Spectrum Business Cloud Backup Administrator Guide

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Introduction

Spectrum Business Cloud Backup provides remote backup and file management services for internet-connected devices.

Your computer, laptop and sever hold your most important files, including email, photos, music, financial data and business contacts. Spectrum Business Cloud Backup protects your files by automatically backing them up to our cloud-based data center. If disaster strikes, or whenever you choose, you can restore your files quickly and easily using the Spectrum Business Cloud Backup client or the Web Console. Files can also be restored by right-clicking on the destination folder you're choosing to restore data from.

Spectrum Business Cloud Backup is easy to download and install on your computer. Spectrum Business Cloud Backup is a small software program that works quietly in the background, so that when your computer is idle, and at regular intervals, the program automatically backs up new and changed files. You choose when and how often the backup program will run, as well as which files are included in the backup.

As part of the backup process, each file is encrypted before being sent over the internet and remains encrypted in our cloud-based data center. You're the only person who can decrypt them, ensuring your files remain protected at all times.

Spectrum Business Cloud Backup makes configuration simple for IT Administrators. After you've installed Spectrum Business Cloud Backup, you can select the Exchange and SQL backup sets from the configuration panel's Backup Sets tab.

Spectrum Business Cloud Backup takes advantage of block-level incremental backups to save bandwidth and processing time. You can maintain server performance during backups by using bandwidth throttling to use more or less upload bandwidth.

System requirements

To use each Spectrum Business Cloud Backup feature, you must meet the following system requirements:

Feature	Requirements
Spectrum Business Cloud Backup Software	Operating System:
Buokup Communo	 Windows 2007 or above. Windows Vista or above. Latest service packs required. Mac OS X 10.7 or Later. Note: Support may be limited for other operating systems that aren't listed above.
	Processor: 1.8 GHz Intel Core Duo (Dual core) or equivalent.
	Screen Resolution: 1024x768 or higher.
	Memory: 512 MB. Plus 1 GB available for every 1 million files selected for backup.
	Hard Drive Space (available): 1 GB. Plus 1 GB available for every 1 Million files selected for backup.
Spectrum Business Cloud Backup Web Access	Web Browser: Internet Explorer 9 or higher, Chrome 22 or later, Firefox 17 or later, and Safari 6 or later.
	Internet Connection: 128 kbps upload speed.

Understanding Spectrum Business Cloud Backup

Spectrum Business Cloud Backup consists of these components for complete protection of, and access to, your files:

Spectrum Business Cloud Backup Client

The Spectrum Business Cloud Backup client is a desktop agent used to back up the data on your machines. It's installed on all workstations and servers that contain files you want to include in your backup. Spectrum Business Cloud Backup supports multiple methods of installing and activating the client within your organization, allowing you to tailor the deployment according to your needs.

Web Access

Files backed up with Spectrum Business Cloud Backup can be accessed from any computer that is connected to the internet. Users can do this themselves, or Administrators can do this on behalf of users. You can choose to restore a single file, many files, or all files stored to Cloud Backup, as well as previous versions of files, files deleted from the computer or files that were deselected from backup in the past 90 days. Selected files can be restored using the Spectrum Business Cloud Backup Web Console.

Administrator Console

The Administrator Console is an online management portal that lets Administrators manage their backup environment. It's accessed using any internet-connected device capable of running a supported Web browser. The console allows you to view reports, client machine backup status, etc.

Roles and Capabilities

When your Spectrum Business Cloud Backup account is initially created, a parent Administrator needs to be created in the Spectrum Business Control Panel. The parent Administrator is responsible for managing all aspects of your Spectrum Business Cloud Backup account.

Administrators

The Administrator account is required to create Service Users, view reports, setup Service User restores.

Service Users

Each individual using Spectrum Business Cloud Backup in your organization must have a Service User account created. The Administrator is responsible for assigning a License key and storage space to the user during the creation of the Service User account.

License Keys

License keys enable the Spectrum Business Cloud Backup client to connect to the Spectrum Business Cloud Backup service. Each machine requires a unique license key to activate the Spectrum Business Cloud Backup software.

