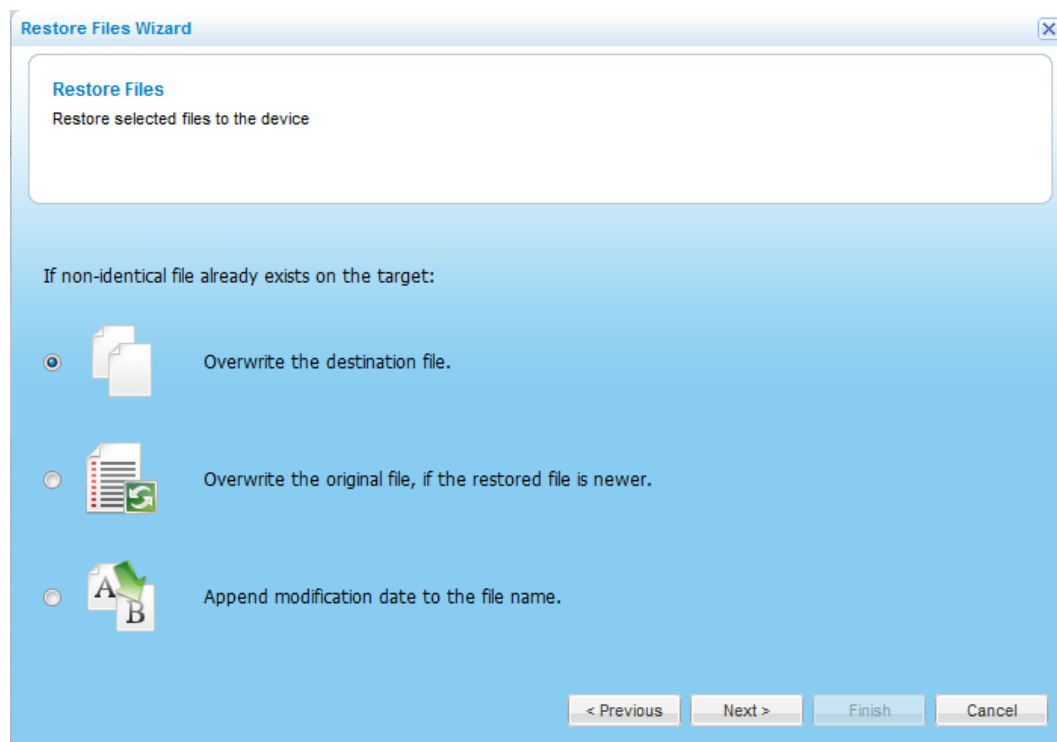
The **Restore Files Wizard** opens displaying the **Select Files to Restore** dialog box.



6 Select the **NTDS** and/or **SYSVOL** folder(s).

7 Click **Next**.

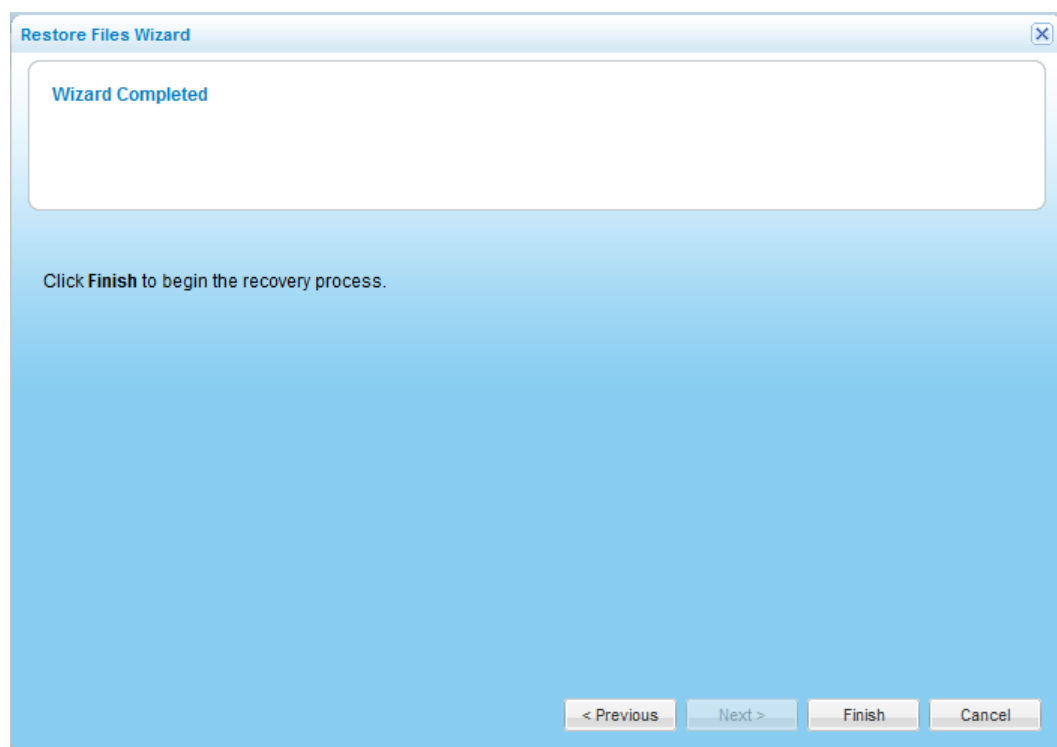
The **Restore Files** dialog box appears.



8 Choose **Overwrite the destination file.**

9 Click **Next.**

The **Wizard Completed** screen appears.



- 10 Click **Finish**.
- 11 Restart the computer and allow it to boot normally.

Backing Up and Restoring Hyper-V Virtual Machines

This chapter explains how to backup your Microsoft Hyper-V Server Virtual Machines (VMs) and restore them from a file-level backup.

In This Chapter

Backing Up and Restoring Microsoft Hyper-V VMs in Gateway Mode	161
Backing Up and Restoring Microsoft Hyper-V VMs in Cloud Mode	167

Backing Up and Restoring Microsoft Hyper-V VMs in Gateway Mode

If your CTERA Agent is connected to a CTERA cloud gateway, use the following procedures to backup and restore your Hyper-V Server VMs.

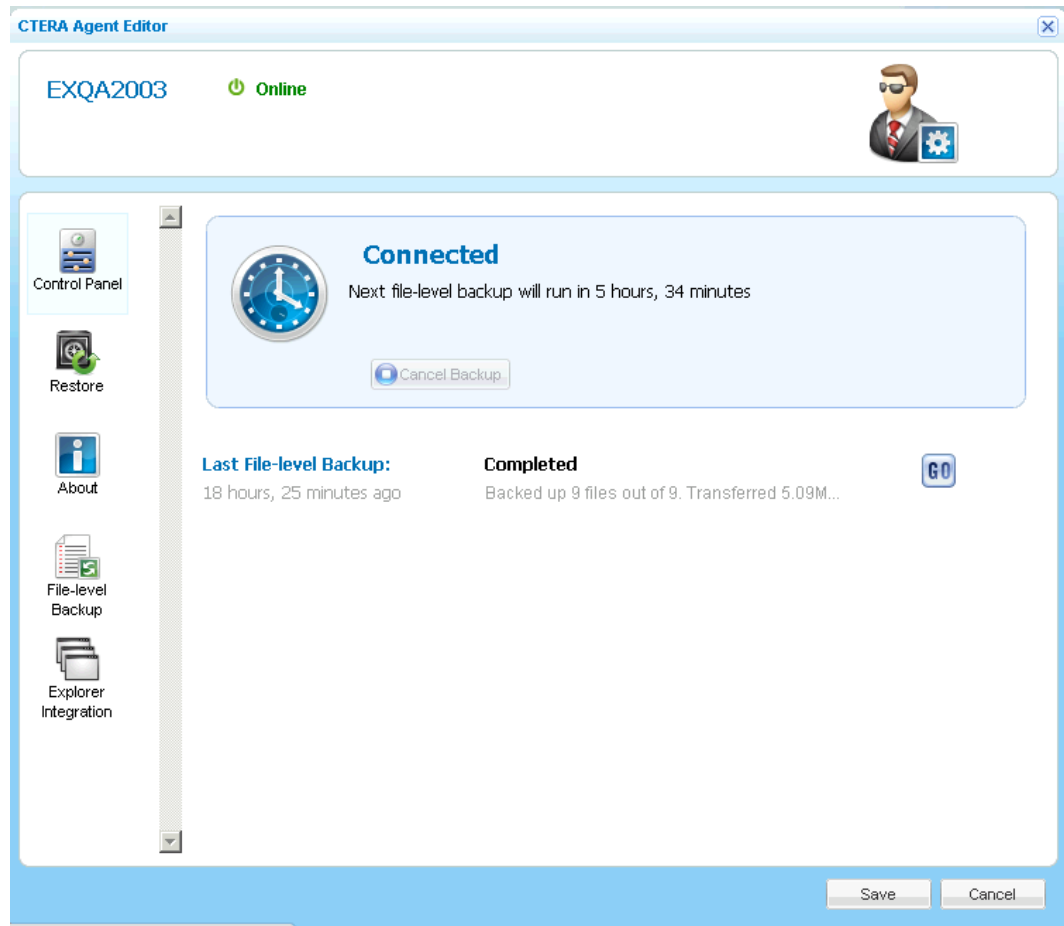
Backing Up Microsoft Hyper-V Server VMs (Gateway Mode)

» To back up Microsoft Hyper-V Server VMs

- 1 Right-click on the CTERA Agent tray icon in the notification area of the Windows taskbar, and then click Settings.

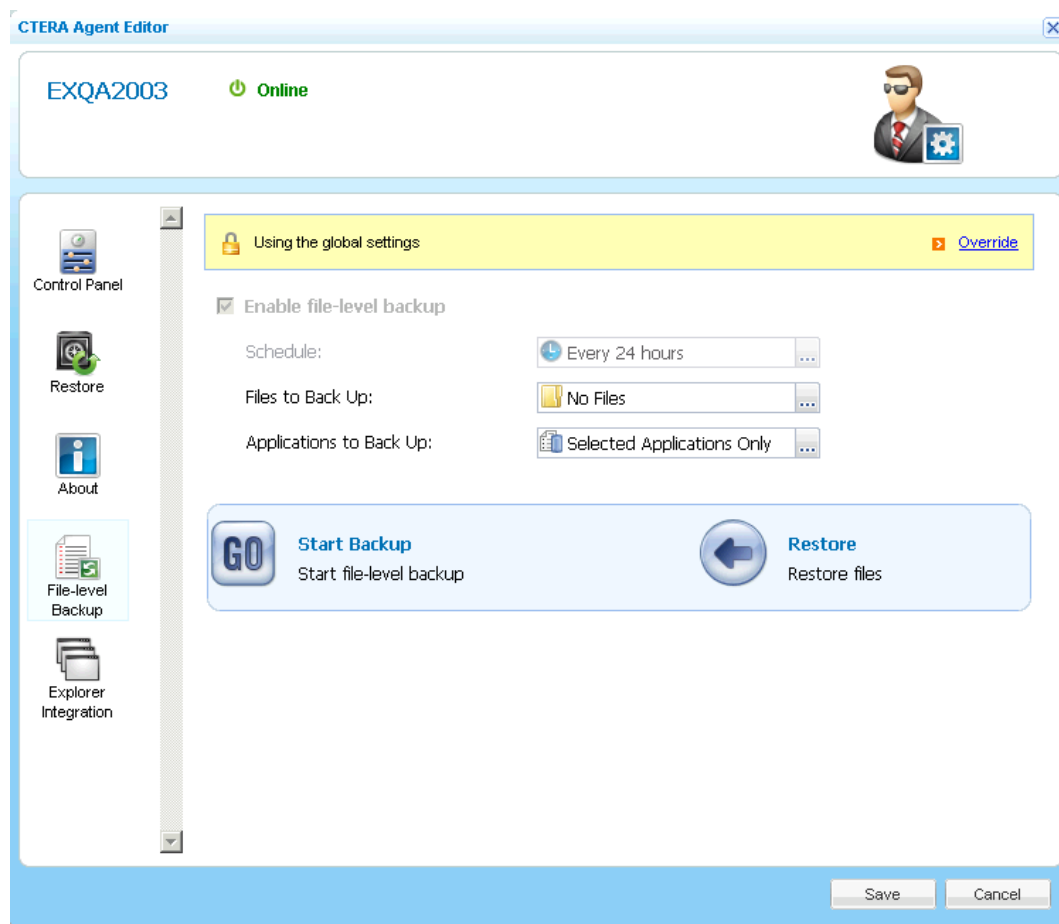
If you are prompted for a username-password authentication, enter your credentials.

The CTERA Agent Manager opens displaying the **Control Panel** tab.



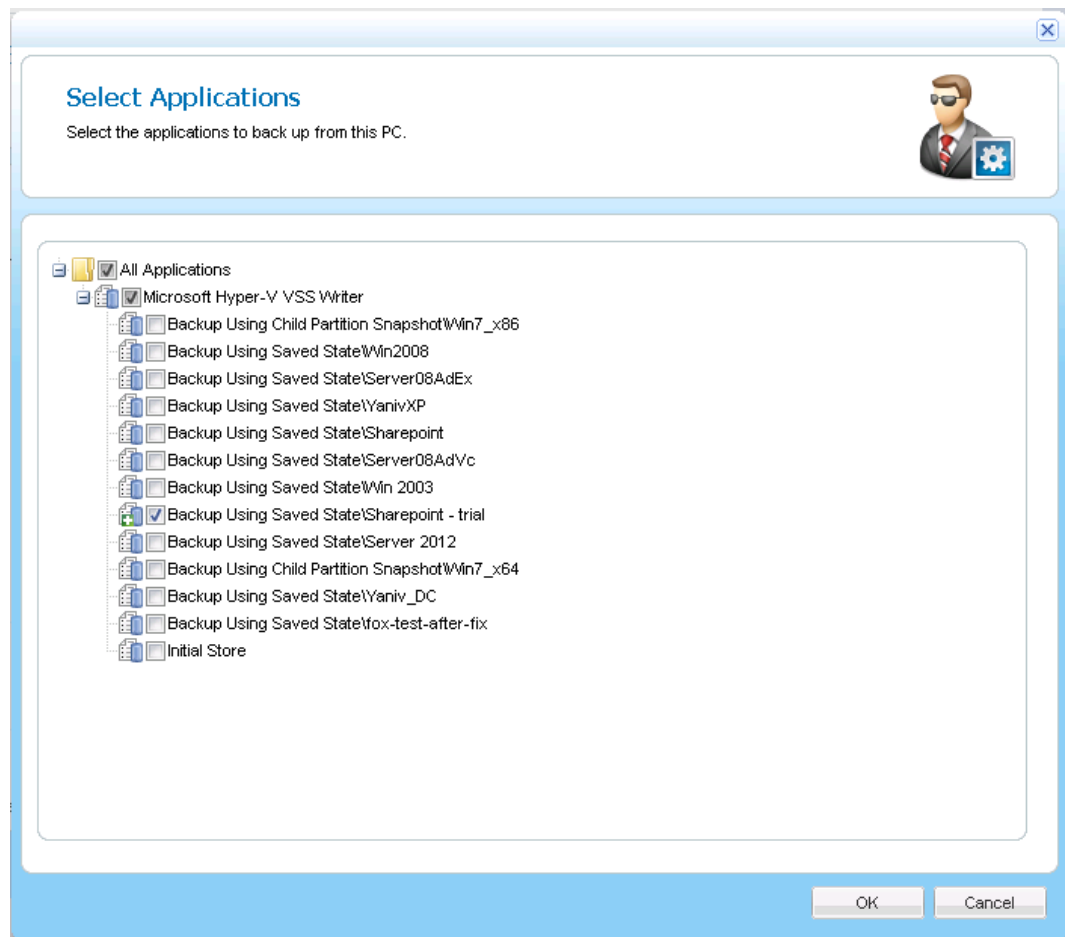
- 2 Click the **File-level Backup** tab.

