

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 137) in this guide.

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Introduction

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

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About Cloud Attached Storage

CTERA's Cloud Attached Storage® combines on-premises Network Attached Storage devices 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 and disaster recovery. Automated differential backup and restore functions include the industry's latest block-level de-duplication, compression, and encryption technologies, ensuring secure and efficient synchronization between the cloud storage service and the CTERA appliance or CTERA Agent-installed computer.

About the 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:

Appliance mode

The CTERA Agent connects to a local CTERA appliance, 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 appliance and from the appliance to the CTERA Portal.

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

Cloud Agent mode

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

Cloud Agent mode also supports Cloud Drive synchronization, 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



The CTERA Agent is also available as an app that can be installed on mobile devices. For information refer to the *CTERA Mobile User Guide*.

CTERA Agent Licensing (Appliance 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 appliance. If your appliance 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 appliance. If your appliance 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 appliance. If you are no longer using an agent, you can delete the agent entry from the appliance to regain its license.

CTERA Agent Licensing (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 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.

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 appliance. 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 appliance. 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 44).

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 appliance 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 Appliance 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 125).

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

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.

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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 3.0 or later, or Google Chrome 5.0 or later
- + Adobe Flash Player

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 Vista	Yes	Yes	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

Opening Ports on Your Firewall

In order to back up roaming PCs and remote offices *outside* your network in Appliance mode, you must open your firewall for the network where the CTERA appliance is located, to allow incoming TCP ports 995 and 873 to the CTERA appliance.

Installing the Agent

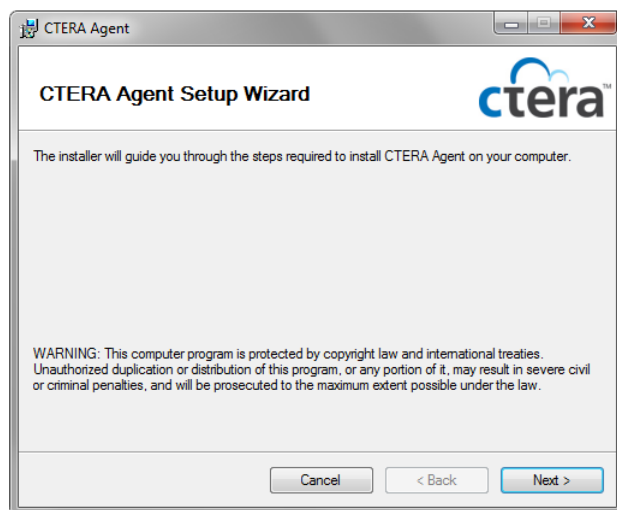
» To install the CTERA Agent

- 1 In the **My Computers** tab, choose **CTERA Agent for Windows**, then click **Install**.

The CTERA Agent installer is downloaded to your computer.

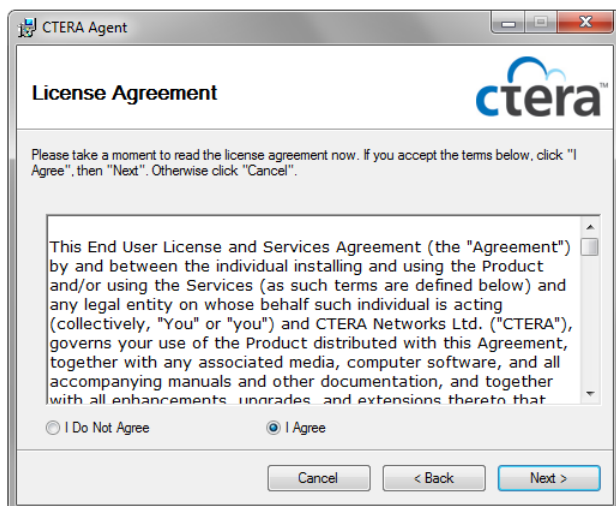
- 2 Double-click on the installer file.

The **CTERA Agent Setup Wizard** opens, displaying the **CTERA Agent Setup Wizard** screen.



- 3 Click **Next**.

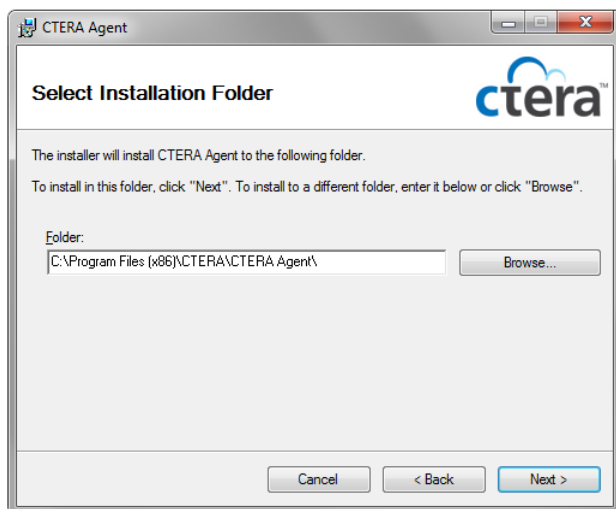
The **License Agreement** dialog box appears.



4 Choose **I Agree**.

5 Click **Next**.

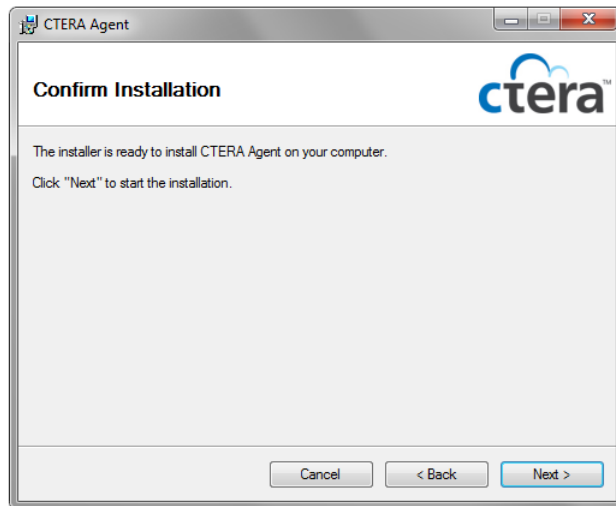
The **Select Installation Folder** dialog box appears.



6 Click **Browse** and browse to the folder in where the CTERA Agent should be installed.

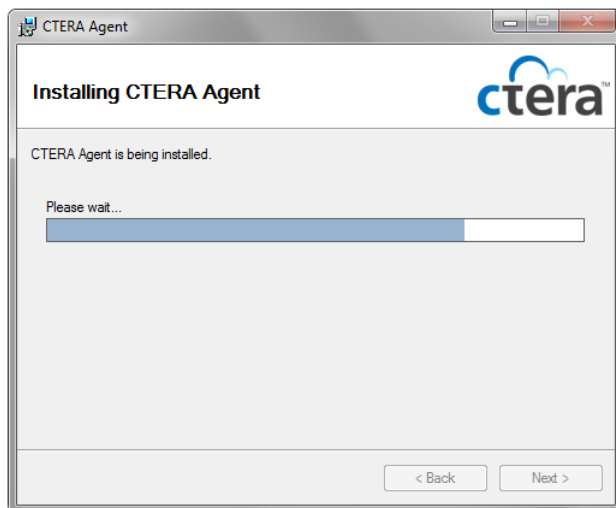
7 Click **Next**.

The **Confirm Installation** screen appears.

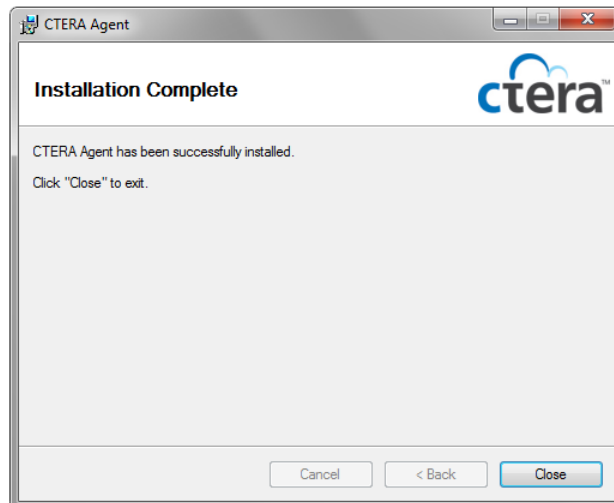


8 Click **Next**.

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



The **Installation Complete** screen appears.



- 9 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

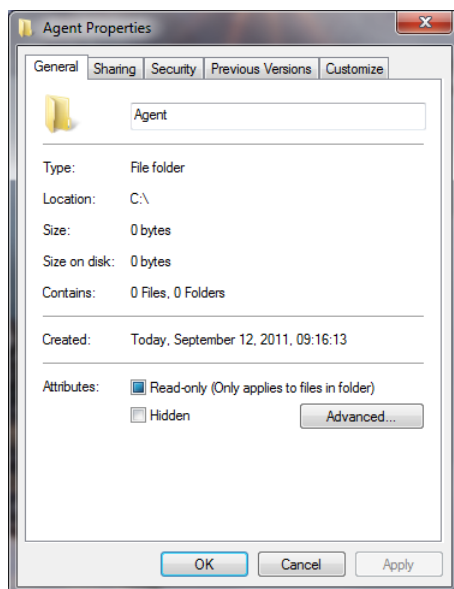
You can centrally install CTERA Agent on multiple computers via Microsoft Active Directory.

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

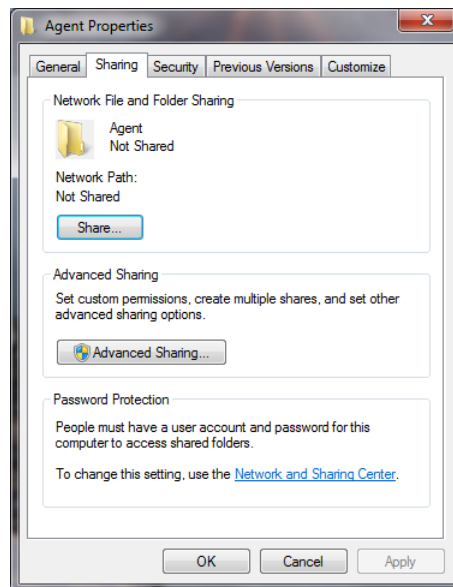
- 1 Prepare the CTERA Agent installation file for central use, by doing the following:
 - a On the Active Directory machine, create a shared folder called `Agent` under `C:\`.
 - b Copy the CTERA Agent installation file to the new folder.
 - c Right-click on the folder, then click **Properties**.

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



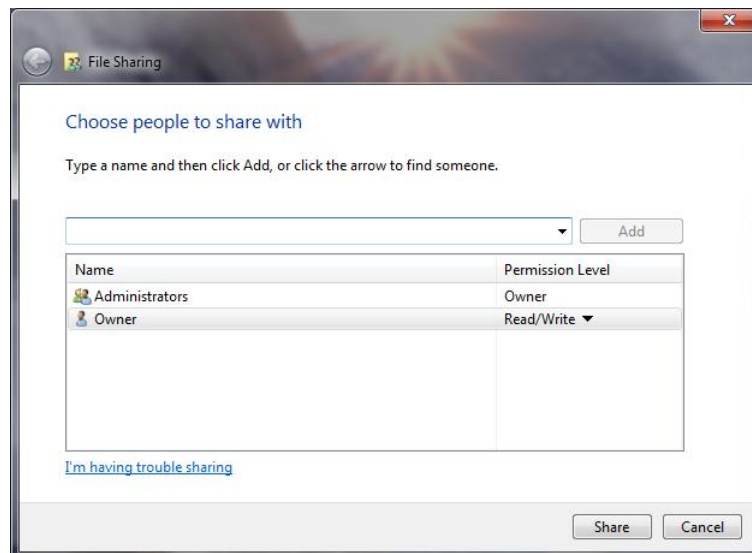
- d Click the **Sharing** tab.

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".

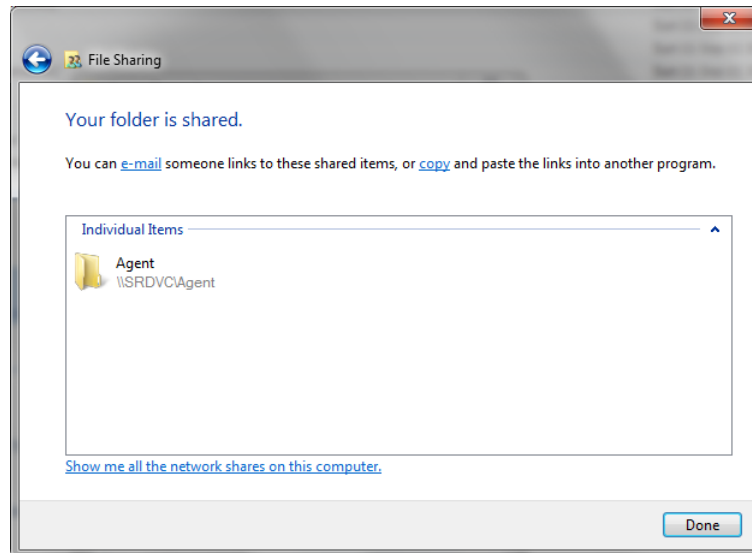
- 2 Click **Add**.

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.



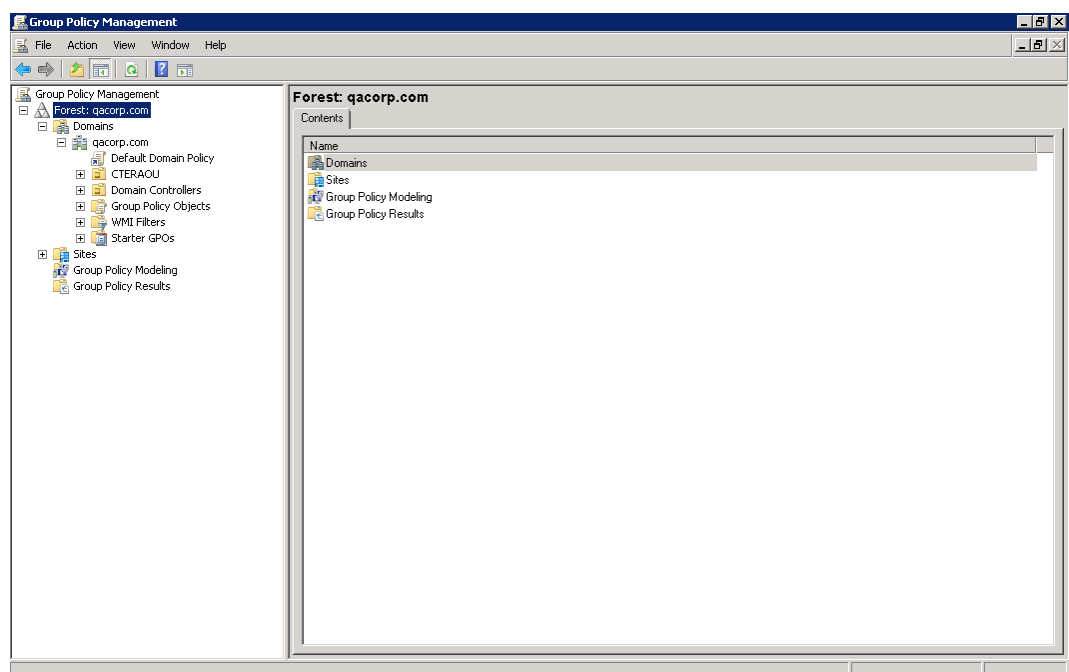
- h Click **Done**.

- 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**.

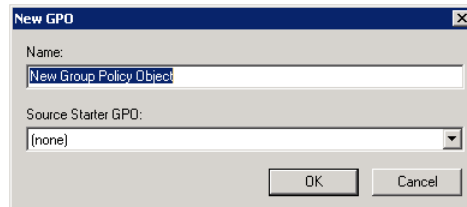
The Group Policy Management Console opens.



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

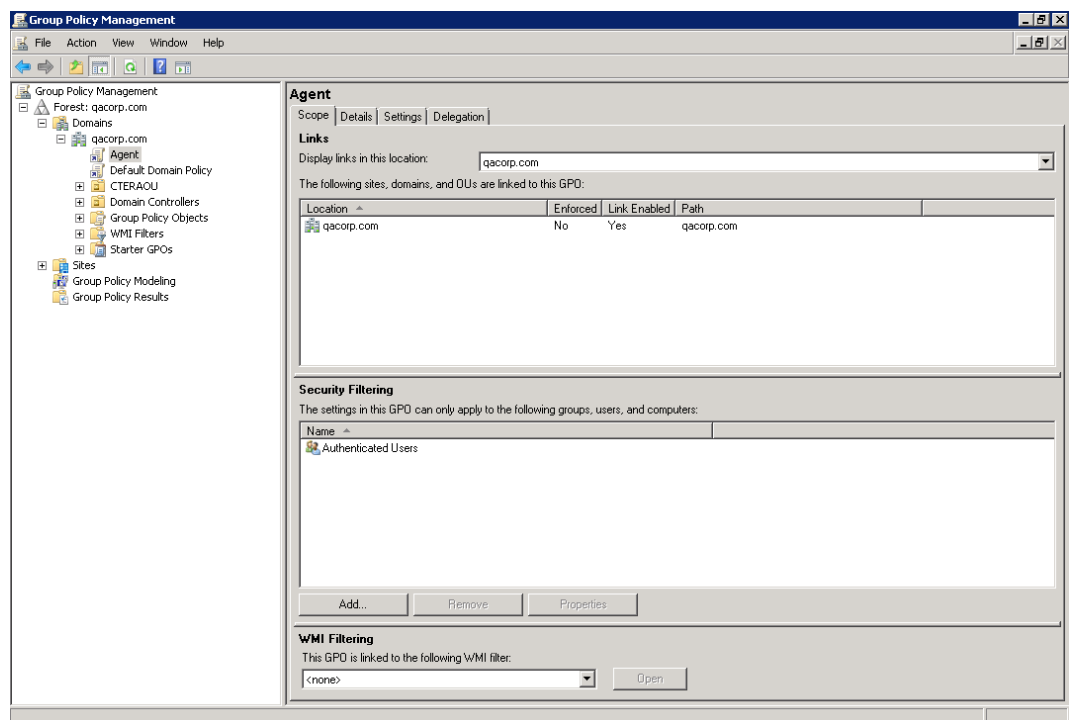
- b** In the navigation pane, right-click on the domain or organizational unit for which you want to create the policy, then click **Create a new GPO in this domain and Link it here**.

The **New GPO** dialog box appears.



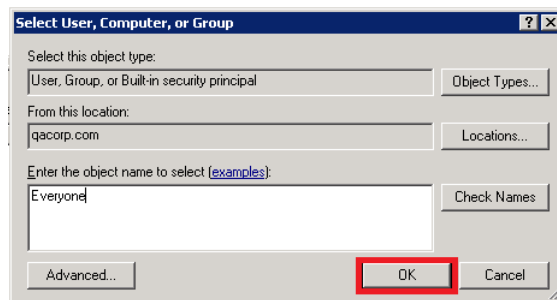
- c** In the **Name** field, type a name for the policy.
For example, "Agent 3.0".
- d** Click **OK**.
- e** In the navigation pane, click on the policy you created.

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.



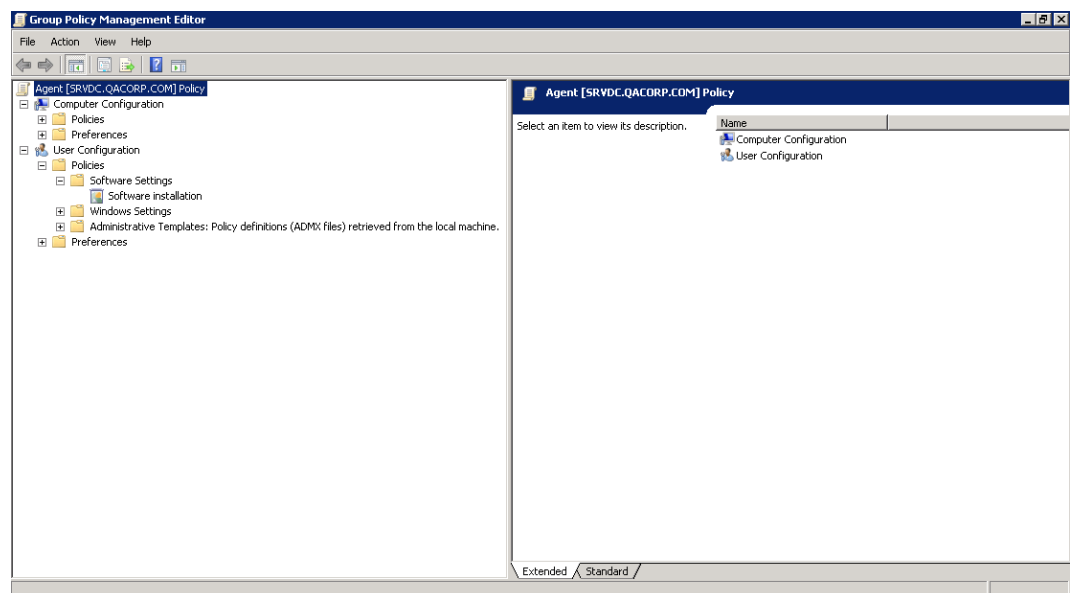
- 2 In the **Enter the object name to select** area, type the name of the user/group.

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**.

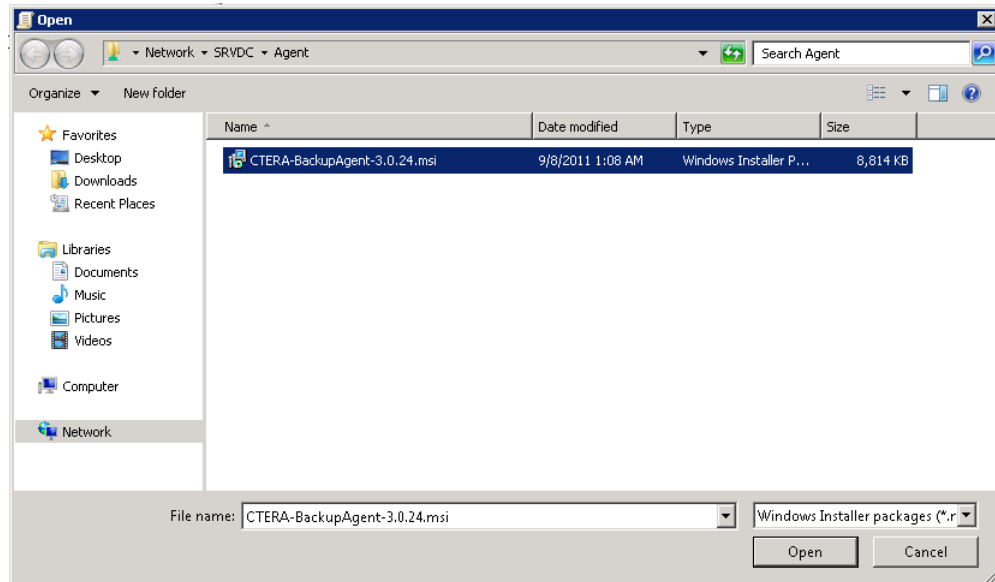
The **Group Policy Management Editor** opens.



- h In the navigation pane, expand **User Configuration > Policies > Software Settings**.

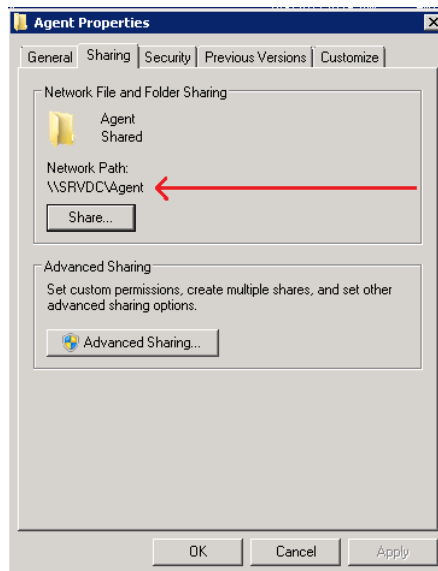
- i Right-click **Software Installations**, then click **New > Package**.

The **Open** dialog box appears.



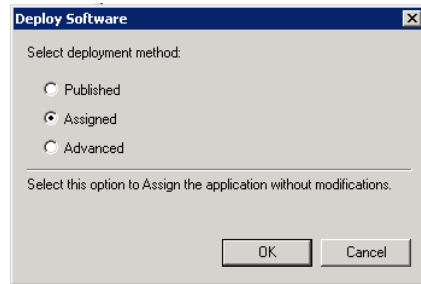
- j Specify the network location of the shared folder containing the CTERA Agent installation file, which you created in step 1.

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**.