Storage Space Limits

The storage space assigned to a user determines the total space that can be used for backing up files. Storage space is assigned to Service Users by the Administrator of the account.

Set Up Spectrum Business Cloud Backup Admin Account

Set Up Administrator Account

- 1. Create your Spectrum Business Control Panel password.
- Sign in to the Spectrum Business Control Panel at https://cp.Spectrum-business.net/single.html.
- 3. Choose the Spectrum Business Cloud Backup Subscription.



- 4. Select Create.
- 5. Complete the following fields and select **Next**.
 - Admin User Name
 - Administrator Password
 - Administrator Full Name
- 6. Verify the information you entered is correct and choose **finish**.

Edit Administrator Account Details

You can change any of the account details for an Administrator account such as name, username/email address, and password in the Spectrum Business Control Panel.

- 1. Sign in to the Spectrum Business Control Panel.
- 2 Select the Spectrum Business Cloud Backup Subscription.
- 3. Under the Spectrum Business Cloud Backup Section, select Manage.



4. Select the **Spectrum Business Cloud Backup Account** tab, then choose **Settings**.



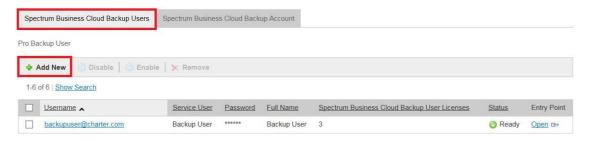
5. Choose **Edit**, enter the new admin information and then select **Submit**.

Manage Service Users

Create a Service User

Each individual using Spectrum Business Cloud Backup in your organization must have a Service User account created. The Administrator is responsible for assigning a license key and storage space to the Service User when creating the account.

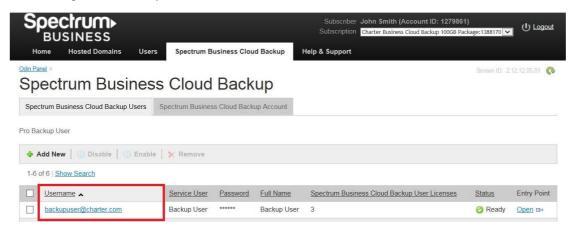
- 1. Sign in to the Spectrum Business Control Panel and select the Spectrum Business Cloud Backup Subscription.
- 2 Select the **Spectrum Business Cloud Backup** tab.
- 3. Choose the Spectrum Business Cloud Backup Users tab, then select Add New.



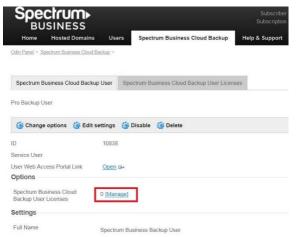
- 4. Choose whether you want to create a **New Service User** or base the new user account on an **Existing Service User**, then select **Next**.
- 5. Complete the following required fields and choose **Next**.
 - Display Name
 - Login
 - Password
 - Confirm Password
- 6. Verify the full name and select **Next**.
- 7. Confirm the new user's information, then choose **Finish**.
- 8. Once the Service User is created you'll need to associate a license key and storage quota to the user.

Assign a License Key

1. Once the Service User is created and **Ready**, select the username (email address) that you wish to assign a license key to.



Under Options, select Manage.



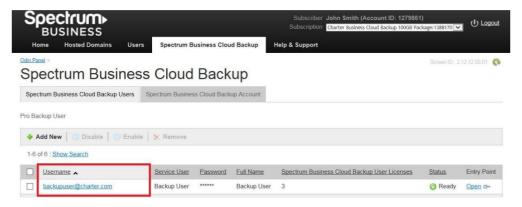
On the Spectrum Business Cloud Backup User Licenses tab, choose Add New.



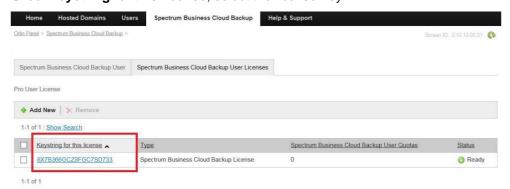
- To complete the process, select Finish.
- 5. Once the license key is provisioned the Service User will receive an email with a username, license key and download instructions

Assign Storage Quota

- 1. Select the **Spectrum Business Cloud Backup** tab.
- Choose the Spectrum Business Cloud Backup Users tab.
- 3. Select the username to which you want to assign storage quota.