The **File-level Backup** tab appears.



- 3 In the **Applications to Back Up** field, click .

The **Select Applications** window opens.



- 4 Click on the + icons to expand the **All Applications > Microsoft Hyper-V VSS Writer** node, then select the check boxes next to the VMs you would like to back up.

You can select all VMs, by selecting the **Microsoft Hyper-V VSS Writer** check box.

- 5 Click **OK**.
- 6 Click **Save**.
- 7 Click the **Control Panel** tab.

The Control Panel tab appears.

- 8 Click **Go**.

The Microsoft Hyper-V Server VMs are backed up.

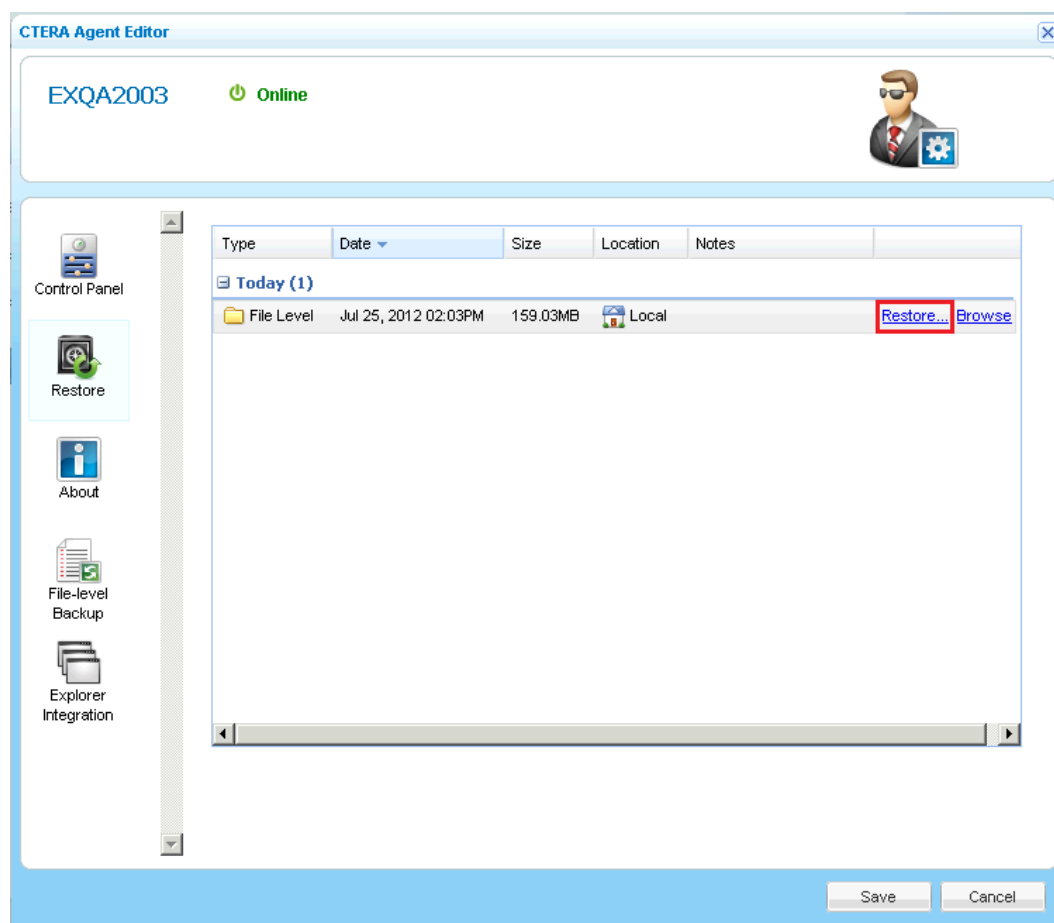
Restoring Microsoft Hyper-V Server VMs (Gateway Mode)

This procedure explains how to restore some or all Hyper-V Server VMs.

» To restore Microsoft Hyper-V Server VMs

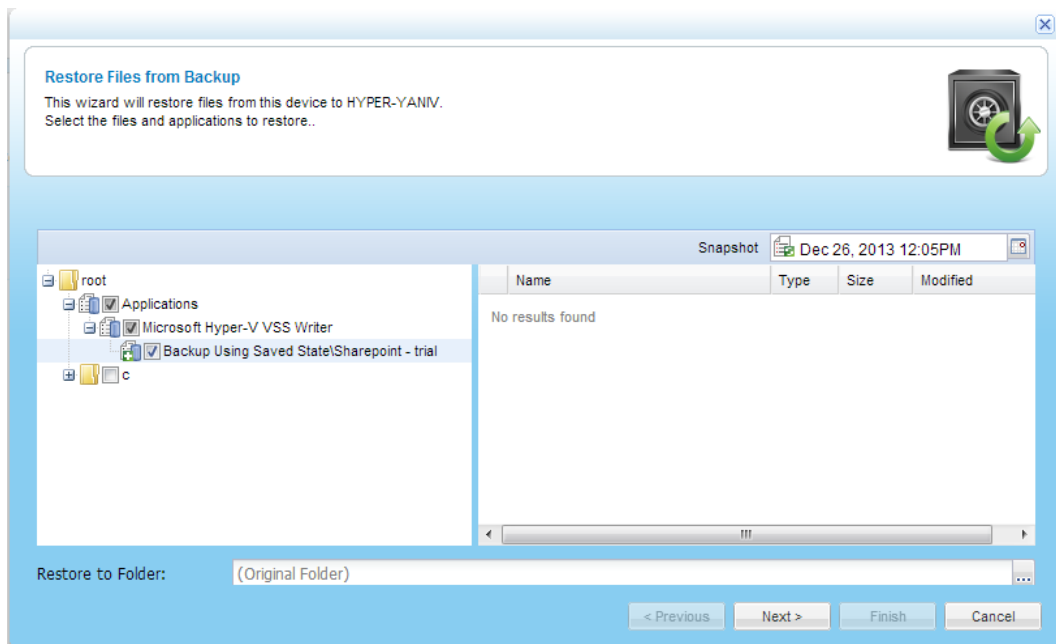
- 1 Right-click on the CTERA Agent tray icon in the notification area of the Windows taskbar, and then click **Restore**.

The CTERA Agent Manager opens displaying the **Restore** tab.



- 2 Next to the file-level-backup from which you would like to restore the Hyper-V VMs, click **Restore**.

The **Restore Files from Backup** dialog box opens.

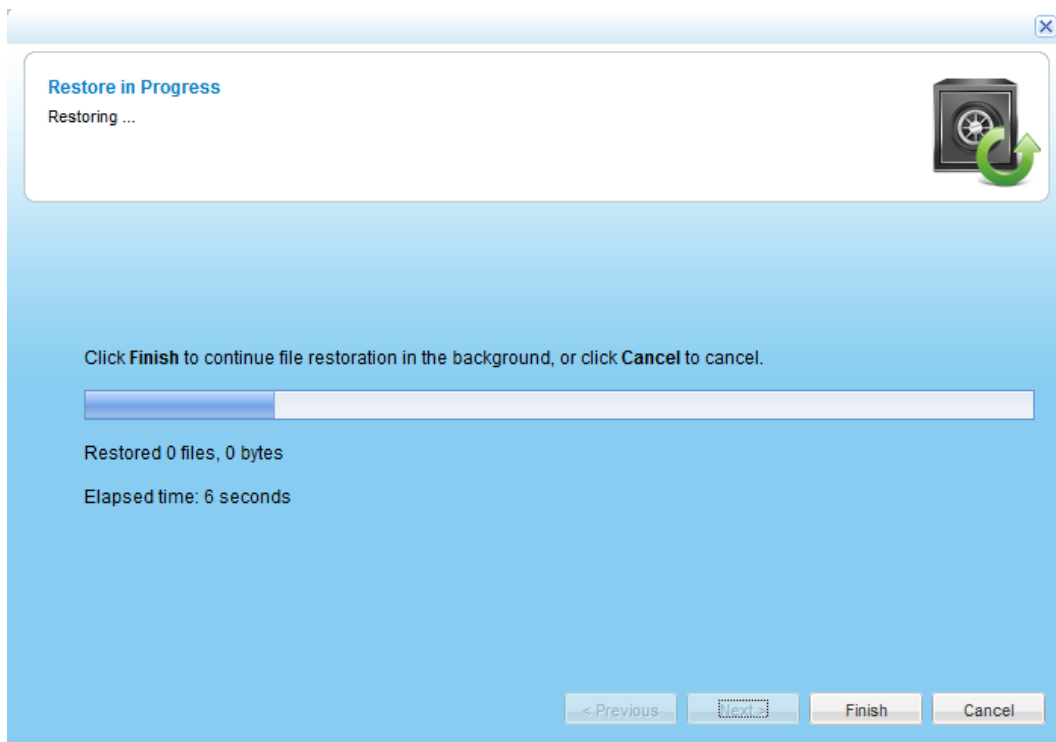


- 3 Click on the + icons to expand the **All Applications > Microsoft Hyper-V VSS Writer** node, then select the check boxes next to the VMs you would like to restore.

You can select all VMs, by selecting the **Microsoft Hyper-V VSS Writer** check box.

- 4 Click Next.

The **Restore In Progress** screen appears with a progress bar.



- 5 Once the restoration is complete, click **Finish**.

Backing Up and Restoring Microsoft Hyper-V VMs in Cloud Mode

If your CTERA Agent is connected to the CTERA Portal, use the following procedures to backup and restore your Hyper-V Server VMs.

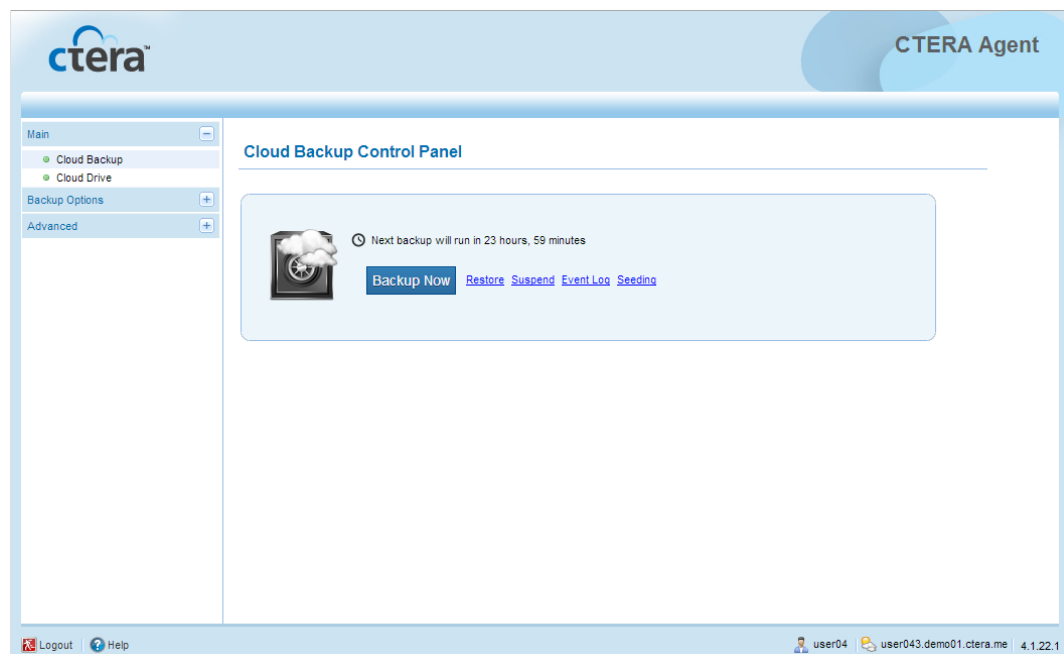
Backing Up Microsoft Hyper-V Server VMs (Cloud Mode)

» To back up Microsoft Hyper-V Server VMs

- 1 Right-click on the CTERA Agent tray icon in the notification area of the Windows taskbar, and then click **Settings**.

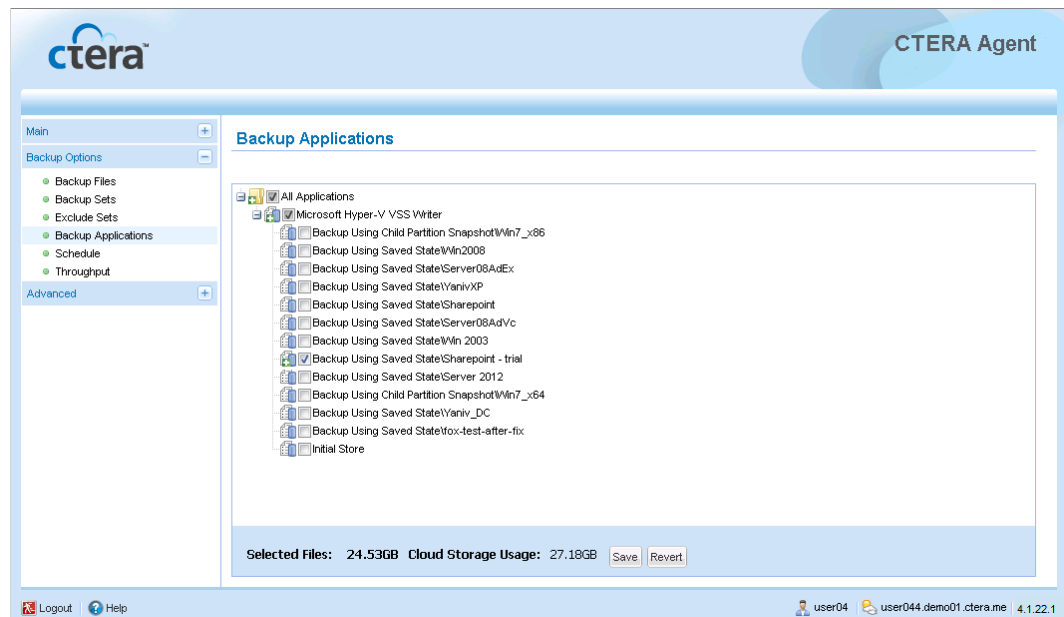
If you are prompted for a username-password authentication, enter your credentials.

The CTERA Agent Web interface opens in your Web browser, displaying the **Cloud Backup Control Panel** page.



- 2 In the navigation pane, click **Backup Options > Backup Applications**.

The **Backup Applications** page appears.



- 3 Click on the + icons to expand the **All Applications > Microsoft Hyper-V VSS Writer** node, then select the check boxes next to the VMs you would like to back up.