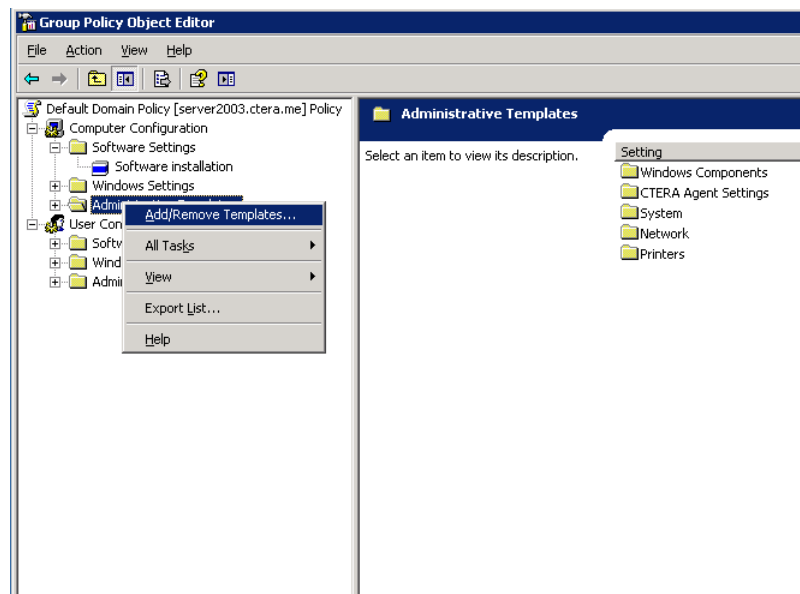
- 3** Add the `ctera-agent.adm` file to **Domain Group Policy** as an administrative template, by doing the following:

Tip

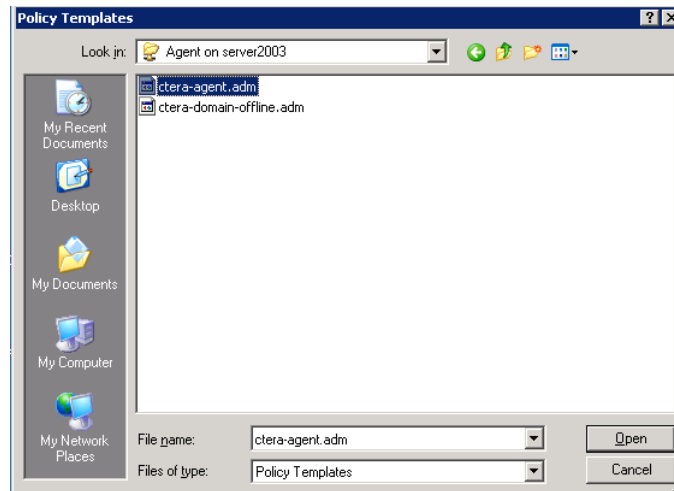


This file contains the agent deployment settings.

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

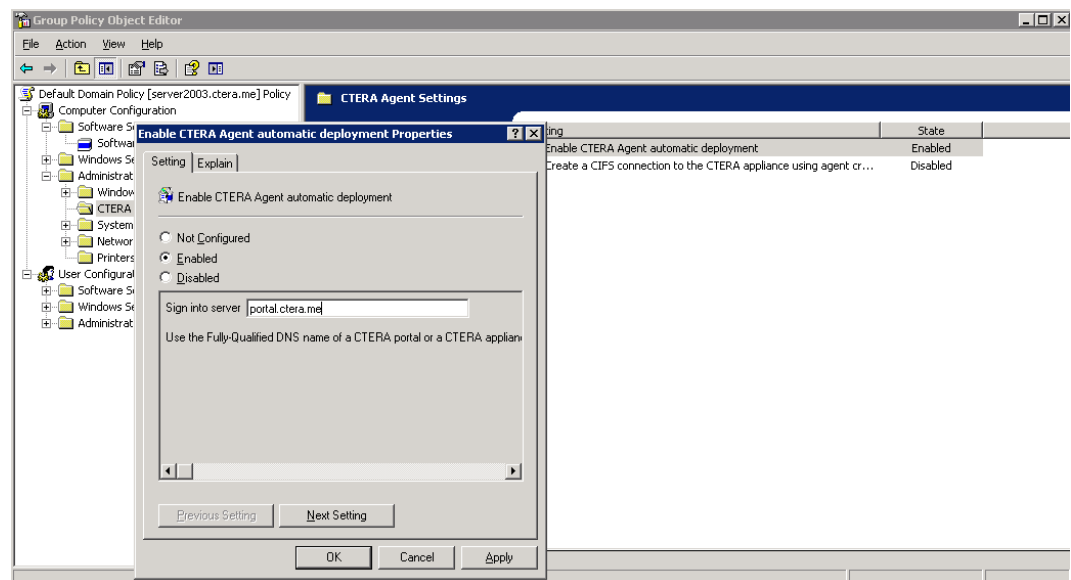


The **Policy Templates** window opens.



- 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 appliance to which the CTERA Agent should connect.
- e Click **OK**.

Using the CTERA Agent in Appliance Mode

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

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Workflow

To use the CTERA Agent for local backup in Appliance Mode, do the following:

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

See **Installing the Agent** (on page 10).

- 2 Connect the CTERA Agent to the CTERA appliance.

See **Connecting the Agent to a CTERA Appliance** (on page 24).

- 3 If local configuration of the agent is enabled, do the following:

- a Connect to the CTERA Agent Manager.

See **Connecting to the CTERA Agent Manager** (on page 27).

- b** Configure the agent-specific settings for the CTERA Agent.

See **Configuring the Agent** (on page 29).

- 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 38).

Local configuration is controlled by the **Allow user to configure the agent** check box in the CTERA Agent global settings. See *your CTERA appliance's user guide*, Configuring Global Settings for All CTERA Agents.

Connecting the Agent to a CTERA Appliance



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 appliance.
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 appliance's Web interface, and make sure that you are subscribed to the DDNS service. Note the DNS address that was allocated to your appliance. Enter this address in the **Server** field.

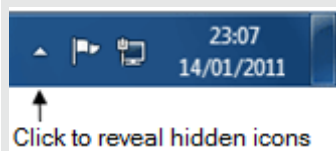
» To connect the CTERA Agent to the CTERA appliance

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

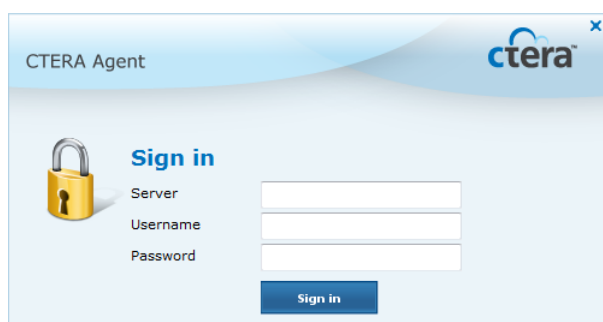
Tip



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.



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

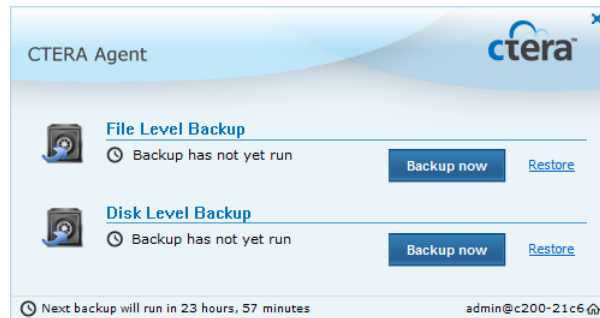
If your appliance is connected to CTERA Portal and subscribed to the Dynamic DNS service, enter the appliance DNS name as it appears in the **Services** page, in this field. If you opened the appropriate ports on your firewall, this will enable the CTERA Agent to back up from anywhere on the Internet. See **Opening Ports on Your Firewall** (on page 10).

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

The following things happen:

- + The CTERA Agent connects to the CTERA appliance.

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



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



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. See *your CTERA appliance's user guide*, Configuring Global Settings for All CTERA Agents.

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 appliance Web interface. See *your CTERA appliance's user guide*, Configuring the Agent.

» To connect to the CTERA Agent Manager

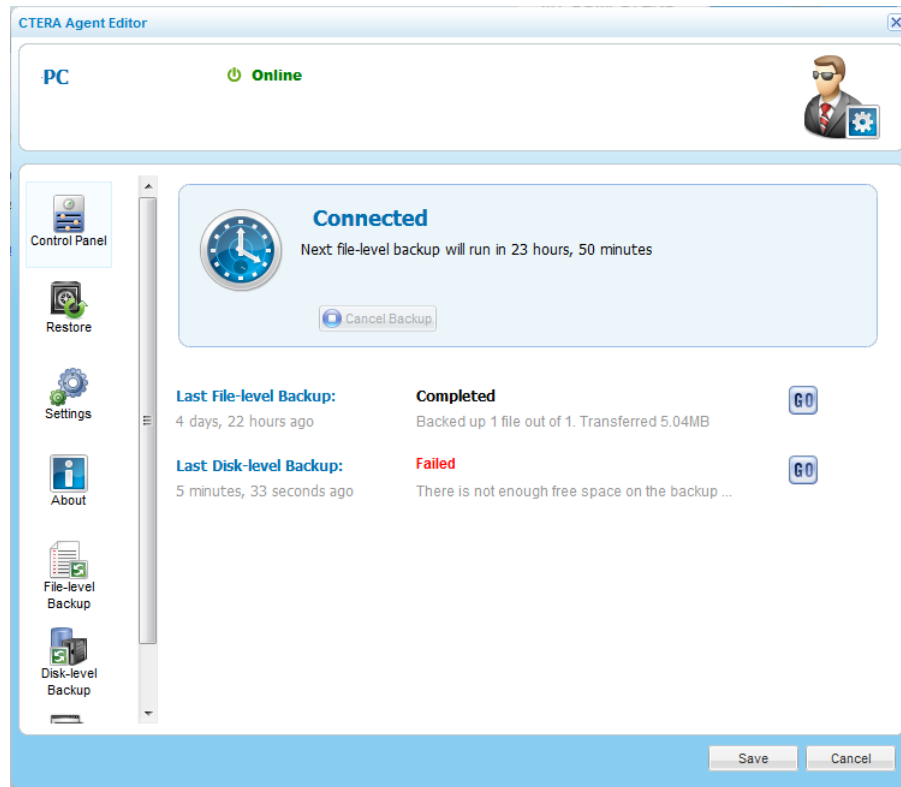
- + Right-click the CTERA Agent tray icon in the notification area of the Windows taskbar, and click **Settings**.

The following things happen:

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

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

- The CTERA appliance Web interface opens displaying the CTERA Agent Manager.



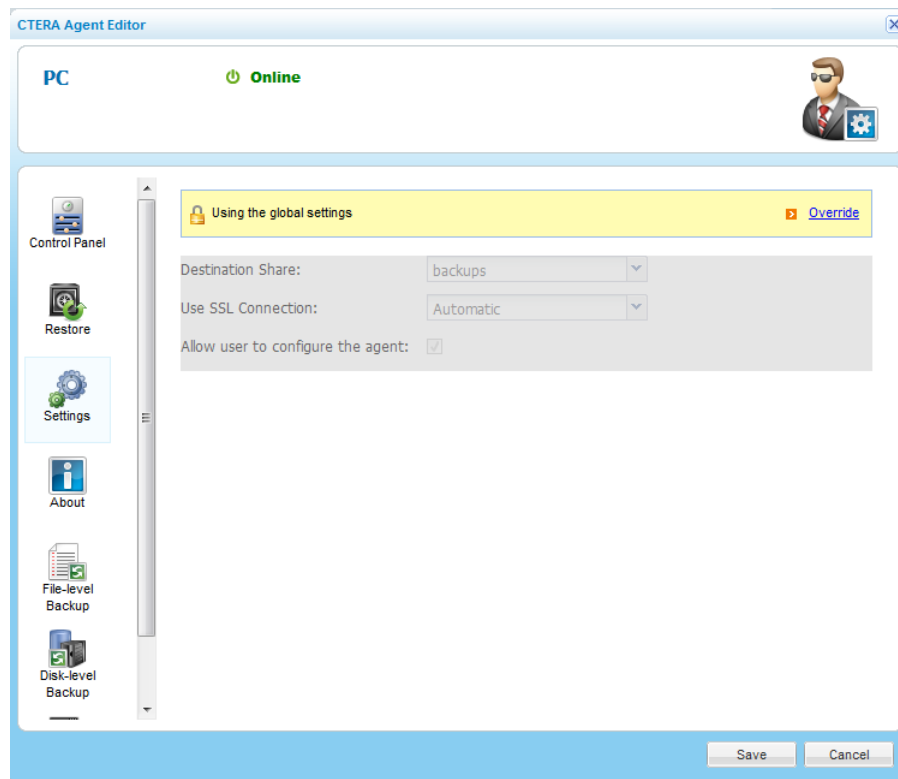
Configuring the Agent

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**.

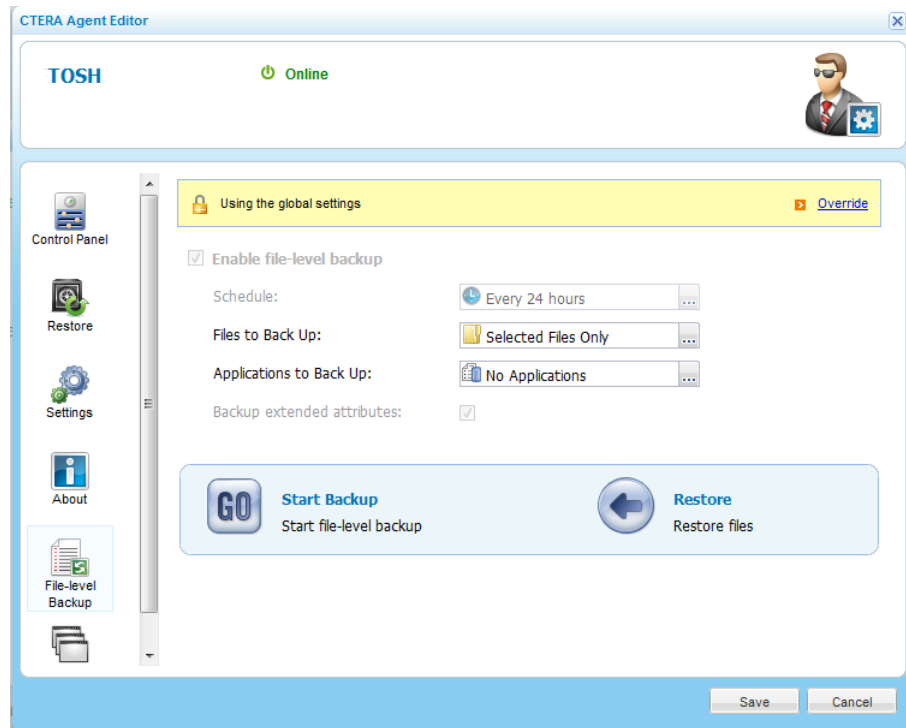
In this field...	Do this...
Destination Share	Select the local CTERA appliance network share with which the files and folders from the CTERA Agent-enabled computer should be backed up. Subdirectories will automatically be created under this network share for each backed up folder.
Use SSL Connection	Specify whether to use Secure Socket Layer (SSL) encryption for connections from the CTERA Agent to the CTERA appliance:  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 CTERA appliance, and will use SSL when they are not in the same LAN as the CTERA appliance. 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, <i>and</i> 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 CTERA appliance Web interface. The CTERA Agent user cannot select files for backup locally, nor can they configure agent settings via the CTERA appliance 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.

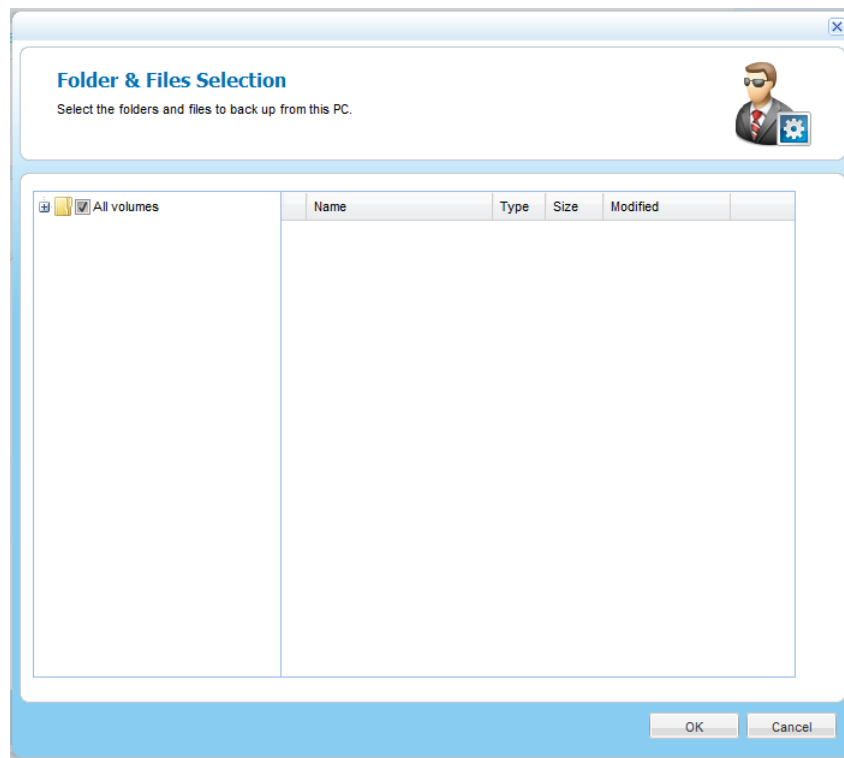
- b Complete the fields using the information in **Schedule Fields** (page 34).
- c Click **OK**.

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

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

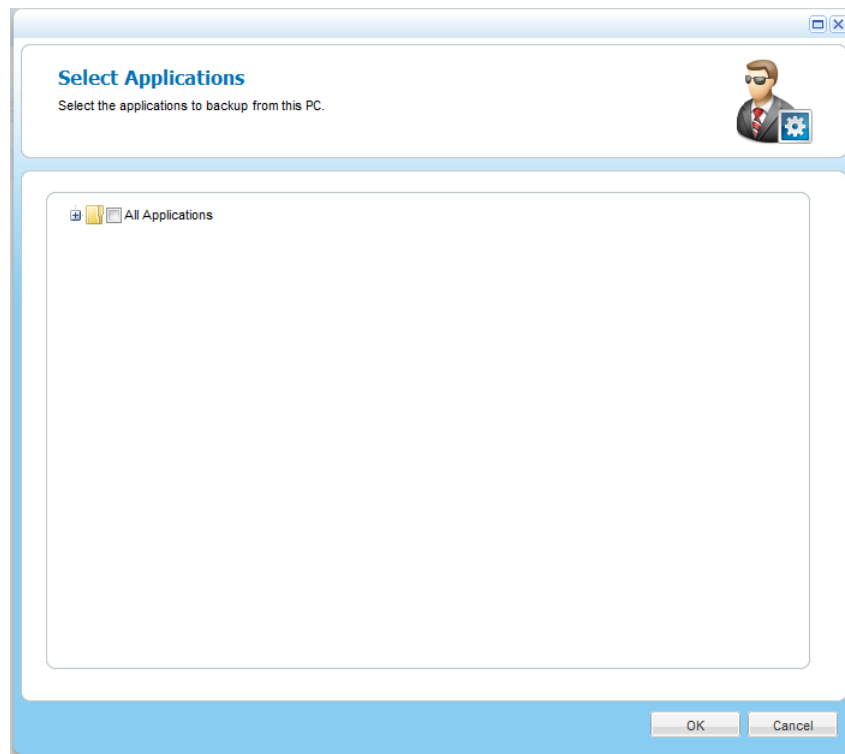
- a** In the **Files to Back Up** field, click .

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 CTERA appliance 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

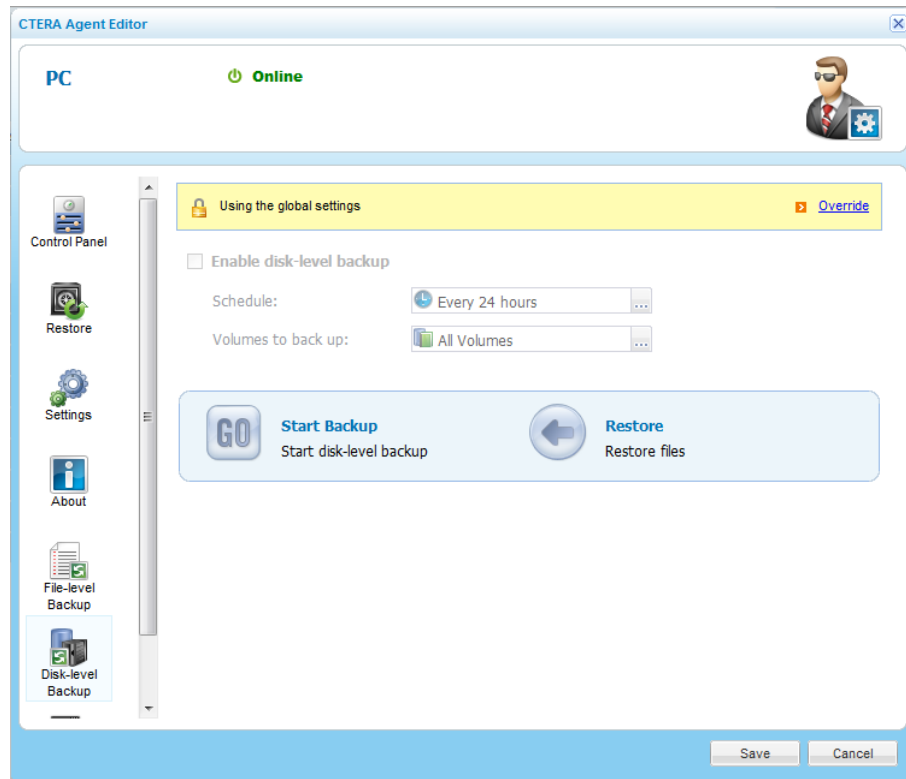
In this field...	Do this...
Manual Only	Choose this option to disable automatic backups.
Periodically	Choose this option to specify that automatic backups should be performed every certain number of hours. The Start Every field is enabled, and you must complete it.
Start Every	Use the arrows to specify 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.

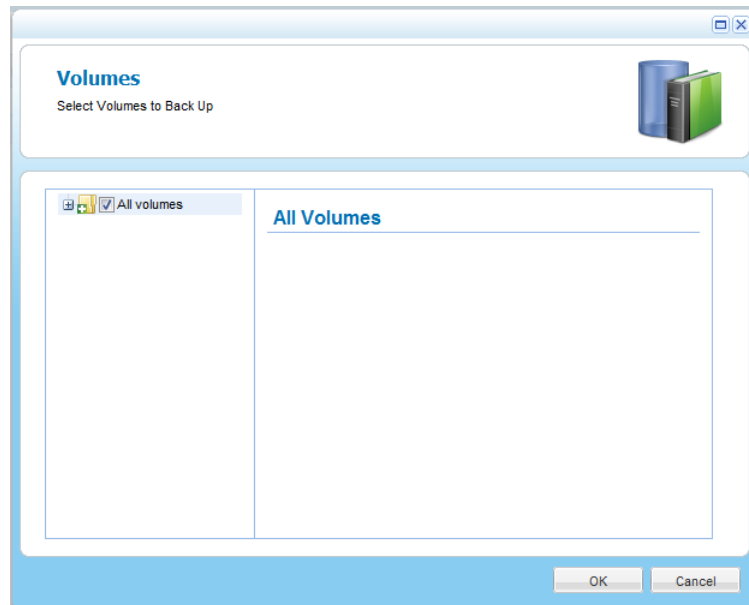
- b Complete the fields using the information in **Schedule Fields** (page 34).
- c Click **OK**.

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 36).

- c Click **OK**.

6 Click **Save**.

Table 2: 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.

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.

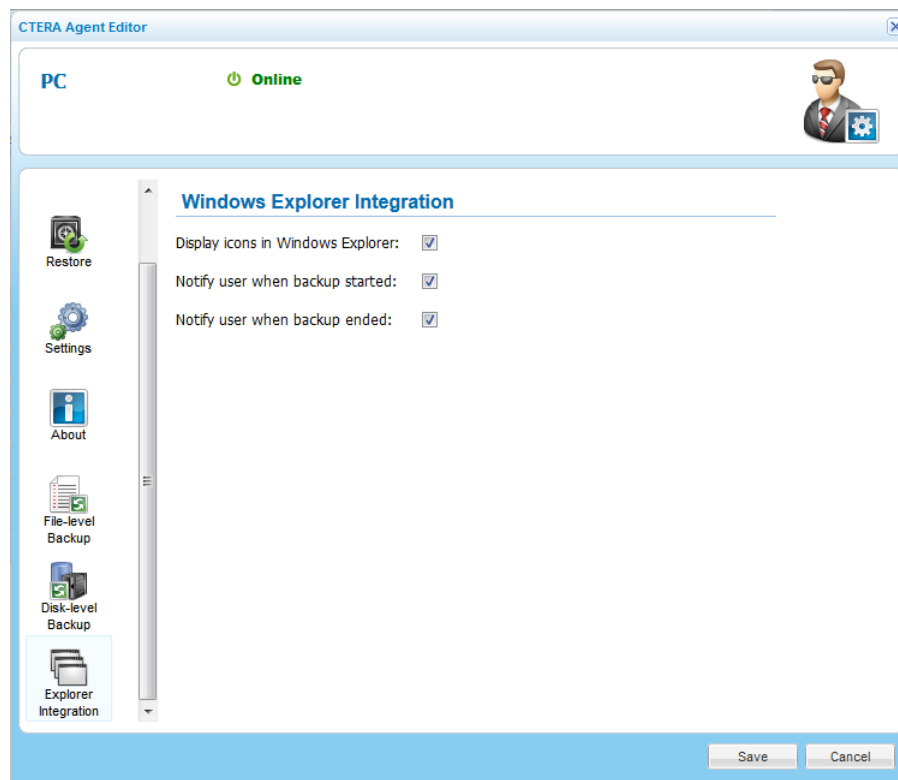
See *Configuring File-Level Backup Settings* (on page 31).