- 4. Under Options, select Manage.
- 5. Under **Keystring for this license**, select the license key.



- 6. Under Options, select Manage.
- 7. Select the **Spectrum Business Cloud Backup User Quotas** tab, then choose **Add New**.



8. The system automatically assigns 10GB of storage quota to Service Users. Select **Finish** to complete the process.

New Service Users receive a Welcome Email containing a link to download the Spectrum Business Cloud Backup software and a unique license key to activate the software. If the user has multiple machines, each machine requires its own license key and will need to be configured separately.

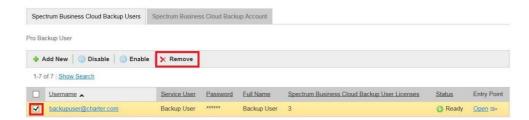
Delete a Service User

When you delete a Service User, the storage space and license keys assigned to that user become available for reassignment. Any machines assigned to that user are deleted and the associated files are no longer available for backup or restore.

- 1. Sign in to the Spectrum Business Control Panel at https://cp.spectrum-business.net/single.html.
- 2 Select the Spectrum Business Cloud Backup Subscription.
- 3. Under the **Spectrum Business Cloud Backup** section, choose **Manage**.



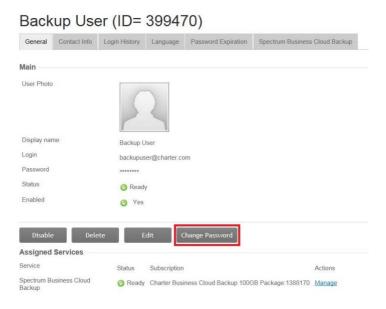
4. Place a check next to the Username you wish to delete, then select **Remove**.



5. When prompted, select **OK** to confirm you want to delete the Service User.

Reset Service User Password

- Sign in to the Spectrum Business Control Panel at https://cp.spectrum-business.net/single.html.
- 2 Select the Spectrum Business Cloud Backup Subscription.
- 3. Select the **Users** tab, then choose the username that requires a password reset.
- 4. Choose Change Password.



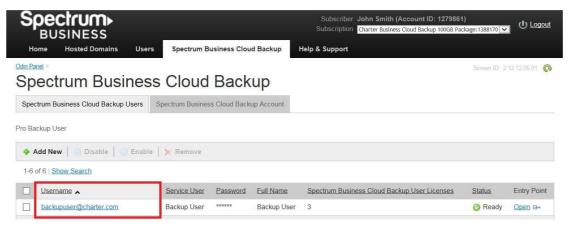
- 5. Enter the new password, confirm the new password, and then select **Submit**.
- 6. The status of the password change will show **Updating**. Select the **Refresh** arrow at the top of your screen to update the status to **Ready**. Notify the Service User that the password has successfully been changed.

Note: The minimum length for password is 8 characters of different types (uppercase and lowercase letters, numbers, and special characters).

Assign Additional License Keys

If a Service User has multiple machines, each machine requires its own license key and will need to be configured separately.

- 1. Sign in to the Spectrum Business Control Panel.
- 2 Select the Spectrum Business Cloud Backup Subscription.
- 3. Select the **Spectrum Business Cloud Backup** tab.
- 4. Choose the **Spectrum Business Cloud Backup Users** tab and then select the username (email address) to which you want to assign additional license keys.



- 5. Under Options, select Manage.
- 6. On the Spectrum Business Cloud Backup User Licenses tab, select Add New.



- 7. Select **Finish** to complete the process.
- 8. Once the license key is provisioned, the Service User will receive an email with a username, license key and download instructions.

Web Administrator Console

The Administrator Console is a Web-based management tool that lets Administrators manage their backup environment using any internet-connected device capable of running a supported Web browser.

The Administrator Console displays a navigation menu in the left-side pane and a Dashboard in the main section of the screen. The Dashboard is segmented into content panels. Clicking a menu item in the left-side pane opens a new content panel or performs a specific action. When a new content panel is opened, it persists on your Dashboard until you close it.