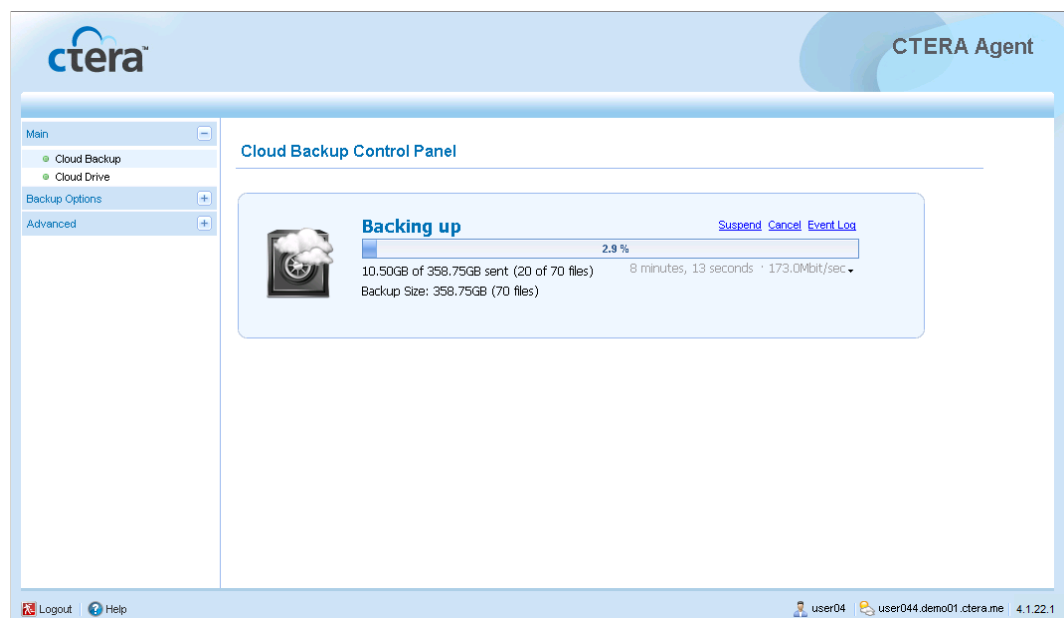
You can select all VMs, by selecting the **Microsoft Hyper-V VSS Writer** check box.

- 4 Click **Save**.
- 5 In the navigation pane, click **Main > Cloud Backup**.

The **Cloud Backup Control Panel** page appears.

- 6 Click **Backup Now**.

A progress bar appears, and the Microsoft Hyper-V Server VMs are backed up.



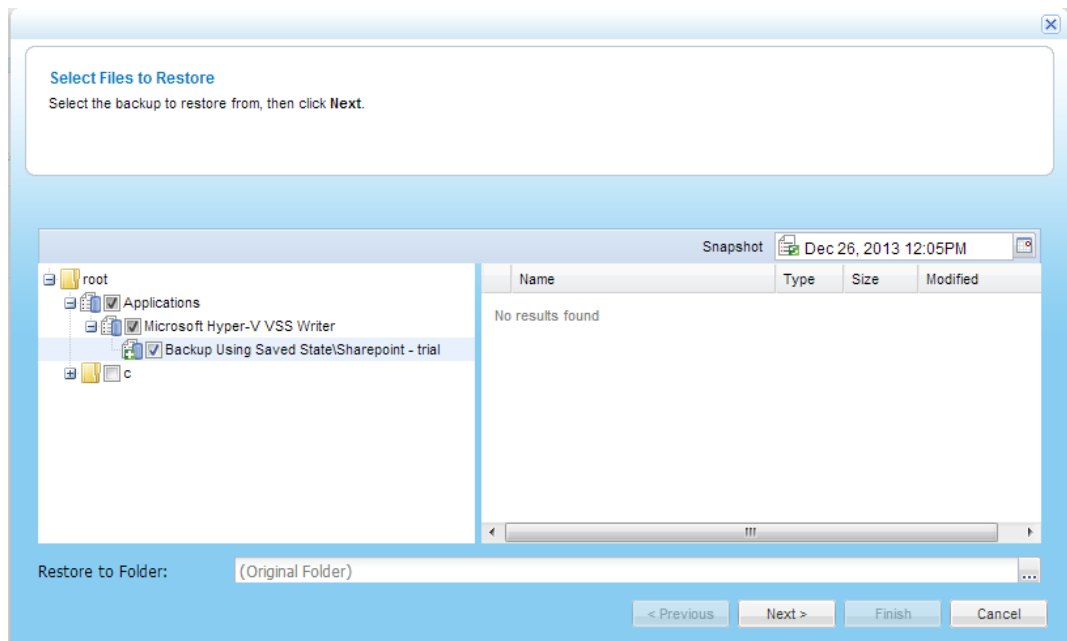
Restoring Microsoft Hyper-V Server VMs (Cloud Mode)

This procedure explains how to restore some or all Hyper-V Server VMs.

» To restore Microsoft Hyper-V Server VMs

- 1 Right-click on the CTERA Agent tray icon in the notification area of the Windows taskbar, and then click **Restore**.

The Restore Files Wizard opens displaying the **Select Files to Restore** dialog box.

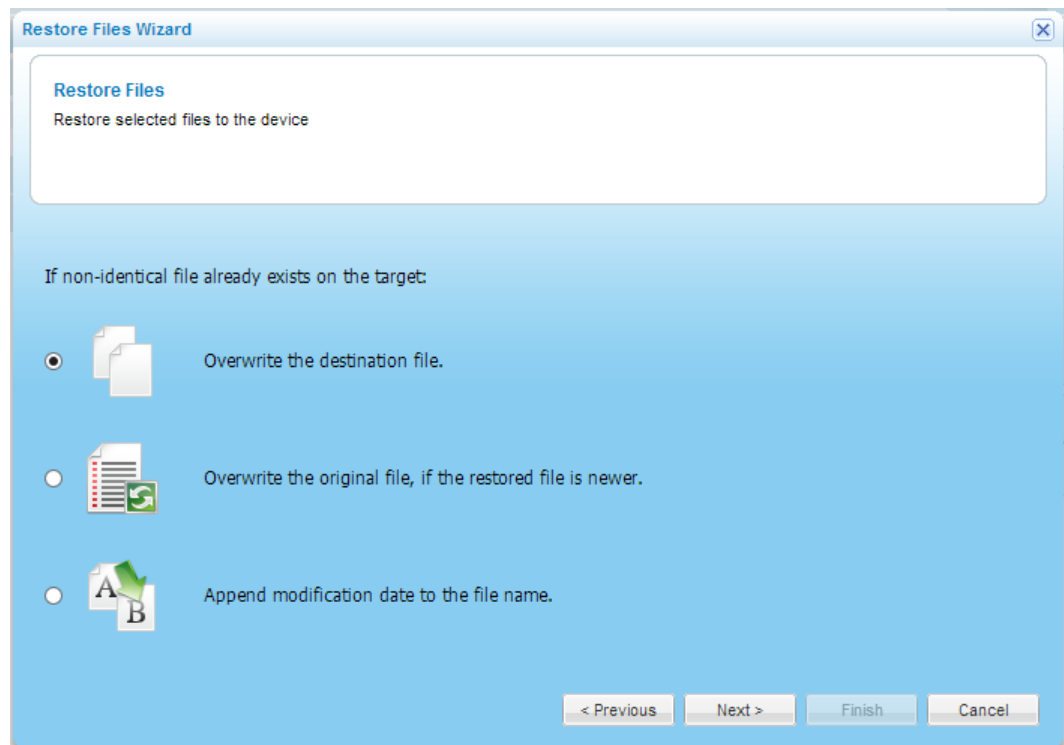


- 2 Click on the + icons to expand the **All Applications > Microsoft Hyper-V VSS Writer** node, then select the check boxes next to the VMs you would like to restore.

You can select all VMs, by selecting the **Microsoft Hyper-V VSS Writer** check box.

- 3 Click **Next**.

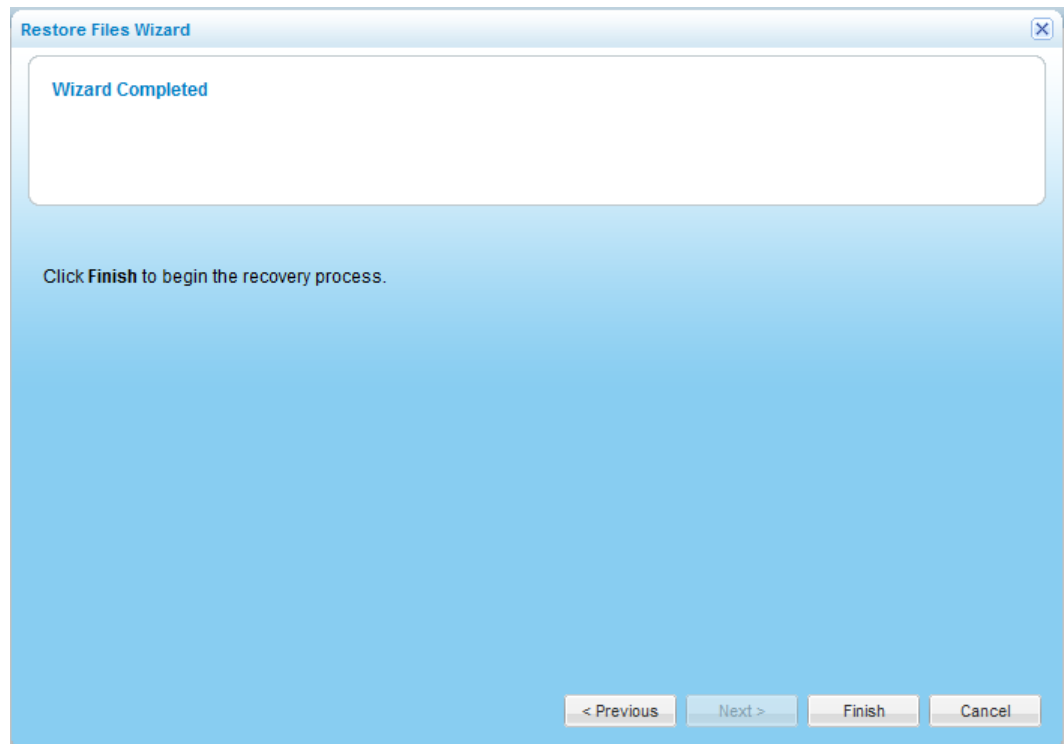
The **Restore Files** dialog box appears.



4 Choose **Overwrite the destination file**.

5 Click **Next**.

The **Wizard Completed** screen appears.



6 Click **Finish**.

Tip



You can monitor the restoration process from the CTERA Cloud Agent's Web Interface.

Backing Up and Restoring SQL Server Databases

This chapter explains how to backup your Microsoft SQL server databases and restore them from a file-level backup.

In This Chapter

Backing Up and Restoring SQL Server in Gateway Mode	173
Backing Up and Restoring SQL Server Databases in Cloud Mode	179

Backing Up and Restoring SQL Server in Gateway Mode

If your CTERA Agent is connected to a CTERA cloud gateway, use the following procedures to back up and restore your SQL server databases.

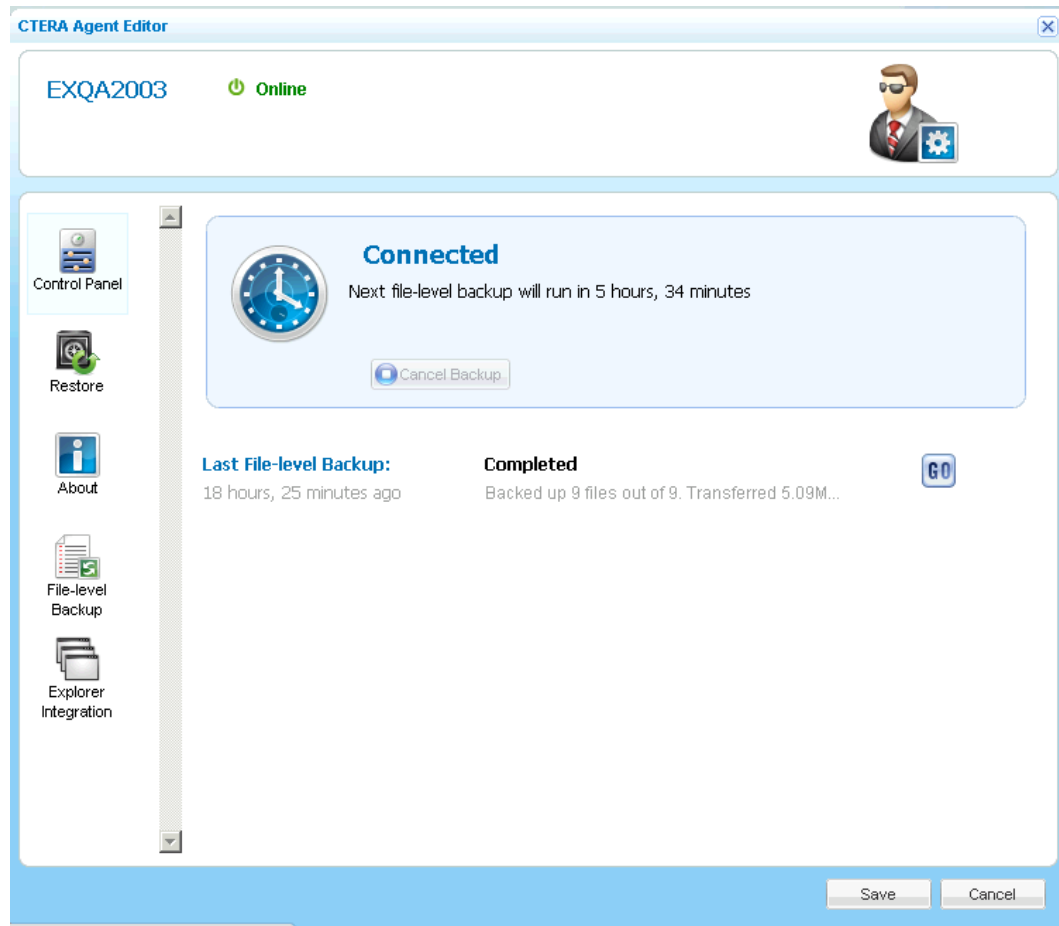
Backing Up SQL Server Databases (Gateway Mode)

» To back up SQL server databases

- 1 Right-click on the CTERA Agent tray icon in the notification area of the Windows taskbar, and then click **Settings**.