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 3: CTERA Agent Explorer Integration Fields

In this field...	Do this...
Display icons in Windows Explorer	Select this option to display CTERA backup icons in Windows Explorer. Files and folders that are selected for backup will be marked with the  icon in Windows Explorer. Folders for which only part of the contents are selected for backup will be marked with the  icon.
Notify user when backup started	Select this option to display a pop-up notification above the CTERA Agent tray icon, when backup starts.
Notify user when backup ended	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 CTERA appliance's user guide*, Configuring Global Settings for All CTERA Agents.

If this option is not enabled, files and folders for backup can only be configured by appliance administrators, via the Web interface. See *your CTERA appliance's user guide*, Selecting Files and Folders for File-Level Backup.

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

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 appliance, right-click on the desired file/folder, and click **CTERA Agent > Add to backup**.

If the **Display icons in Windows explorer** check box is selected in the agent's file-level backup settings, the file/folder is marked with the  icon. For information on configuring file-level backup settings, see **Configuring File-Level Backup Settings** (on page 31).

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

The  icon is removed from the file/folder.

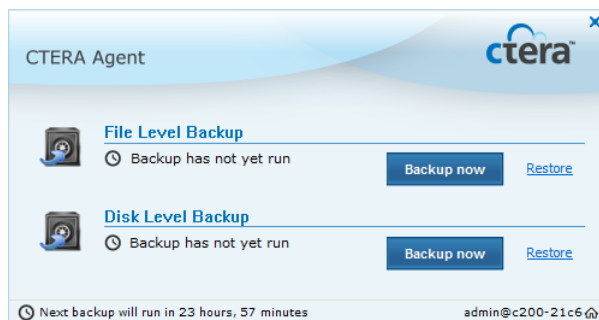
Manually Starting Backup

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

» To manually start backup

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

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 CTERA appliance.

Stopping the Current Local Backup Operation

» To stop the current backup operation

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

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 notification area of the Windows taskbar, and click **Suspend**.

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 notification area of the Windows taskbar, and click **Unsuspend**.

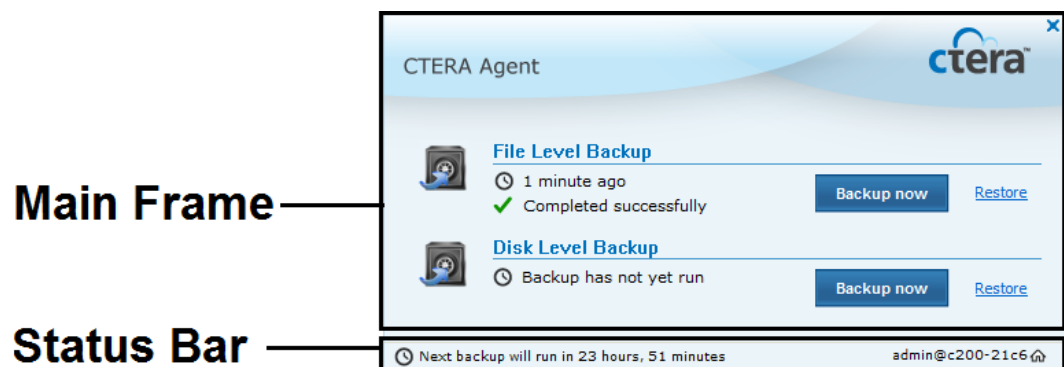
Local backup resumes.

Viewing the Agent Status

» To view the CTERA Agent's status

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

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, followed by `username@appliance`, where `username` is your username for accessing the CTERA appliance and `appliance` is the name of the CTERA appliance to which the CTERA Agent is currently connected. The  icon indicates that the CTERA Agent is in Appliance mode.

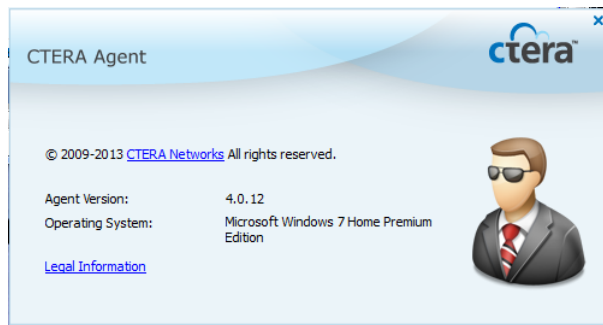
Viewing Agent Details

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 notification area of the Windows taskbar, 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**.

Disconnecting the Agent from a CTERA Appliance

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

» To disconnect the CTERA Agent from a CTERA appliance

- 1 Right-click the CTERA Agent tray icon in the notification area of the Windows taskbar, and click **Sign out**.

A confirmation message appears.

- 2 Click **OK**.

The CTERA Agent disconnects from the CTERA appliance.

Restoring Files from File-Level Backup

» To restore files from file-level backup

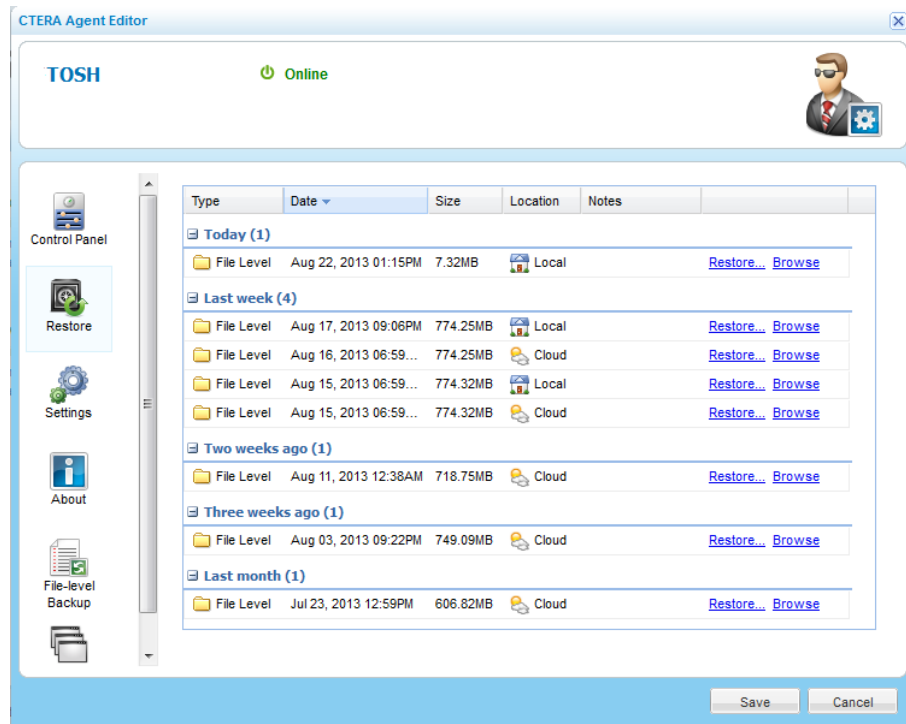
- 1 Do one of the following:

- + Connect to the CTERA Agent Manager, then click the **Restore** tab.

See Connecting the Agent to the CTERA Agent Manager.

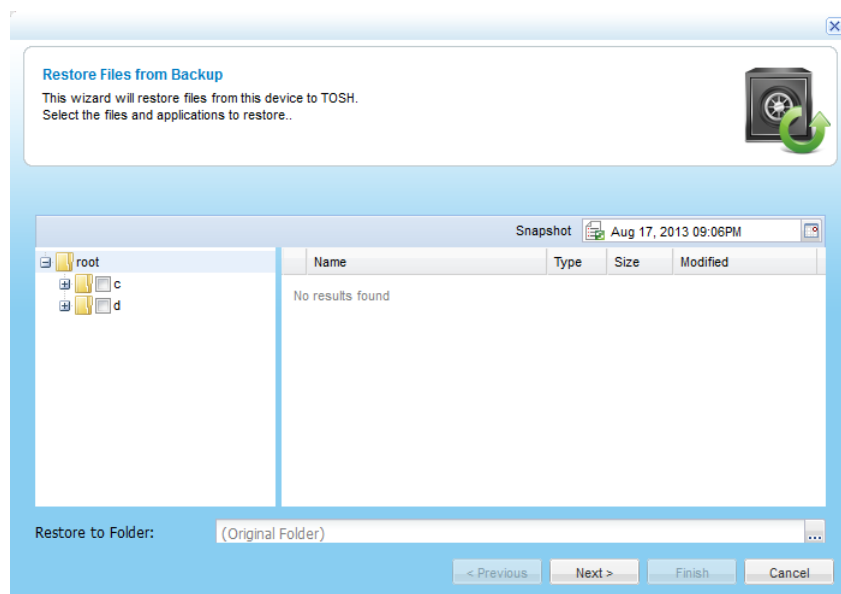
- Right-click on the CTERA Agent tray icon in the notification area of the Windows taskbar, and click **Restore**.

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



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

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

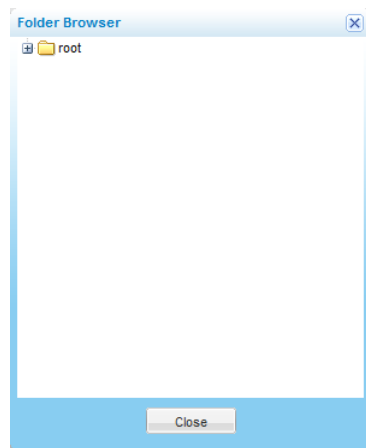


- 3 To view a folder's contents, select the folder in the left pane.
The selected folder's contents appear in the right pane.
- 4 In either pane, select the check boxes next to the files and folders you want to restore.

For an explanation of the icons and check boxes next to each folder, see **Folder Icons** (page 36).

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.

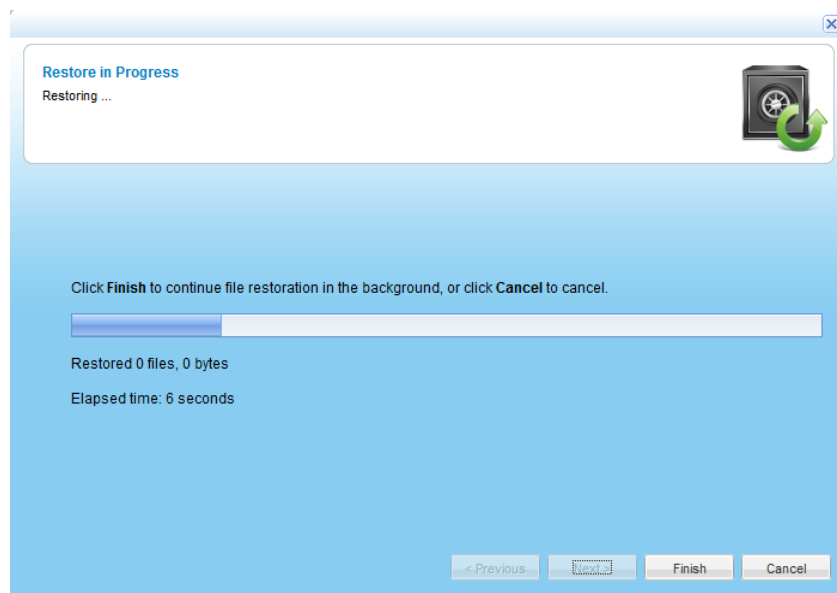


b Select the folder to which you would like to restore the files.

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 44).

 Restore your entire computer

See *Restoring the Entire Computer from Disk-Level Backup* (on page 44).

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 46).

» 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 46).

» 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 46).

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 44) 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 44)), the System Recovery Options dialog box appears.



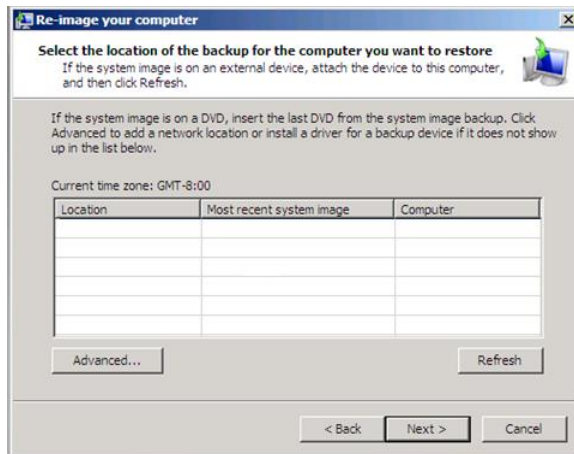
- 2 In the **System Recovery Options** dialog box, choose **Restore your computer using a system image that you created earlier**.
- 3 Click **Next**.

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



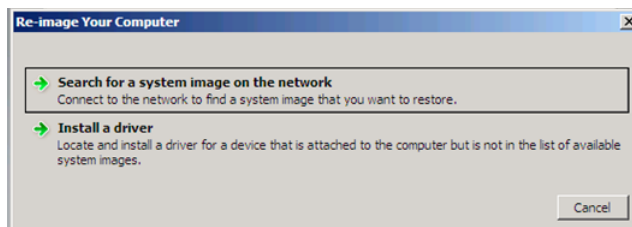
- 4 Choose **Select a system image**.
- 5 Click **Next**.

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.

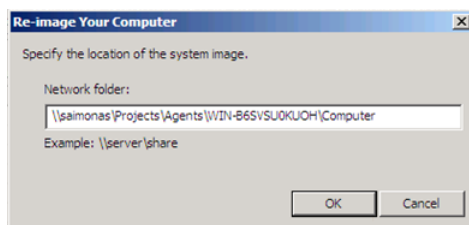


7 Click **Search for a system image on the network**.

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.

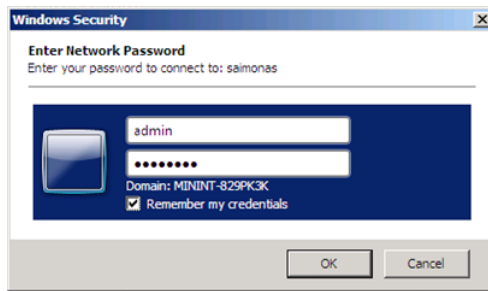
Tip



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

10 Click **OK**.

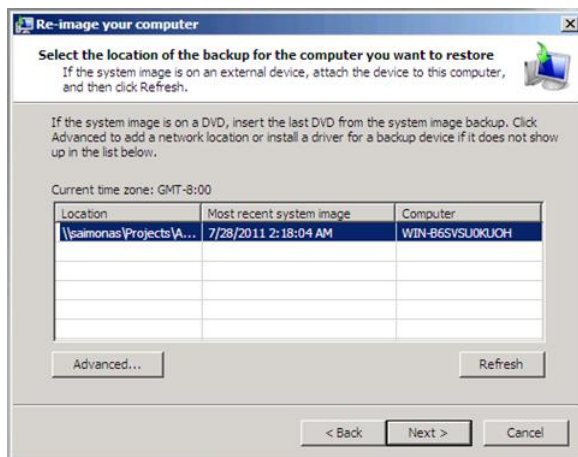
The **Enter Network Password** dialog box opens.



11 Enter your user name and password for authenticating to the CTERA appliance.

12 Click **OK**.

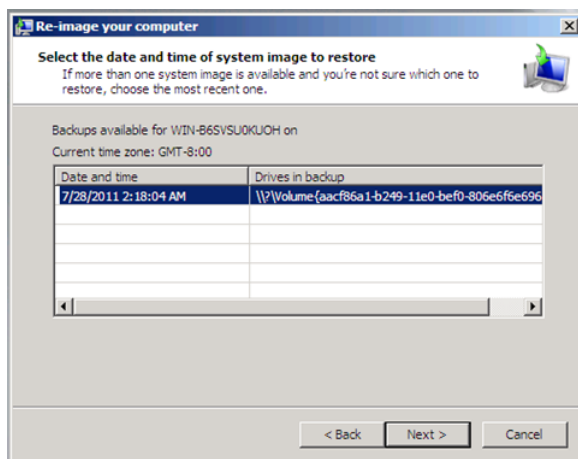
The disk-level backup image you specified appears in the **Select the location of the backup for the computer you want to restore** dialog box.



13 Select the disk-level backup image.

14 Click **Next**.

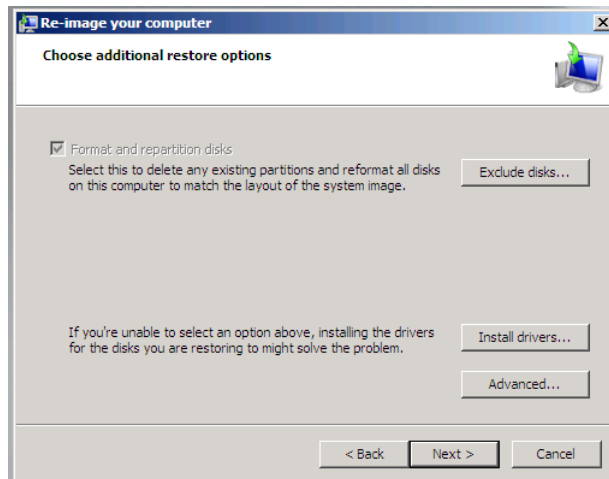
The **Select the date and time of system image to restore** dialog box appears.



15 Select the desired date and time.

16 Click **Next**.

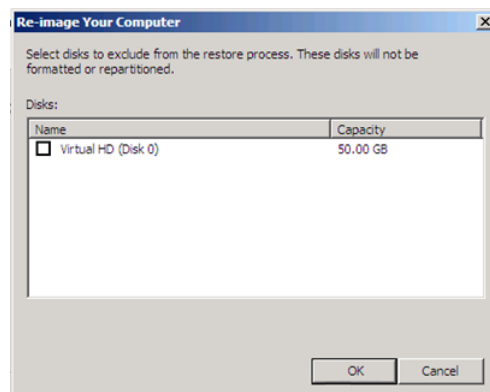
The **Choose additional restore options** dialog box appears.

**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**

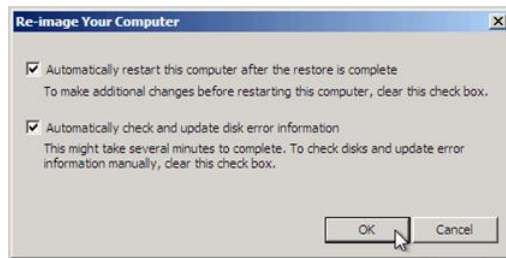
This step is optional and not recommended, as it is preferable to reformat and repartition all disks.

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.

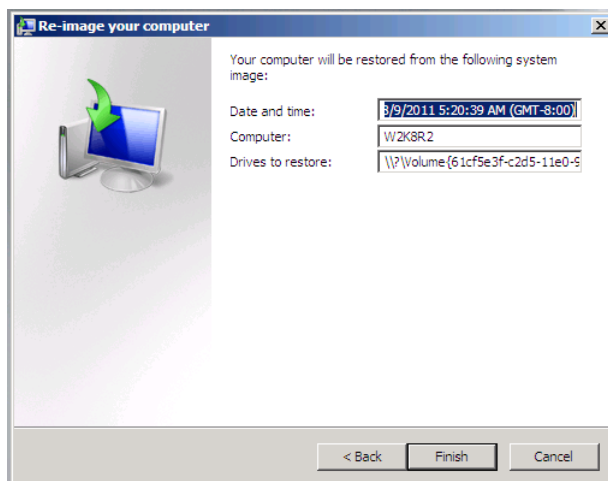


b Select the desired options.

c Click **OK**.

20 Click **Next**.

The final dialog box appears.



21 Click **Finish**.

A warning message appears.

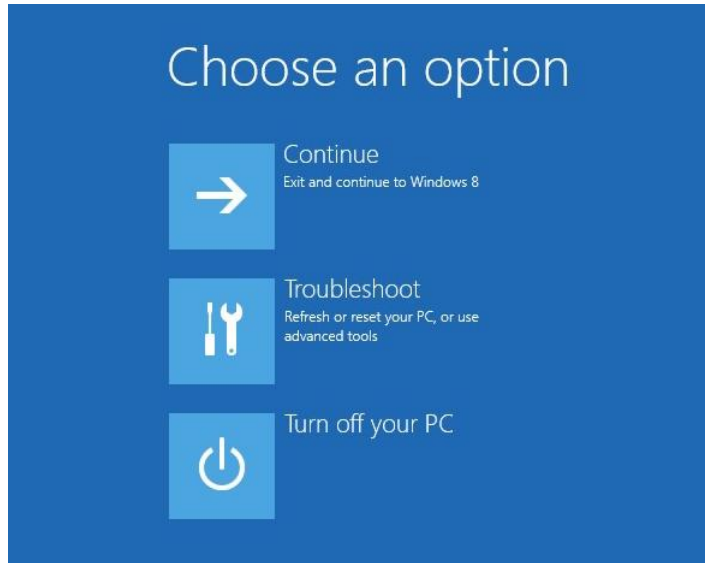
22 Click **Yes**.

The re-imaging process begins.

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

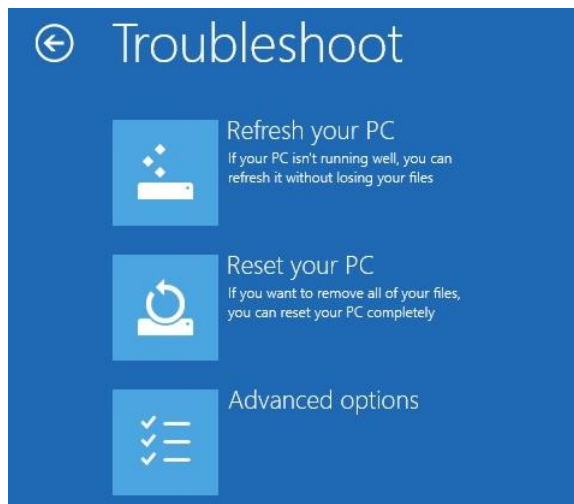
» **To re-image your computer in Windows 8 / 2012**

- 1 When you click **Repair your computer** (see *Restoring the Entire Computer from Disk-Level Backup* (on page 44)), the Advanced Startup options menu appears.



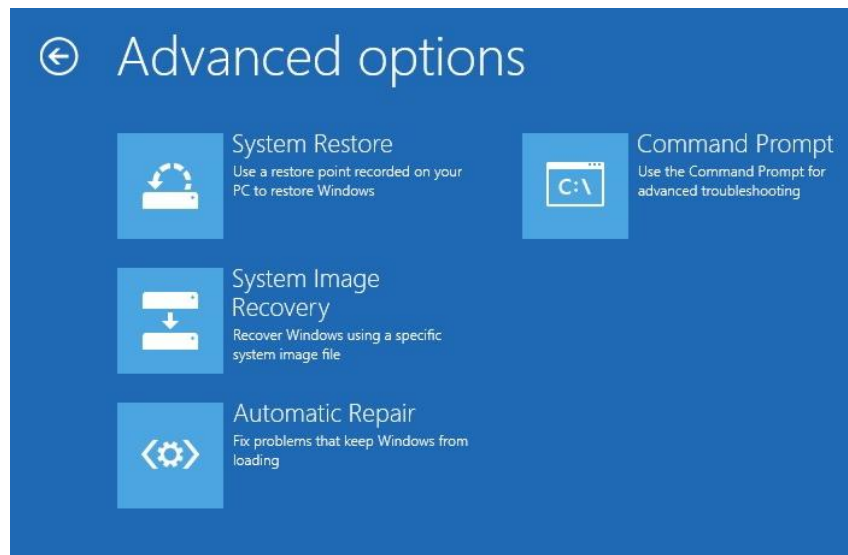
- 2 Click **Troubleshoot**.

The Troubleshoot menu appears.



- 3 Click **Advanced options**.

The Advanced options menu appears.



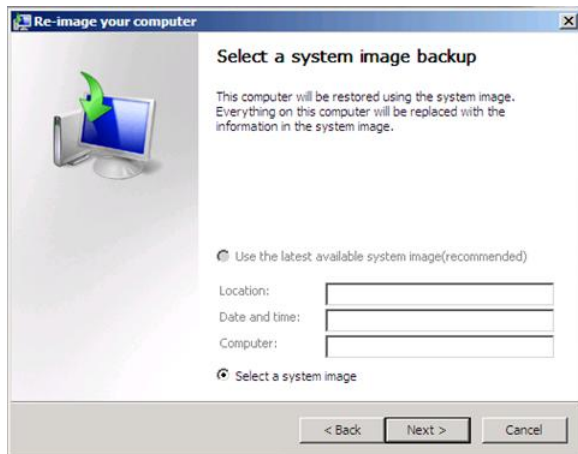
4 Click **System Image Recovery**.

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



5 Select the operating system.

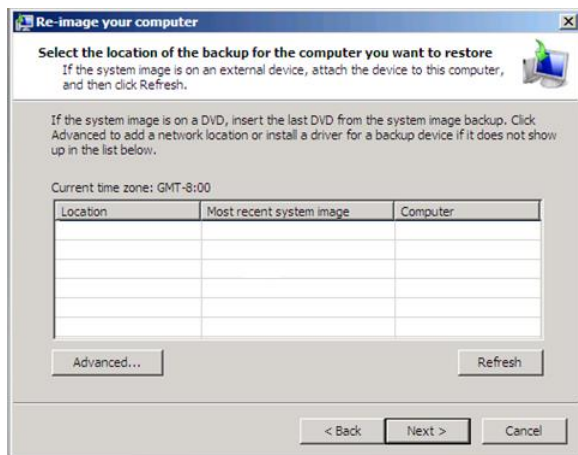
The **Re-image your computer** wizard opens displaying the **Select a system image backup** dialog box.