Sign In to the Admin Console

- 1. In a Web browser, enter https://backup.Spectrumbusiness.com/login/admin.
- 2 Sign in using your Admin username and password, then select **Log In**.



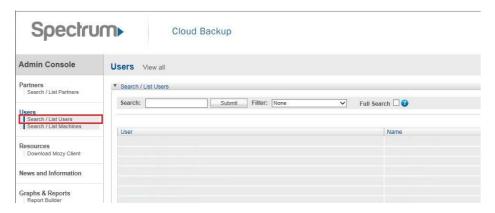
About the Dashboard and Content Panels

The **Dashboard** consists of content panels, allowing you to easily find and manage specific aspects of your Spectrum Business Cloud Backup account. The **Backups** content panel offers an overview of backup activity and the **Machines** content panel lists machines within your organization. Use the controls in the title bar to expand, collapse and refresh the panel. Use the **Admin Console** menu on the left to view additional user information, download the Cloud Backup software and more.

Users

Search/Filter User List

- 1. Sign in to the Administrator Console.
- 2 Under Users in the Admin Console menu on the left, select Search/List Users.



- 3. In the **Search** field, enter the text you want to search for and then select **Submit**.
- 4. Use the **Filter** dropdown menu to refine your search.
- 5. (Optional) To see the full list again, choose **Clear Search**.

Export User List

You can export the user list as a CSV file, which can be opened by a spreadsheet application.

- 1. Sign in to the Administrator Console.
- 2 Under Users in the Admin Console menu on the left, select Search/List Users.
- Select Export to Excel (CSV).

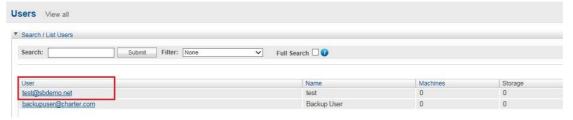


4. Choose to either Open, Save, Save As or Save and Open the file.

Sign In as User

When you create a new user, you can masquerade as that user without having to sign out of your own account. This allows you to validate the user account is working correctly. Any open browser session will act as that user as well.

- 1. Sign in to the Administrator Console.
- 2. Under **Users** in the **Admin Console** menu on the left, select **Search/List Users**.
- 3. Select the **User** (email address) you want to sign in as.



4. Choose Log in as User.



- 5. A new browser window opens and you're signed in as the selected user.
- 6. To stop acting as the user, close the browser window.

Resources

Download Spectrum Business Cloud Backup Client

The Spectrum Business Cloud Backup client is a desktop agent used to back up the data on your machines. It's installed on all workstations and servers that contain files you want to include in your backup. Spectrum Business Cloud Backup supports multiple methods of installing and activating the client within your organization, allowing you to tailor the deployment according to your needs.

When a Service User is created they receive a Welcome Email containing a license key and link to download the Cloud Backup software. If necessary, the Cloud Backup client can also be downloaded from the Administrator Console:

- 1. Sign in to the Administrator Console.
- 2. Under **Resources** in the **Admin Console** menu on the left, select **Download Mozy Client** (the Spectrum Business Cloud Backup software).
- 3. Select the link for the client you want to download.



4. Save the file to your hard drive and install the client when you're ready.

Graphs & Reports

About Graphs and Reports

The Admin Console provides reporting tools to help you manage and monitor your Spectrum Business Cloud Backup environment. Select Graphs & Reports from the Admin Console menu on the left to view:

- Report Builder: A set of report types you can customize, save, and then run on demand or on a schedule. When you create a report using the Report Builder, it's listed in the Scheduled Reports panel.
- O **Scheduled Reports:** A list of custom reports showing each report's type, recipients, schedule, and status information. You can save a maximum of 33 instances of each report type.
- Quick Reports: A list of basic reports providing details about common components in your environment such as users, machines, and unassigned keys.
- Backup History/Backup Health: A graph of your Cloud Backup activity over the past 24 hours, week, month or year.
- Backup Health: A graph of the number of machines backing up and their frequency during the time period selected.