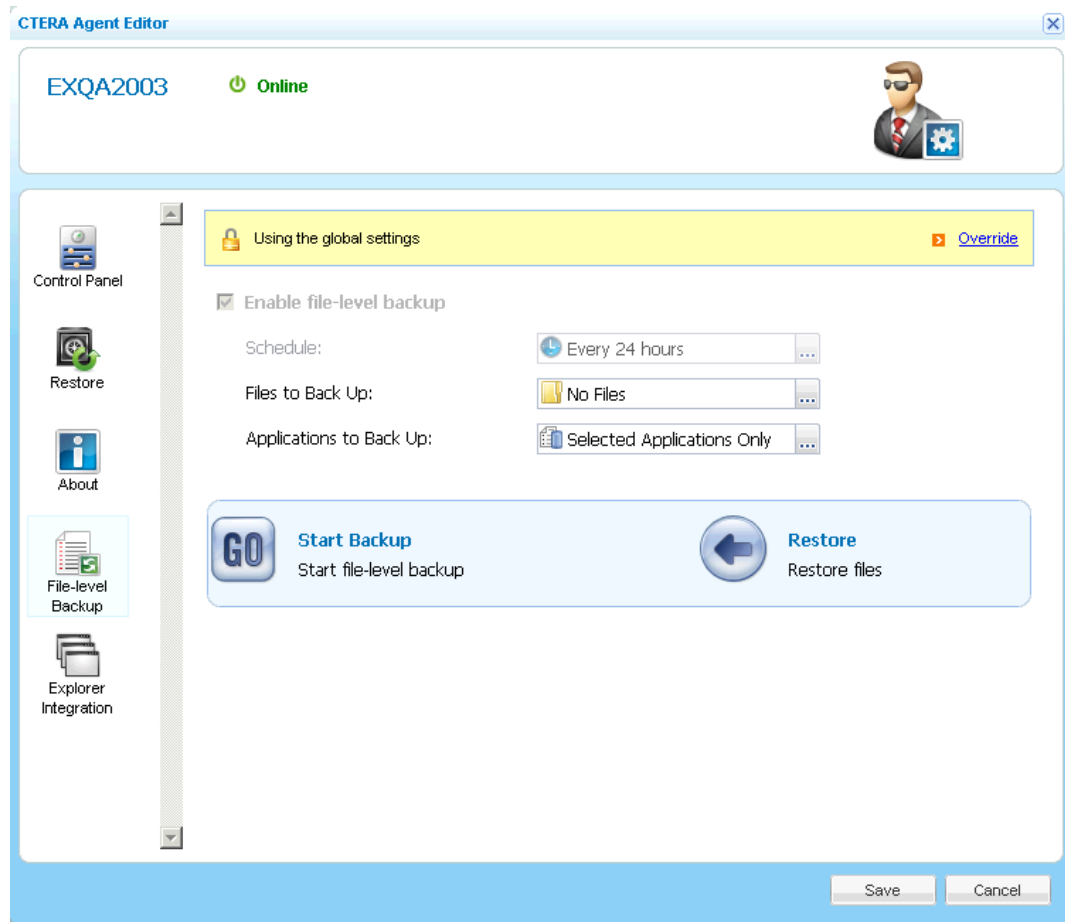
If you are prompted for a username-password authentication, enter your credentials.

The CTERA Agent Manager opens displaying the **Control Panel** tab.



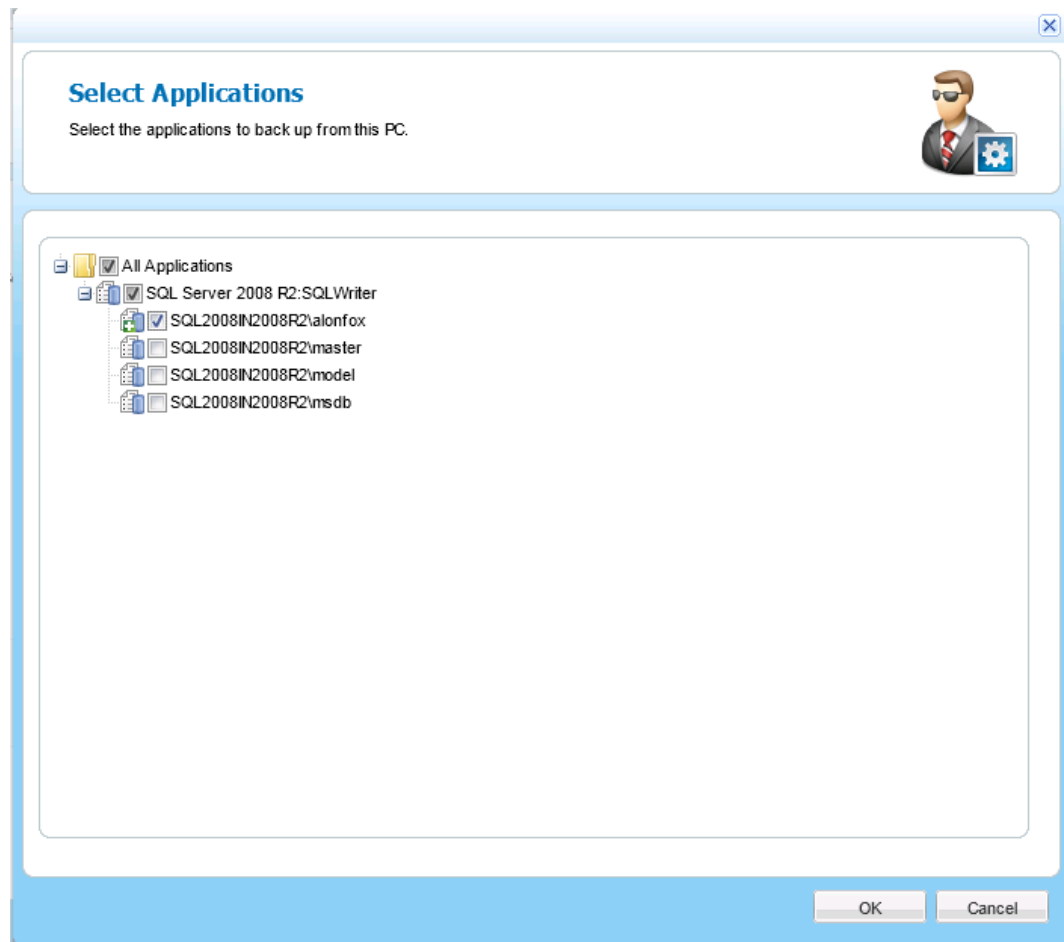
- 2 Click the **File-level Backup** tab.

The **File-level Backup** tab appears.



- 3 In the **Applications to Back Up** field, click .

The **Select Applications** window opens.



- 4 Click on the + icons to expand the **All Applications** node, then select the check boxes next to the databases you want to back up.

- 5 Click **OK**.

- 6 Click **Save**.

- 7 Click the **Control Panel** tab.

The **Control Panel** tab appears.

- 8 Click **Go**.

The SQL server databases are backed up.

Restoring SQL Server Databases (Gateway Mode)

This procedure explains how to restore an entire SQL Server database.

Tip



In order to restore databases backed up by CTERA to a new server instance, make sure the new server meets the following requirements:

- The SQL version on the new server is the same as the SQL version on the old server.
- The computer name of the new server is the same as the computer name of the old server.
- The SQL Server name on the new server is the same as the SQL Server name on the old server.

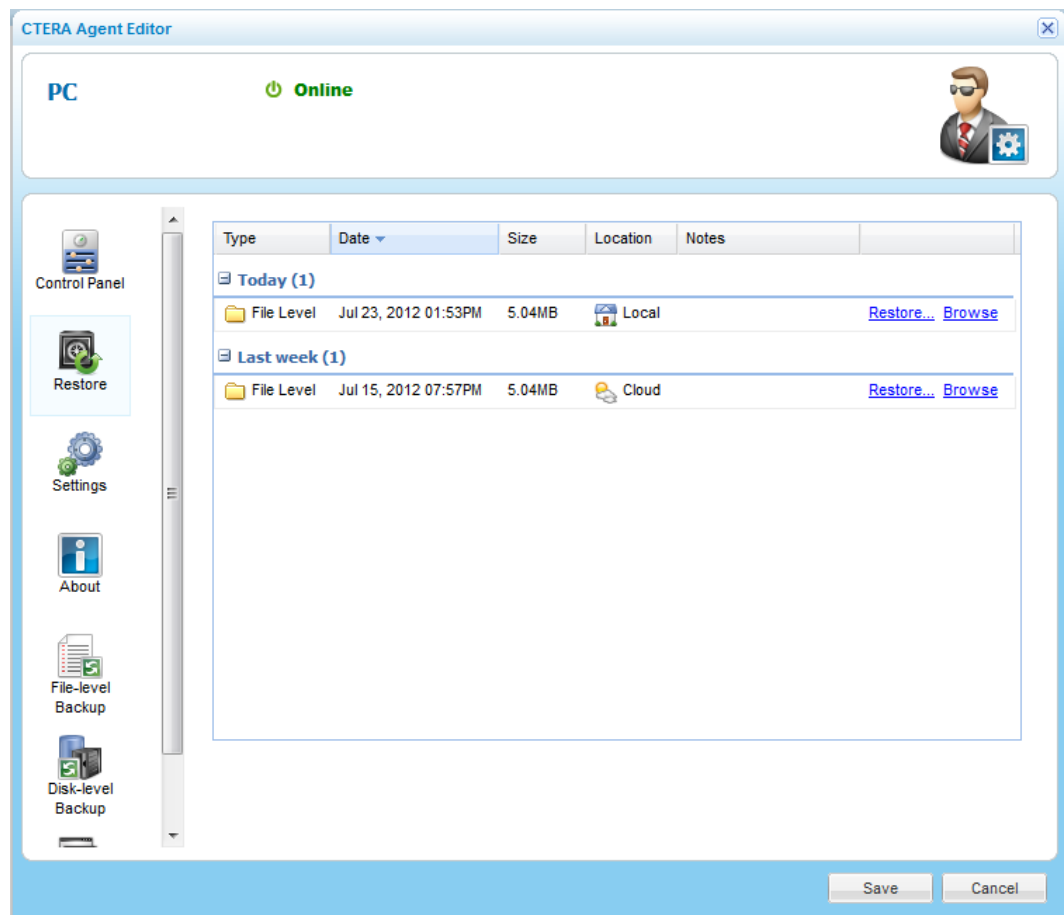
» To restore SQL server databases

- 1 Connect your CTERA Agent to the CTERA cloud gateway.

For information, refer to the cloud gateway's user guide or the *CTERA Agent User Guide*.

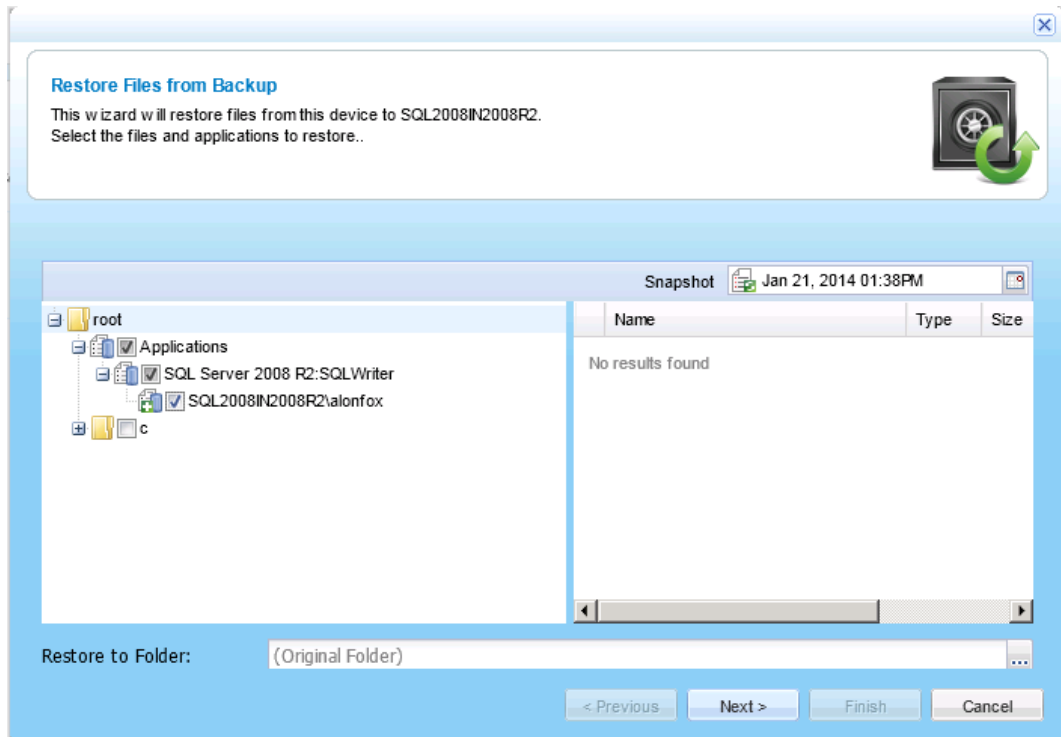
- 2 Right-click on the CTERA Agent tray icon in the notification area of the Windows taskbar, and click **Restore**.

The CTERA Agent Manager opens displaying the **Restore** tab.



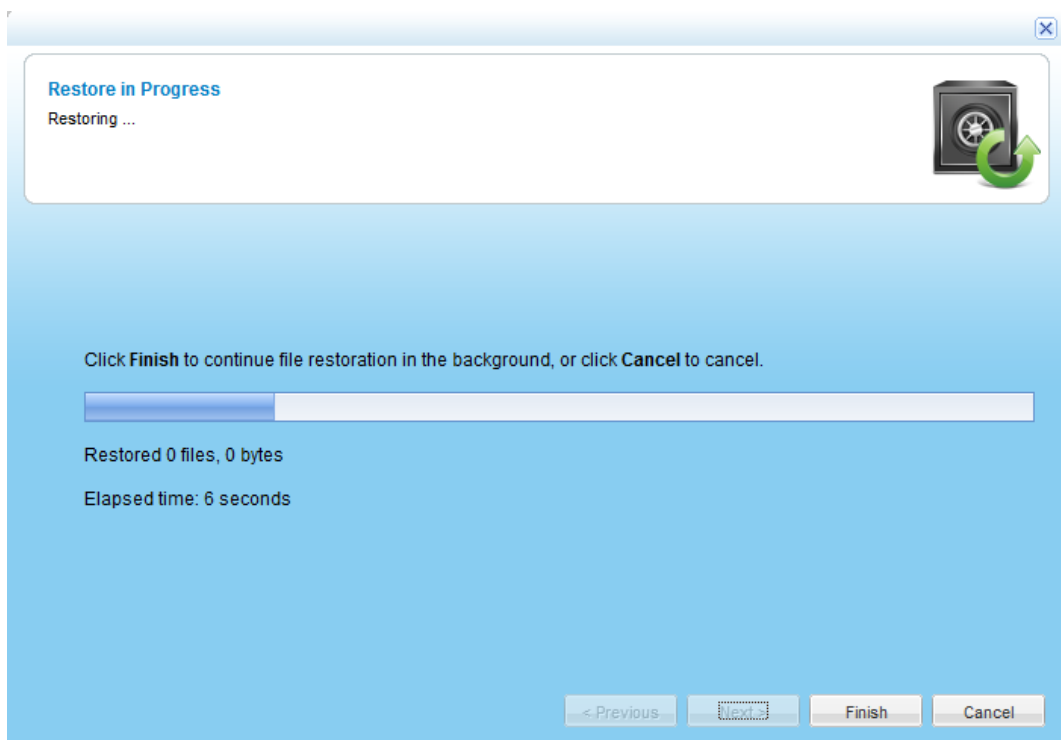
- 3 Next to the desired snapshot, click **Restore**.

The **Restore Files from Backup** dialog box opens.



- 4 Expand the list using the + icon and select the databases you would like to restore.
- 5 Click **Next**.

The **Restore In Progress** screen appears with a progress bar.



- 6 Click **Finish**.

Backing Up and Restoring SQL Server Databases in Cloud Mode

If your CTERA Agent is connected to the CTERA Portal, use the following procedures to back up and restore your SQL server databases.