6 Choose **Select a system image**.

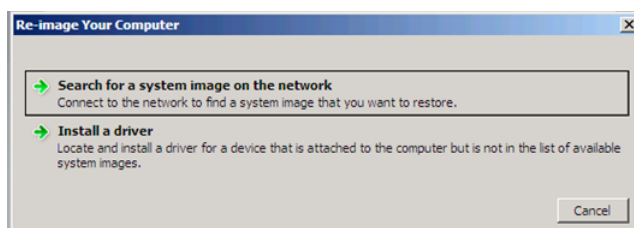
7 Click **Next**.

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.

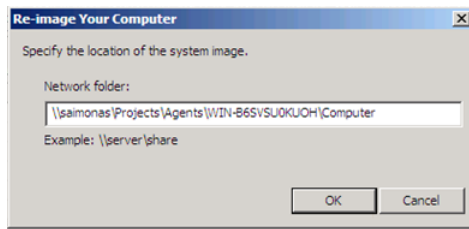


9 Click **Search for a system image on the network**.

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.

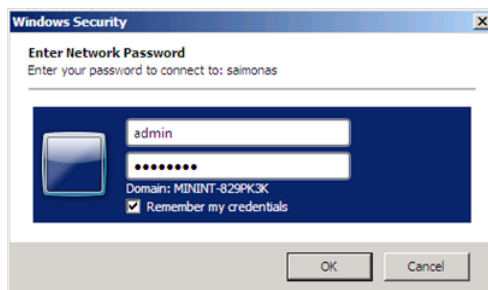
Tip



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

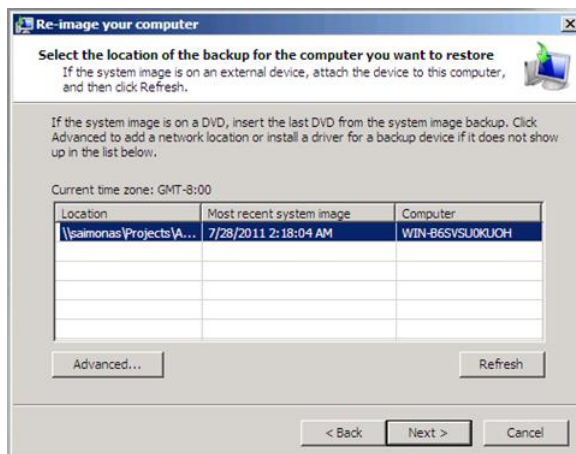
- 12 Click **OK**.

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



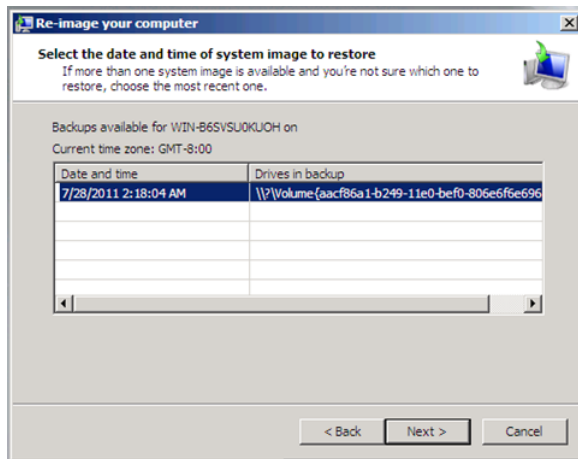
- 13 Enter your user name and password for authenticating to the CTERA appliance.
- 14 Click **OK**.

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**.

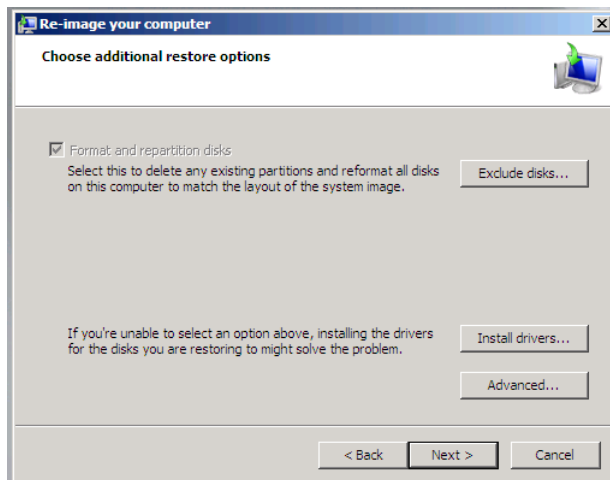
The **Select the date and time of system image to restore** dialog box appears.



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:

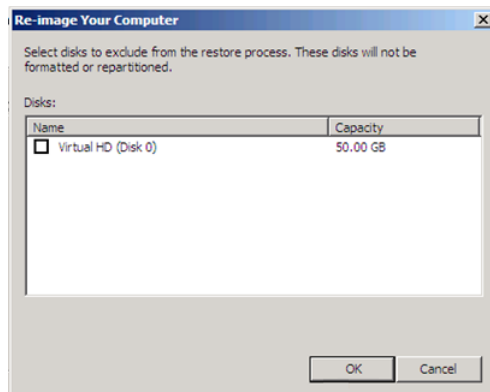
Tip



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.



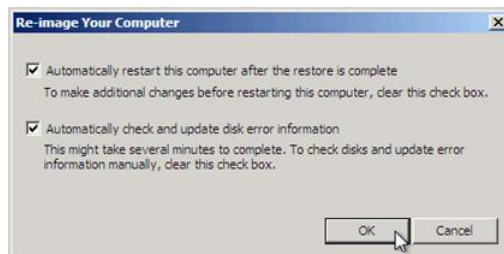
b Select the disks to exclude.

c Click **OK**.

21 To configure advanced options, do the following:

a Click **Advanced**.

A dialog box appears.

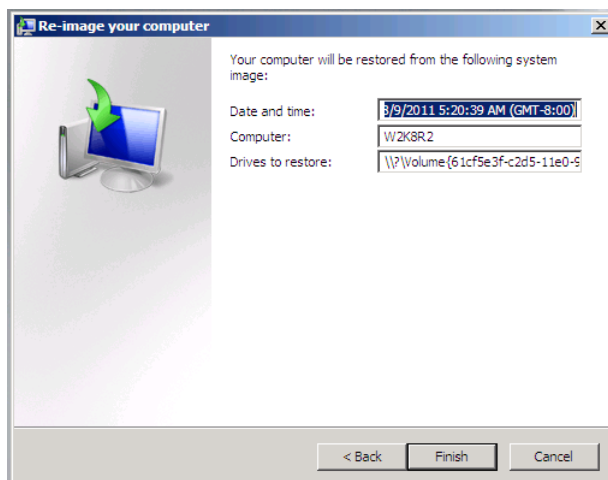


b Select the desired options.

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 Appliance

You can access files on the appliance using the following procedure.

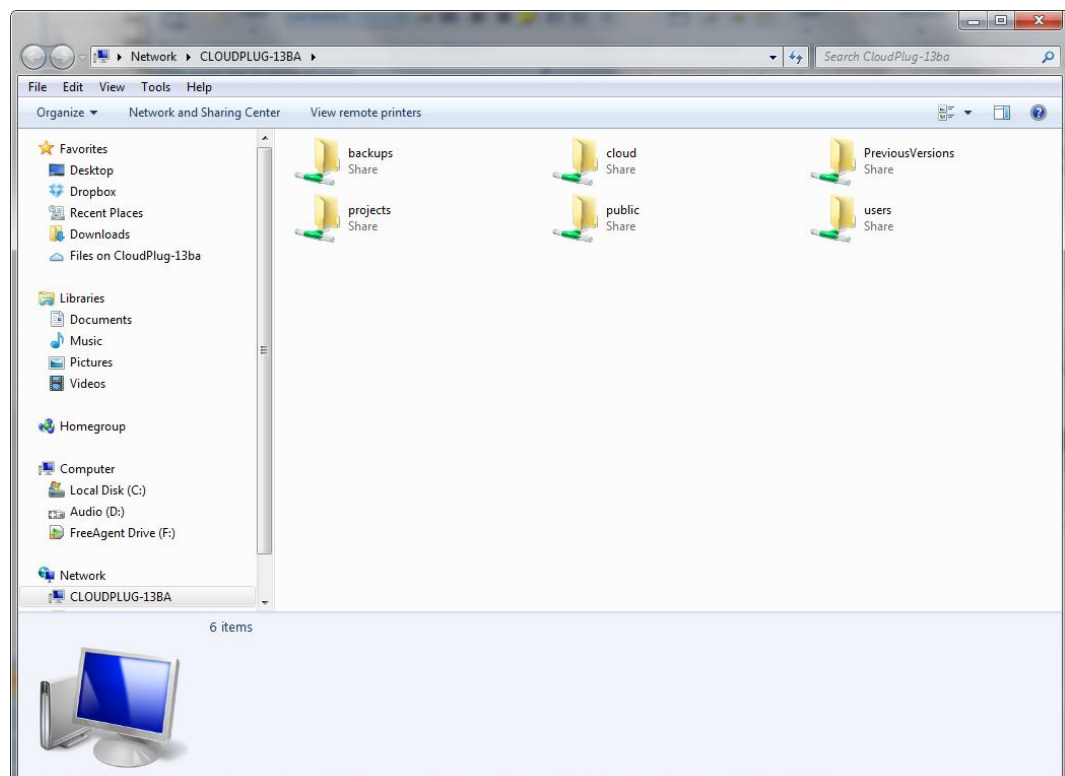
» **To access files on the appliance**

+ 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 **Files on Appliance** shortcut on your desktop .

Windows Explorer opens displaying the shares on the appliance.



Using the CTERA Agent in Cloud Agent Mode

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

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Workflow

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

- 1 Install the CTERA Agent on the computer whose files you want to back up to the CTERA appliance.
See **Installing the Agent** (on page 10).
- 2 Connect the CTERA Agent to the CTERA appliance.
See **Connecting the Agent to the CTERA Portal** (on page 60).
- 3 Configure CTERA Agent settings, by doing the following:

- a** Connect to the CTERA Agent Web Interface.
See **Connecting to the CTERA Agent Web Interface** (on page 62).
 - b** Configure the CTERA Agent's cloud backup settings.
See **Configuring Cloud Backup** (on page 65).
 - c** (Optional) Enable remote access.
See **Enabling/Disabling Remote Access** (on page 88).
 - d** (Optional) Configure logging.
See **Configuring Event Log Settings** (on page 95).
- 4** 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 Backup** (on page 107).

Connecting the Agent to the CTERA Portal

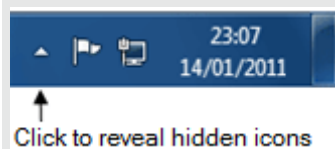
» To connect the CTERA Agent to the CTERA Portal

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

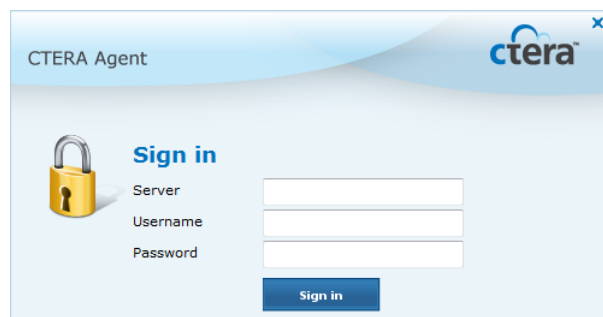
Tip



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 **Sign In** window opens.

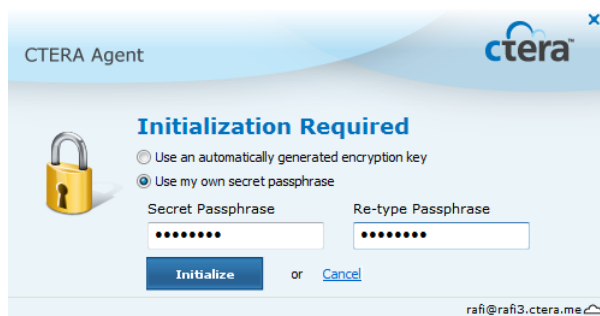


- 2** In the **Server** field, type the CTERA Portal's DNS name.
- 3** In the **Username** and **Password** fields, type your user name and password for accessing the CTERA Portal.

4 Click **Sign in**.

The following things happen:

- + The CTERA Agent connects to the CTERA Portal, and the CTERA Agent appears in the CTERA Portal, in the **Main > Devices** page.
- + A backup folder is automatically created for this agent on the CTERA Portal.
- + If this is the first time this agent connects to the CTERA Portal, the **Initialization Required** screen opens.

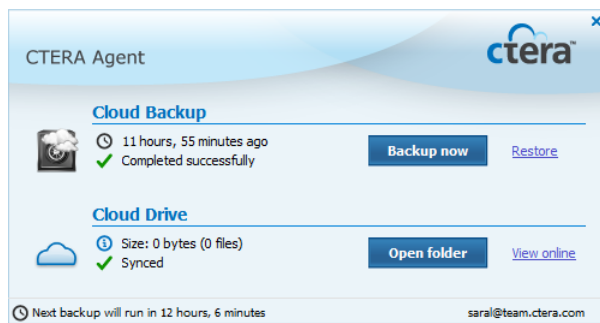


Do one of the following:

- + To use an automatically generated encryption key to protect the created backup folder, choose **Use an automatically generated encryption key**, and then click **Initialize**.
- + To secure the backup folder with your own secret passphrase, choose **Use my own secret passphrase**, enter the desired passphrase in the **Secret Passphrase** and **Re-type Passphrase** fields, and then click **Initialize**.

Each time the agent connects to CTERA Portal, you will need to enter this passphrase.

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



- + A shortcut to the cloud drive folder is automatically created on your desktop .

Using the CTERA Agent Web Interface

In Cloud Agent 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
- + 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.

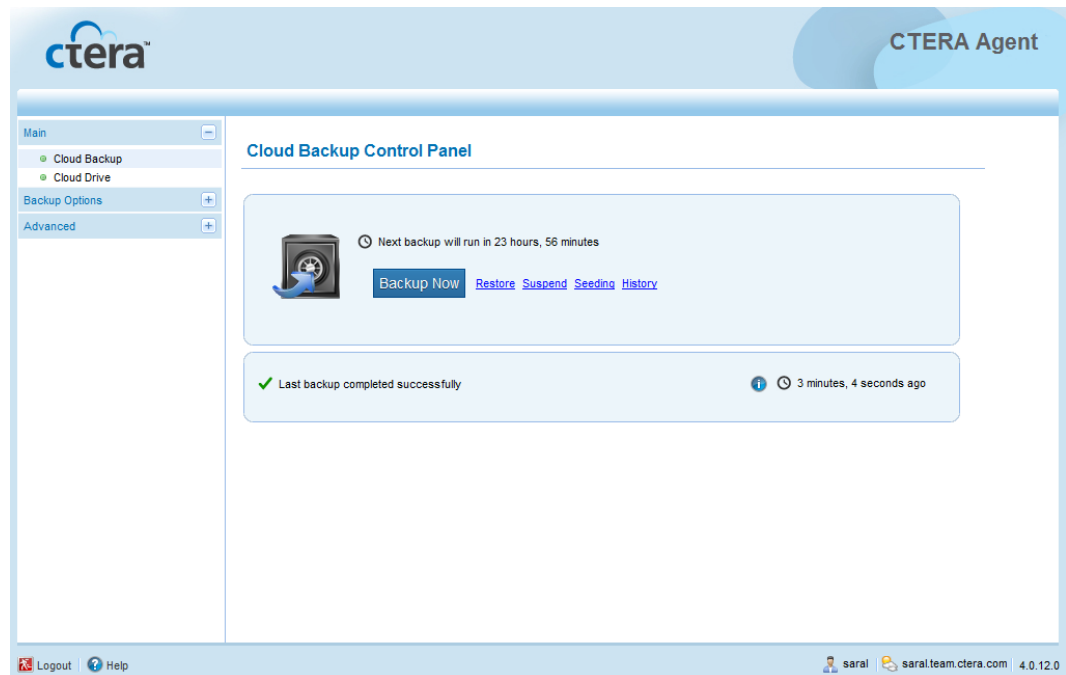
To allow a user who does not belong to one of these groups to access the CTERA Agent Web interface, do the following: Open the Microsoft Management Console (MMC), and in the **Local Security Policy** snap-in under **User Rights Assignment**, assign the user the "Backup files and directories" privilege.

» 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
	2013/08/14 23:01:22	
	2013/08/14 22:38:30	
	2013/08/15 12:29:34	
	2013/08/15 12:29:17	
	2013/08/15 11:48:52	

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.

System

Select Topic: System ▼	Minimum Severity: Info ▼	
Type	Date ▼	User
	2013/08/22 14:37:43	
	2013/08/22 13:14:33	
	2013/08/22 11:55:50	Con
	2013/08/22 11:55:18	Disc
	2013/08/22 11:06:17	Con

- 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.

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 66).
 - + 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 67).
 - + To choose specific applications to include in the backup, select the desired applications.
See **Selecting Applications for Backup** (on page 77).
- 2 Do one or more of the following:
 - + Schedule automatic backup of the selected folders.
See **Scheduling Automatic Cloud Backup** (on page 80).

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 83).

The files will be backed up immediately.

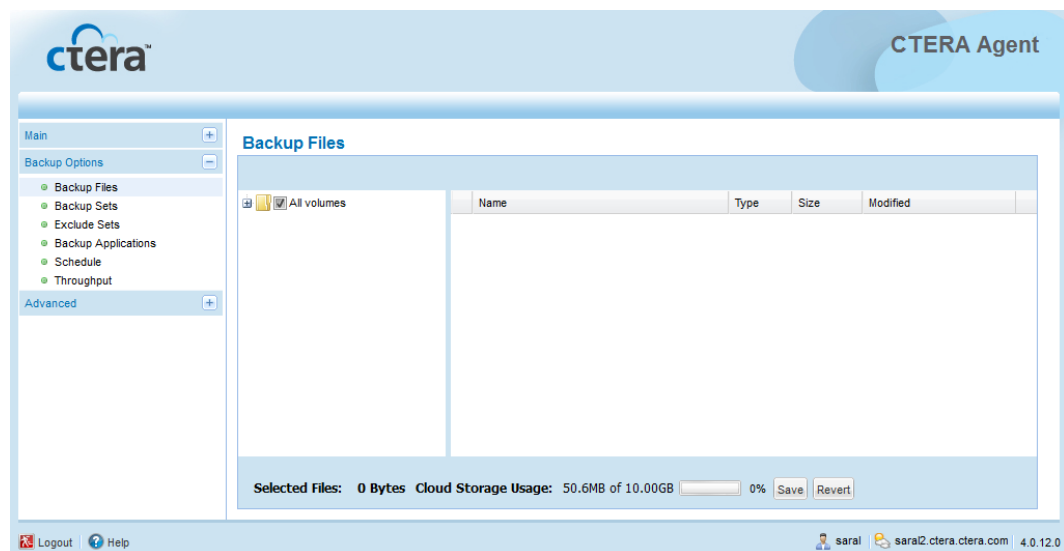
Selecting Files and Folders for Cloud Backup

By default, all folders and files are selected for cloud backup. If desired, you can modify the selection.

» To select files and folders for cloud backup

- 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 36).

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 appliances included in your account).

For example, let's say your account includes two CTERA appliances, and each appliance 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".

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:

-  **Included sets.** Files that should be included in each backup
-  **Excluded 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 *included 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 *excluded 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 appliance processes included sets, excluded sets, and selected folders, see *your CTERA appliance's user guide*, *How Can I Control the Scope of Backup Operations?*.

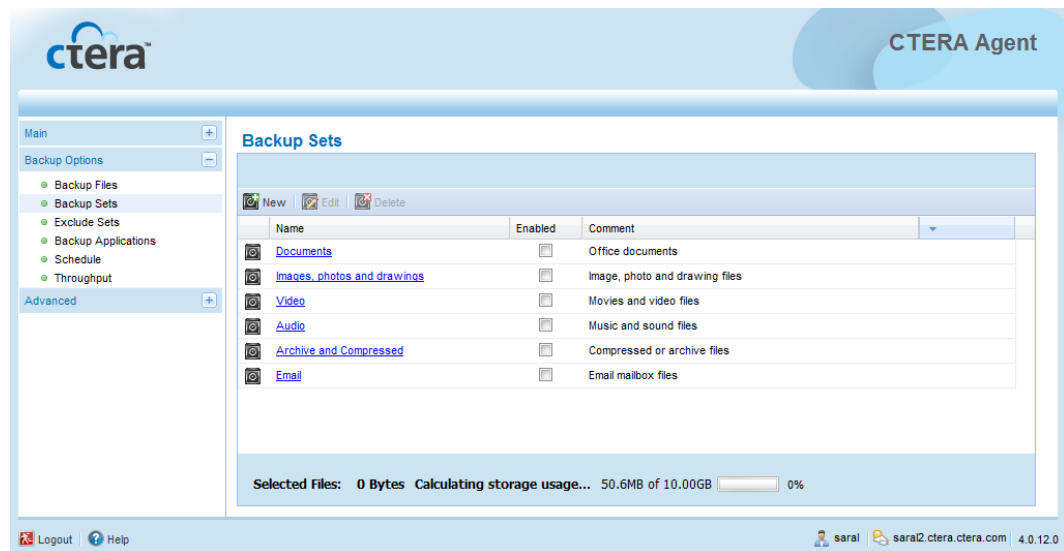
Enabling/Disabling Included Sets

In order for an included set to be used during backup operations, it must be enabled.

» To enable an included set

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

The **Backup Sets** page appears.



- 2 Next to the desired included set, in the **Enabled** column, select the check box.

The included 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 appliances included in your account).

» To disable an included set

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

The **Backup Sets** page appears.

- 2 Next to the desired included set, in the **Enabled** column, clear the check box.

The included 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 appliances included in your account).

Adding and Editing Included Sets

» To add or edit an included 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 included set, click **New**.

- + To edit an existing included 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 73).

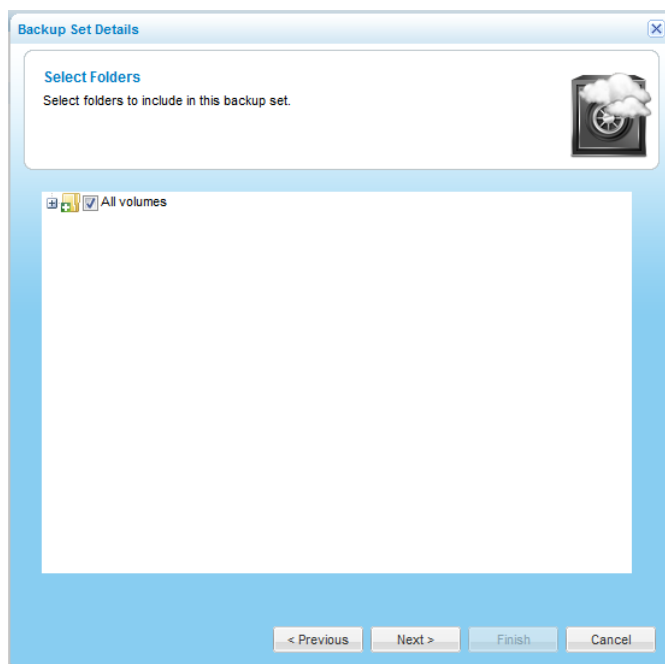
- d** Click in the third column, and complete the condition:
 - If the parameter is **File Size**, type the desired file size and unit.
 - If the parameter is **File Modified**, click and choose the desired date.
 - For all other parameters, type the desired free-text value.

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.

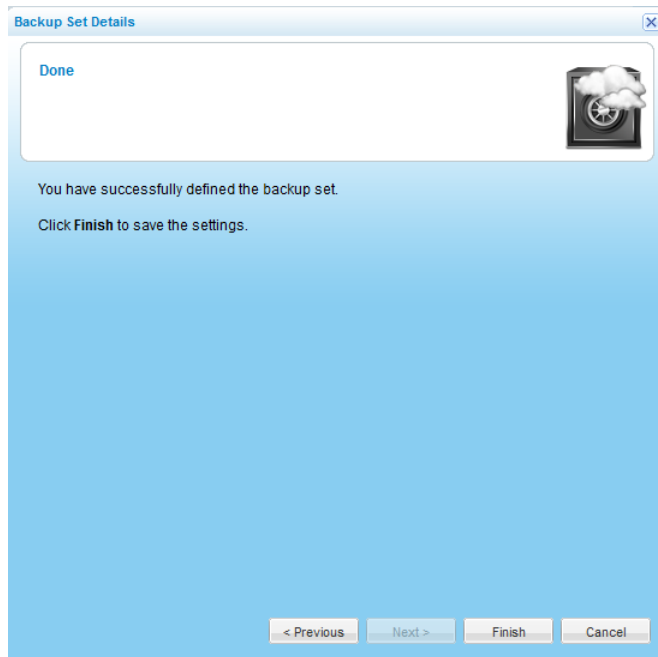
- 9 Expand the tree nodes to reveal the folders.

For an explanation of the icons and check boxes next to each folder, see **Folder Icons** (page 36).