Understanding Reports

All reports are output to .CSV (comma-separated value) files, which can be viewed with any spreadsheet program such as MS Excel.

Scheduled Reports

You can use the Report Builder panel to create reports to suit your organization's needs. Reports you create are listed in the **Scheduled Reports** panel. You can determine each report's settings, schedule when they run and specify who receives them. Up to 33 instances of each report type may be saved. You can also run these reports on an ad-hoc basis. All reports, whether run as scheduled or run ad-hoc, can be emailed or downloaded at any time.

To see the available report types, select **Report Builder** under **Graphs & Reports** in the **Admin Console** menu on the left. The following report types are available:

Report Type	Description
Billing Summary	A summary of resources and usage by partner and user group.
Billing Detail	Provides a breakdown of resources and usage by user and device.
Machine Watchlist	Identifies devices with problems or potential problems backing up.
Machine Status	Provides the state of the backup service by device, including the time of the most recent backup and the amount of quota consumed.
Resources Added	Lists all purchases of resources (license keys and storage) as well as storage added by Autogrow.
Machine Over Quota	Lists users who exceed their storage amount.

Quick Reports

Quick reports are a set of basic reports showing details about common components in your environment. You can immediately save or open the resulting .CSV files. You can't customize quick reports.

Select **Quick Reports** under **Graphs & Reports** in the **Admin Console** menu on the left. The following report types are available:

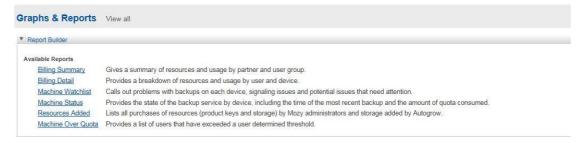
Report	Description
Users (CSV)	List of all users (not including users in sub-partners).
Machines (CSV)	List of all machines.
UserGroups (CSV)	List of all user groups.
Roles (CSV)	List of Administrator roles.
Mozy Pro Keys (CSV)	List of all unassigned license keys.

Create a Report

You can create custom reports to suit your organization's needs using Report Builder.

To create a report:

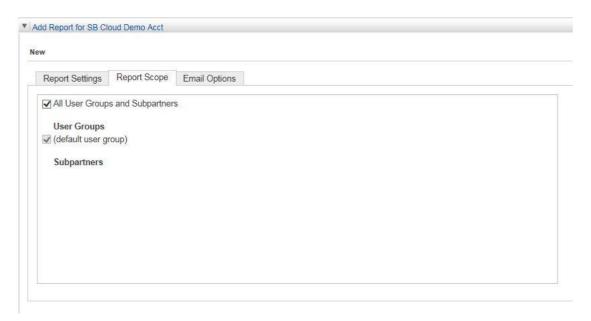
- 1. Sign in to the Administrator Console.
- 2 Under Graphs & Reports in the Admin Console menu on the left, select Report Builder.
- 3. In the **Report Builder** panel, select the type of report you want to create.



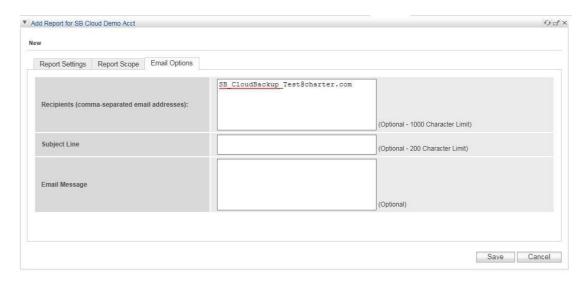
4. The **Add Report** panel displays. From the **Report Settings** tab, enter the name of the new report, then set the frequency and start date. If necessary, you can change the report type and deactivate the report.



5. On the **Report Scope** tab, select which user groups and subpartners you wish to include in the reports.



- 6. From the **Email Options** tab, provide email addresses for recipients of the report, separated by commas. Also provide the subject line and body text for the email delivering the report.
- 7. Select Save.



The custom report will be available under Scheduled Reports and can be edited or deleted at any time. The custom report will run as scheduled and be emailed to the specified recipients.