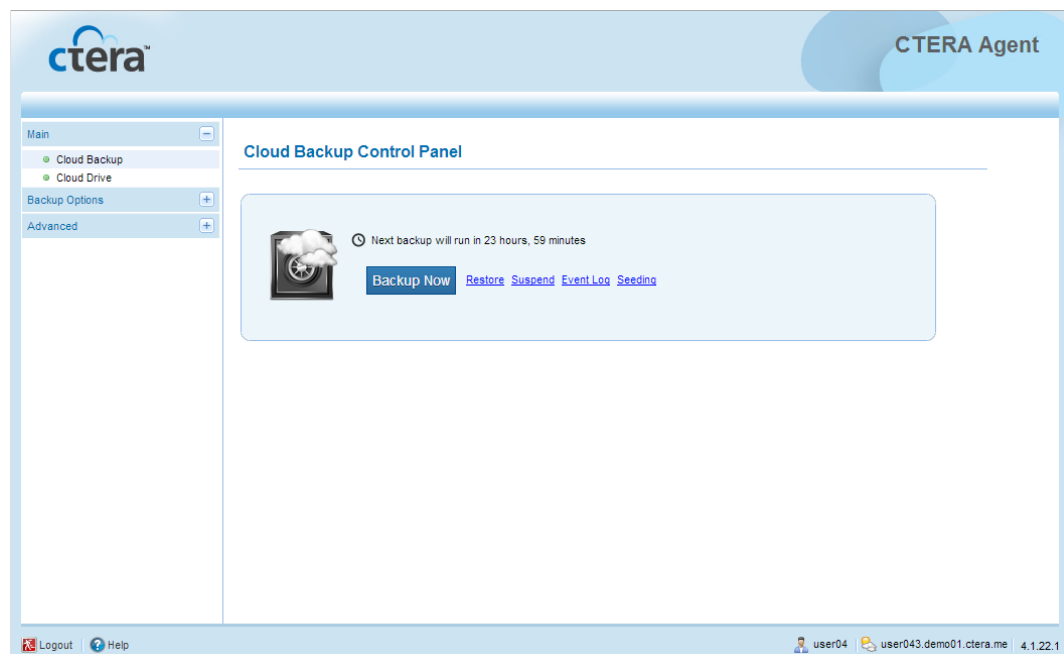
Backing Up SQL Server Databases (Cloud Mode)

» To back up SQL server databases

- 1 Right-click on the CTERA Agent tray icon in the notification area of the Windows taskbar, and then click **Settings**.

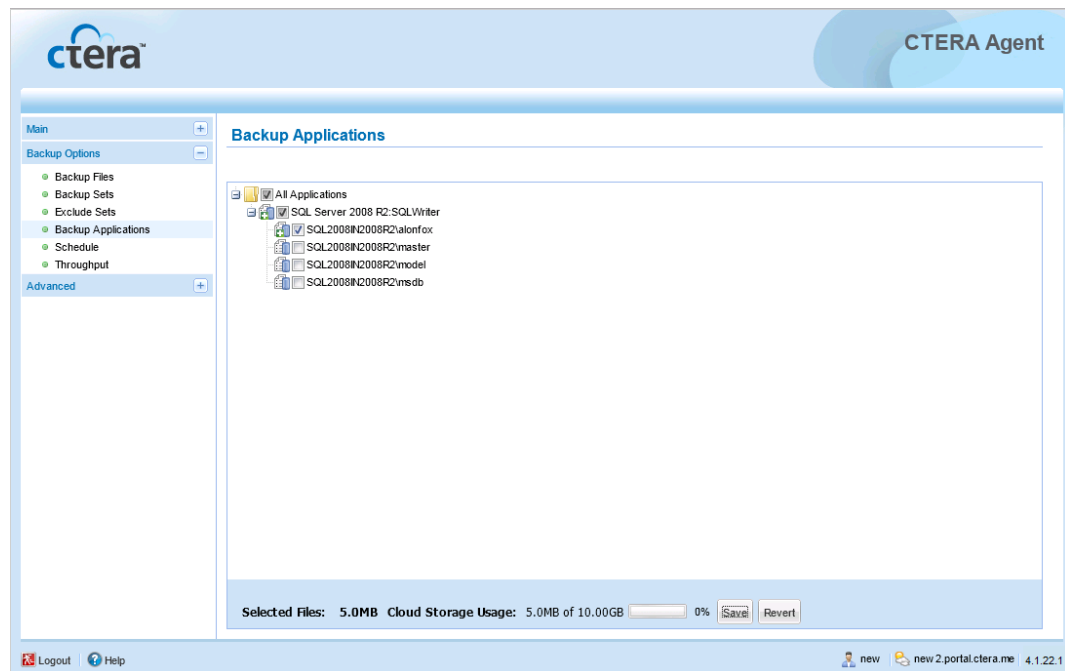
If you are prompted for a username-password authentication, enter your credentials.

The CTERA Agent Web interface opens in your Web browser, displaying the **Cloud Backup Control Panel** page.



- 2 In the navigation pane, click **Backup Options > Backup Applications**.

The **Backup Applications** page appears.

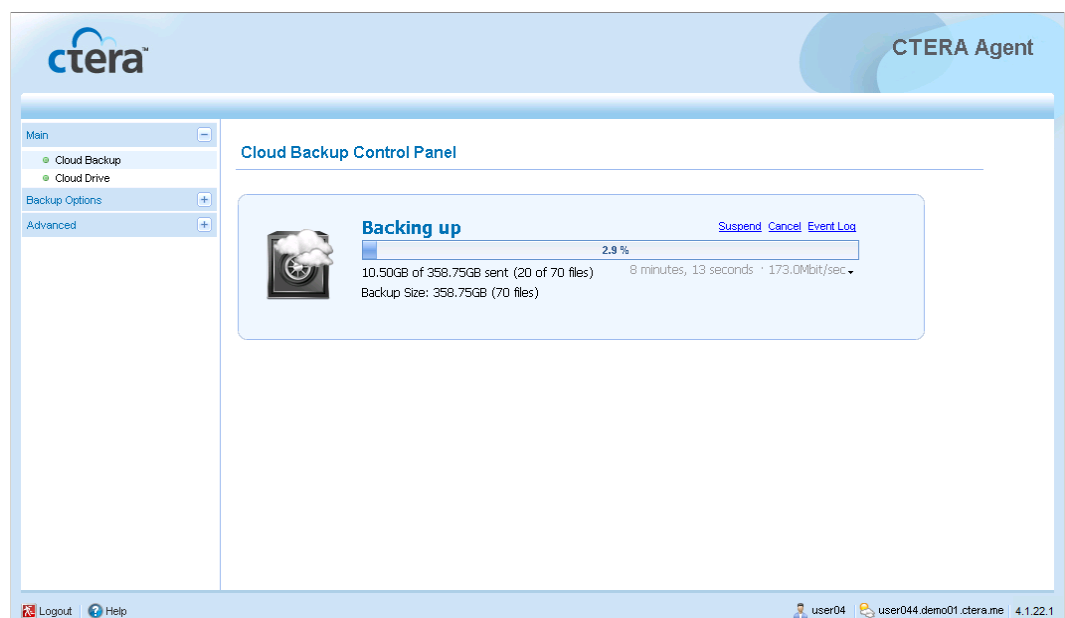


- 3 Click on the + icons to expand the **All Applications** node, then select the SQL Server databases you want to back up.
- 4 Click **Save**.
- 5 In the navigation pane, click **Main > Cloud Backup**.

The **Cloud Backup Control Panel** page appears.

- 6 Click **Backup Now**.

A progress bar appears, and the Microsoft SharePoint Server is backed up.



Restoring SQL Server Databases (Cloud Mode)

This procedure explains how to restore an entire SQL Server database.

Tip



In order to restore databases backed up by CTERA to a new server instance, make sure the new server meets the following requirements:

- + The SQL version on the new server is the same as the SQL version on the old server.
- + The computer name of the new server is the same as the computer name of the old server.
- + The SQL Server name on the new server is the same as the SQL Server name on the old server.

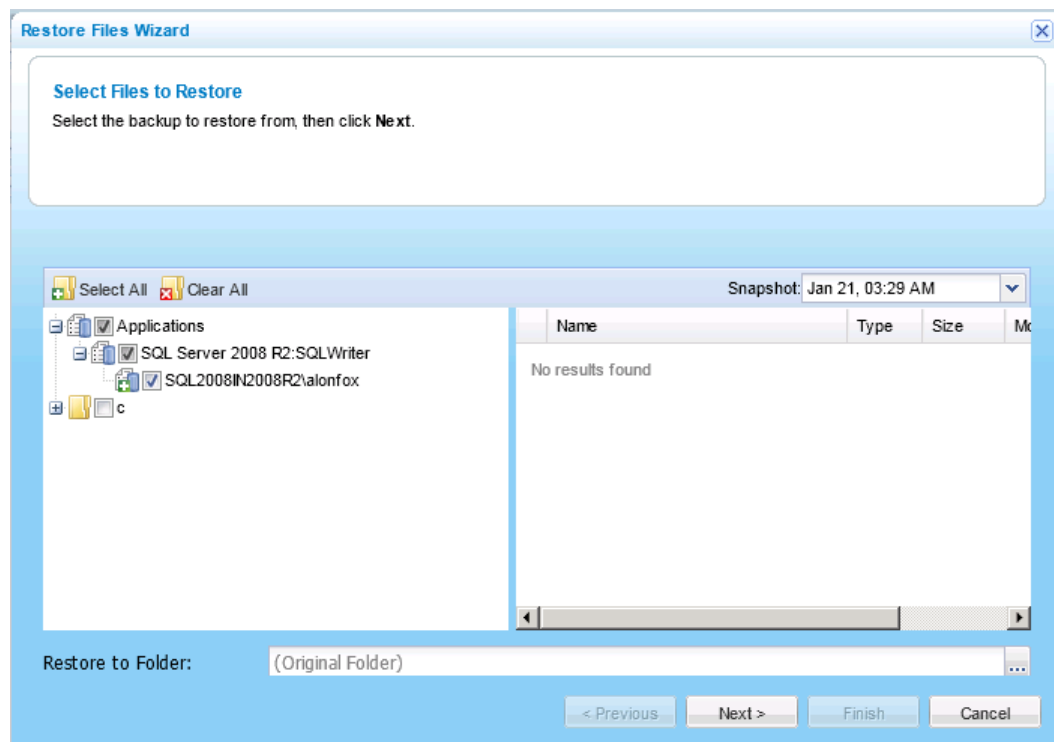
» To restore SQL server databases

- 1 Connect your CTERA Agent to the CTERA Portal.

For information, refer to the *CTERA Agent User Guide*.

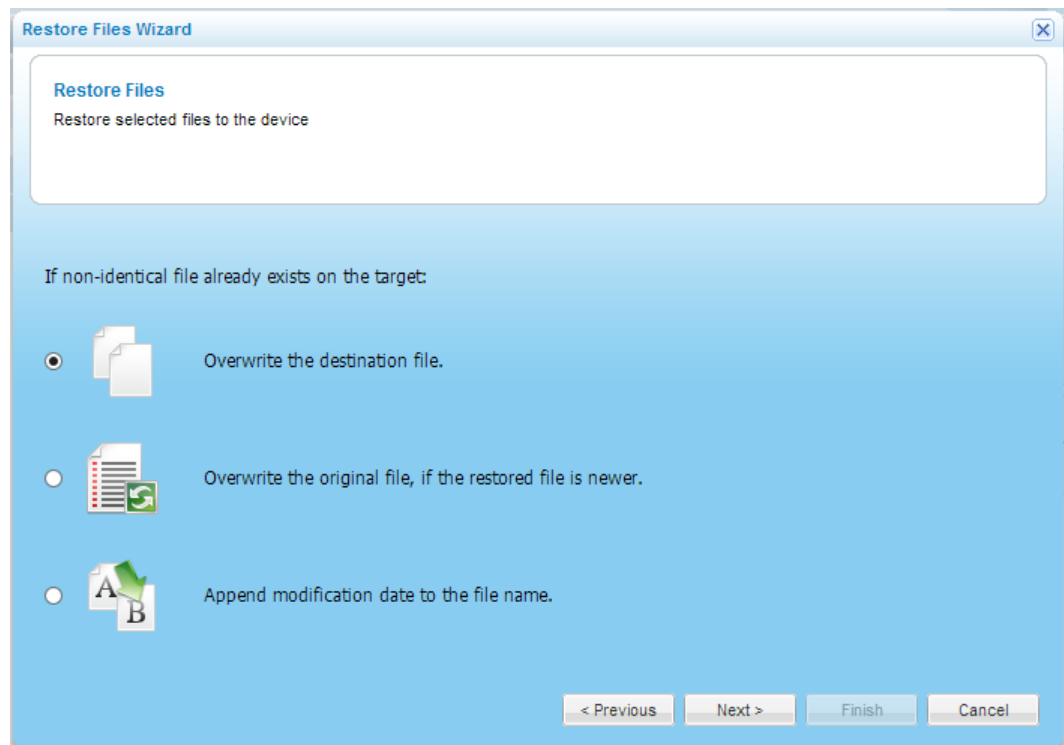
- 2 Right-click on the CTERA Agent tray icon in the notification area of the Windows taskbar, and click **Restore**.

The **Restore Files Wizard** opens displaying the **Select Files to Restore** dialog box.



- 3 Expand the list using the + icon and select the databases you would like to restore.
- 4 Click **Next**.

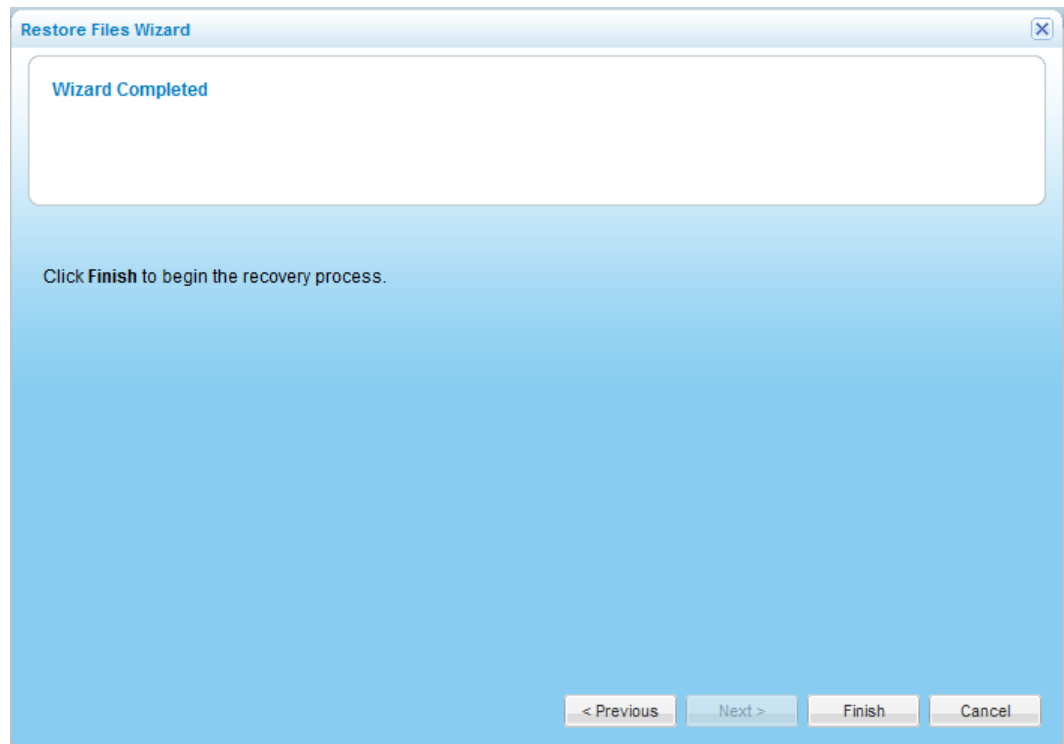
The **Restore Files** dialog box appears.