- 10 Select the check boxes next to the folders you want to include in the included set.

- 11 Click **Next**.

The **Done** screen appears.



12 Click **Finish**.

Tip



If you added a new included set, it is automatically enabled.

Table 4: 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 Included Sets

» To delete an included set

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

The **Backup Sets** page appears.

- 2 Select the desired included set's name and click **Delete**.

A confirmation message appears.

- 3 Click **Yes**.

The included set is deleted.

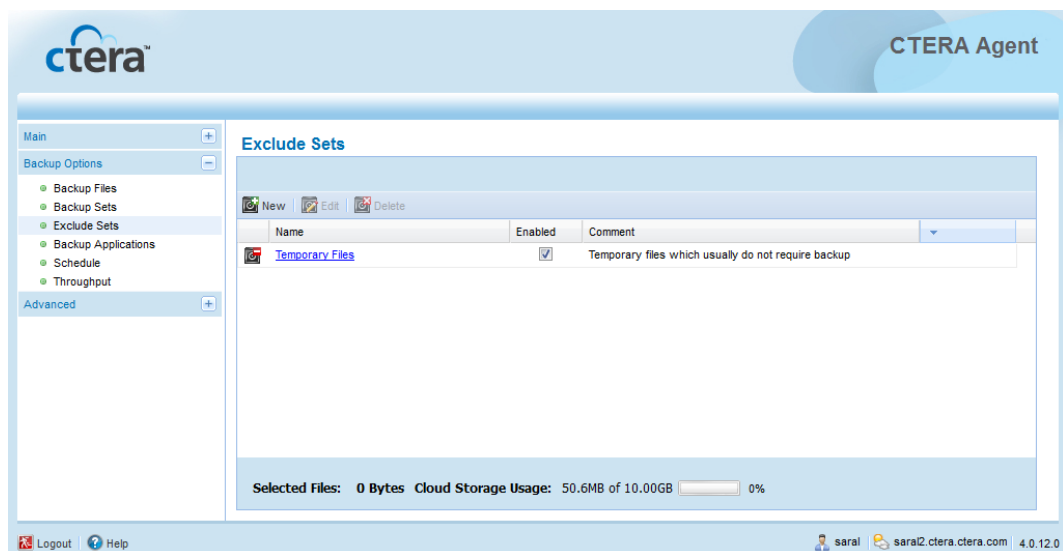
Enabling/Disabling Excluded Sets

In order for an excluded set to be used during backup operations, it must be enabled.

» To enable an excluded set

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

The **Exclude Sets** page appears.



- 2 Next to the desired excluded set, in the **Enabled** column, select the check box.

The excluded 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 appliances included in your account).

» To disable an excluded set

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

The **Exclude Sets** page appears.

- 2 Next to the desired excluded set, in the **Enabled** column, clear the check box.

The excluded 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 appliances included in your account).

Adding and Editing Excluded Sets

» To add or edit an excluded 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 excluded set, click **New**.
-  To edit an existing excluded 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 73).

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 36).

10 Select the check boxes next to the folders you want to include in the excluded set.

11 Click **Next**.

The **Done** screen appears.

12 Click **Finish**.

Tip



If you added a new excluded set, it is automatically enabled.

Deleting Excluded Sets

» To delete an excluded set

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

The **Exclude Sets** page appears.

- 2 Select the desired excluded set's name and click **Delete**.

A confirmation message appears.

- 3 Click **Yes**.

The excluded set is deleted.

Selecting Applications for Backup

Tip

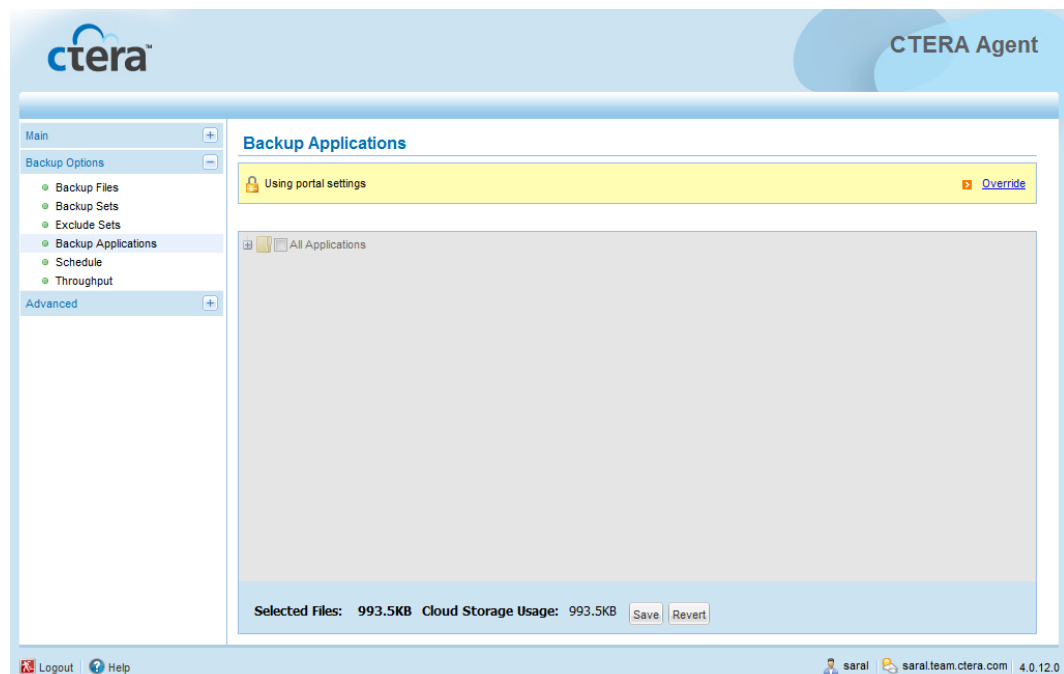


If a selected application is not installed on the target device, it will be ignored.

» To select applications for backup

- 1 In the navigation pane, 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**.

Canceling the Current Cloud Backup

You can cancel a running cloud backup.

Tip

Only the current backup will be canceled. The next automatic backup will occur as scheduled.

» To cancel the current cloud backup

- 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 the Cloud Backup Service

You can suspend the CTERA Cloud Backup service, including:

- + The currently running backup
- + All scheduled automatic backup

Tip

Performing the following procedure is equivalent to suspending the Cloud Backup service via the CTERA Agent tray icon's right-click menu.

» To suspend the CTERA Cloud Backup service

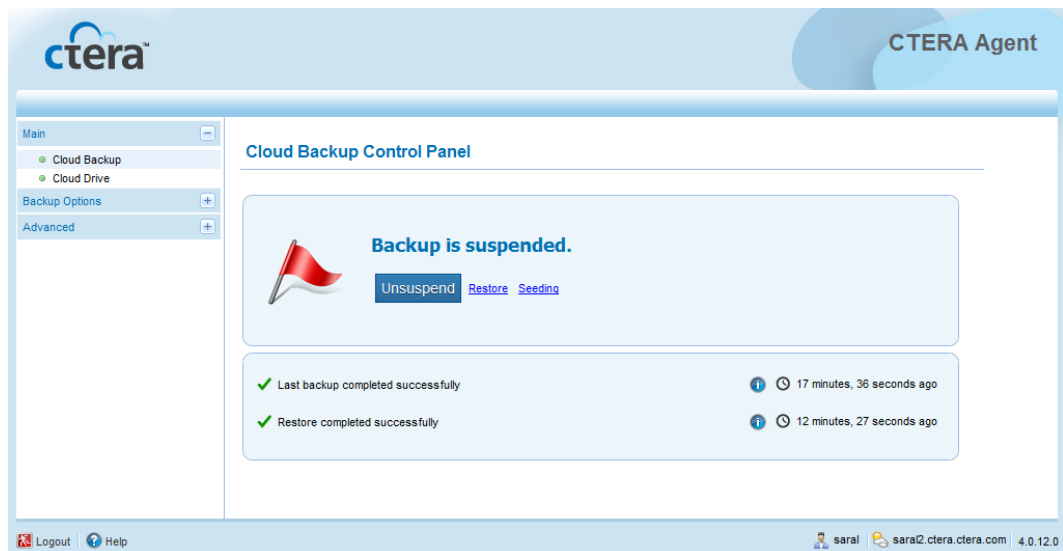
- 1 In the navigation pane, click **Main > Cloud Backup**.

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.



Resuming the Cloud Backup Service

If the CTERA Cloud Backup service is suspended, you can unsuspend it.

Tip



Performing the following procedure is equivalent to resuming the Cloud Backup service via the CTERA Agent tray icon's right-click menu.

» To resume the CTERA Cloud Backup service

- 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

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

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

The following information is displayed:

Table 5: Cloud Backup Information

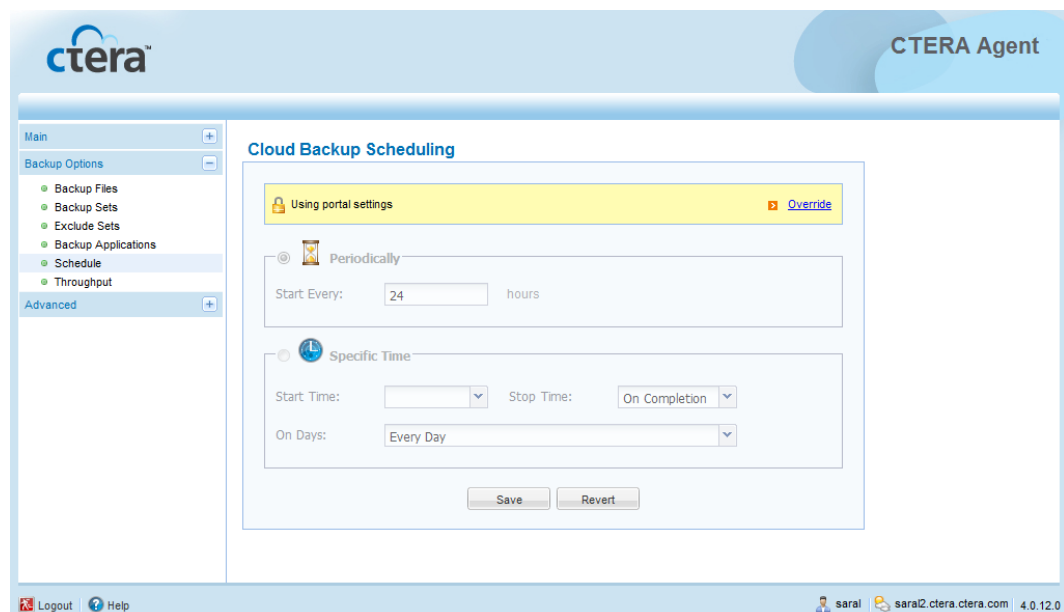
This field...	Displays...
Next backup will run in	The amount of time until the next scheduled automatic backup.
The last backup result	The status of the last backup: Completed successfully Backup in Progress The last backup has failed, followed by the reason it failed If an error occurred during backup, refer to the backup logs for details. See Viewing Cloud Backup Logs (on page 98).
	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.

Scheduling Automatic Cloud Backup

» To schedule automatic cloud backup

- 1 In the navigation pane, 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.

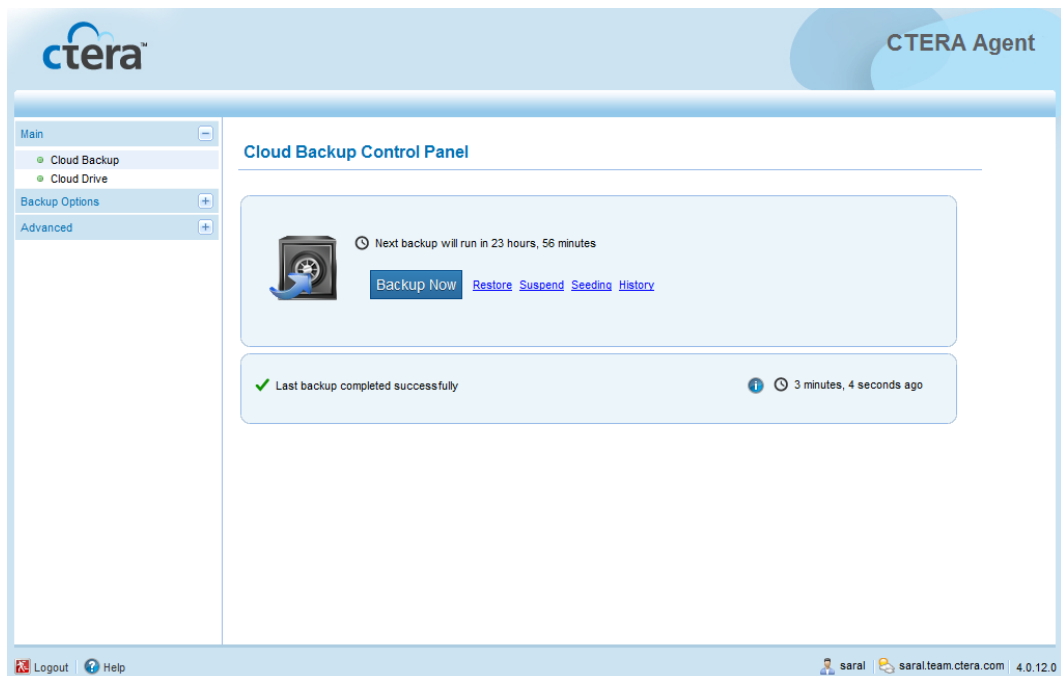
Manually Starting Cloud Backup

You can manually start cloud backup at any time.

» To manually start cloud backup

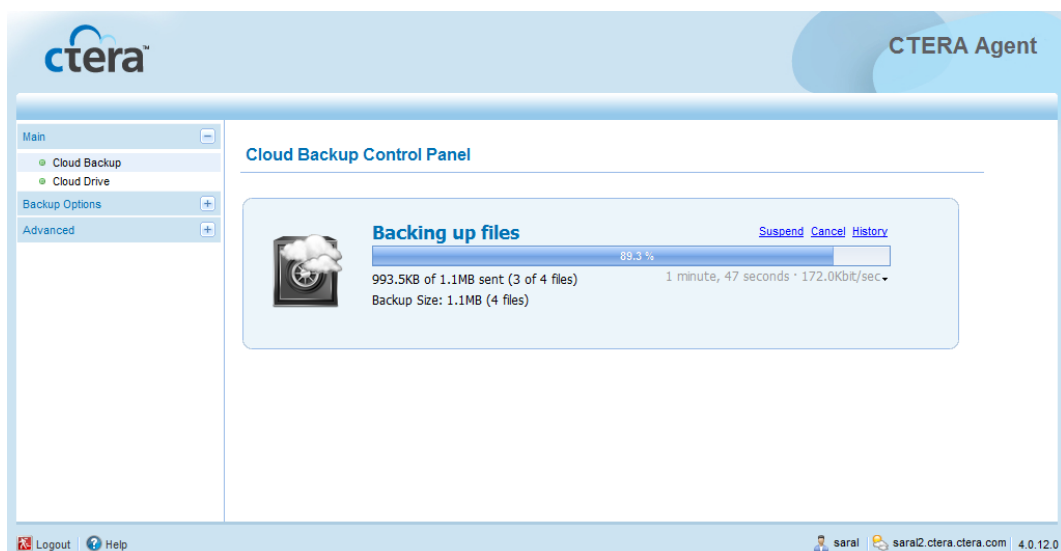
- 1 In the navigation pane, click **Main > Cloud Backup**.

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**.

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 66).

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

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

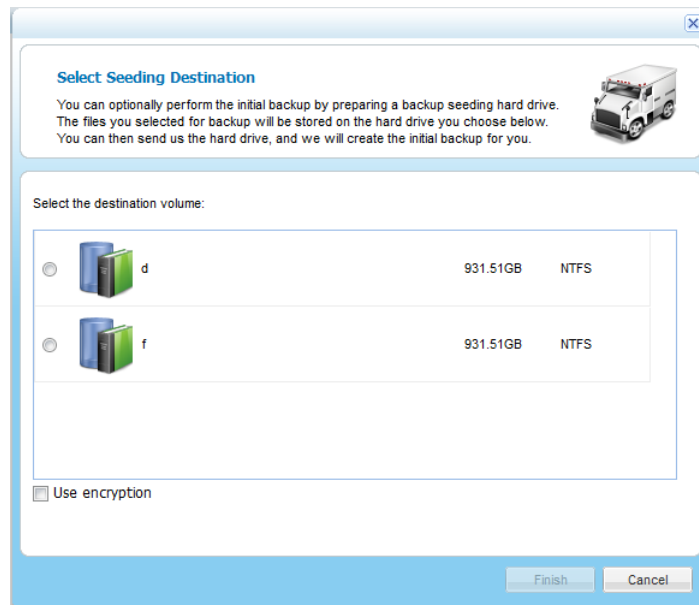
The **Cloud Backup Control Panel** page appears.

- 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 appliance.

Logging Out of the CTERA Agent Web Interface

» To log out of the CTERA Agent Web interface

- 1 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.

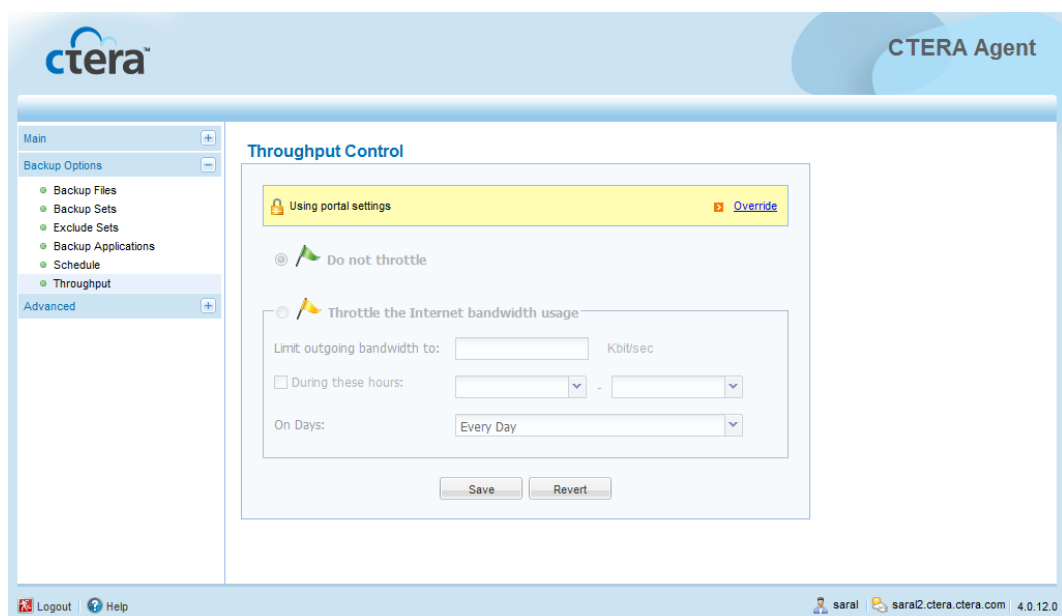
Restricting Throughput

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 7: 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 .

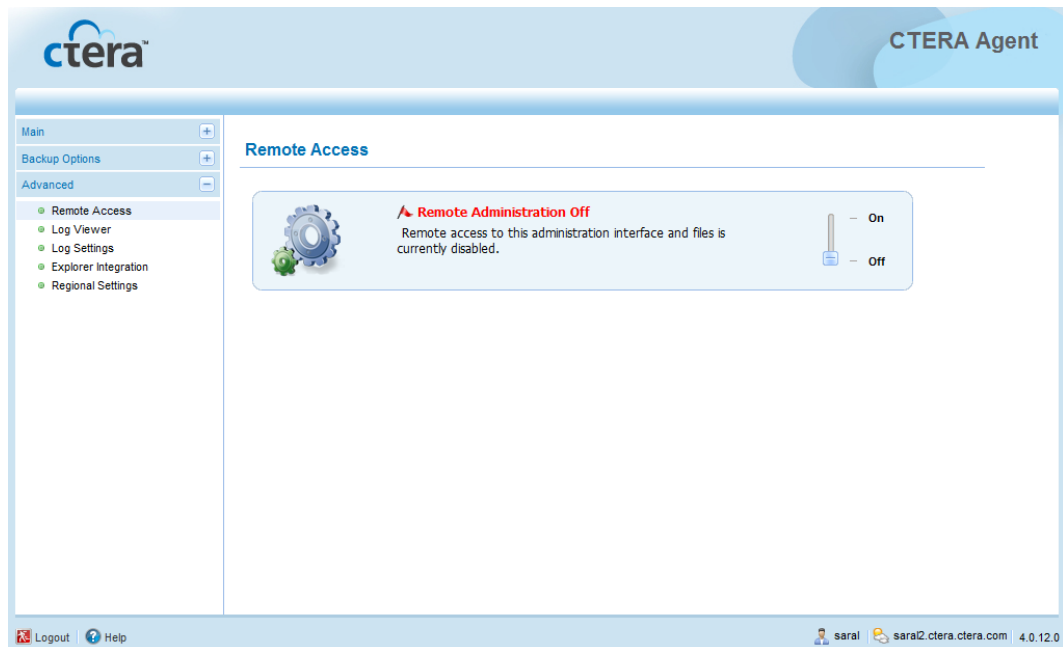
Enabling/Disabling Remote Access

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

» To enable remote access

- 1 In the navigation pane, click **Remote Access**.

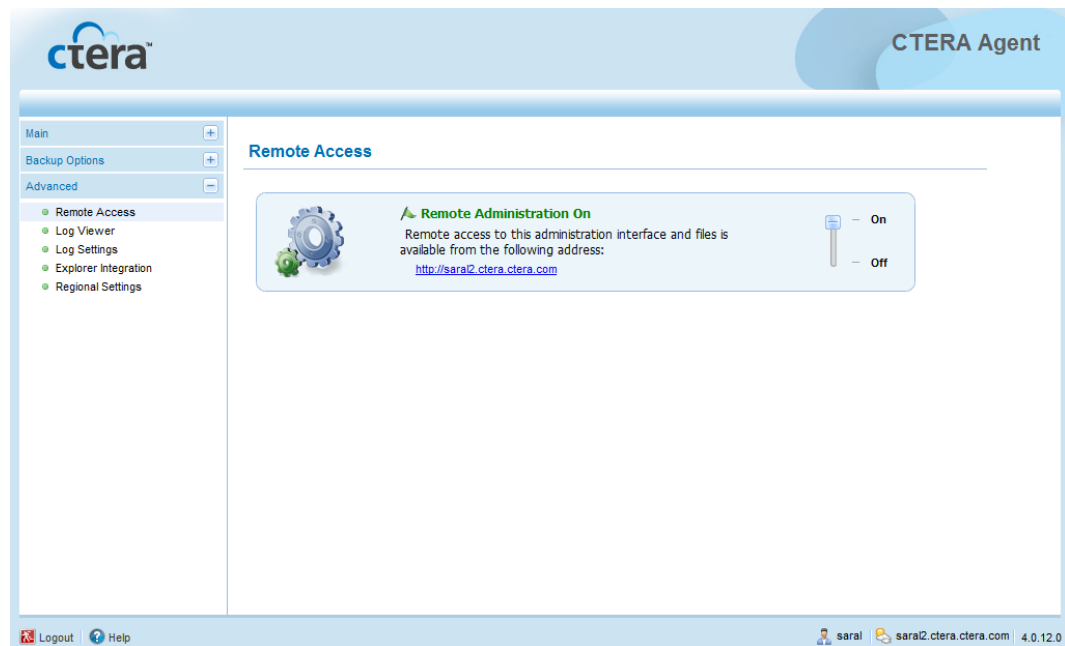
The **Remote Access** page appears.



- 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 appliance.



» To disable remote access

- 1 In the navigation pane, click **Remote Access**.

The **Remote Access** page appears.

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

Remote access is disabled.

Using Cloud Drive Synchronization

If you are subscribed to the Cloud Drive service on your service provider's CTERA Portal, cloud drive synchronization is enabled in the CTERA Agent by default, enabling you to synchronize your portal cloud drive with a specific folder on one or more CTERA agents in cloud mode.

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. On a computer with an older file version, the file is moved to the cloud drive's `.conflicts` folder, called the "conflicts trashcan". Files in the conflicts trashcan are automatically deleted after a configurable time.

Tip



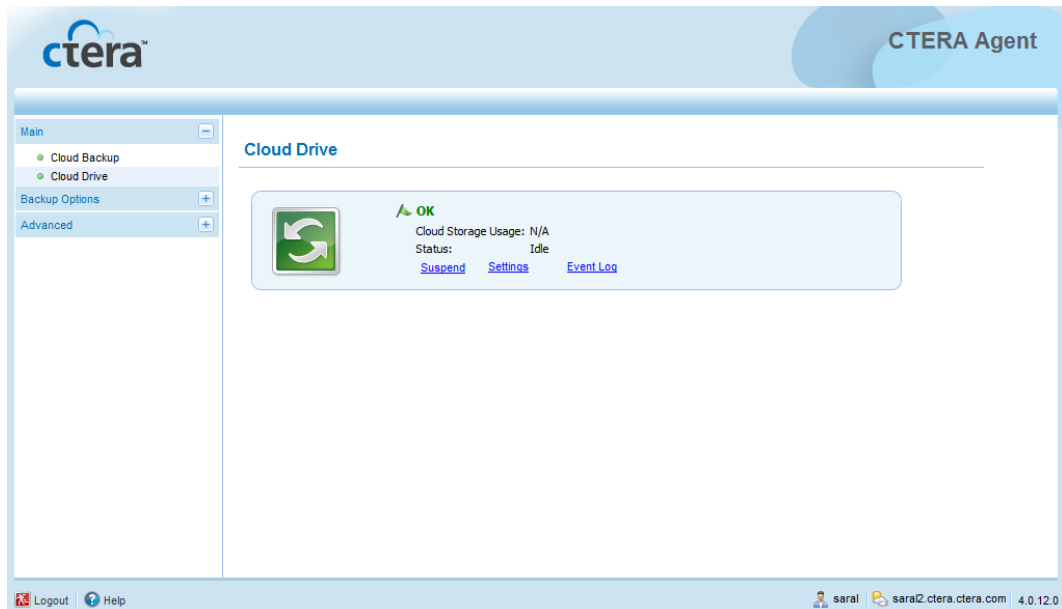
In order for conflict resolution to be performed correctly, your computer clock must be synchronized with the CTERA Portal clock. If there is more than one hour difference between the two clocks (after taking into account timezone differences), the agent will not synchronize the cloud drive folder.