Run, Email or Download Scheduled Report

The Scheduled Reports panel lists the reports created in Report Builder. You can run, email or download these reports at any time.

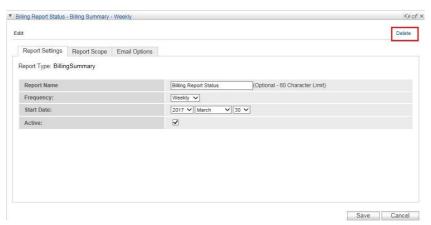
- 1. Sign in to the Administrator Console.
- Under Graphs & Reports in the Admin Console menu on the left, select Scheduled Reports.
- 3. In the Scheduled Reports panel, identify the report you want, then select Run, Download or Email.



Edit or Delete a Scheduled Report

You can activate or deactivate reports, edit their settings and delete them.

- 1. Sign in to the Administrator Console.
- 2. Under Graphs & Reports in the Admin Console menu on the left, select Scheduled Reports.
- 3. In the **Scheduled Reports** panel, select the report you want to modify.
- 4. The selected report will open in a new panel. You can:

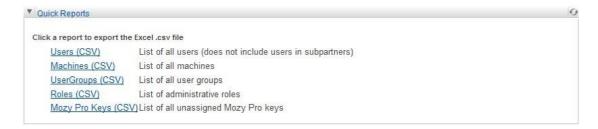


- Select **Delete** to permanently delete the report.
- Choose the **Report Settings** tab to edit the report name, frequency and start date.
- Select the Report Scope tab to edit which user groups are included in the report, as necessary.
- Choose the Email Options tab to edit the email addresses, the subject line, and body text
 for the email delivering the report as necessary. Note: Email addresses must be
 separated by commas.
- Select Save.

Run a Quick Report

Quick Reports provide details about common components in your environment. When you run a Quick Report, you can save or open the resulting .CSV files as you would any other file you download in your Web browser. You can view .CSV files with any spreadsheet program such as MS Excel.

- 1. Sign in to the Administrator Console.
- 2 Under Graphs & Reports in the Admin Console menu on the left, select Quick Reports.
- 3. In the **Quick Reports** panel, select the name of the report you want to run.



4. Save or Open the resulting .CSV file.

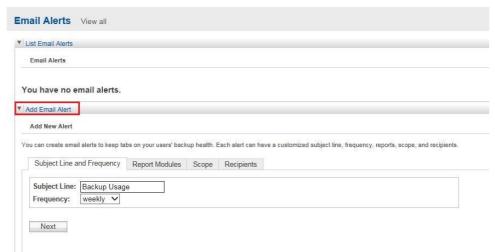
Manage Email Alerts

Email Alerts allow you to communicate with users about their backups on a regular basis. Each alert can have a customized subject line, frequency, reports, scope, and recipients.

Add an Email Alert

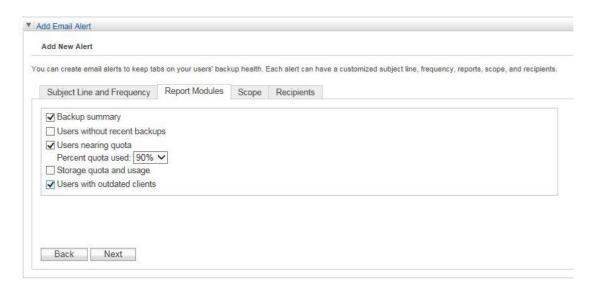
You can add custom alerts to help you manage Spectrum Business Cloud Backup.

- 1. Sign in to the Administrator Console.
- 2 Under Graphs & Reports in the Admin Console menu on the left, select Email Alerts.
- 3. Select **Add Email Alert** dropdown arrow to open the Add Email Alert panel.

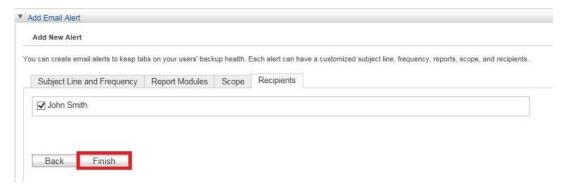


4. Choose the **Subject and Frequency** tab, then enter the text you want to appear in the subject line of the email and assign a frequency for the email alert.