5 Choose **Overwrite the destination file.**

6 Click **Next.**

The **Completing the Restore Files Wizard** screen appears.



7 Click **Finish**.

Tip



You can monitor the restoration process from the CTERA Cloud Agent's Web Interface.

Backing Up and Restoring an Exchange Server

This chapter explains how to back up your Microsoft Exchange Server and restore it from a file-level backup.

In This Chapter

Backing Up and Restoring Microsoft Exchange in Gateway Mode	185
Backing Up and Restoring Microsoft Exchange in Cloud Mode	191

Backing Up and Restoring Microsoft Exchange in Gateway Mode

If your CTERA Agent is connected to a CTERA cloud gateway, use the following procedures to backup and restore your Exchange Server.

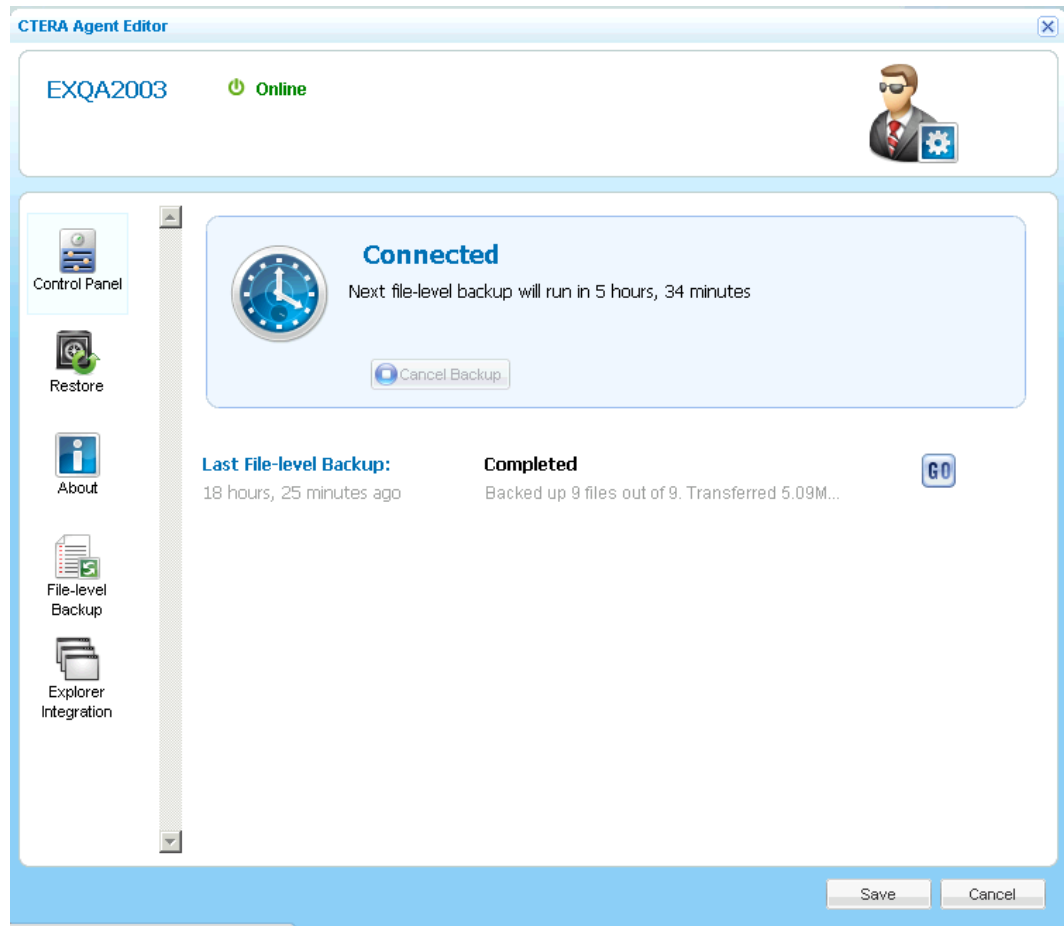
Backing Up Microsoft Exchange Server (Gateway Mode)

» To back up Microsoft Exchange Server

- 1 Right-click on the CTERA Agent tray icon in the notification area of the Windows taskbar, and then click **Settings**.

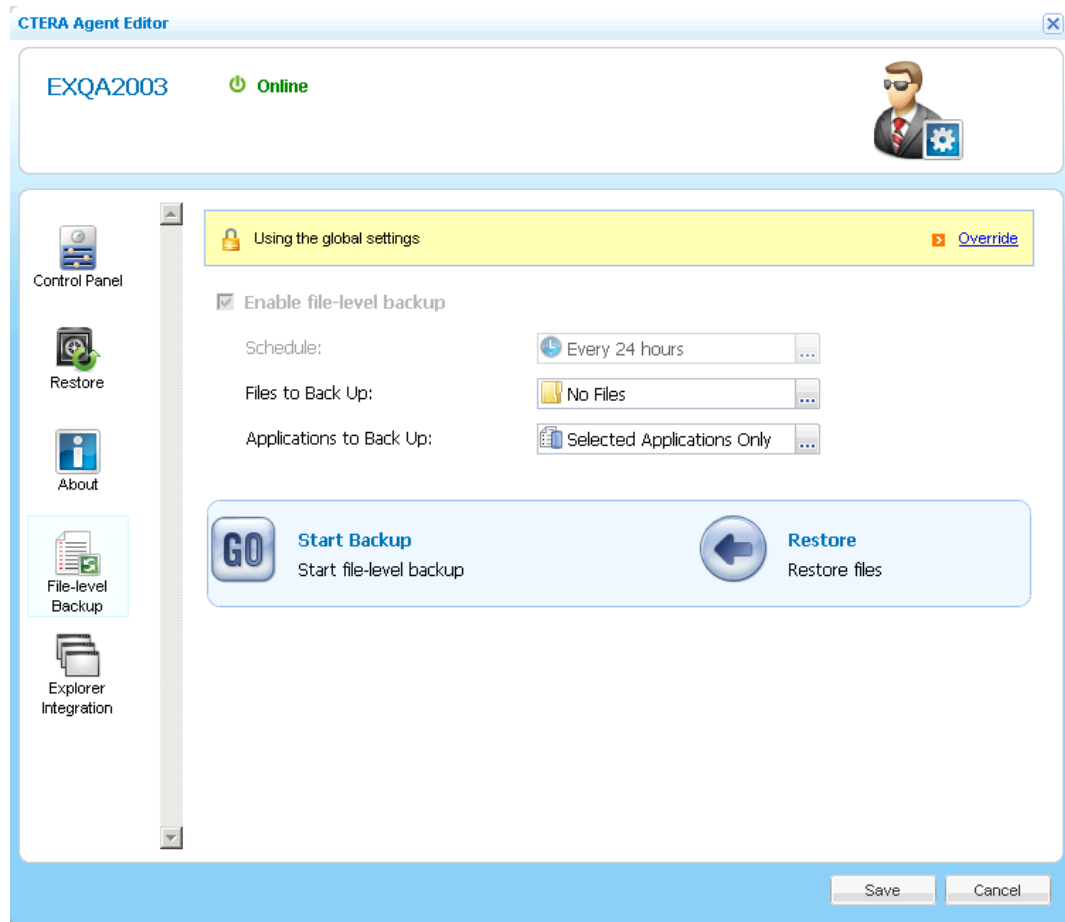
If you are prompted for a username-password authentication, enter your credentials.

The CTERA Agent Manager opens displaying the **Control Panel** tab.



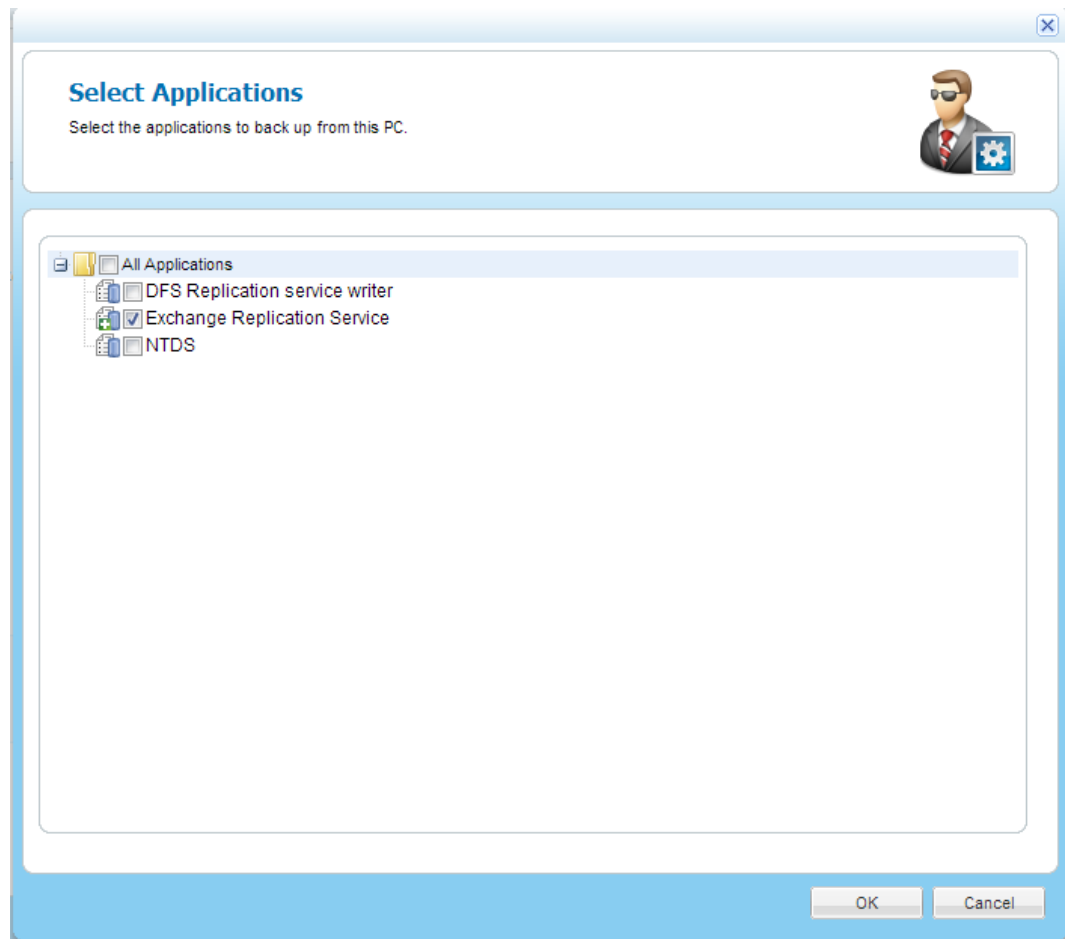
- 2 Click the **File-level Backup** tab.

The **File-level Backup** tab appears.



- 3 In the **Applications to Back Up** field, click .

The **Select Applications** window opens.



- 4 Click on the + icons to expand the **All Applications > Exchange Replication Service** node, then select the check box next to the mailbox database you would like to back up.
- 5 Click **OK**.
- 6 Click **Save**.
- 7 Click the **Control Panel** tab.

The **Control Panel** tab appears.

- 8 Click **Go**.

The Microsoft Exchange Server is backed up.

Restoring Microsoft Exchange Server (Gateway Mode)

This procedure explains how to restore the entire mailbox database.

Tip

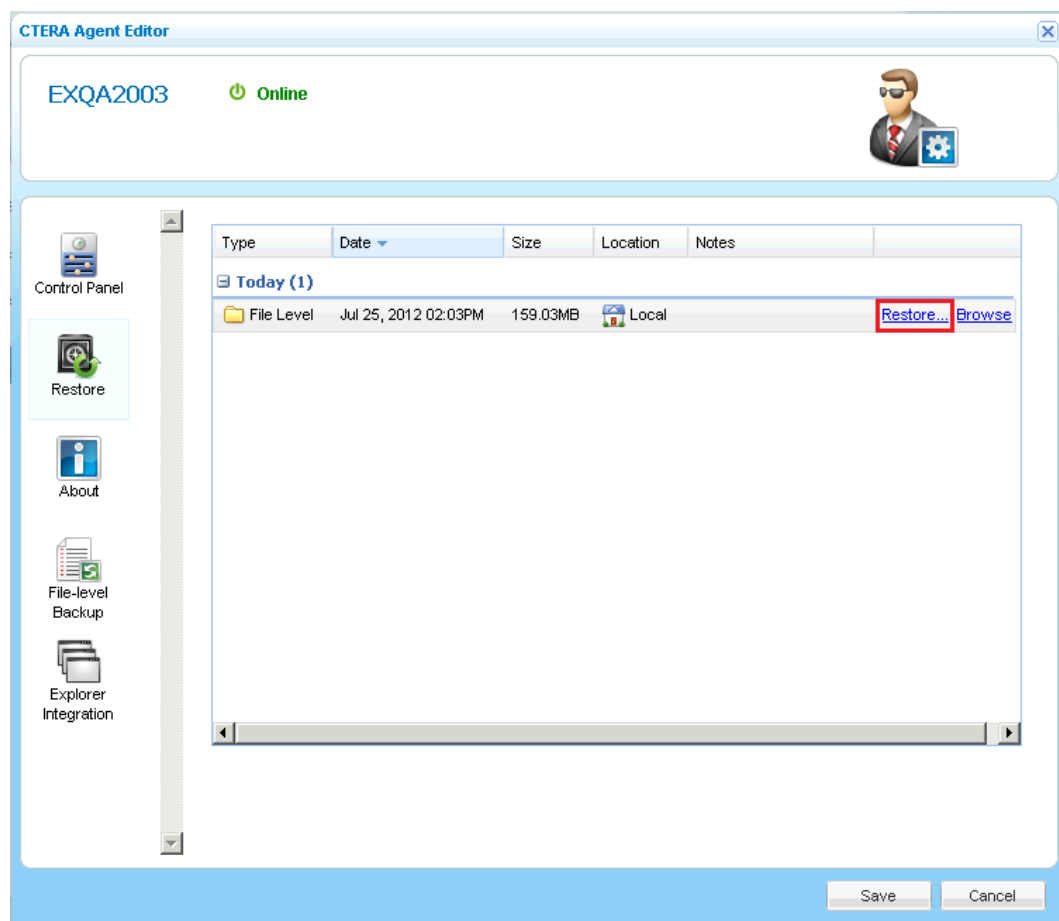


This procedure is supported when restoring *to the same instance*.
Brick-level add-on is also available for performing brick-level restore. To obtain the demo, visit: www.ctera.com/exchange-recovery
To purchase the full version, contact the CTERA Sales Team at info@ctera.com.