Suspending/Unsuspending Cloud Drive Synchronization

» To suspend cloud drive synchronization

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

The **Cloud Drive** page appears.



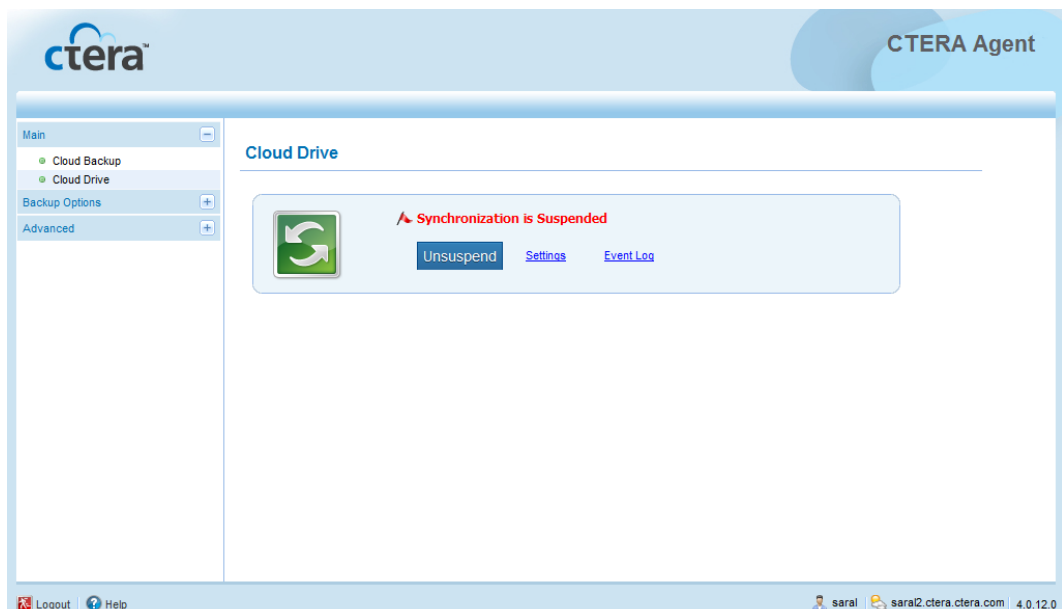
- 2 Click **Suspend**.

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.

Selecting Cloud Folders for Synchronization

You can specify which of the portal cloud folders should be synchronized with the CTERA appliance.

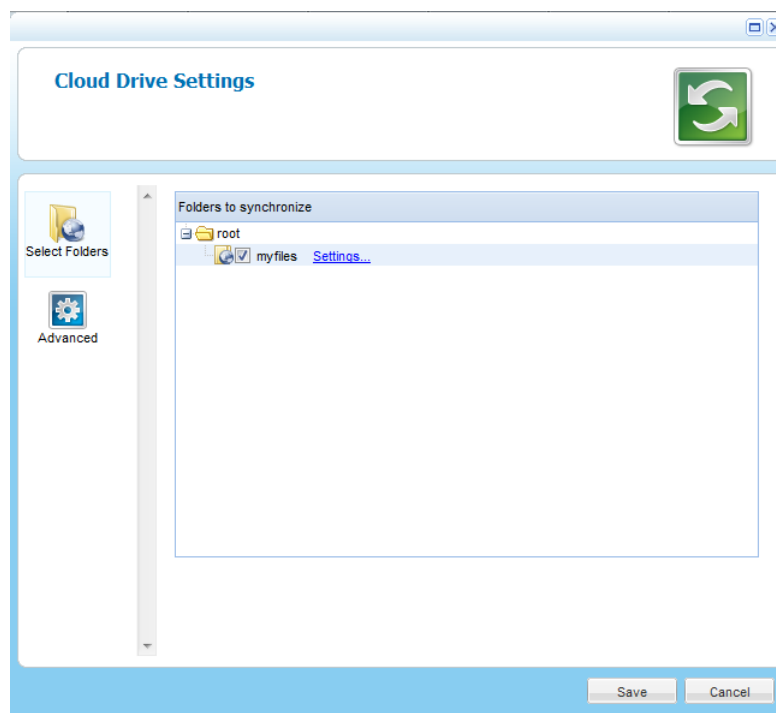
» **To select portal cloud folders for synchronization**

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

The **Cloud Drive** page appears.

2 Click **Settings**.

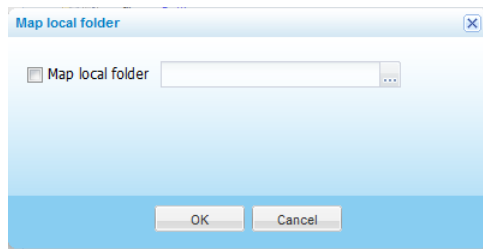
The **Cloud Drive Settings** window opens displaying the **Select Folders** tab.



The **Select Folders** tab displays a tree of the folders in the portal cloud drive that are available to be synchronized.

3 Expand the tree nodes and select the check box next to the portal cloud folder you want to synchronize with the CTERA appliance. By default, the selected portal cloud folder is synced to the path CTERA\CTERA Agent\CloudDrive under your system's ProgramData folder.

- 4 If you would like to map a different local folder to synchronize with the selected portal cloud drive folder, click **Settings**. The **Map local folder** dialog box appears.



- 5 Check **Map local folder**.
- 6 Click . The **Folder Browser** window appears. Browse to the local folder you want to synchronize to the selected portal cloud folder. If, at any time, you want to revert to the default local folder, uncheck the Map local folder box in the Map local folder window.
- 7 Click **Close**.
- 8 In the **Map local folder** window, click **OK**.
- 9 Click **Save**.

Configuring Advanced Cloud Drive Synchronization Settings

You can specify which local folder should be synchronized with the cloud drive, as well as how conflicts between file versions should be handled.

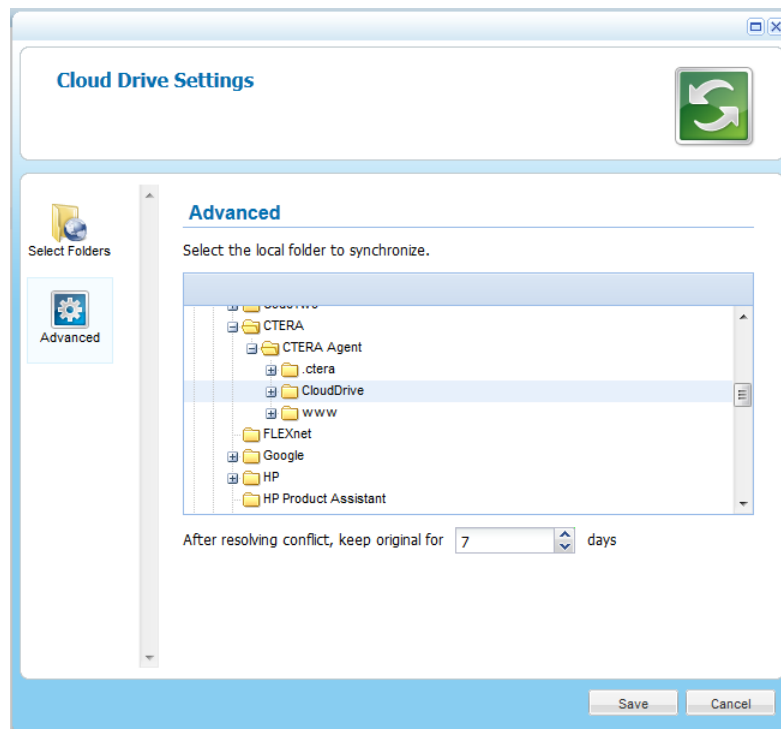
» To configure advanced cloud drive synchronization settings

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

The **Cloud Drive** page appears.
- 2 Click **Settings**.

The **Cloud Drive Settings** window opens displaying the **Select Folders** tab.
- 3 Click the **Advanced** tab.

The **Advanced** tab appears.



- 4 Expand the tree nodes and select the local folder under which folders should be created for each portal cloud folder you chose for synchronization.

For information on choosing portal cloud folders for synchronization, see **Selecting Cloud Folders for Synchronization** (on page 91).

- 5 In the **After resolving conflict, keep original for** field, use the arrow buttons to specify the number of days that the appliance should retain the original version of a file that was independently modified on more than one replica.

After this time, the conflicting copies are deleted. Conflicting copies are stored in the conflicts trashcan folder, `.conflicts`.

- 6 Click **Save**.

Viewing Cloud Drive Synchronization Status

You can view information on cloud drive synchronization status and the amount of cloud storage used.

» To view cloud drive synchronization status

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

The **Cloud Drive** page appears.

The following information is displayed:

Table 8: Cloud Drive Synchronization Information

This field...	Displays...
Cloud Storage Usage	The amount of used space in your account, followed by the number of files on the cloud drive.
Status	The cloud drive synchronization status. Some possible statuses are: Sync in progress. Synchronization is currently in progress. Path is not configured. The path to the local folder which should be synchronized with the cloud drive is not configured. To configure it, see <i>Configuring Advanced Cloud Drive Synchronization Settings</i> (on page 92).

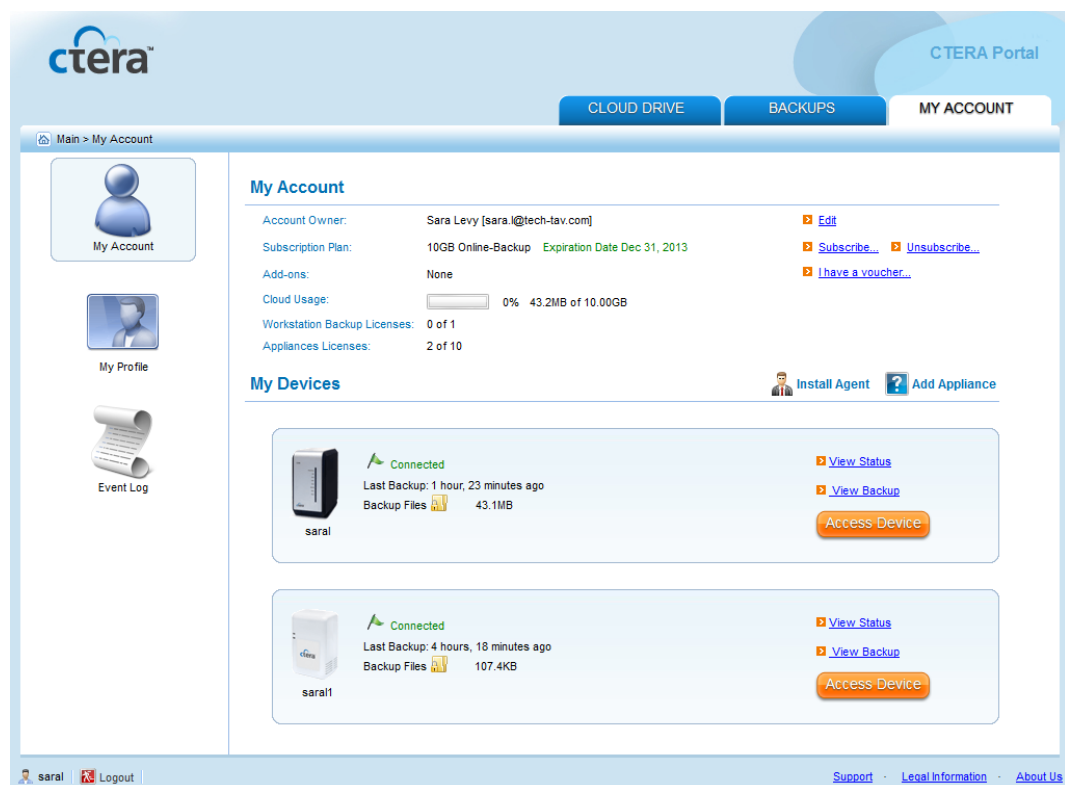
Managing Files and Folders on the Cloud Drive

You can manage files and folders directly on the CTERA Portal cloud drive.

» To manage files and folders on the cloud drive

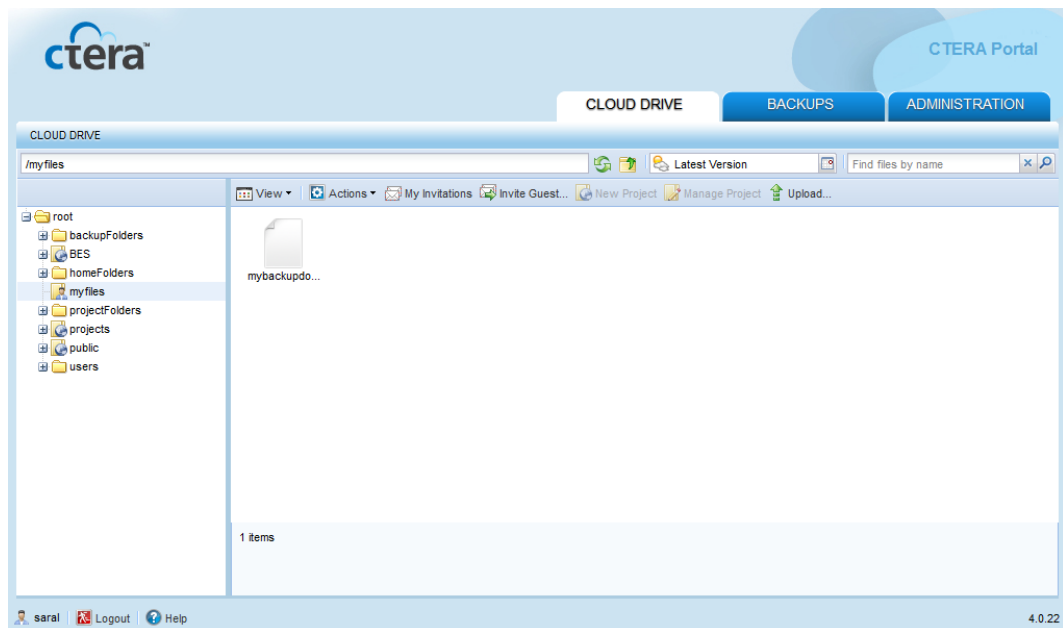
- 1 Using a Web browser, log in to your CTERA Portal account.

The CTERA Portal opens displaying the **My Account** tab.



- 2 Click the **Cloud Drive** tab.

The **Cloud Drive** tab opens.



- 3 Navigate to the portal folder you selected in *Selecting Cloud Folders for Synchronization* (on page 91).
- 4 Manage the files as desired.

Configuring Event Log Settings

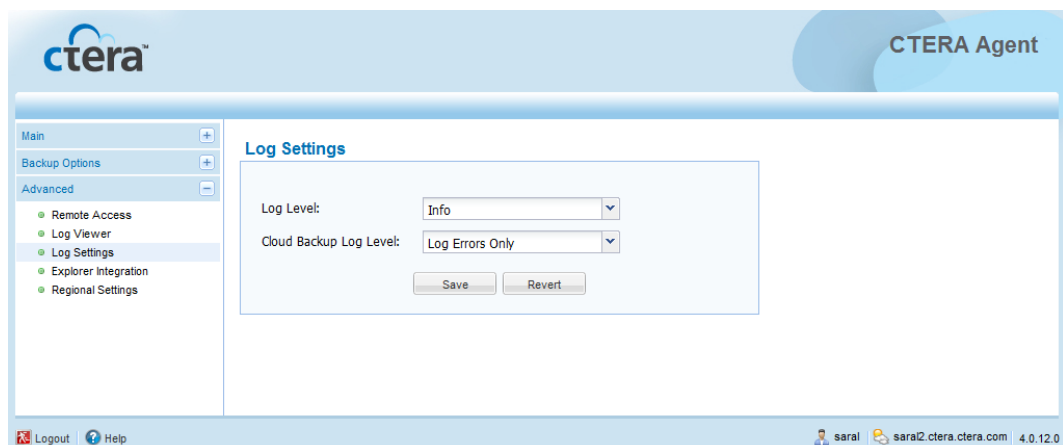
You can configure settings for the CTERA appliance Event Log, including log storage and the log level to display.

» 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 97).

The **Log Settings** page appears.



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

3 Click **Save**.

Table 9: Log Settings Fields

In this field...	Do this...
Log Level	Select the minimum log level to display in the CTERA appliance Web interface. For example, if you select Critical, then only Alert, Critical, and Emergency logs will appear in the CTERA appliance Web interface. The default value is Info.
Cloud Backup Log Level	CTERA appliance automatically logs all backup and restore operations. Specify whether CTERA appliance 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 98). The default level is Log Errors Only.

Viewing Logs

The CTERA appliance Event Log includes the following log categories:

Table 10: Log Categories

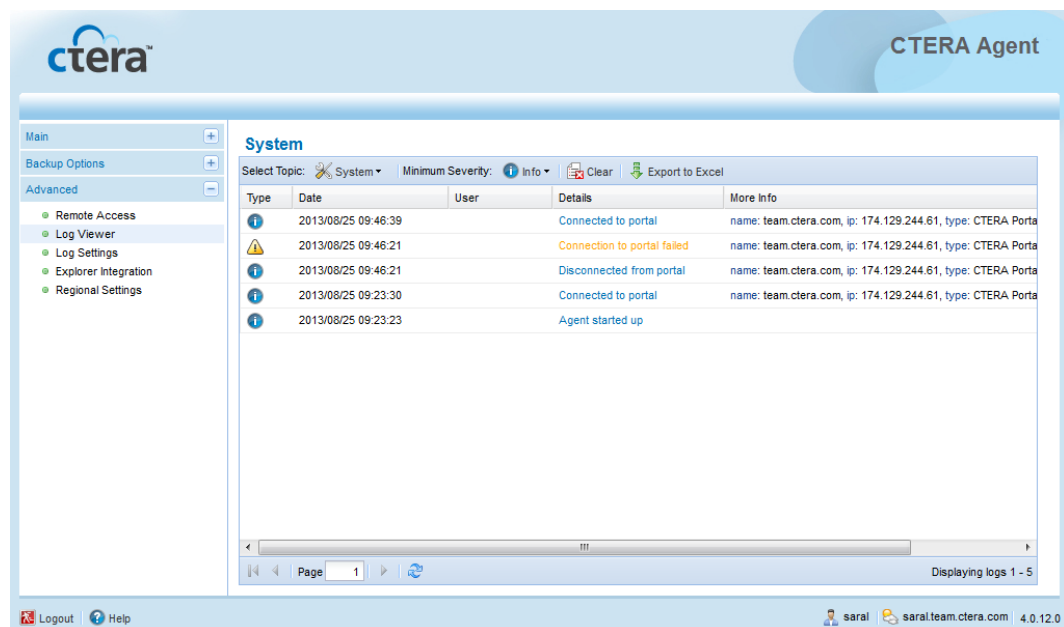
This log category...	Displays...
System	General CTERA Agent events, including connecting to the CTERA Portal, disconnecting from the CTERA Portal, and so on
Cloud Backup	Events related to cloud backup or restore operations
Cloud Sync	Events related to cloud drive synchronization operations
Access	Events 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 11: System Log Fields

This field...	Displays...
Type	An icon indicating the log level. See Log Levels (page 98).
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 12: 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 interface for Cloud Backup logs. The sidebar on the left includes 'Main', 'Backup Options', and 'Advanced' sections. The 'Advanced' section is expanded, showing 'Remote Access', 'Log Viewer', 'Log Settings', 'Explorer Integration', and 'Regional Settings'. The main content area is titled 'Cloud Backup' and contains a table of backup logs. The table has columns: Type, Start Time, Mode, Type, Duration, Result, and Files. Three backup operations are listed, all with a 'Canceled by user' result. Below the table is a section for 'Export to Excel' and a table with columns: Type, Operation, File Name, Path, Duration, Size, Transferr..., Dedup Ratio, and Result. This section shows 'No results found'.

Type	Start Time	Mode	Type	Duration	Result	Files
Backup	2013/08/22 08:57:06	manual	Backup	00:14:50	Canceled by user	3167
Backup	2013/08/22 08:53:25	manual	Backup	00:01:53	Canceled by user	13254
Backup	2013/08/22 08:52:35	manual	Backup	00:00:07	Canceled by user	0

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 95).

- 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 13: Cloud Backup Log Upper Pane Fields

This field...	Displays...
Type	An icon indicating the log level. See Log Levels (page 98).
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 14: 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

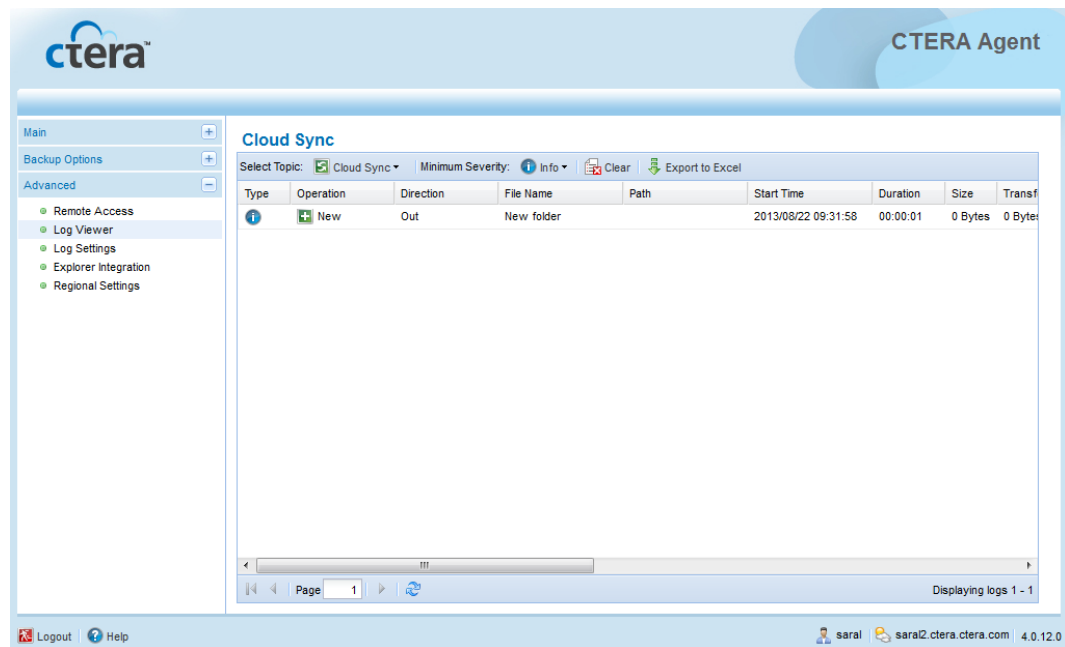
» To view Cloud Sync logs

- 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 15: Cloud Sync Log Fields

This field...	Displays...
Type	An icon indicating the log level. See Log Levels (page 98).
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

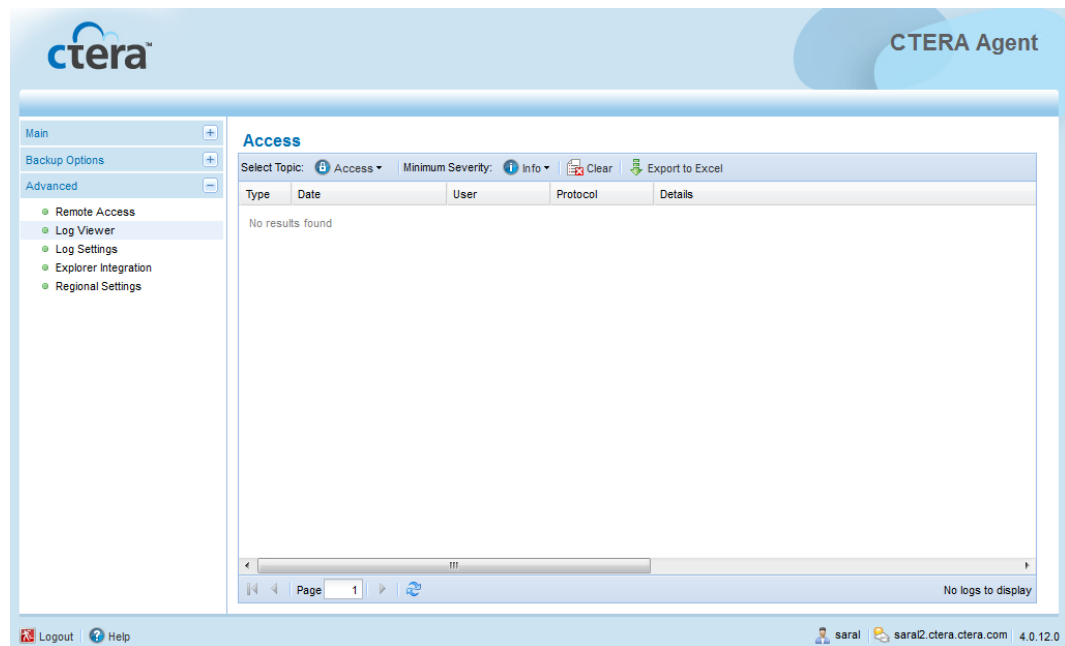
» To view Access logs

- 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 16: Access Log Fields

This field...	Displays...
Type	An icon indicating the log level. See Log Levels (page 98).
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

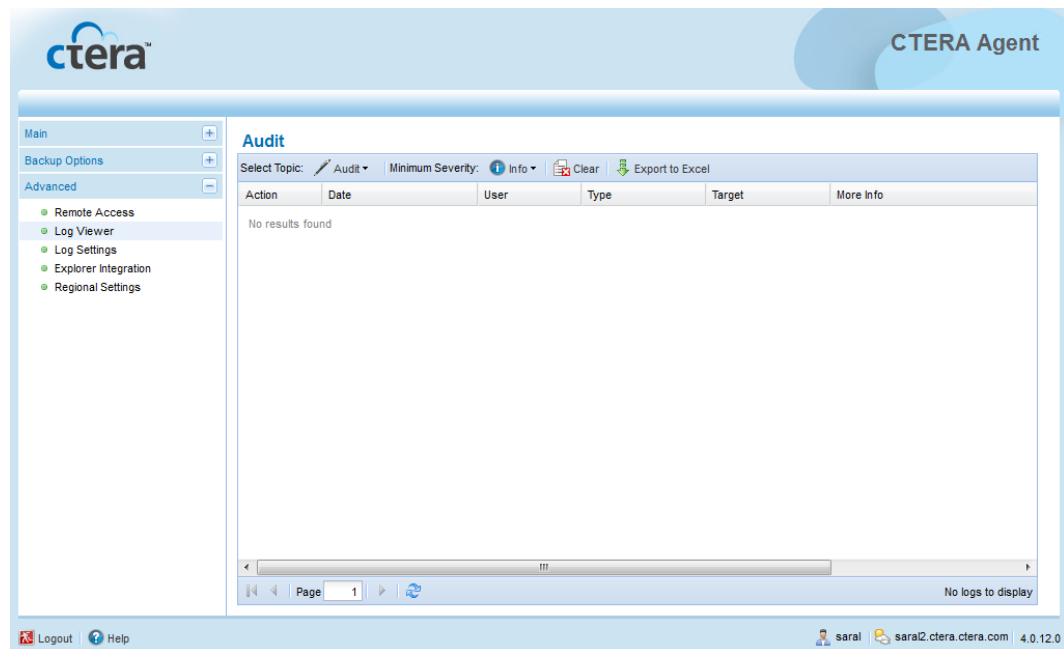
» To view Audit logs

- 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 17: Audit Log Fields

This field...	Displays...
Action	The action type. See Audit Log Action Types (page 105).
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 18: Action Types

Icon	Label	Description
	Added	An object was added to the CTERA appliance Web interface.
	Deleted	An object was deleted from the CTERA appliance 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 95).