5. Select the **Report Modules** tab, then insert a check in the boxes next to the modules you want to include in the alerts.



- Select the Scope tab to manage which user groups are included in the email alert.
- 7. Choose the Recipients tab, then select which admins should receive the email alert.
- 8. Select Finish.



The Email Alert is added to the List Email Alerts panel and is opened in its own panel at the bottom of the page. The Email Alert is sent based on the frequency defined.

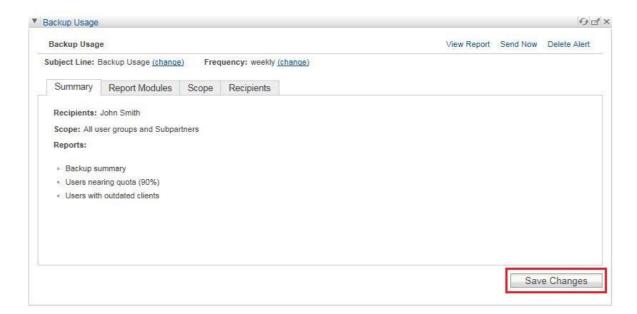
To test the email alert or to send it immediately, select the email alert created and then choose **Send Now**.



View or Edit an Email Alert

You can view or edit existing email alerts.

- 1. Sign in to the Administrator Console.
- 2. Under **Graphs & Reports** in the **Admin Console** menu on the left, select **Email Alerts**.
- 3. Select the **Subject Line** of an email alert that you've created.
- 4. Navigate through each tab and make any necessary edits.
- 5. To edit the Subject line or Frequency, select **Change** next to each item.
- 6. Select **View Report** to view the details of the email alert.
- 7. Choose **Send Now** to test the email alert or send it immediately.
- 8. Select Save Changes.



Restores

Spectrum Business Cloud Backup lets you download your backed up files from any computer. You can quickly download one or a few files, including older versions of files or files that you deleted from your computer in the past 90 days. You can even restore all your files. Keep in mind that the more files you need to download, the longer it will take. If your initial backup took a long time, you can expect a download of the same files to take a long time as well.

Emergency Restore

Emergency Restore makes it easy for you to restore all your files if your computer has been lost, stolen, or damaged. All of your files are packaged into a single set, and you choose how that set will be delivered.

Note: Web access isn't intended to be a file transfer utility. If you can still use your old computer, it's recommended that you manually transfer your files onto your new computer.

After you have restored all your files, you can install Spectrum Business Cloud Backup on the new computer with the same user ID and password, choosing to replace your old computer. During the first backup, files already in the data center are associated with the new computer and you'll no longer be able to use Spectrum Business Cloud Backup on your old computer.

Only the most recently backed up versions of files are restored. If you have already installed Spectrum Business Cloud Backup on a new computer, you can choose to include deleted files that were backed up using the old computer. The files are considered to be deleted since they are no longer present for backup on the new computer.

In Web access and in your account information, you won't see the name of the old computer, but you'll see all your files listed under the new computer. If you find that you missed restoring any files, you have 90 days to restore them using either Web access or Spectrum Business Cloud Backup.

Restore User Files Online

As the Administrator of your Spectrum Business Cloud Backup account, you can restore files on behalf of your users. You can choose to either restore all of the user's files using Emergency Restore, or select only a few files that you urgently need to recover.

Note: If you plan to move the restored files to a different operating system platform, you must decrypt the files on the native platform first. If the user defined a personal encryption key for their files, they must have the key available to decrypt the files you're restoring.

- 1. Sign in to the Administrator Console.
- 2. Under Users in the Admin Console menu on the left, select Search / List Users.
- 3. Select the email address of the **User** whose files you want to restore.
- 4. The Username information panel displays.
- 5. Select **Restore Files** next to the computer or device you wish to restore files from.
- Choose Emergency Restore, then provide a name for the set of files and select Next.
- 7. (Optional) Change the date from which to restore to get versions of files from before today, then select **Next**. For example, if you need versions of files from before your computer was infected with a virus, you can select files up to 90 days old.
- 8. (Optional) Select **Include Deleted Files** to include files considered deleted within the past 30 days, then select **Next**.
- 9. Choose the delivery method for your restored files, then choose **Next**.
- 10. A notification is sent when your files are ready.