» To restore Microsoft Exchange Server

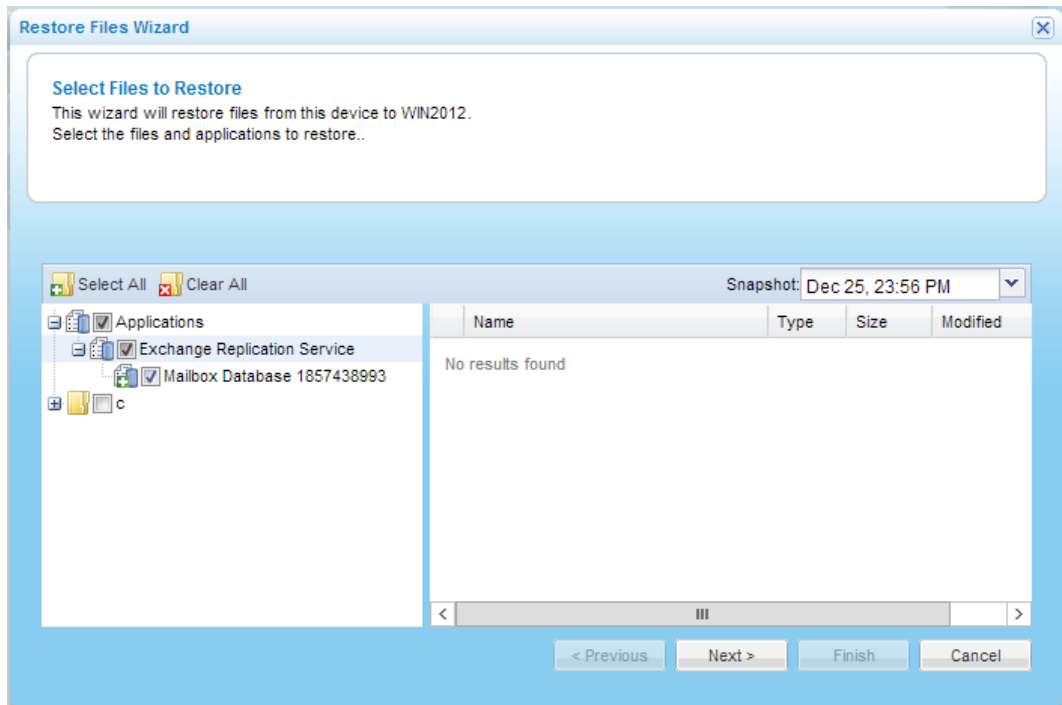
- 1 Right-click on the CTERA Agent tray icon in the notification area of the Windows taskbar, and then click **Restore**.

The CTERA Agent Manager opens displaying the **Restore** tab.



- 2 Next to the file-level-backup from which you would like to restore the database, click **Restore**.

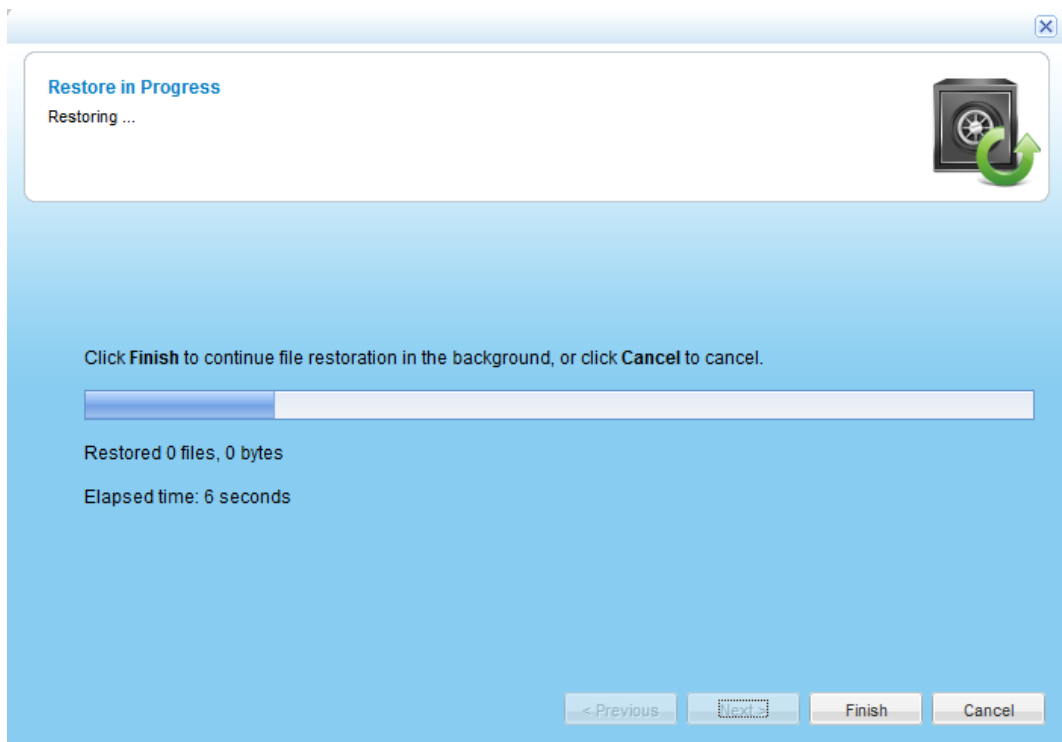
The Restore Files Wizard opens displaying the **Select Files to Restore** dialog box.



3 Specify the database path by selecting the relevant check boxes in the left pane.

4 Click **Next**.

The **Restore In Progress** screen appears with a progress bar.



5 Once the restoration is complete, click **Finish**.

Backing Up and Restoring Microsoft Exchange in Cloud Mode

If your CTERA Agent is connected to the CTERA Portal, use the following procedures to backup and restore your Exchange Server.

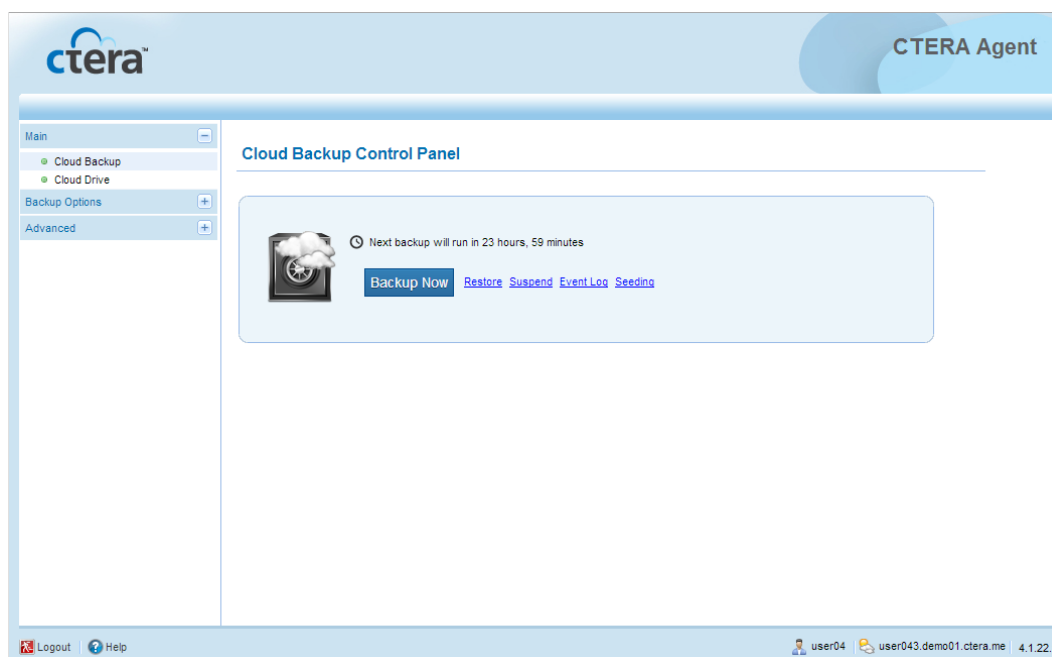
Backing Up Microsoft Exchange Server (Cloud Mode)

» To back up Microsoft Exchange Server

- 1 Right-click on the CTERA Agent tray icon in the notification area of the Windows taskbar, and then click **Settings**.

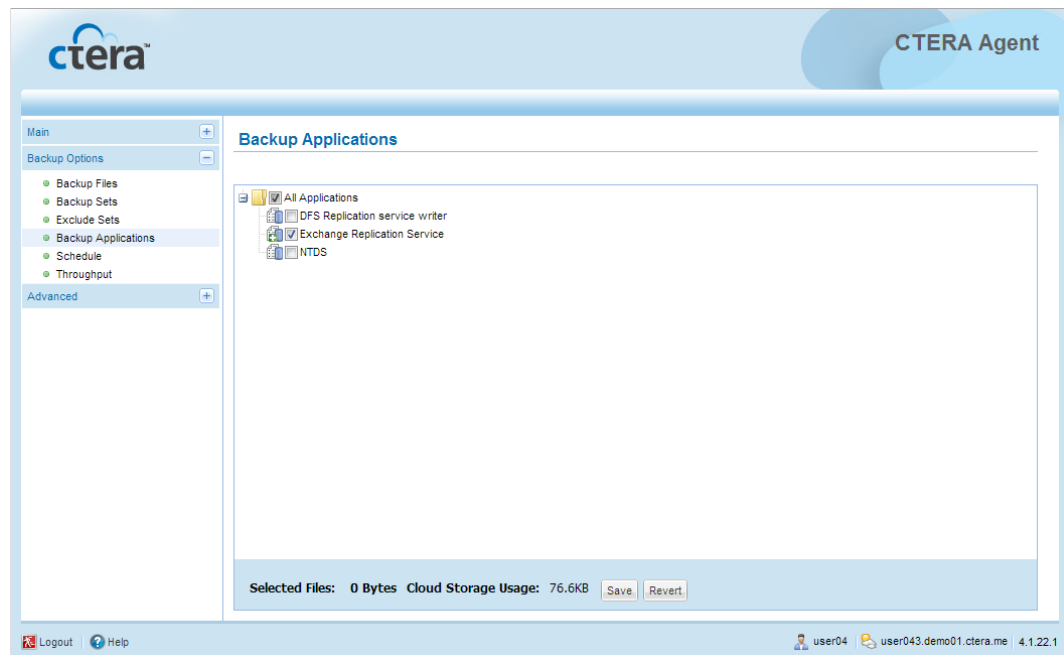
If you are prompted for a username-password authentication, enter your credentials.

The CTERA Agent Web interface opens in your Web browser, displaying the **Cloud Backup Control Panel** page.



- 2 In the navigation pane, click **Backup Options > Backup Applications**.

The **Backup Applications** page appears.

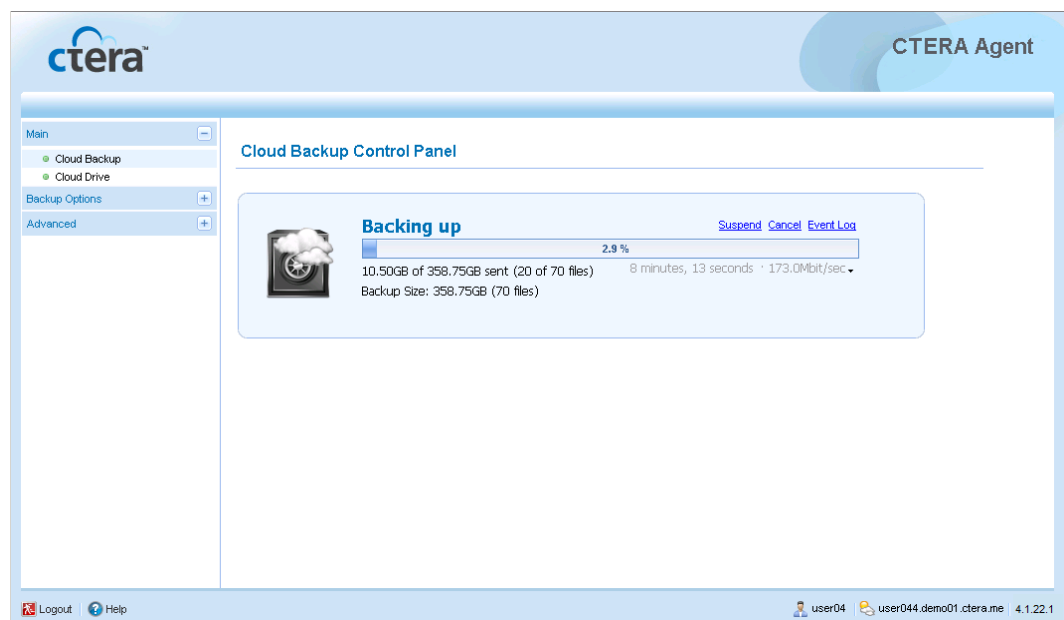


- 3 Click on the + icons to expand the **All Applications** node, then select the **Exchange Replication Service** check box.
- 4 Click **Save**.
- 5 In the navigation pane, click **Main > Cloud Backup**.

The **Cloud Backup Control Panel** page appears.

- 6 Click **Backup Now**.

A progress bar appears, and the Microsoft Exchange Server is backed up.



Restoring Microsoft Exchange Server (Cloud Mode)

Tip



This procedure is supported when restoring *to the same instance*.

Tip

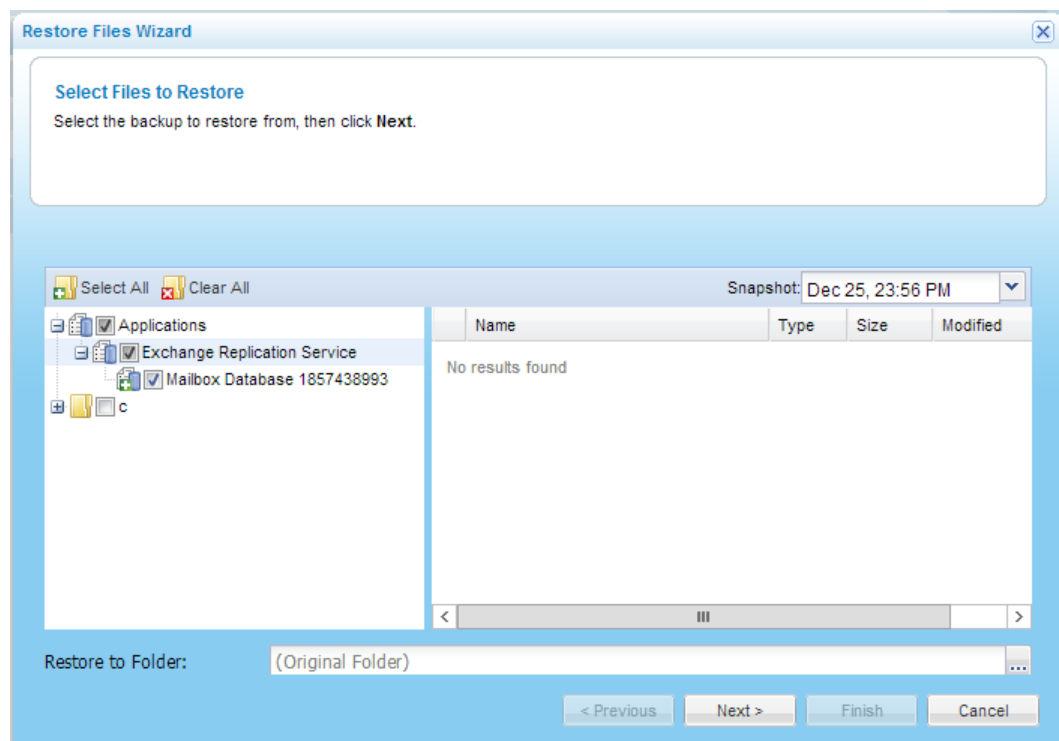


This procedure explains how to restore the entire mailbox database. Brick-level add-on is also available for performing brick-level restore. To obtain the demo, visit: www.ctera.com/exchange-recovery
To purchase the full version, contact the CTERA Sales Team at info@ctera.com.