» To filter logs in a log category

- 1 View the desired log category.

See **Viewing Logs** (on page 97).

- 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 97).

- 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 97).

- 2 Click **Export to Excel**.

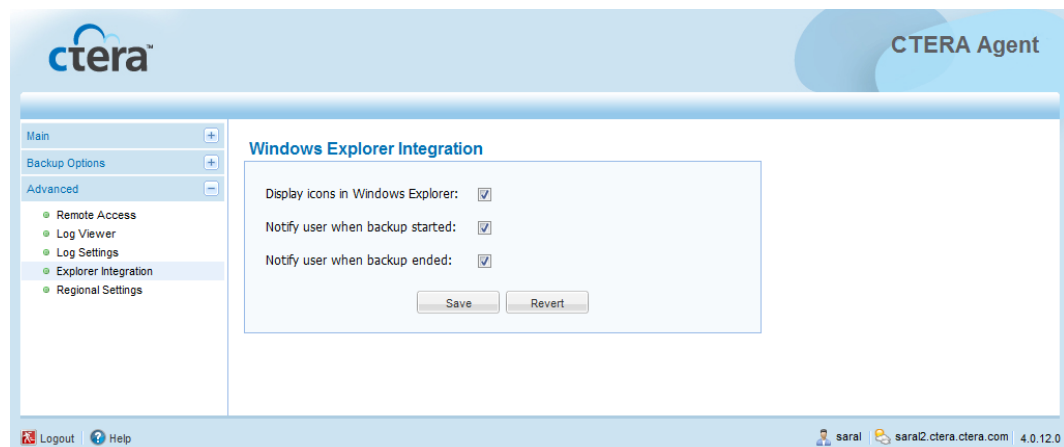
The logs are exported.

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 38).
- 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, and Spanish.

» To configure the CTERA Agent language

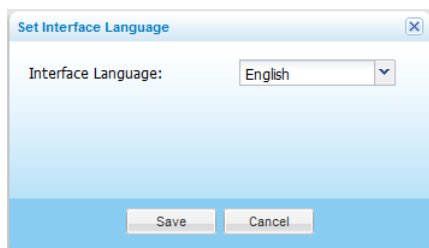
- 1 In the navigation pane, click **Advanced > Regional Settings**.

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**.

Selecting Files and Folders for Backup

Tip



Files and folders can also be selected for backup via the CTERA Agent Web interface. See **Selecting Files and Folders for Cloud Backup** (on page 66).

» To select files and folders for file-level backup

- 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.

Manually Starting 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 80)). If desired, you can manually trigger backup at any time.

Tip

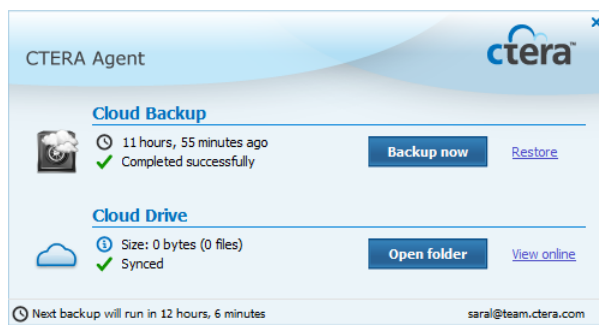


Backup can also be manually started via the CTERA Agent Web interface. See **Manually Starting Cloud Backup** (on page 83).

» To manually start backup

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

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 back up are displayed.

The CTERA Agent backs up files to the CTERA Portal.

Stopping the Current Backup Operation



Tip

Backup can also be stopped via the CTERA Agent Web interface. See ***Cancelling the Current Cloud Backup*** (see "***Canceling the Current Cloud Backup***" on page 78).

» To stop the current backup operation

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

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

- 2 Click **Cancel**.

The current backup operation is stopped.

Suspending and Resuming 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



Tip

Backup can also be suspended and resumed via the CTERA Agent Web interface. See ***Suspending the Cloud Backup Service*** (on page 78) and ***Resuming the Cloud Backup Service*** (on page 79).

» To suspend backup

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

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

» To resume backup

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

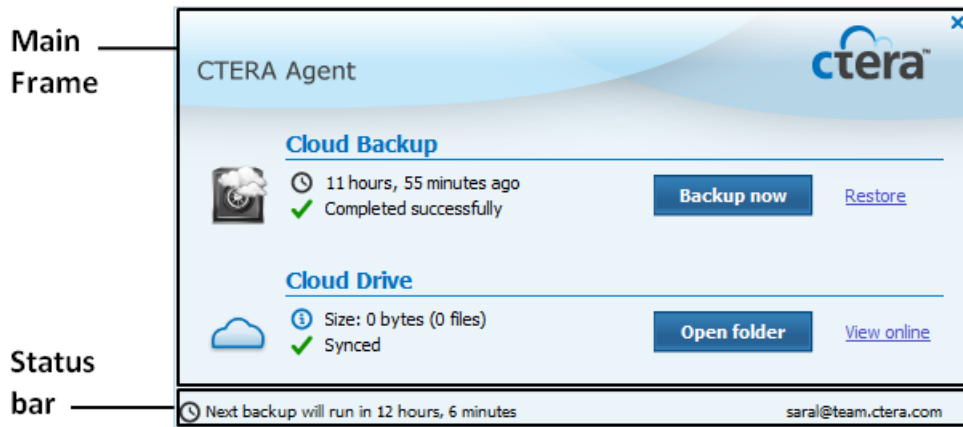
Backup resumes.

Viewing the Agent Status

» To view the CTERA Agent's status

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

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, followed by `username@portal`, where `username` is your `username` for accessing the CTERA Portal and `portal` is the name of the CTERA Portal to which the CTERA Agent is currently connected. The  icon indicates that the CTERA Agent is in Cloud Agent mode.

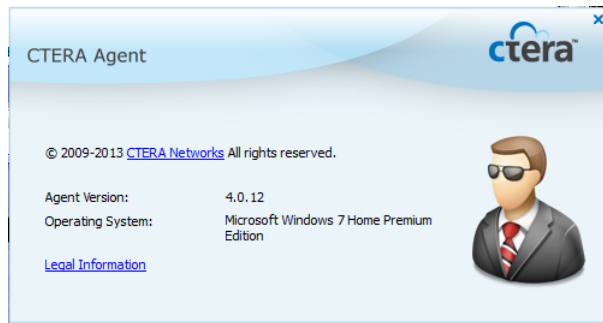
Viewing Agent Details

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 notification area of the Windows taskbar, 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**.

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 notification area of the Windows taskbar, and click **Sign out**.

A confirmation message appears.

- 2 Click **OK**.

The CTERA Agent disconnects from the CTERA Portal.

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.

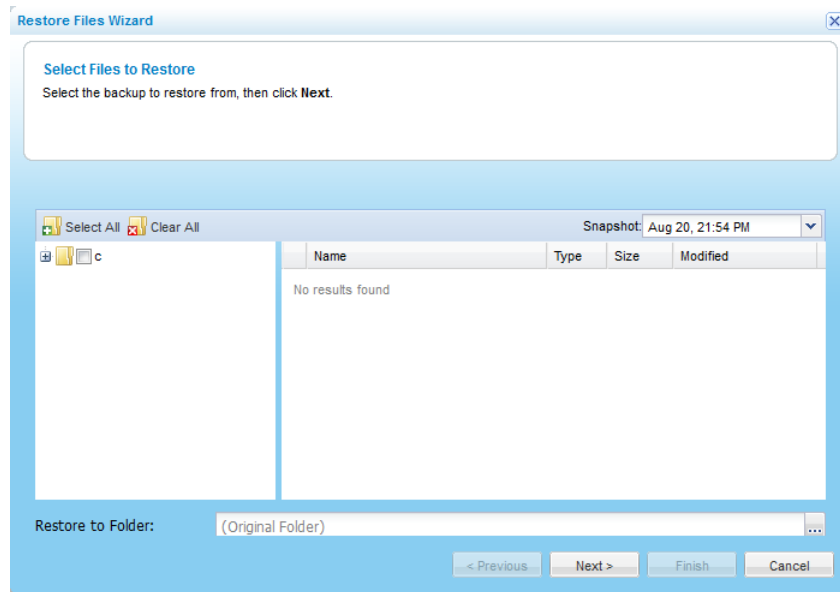
» To restore backed up files from the Cloud Backup Control Panel

- 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.

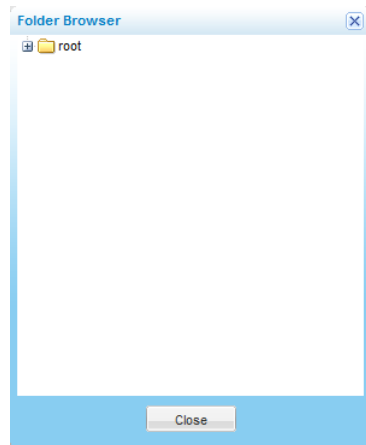
For an explanation of the icons and check boxes next to each folder, see **Folder Icons** (page 36).

- + 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:

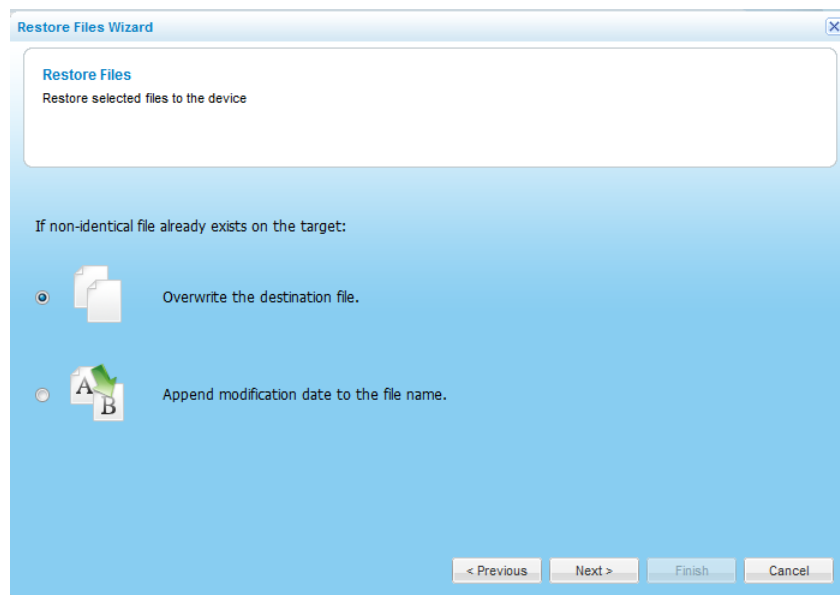
- a Click in the **Restore to Folder** field. The **Folder Browser** dialog box appears.



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

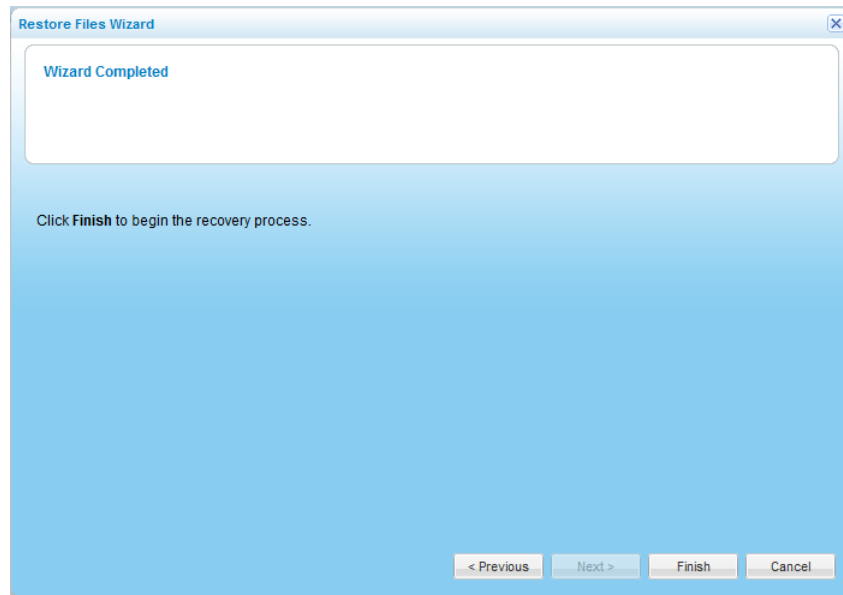
- 6 Click **Next**.

The **Restore Files** dialog box appears.



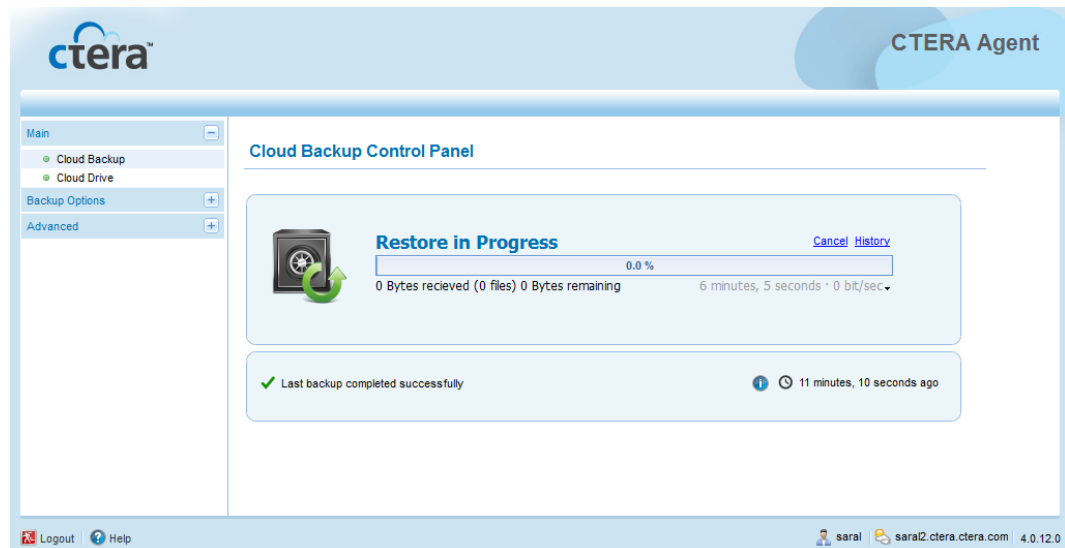
- 7 Specify how the CTERA appliance should handle files that exist both on your drive and in the selected backup, by doing one of the following:
- + To specify that the files on your drive should be overwritten by the files in the backup, choose **Overwrite the destination file**.
 - + To specify that the files on your drive 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.

Accessing the Cloud Drive Folder

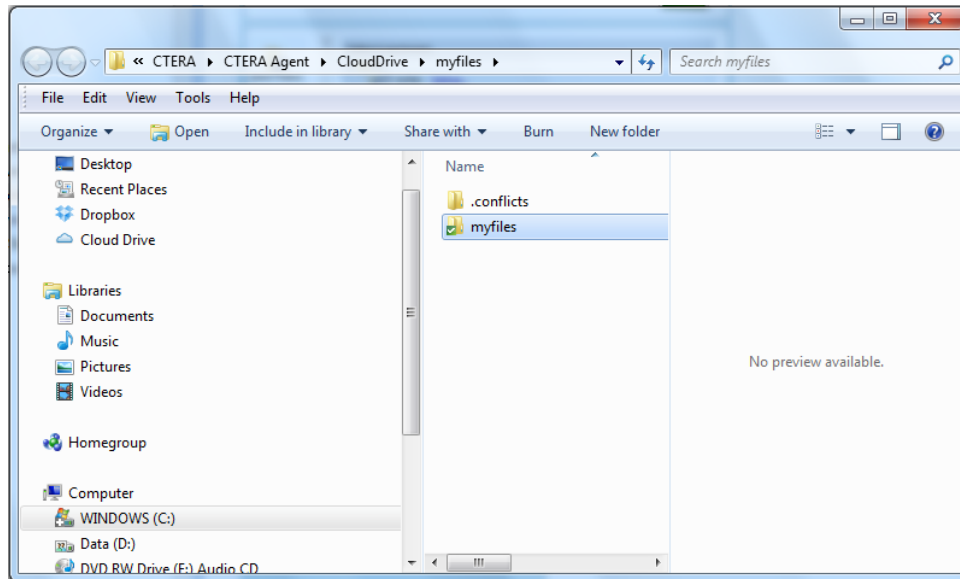
If you are subscribed to the Cloud Drive service, your cloud drive will automatically be mapped as a network drive. You can access the cloud drive and its contents using the following procedure.

» 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 that are in sync are marked with the  icon, and files that are currently synchronizing are marked with the  icon.



Browsing the Cloud Drive Folder Online

You can browse the contents of your cloud drive folder online.

» To browse a cloud drive folder online

- 1 Access the cloud drive folder.

See **Accessing the Cloud Drive Folder** (on page 115).

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

The CTERA Portal opens in your browser displaying the **Cloud Drive** tab and the contents of the cloud drive folder.

Collaborating on Projects

You can easily share files and folders with fellow workers, by defining *collaboration projects*.

When connected to a portal for which project collaboration is enabled, you can create a project and invite co-workers to join the project as *project members*. Project members receive an email notification inviting them to collaborate on the project. They can then view files in the project and/or add files and folders to the project, depending on their permissions.

Creating Projects

» To create a collaboration project

- 1 Browse the cloud drive folder online.

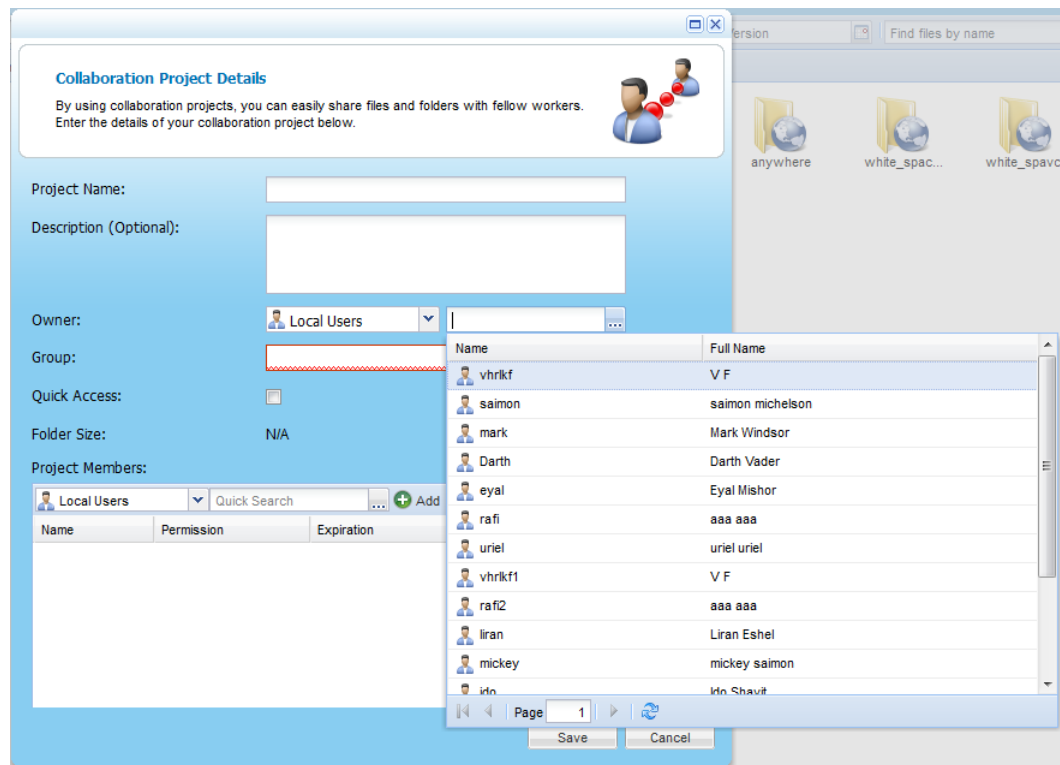
See *Browsing the Cloud Drive Folder Online* (on page 116).

- 2 Navigate to the `projects` share.
- 3 Click **New Project**.

The **Collaboration Project Details** dialog box opens.

- 4 In the **Project Name** field, type a name for the project.
- 5 (Optional) In the **Description** field, type a description of the project.
- 6 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 CTERA appliance.
 - + **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.

- 7** In the **Group** field, select the folder group whose contents should be included in the collaboration project.
- 8** To make the project appear directly under the cloud drive's root folder, instead of appearing under the projects folder, check the **Quick Access** box. (This requires an administrator user role.)
- 9** To add a project member, do the following in the **Project Members** area:
 - a** In the **Local Users** drop-down list, select one of the following:
 - + Local Users.** Search the user accounts defined locally on the CTERA appliance.
 - + Domain domain Users.** Search the user accounts belonging to the domain called *domain*.
 - + Local Groups.** Search the user groups defined locally on the CTERA appliance.
 - + 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 **Project Member** list.
- 10 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**.
- 11 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.
- 12 To delete a project member, click  in the desired project member's row.
- 13 Click **Save**.

The project is added to the project share.

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

Editing Projects

» To create a collaboration project

- 1 Browse the cloud drive folder online.

See ***Browsing the Cloud Drive Folder Online*** (on page 116).

- 2 Navigate to the `projects` share.
- 3 Select the project and click **Manage Project**.

The **Collaboration Project Details** dialog box opens.

- 4 In the **Project Name** field, type a name for the project.
- 5 (Optional) In the **Description** field, type a description of the project.
- 6 To add a project member, do the following:
 - a In the **Local Users** drop-down list, select one of the following:
 - + **Local Users**. Search the users defined locally on the CTERA appliance.
 - + **Domain *domain* Users**. Search the users belonging to the domain called *domain*.
 - + **Local Groups**. Search the user groups defined locally on the CTERA appliance.
 - + **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 or user group you want to add, then click .
 - A table of users or user groups matching the search string appears.
 - c Select the desired user or user group in the table.
 - The user or user group appears in the **Quick Search** field.
 - d Click **Add**.
 - The user or user group appears in the **Project Member** list.
- 7 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**.
 - + To specify that the member should not be able to view files and folders in this project, select **None**.
- 8 To delete a project member, click  in the desired project member's row.
 - 9 Click **Save**.

The project is added to the project share.