» To restore Microsoft Exchange Server

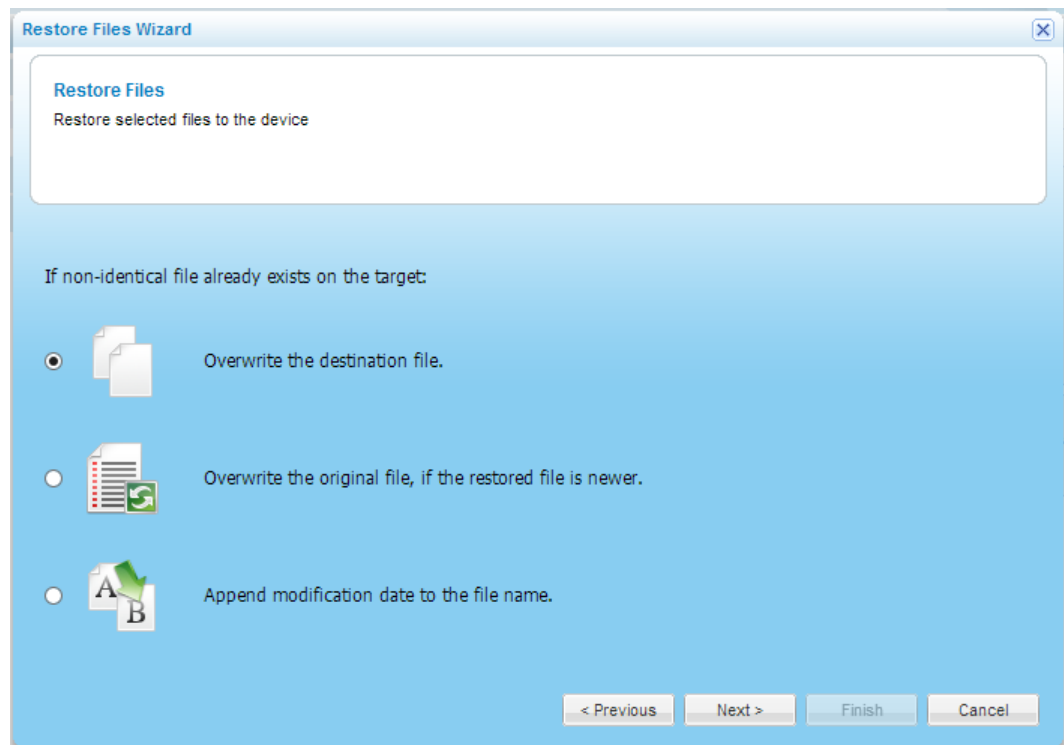
- 1 Right-click on the CTERA Agent tray icon in the notification area of the Windows taskbar, and then click **Restore**.

The Restore Files Wizard opens displaying the **Select Files to Restore** dialog box.



- 2 Click on the + icons to expand the **Applications > Exchange Replication Service** node, then select the check box next to the mailbox database you would like to restore.
- 3 Click **Next**.

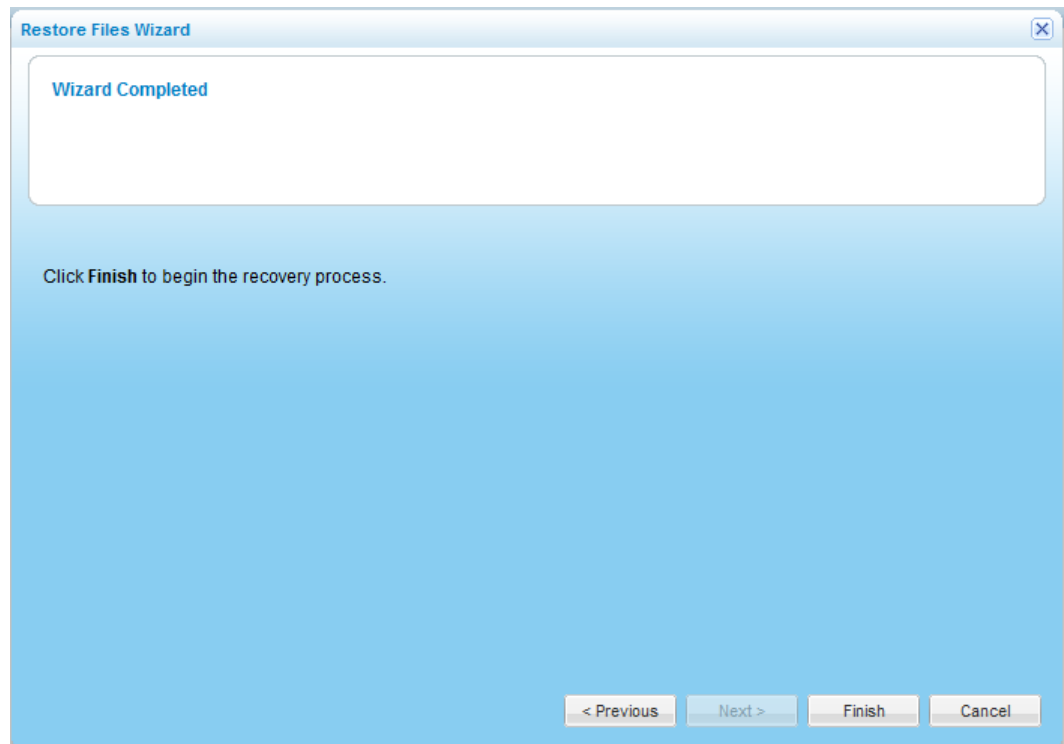
The **Restore Files** dialog box appears.



4 Choose **Overwrite the destination file.**

5 Click **Next.**

The **Wizard Completed** screen appears.



6 Click **Finish**.

Tip



You can monitor the restoration process from the CTERA Cloud Agent's Web Interface.

Using Pre/Post Backup Scripts

CTERA Agent includes pre-backup and post-backup scripts, which are shell scripts that are executed before and after the backup, respectively. You can use these scripts to perform necessary actions before the backup (for example, dumping a database to a file) and after the backup (for example, deleting temporary files that were created by the pre-backup script).

Tip



The scripts are supported both in Cloud mode and Gateway mode.

The scripts return an exit code of 0 for success or any other value for failure. Upon failure, the pre-backup script's output is automatically saved to `C:\ProgramData\CTERA\CTERA Agent\pre-backup.log`, and the post-backup script's output is automatically saved to `C:\ProgramData\CTERA\CTERA Agent\post-backup.log`.

Tip



The pre-backup and post-backup scripts are executed or terminated as follows:

- + If the pre-backup script fails, the backup process does not run, and the post-backup script is executed immediately.
- + The post-backup script is executed regardless of whether the pre-backup script succeeded or failed.
- + If the user cancels backup, both the pre-backup and post-backup scripts will still run to completion.
- + If a script runs longer than 20 minutes, an error is considered to have occurred, and the script is terminated.

» To use the pre-backup or post-backup script

- 1 Open the desired script in any text editor.

The location of the pre-backup script is: `C:\ProgramData\CTERA\CTERA Agent\pre-backup.cmd`

The location of the post-backup script is: `C:\ProgramData\CTERA\CTERA Agent\post-backup.cmd`

- 2 Edit the script as desired.

Here is an example of a pre-backup script:

```
`* Prepare for backup here...
```

```
C:\MyDatabase\dump-database > c:\backup-files\db-dump.txt
```

```
`* This script returns success result code
```

```
exit 0
```

Here is an example of a post-backup script:

```
`* Clean up
```

```
del c:\backup-files\db-dump.txt
```

```
`* This script returns success result code
```

```
exit 0
```

3 Save the script.

Legal Information

This chapter contains important legal information about your CTERA products.

In This Chapter

CTERA End User License Agreement-----	199
GNU GENERAL PUBLIC LICENSE-----	203
GNU GENERAL PUBLIC LICENSE 3-----	206
Apache License-----	213

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Index

A

- About Cloud Attached Storage • 5
- About CTERA Agent • 5
- About the CTERA Cloud Backup Service • 83
- Accessing Files on the Cloud Gateway • 67
- Accessing the Cloud Drive Folder • 112, 113, 126
- Adding and Editing Exclude Sets • 103
- Adding and Editing Include Sets • 97
- Apache License • 213

B

- Backing Up and Restoring an Exchange Server • 185
- Backing Up and Restoring Hyper-V Virtual Machines • 161
- Backing Up and Restoring Microsoft Exchange in Cloud Mode • 191
- Backing Up and Restoring Microsoft Exchange in Gateway Mode • 185
- Backing Up and Restoring Microsoft Hyper-V VMs in Cloud Mode • 167
- Backing Up and Restoring Microsoft Hyper-V VMs in Gateway Mode • 161
- Backing Up and Restoring SQL Server Databases • 173
- Backing Up and Restoring SQL Server Databases in Cloud Mode • 179
- Backing Up and Restoring SQL Server in Gateway Mode • 173
- Backing Up Microsoft Exchange Server (Cloud Mode) • 191
- Backing Up Microsoft Exchange Server (Gateway Mode) • 185

- Backing Up Microsoft Hyper-V Server VMs (Cloud Mode) • 167
- Backing Up Microsoft Hyper-V Server VMs (Gateway Mode) • 161
- Backing Up SQL Server Databases (Cloud Mode) • 179
- Backing Up SQL Server Databases (Gateway Mode) • 173
- Benefits of Syncing your Cloud Drive Folder • 109
- Browsing the Cloud Drive Folder Online • 113, 121, 124, 128, 129

C

- Can I Use File Syncing as a Backup? • 109
- Canceling the Current Restore Process • 134
- Centrally Installing CTERA Agent via Active Directory • 15
- Clearing Logs • 146
- Cloud Backup Configuration Workflow • 86
- Cloud Drive Synchronization Overview • 109
- Cloud Folder Collaboration Overview • 119
- Collaborating on Cloud Drive Folders • 119
- Configuring Disk-Level Backup Settings • 41
- Configuring Event Log Settings • 136, 140, 146
- Configuring File-Level Backup Settings • 36, 42
- Configuring General Settings • 34
- Configuring System State Backup Settings • 42
- Configuring the Agent • 29, 34
- Configuring the CTERA Agent Language • 148
- Configuring Windows Explorer Integration Settings • 43, 44, 83, 113, 147
- Connecting the Agent to a Cloud Gateway • 28, 29, 152
- Connecting the CTERA Agent to the CTERA Portal • 70, 71, 152

Connecting to the CTERA Agent Manager • 29, 32
Connecting to the CTERA Agent Web Interface • 70, 80
Contacting Technical Support • 6
Creating Projects • 121
CTERA Agent Licensing in Cloud Mode • 70
CTERA Agent Licensing in Gateway Mode • 26
CTERA End User License Agreement • 199

D

Deleting Active Guest Invitations • 129
Deleting Exclude Sets • 104
Deleting Include Sets • 102
Disconnecting the Agent from a Cloud Gateway • 31
Disconnecting the Agent from the CTERA Portal • 79
Downloading CTERA Agent • 8
Downloading CTERA Agent from CTERA Portal • 8
Downloading CTERA Agent from your Cloud Gateway • 8

E

Enabling/Disabling Exclude Sets • 102
Enabling/Disabling Include Sets • 96
Enabling/Disabling Remote Access • 134
Exporting Logs • 146

F

Filtering Logs • 146

G

GNU GENERAL PUBLIC LICENSE • 203
GNU GENERAL PUBLIC LICENSE 3 • 206

H

How Can I Control Which Files Will Be Backed Up? • 85, 95
How Does the Cloud Backup Service Work? • 84

I

Installing the Agent • 9, 28, 70
Installing the CTERA Agent • 7
Introduction • 5
Is My Data Secure? • 85

L

Legal Information • 2, 199
Logging Out of the CTERA Agent Web Interface • 82

M

Managing Synchronization Settings of a Synchronized Folder • 116
Manually Starting Backup • 45
Manually Starting Cloud Backup • 86, 91
Modifying Cloud Drive Folder Sharing Settings • 124

N

Navigating Between Table Pages • 82

O

Opening Ports on Your Firewall • 8, 30
Organization and Naming of Shared Cloud Folders • 120

P

Performing Tasks Using Windows Explorer and Windows Taskbar • 83
Preparing a Backup Seeding Hard Drive • 105

R

Refreshing Table Contents • 82
Re-imaging Your Computer • 52, 53
Requirements • 7
Restoring Files and Folders from the Cloud Backup Control Panel • 130, 152
Restoring Files from Cloud Backup • 130
Restoring Files from Disk-Level Backup • 27, 51
Restoring Files from File-Level Backup • 47, 152

Restoring from a System State Backup on Windows 2003 Server SP2 • 28, 151

Restoring Individual Files from Disk-Level Backup • 51

Restoring Microsoft Exchange Server (Cloud Mode) • 193

Restoring Microsoft Exchange Server (Gateway Mode) • 189

Restoring Microsoft Hyper-V Server VMs (Cloud Mode) • 169

Restoring Microsoft Hyper-V Server VMs (Gateway Mode) • 165

Restoring NTDS (Active Directory) and SYSVOL Applications on Windows 2003 / 2008 Server • 155

Restoring SQL Server Databases (Cloud Mode) • 181

Restoring SQL Server Databases (Gateway Mode) • 177

Restoring System State Data, NTDS, and SYSVOL • 151

Restoring the Entire Computer from Disk-Level Backup • 51, 53, 54, 60

Restricting Throughput • 107

S

Scheduling Automatic Cloud Backup • 86, 89, 91

Selecting Applications for Cloud Backup • 86, 88

Selecting Files and Folders for Cloud Backup • 86, 105

Selecting Files and Folders for File-Level Backup • 29, 44

Sending Guest Invitations • 126

Setting Up Connection via a Web Proxy • 71, 78

Sharing Cloud Drive Folders • 121

Sharing Files with Guest Invitations • 119, 126

Software Requirements • 7

Sorting Tables • 81

Stopping Syncing (of a Folder) • 116

Stopping the Current Backup Operation • 92

Stopping the Current Local Backup Operation • 45

Supported Backup Operations • 26

Suspending and Resuming Cloud Backup • 93

Suspending and Resuming Local Backup • 46

Suspending/Unsuspending Cloud Drive Synchronization • 118

Syncing Cloud Drive Folders to Your Computer • 115

Syncing Local Folders to the Cloud Drive • 70, 113

T

The CTERA Agent Web Interface • 80

U

Uninstalling the Agent • 13

Using Cloud Backup • 83

Using Cloud Drive Synchronization • 108

Using Pre/Post Backup Scripts • 197

Using the CTERA Agent in Cloud Mode • 69

Using the CTERA Agent in Gateway Mode • 25

Using the CTERA Agent Manager • 31

Using the CTERA Agent Web Interface • 79

V

Viewing Access Logs • 143

Viewing Active Guest Invitations • 128

Viewing Agent Details • 47, 149

Viewing Audit Logs • 144

Viewing Cloud Backup Information • 94

Viewing Cloud Backup Logs • 95, 137, 139

Viewing Cloud Drive Folders • 110

Viewing Cloud Sync Logs • 142

Viewing Logs • 136, 137, 146, 147

Viewing System Logs • 138

Viewing the Agent Status • 46, 149

W

What Happens to Simultaneous File Changes? • 109

What Restore Options Are Available? • 84, 85

Why Should I Use Cloud Backup? • 83

Workflow • 28, 70

Working with Backup Sets • 85, 86, 95