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

Deleting Projects

» To delete a collaboration project

- 1 Browse the cloud drive folder online.
See *Browsing the Cloud Drive Folder Online* (on page 116).
- 2 Navigate to the `projects` share.
- 3 Select the project.
- 4 Click **Actions**, and then click **Delete**.
A confirmation message appears.
- 5 Click **Yes**.
The project is deleted.

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. The URL contains a special code, 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

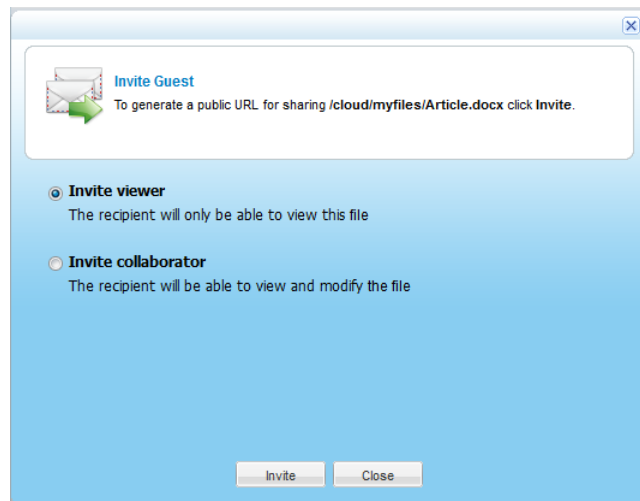
- 1 Access the cloud drive folder.

See **Accessing the Cloud Drive Folder** (on page 115).

- 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 displaying the **Cloud Drive** tab.

The **Invite Guest** dialog box opens.

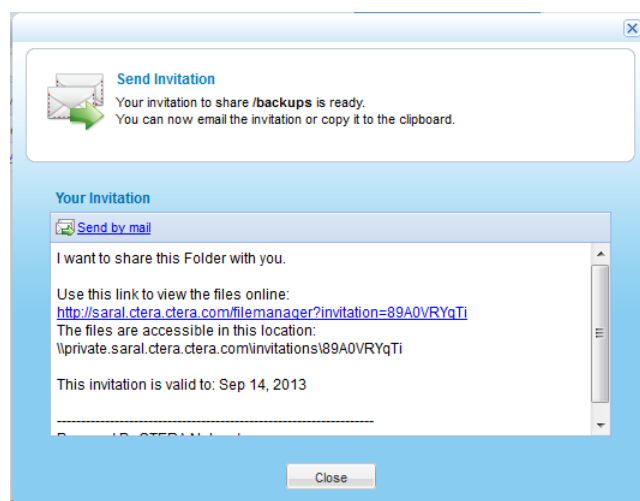


- 3 Do one of the following:

- + To grant the invitation recipient read-only access to the file/folder, choose **Invite viewer**.
- + To grant the invitation recipient read-write access to the file/folder, choose **Invite collaborator**.

- 4 Click **Invite**.

The **Send Invitation** dialog box appears with the content of the guest invitation.



- 5 Click **Send by mail**.

Your email client opens a new message containing the invitation.

- 6 In the **To** field, fill in the email address of the person with whom you want to share the file/folder.
- 7 Click **Send**.
- 8 In the **Send Invitation** dialog box, click **Close**.

Viewing Active Guest Invitations

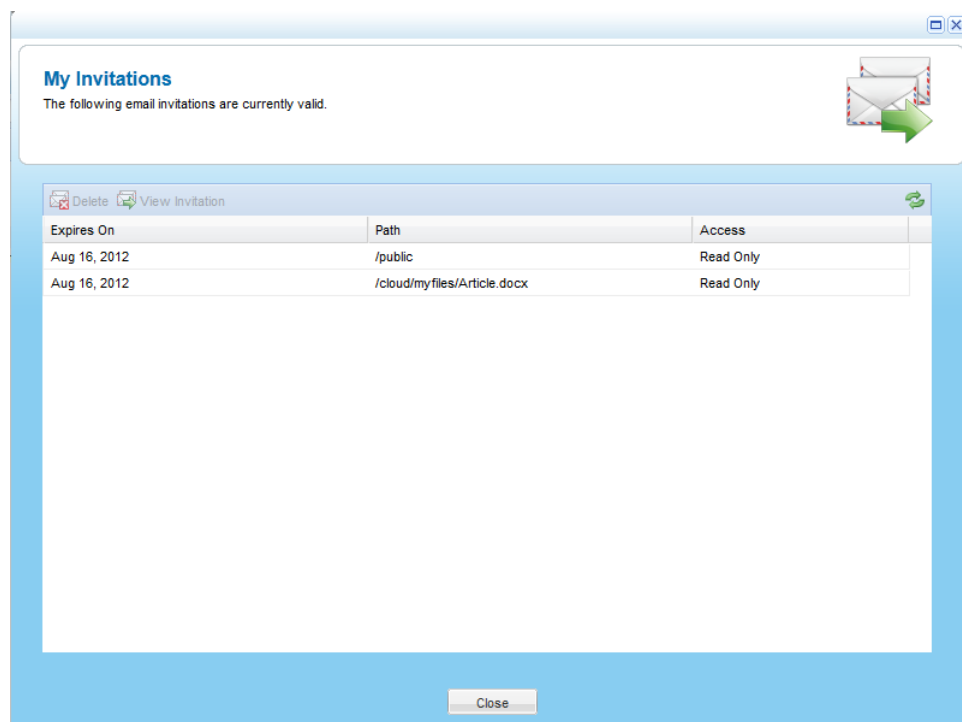
» To view active guest invitations

- 1 Browse the cloud drive folder online.

See *Browsing the Cloud Drive Folder Online* (on page 116).

- 2 Click **My Invitations**.

The **My 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 19: 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 CTERA appliance.
Access	The type of access granted to the invitation recipient (Read Only or Read/Write).

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 116).
- 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 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 ----- 125
Restoring NTDS (Active Directory) and SYSVOL Applications on Windows 2003 / 2008 Server129

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 Appliance mode, do the following:

1 Connect the CTERA Agent to the CTERA appliance.

See *Connecting the Agent to a CTERA Appliance*.

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

See *your CTERA appliance's user guide, Restoring Files from File-Level Backup* (on page 41).

In Cloud Agent mode, do the following:

1 Connect the CTERA Agent to the CTERA Portal.

See *Connecting the Agent to the CTERA Portal*.

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 appliance's user guide, Restoring Files and Folders from the Cloud Backup Control Panel* (on page 111).

» 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.

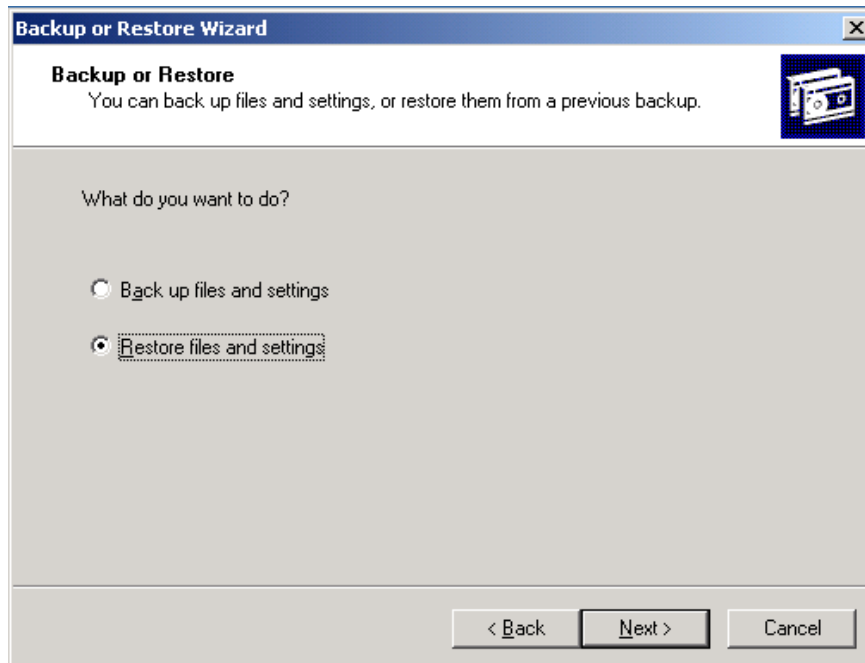
5 In the **START** menu, click **Programs > Accessories > System Tools > Backup**.

The **Backup or Restore Wizard** opens.



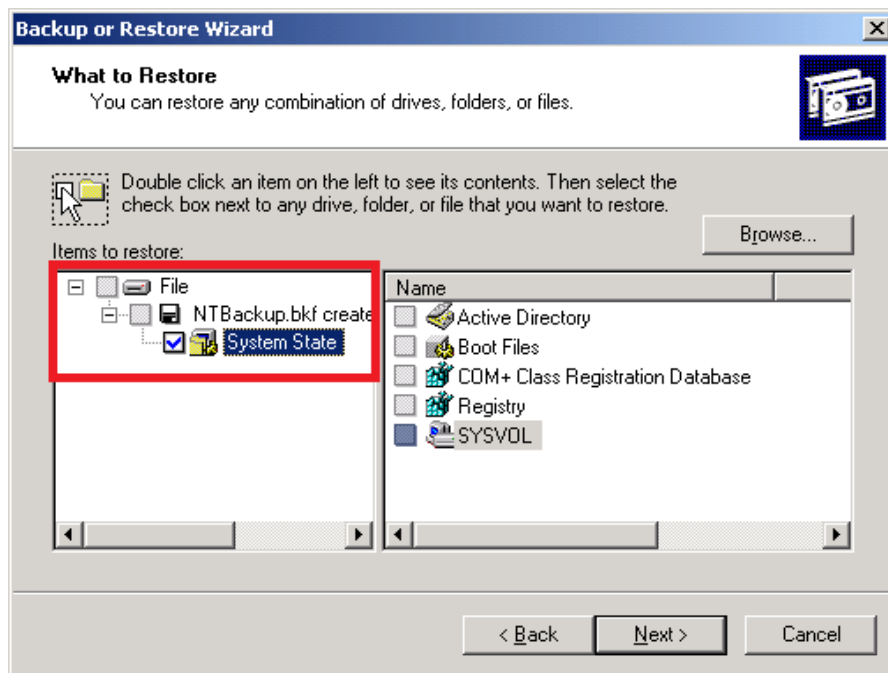
- 6 Click **Next**.

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



- 7 Choose **Restore files and settings**.
- 8 Click **Next**.

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

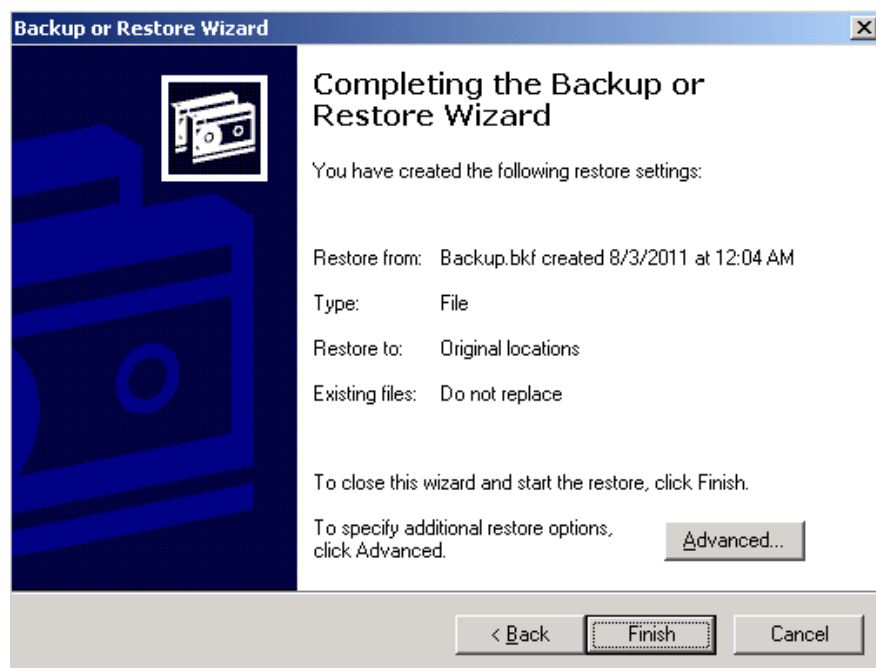


- 9 Click **Browse**, and browse to the system state backup file.

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

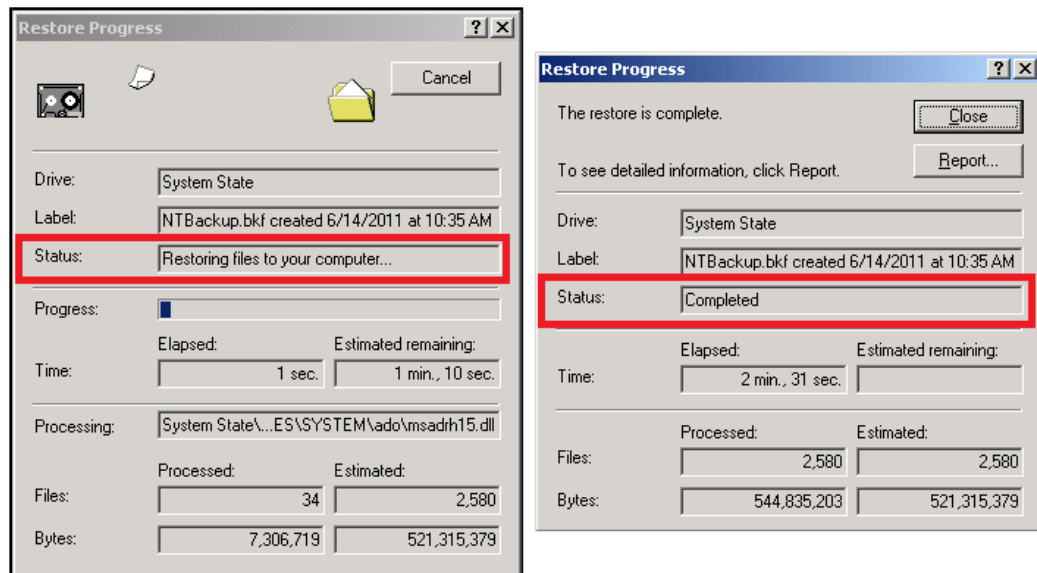
- 10 In the **Items to restore** pane, select **System State**.
- 11 Click **Next**.

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 Appliance mode

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

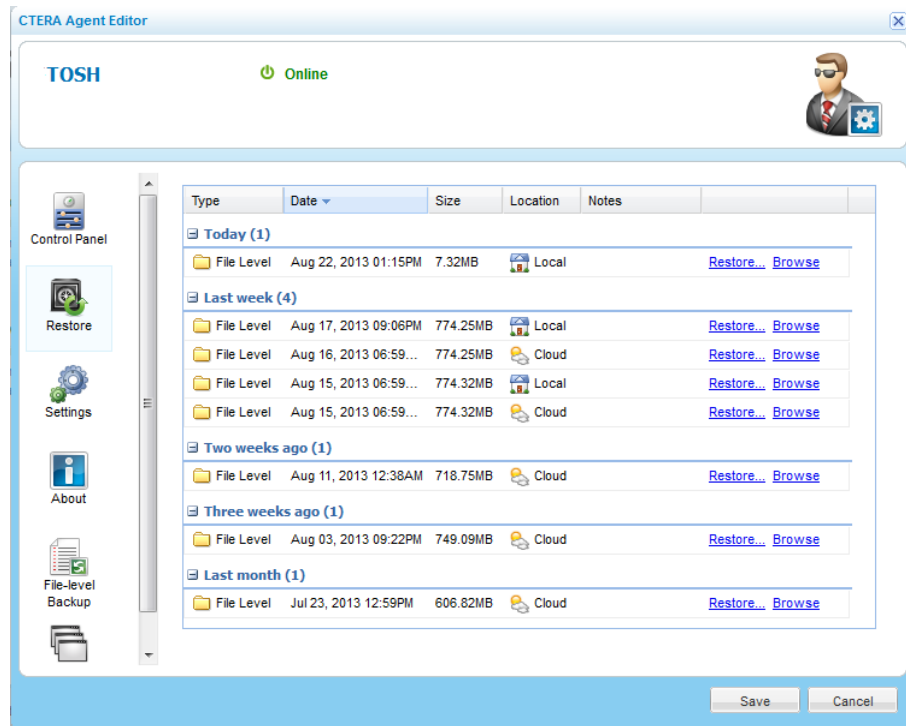
The boot menu appears.

- 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.

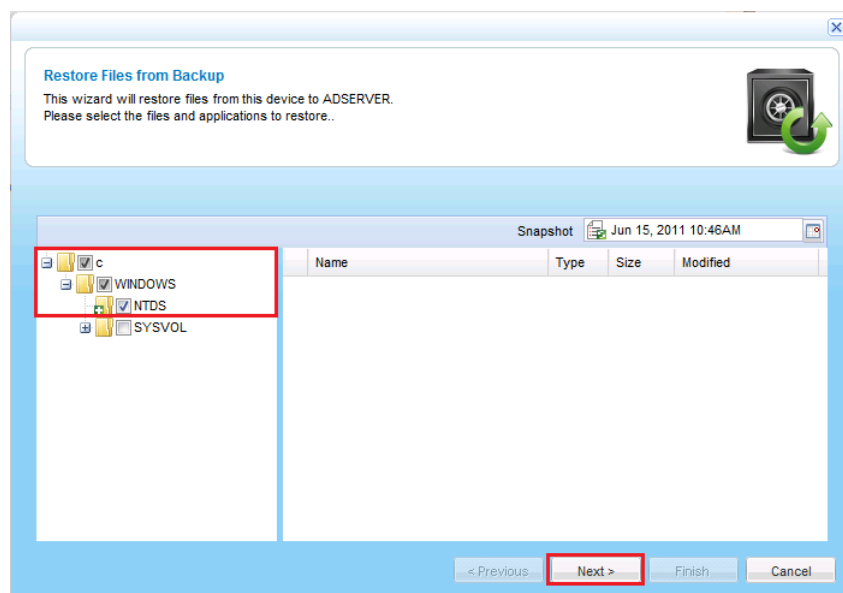
- + In Windows 2008 Server, log in using the local administrator account, by specifying the following user name: <ComputerName>\Administrator.
- 5** Right-click on the CTERA Agent tray icon in the notification area of the Windows taskbar, and click **Restore**.

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



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

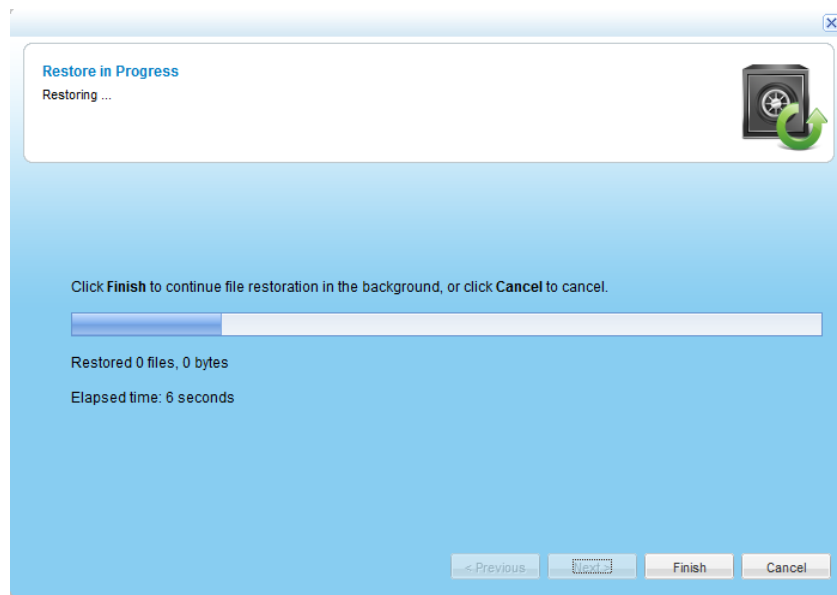
The **Restore Files from Backup** dialog box opens.



- 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 Agent mode**

1 Restart the computer.

2 Press the F8 key.

The boot menu appears.

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

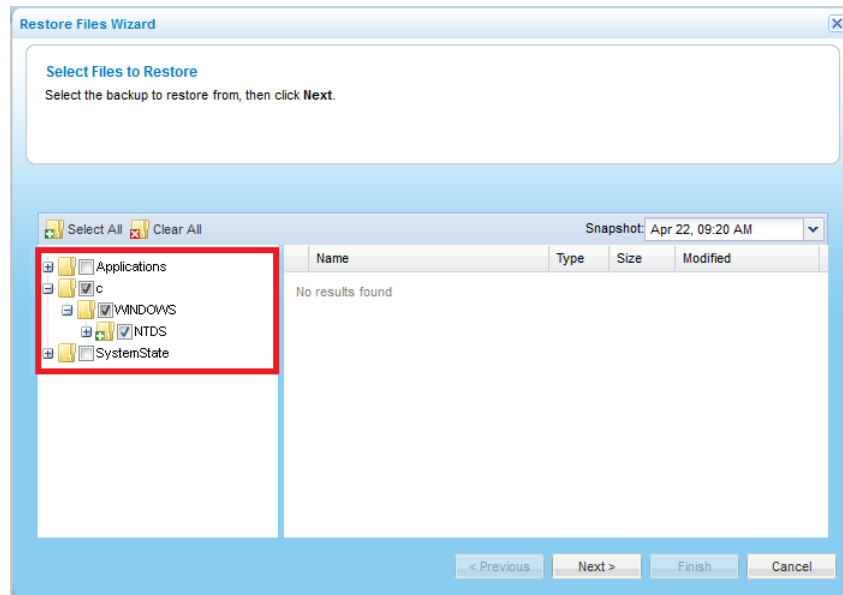
4 Do one of the following:

+ 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.

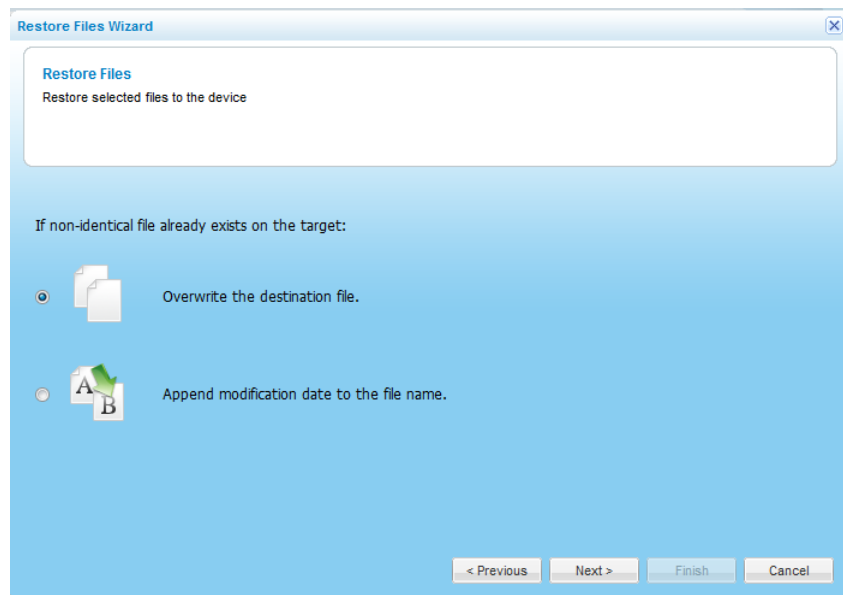
5 Right-click on the CTERA Agent tray icon in the notification area of the Windows taskbar, and click **Restore**.

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



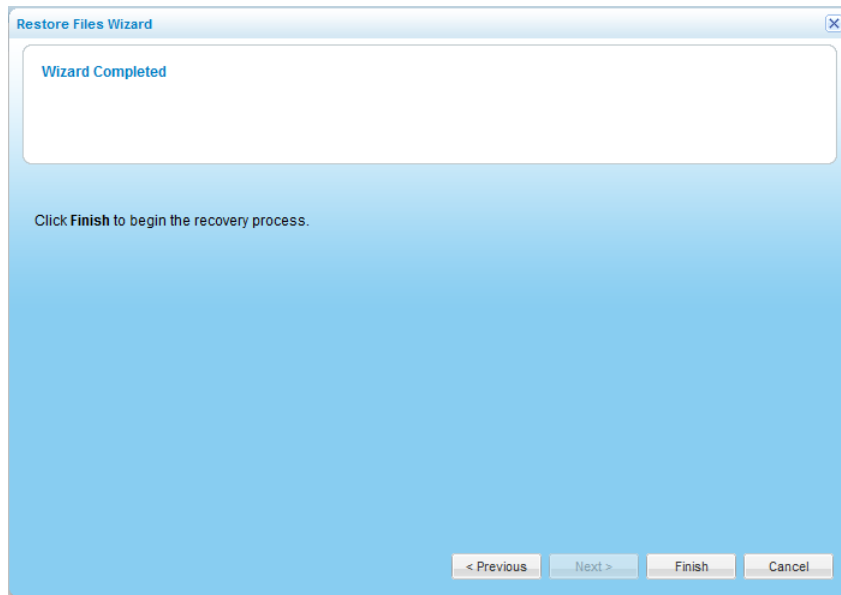
- 6 Select the **NTDS** and/or **SYSVOL** folder(s).
- 7 Click **Next**.

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.

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 Agent mode and Appliance 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-back 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.

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