Note: You can restore all files from only one device at a time. Creating a unique name for each set of file is helpful for distinguishing between multiple restores.

Download Files Immediately

You can download a single file immediately. You may also immediately download an older version of a file or a file you deleted from your computer. This functionality is only available for files that are smaller than 512 MB.

To restore a single file:

- 1. Sign in to the Administrator Console.
- 2. Choose the computer or device you wish to restore files from.
- 3. The **Devices** tab shows drives and Backup Sets for the selected computer or device.
- 4. Find and select the file, then select **Download Now** under **Actions**.

Note: If the user defined a personal encryption key for their files, they must have the key available to decrypt the files you're restoring.

Restore a Deleted File

Files may be marked for deletion from the data center for these reasons:

- A file was deleted from your computer.
- A file was deselected from backing up.
- A drive on your computer was disconnected or malfunctioning during backup.
- Spectrum Business Cloud Backup was installed on a replacement computer and the first backup was completed with files from the original computer not present.

Files marked for deletion remain in the data center for 90 days in case the deletion was unintentional. They remain in the same folder structure as on your computer. This grace period gives you time to restore your files in case your original computer was lost, stolen, or damaged. After 90 days, deletion is considered intentional and the files are permanently deleted from the data center.

To restore a deleted file:

- 1. Sign in to the Administrator Console.
- 2. Choose the computer or device you wish to restore files from.
- 3. The **Devices** tab shows drives and Backup Sets for the selected computer or device.
- 4. Under Actions, select Include Deleted Files.
- 5. Find and select any files or folders, including any files marked Deleted.
- 6. To download immediately, choose **Download Now** under **Actions**.

Note: Files larger than 512 MB can't be downloaded this way. Select **More Download Options** to use a different delivery method.

Microsoft Exchange Server & SQL Disaster Recovery Plan

This is an overview of how Spectrum Business Cloud Backup supports VSS.

- 1. Spectrum Business Cloud Backup communicates with the Microsoft Volume Shadow-copy Service (VSS) to gather metadata from the MS Exchange writer and SQL writer and prepare them for shadow copy creation.
- The VSS receives metadata, in XML format, which describes the backup components and defines the restore method. MS Exchange writer and SQL writer then begin preparing data for shadow copy.
- 3. MS Exchange writer and SQL writer complete all open transactions, rolling transaction logs, and flushing caches, and notify the VSS.
- 4. The VSS freezes I/O write requests, flushes the file system buffer, and then freezes the file system to ensure file system metadata is written correctly.
- 5. The VSS then initiates the provider to create the shadow copy.
- 6. The VSS thaws the file system, MS Exchange writer and SQL writer, from its inactive state.
- 7. The VSS confirms with the MS Exchange writer and SQL writer that I/O writes were inactive while the shadow copy was being created.
- 8. If the I/O writes were active, Cloud Backup is notified for potential data inconsistencies.
- 9. Spectrum Business Cloud Backup continues MS Exchange and SQL backups in a crash-consistent state only if the I/O writers were active.
 - Note: This is the state of disks equivalent to what would be found following a
 catastrophic failure that abruptly shuts down the system. A restore from such a
 shadow copy set would be equivalent to a reboot following an abrupt shutdown. This
 is the default state of data that has been shadow copied without the support of
 writers. (MSDN library/aa384653)
- 10. Spectrum Business Cloud Backup initiates checksum to validate data.
- 11. The data is backed up from the shadow volume, which is a snapshot of the live volume at a point in time.

Microsoft Volume Shadow Services Backup Set Rules

For server backups, you might want to back up Microsoft Exchange, Active Directory, Microsoft SQL Server, SYSVOL, registry, and COM+ data. This helps for quick restoration when you have data loss.

Spectrum Business Cloud Backup makes this process easy for you. For Microsoft Exchange, Active Directory, Microsoft SQL Server, SYSVOL, registry, and COM+ data, Spectrum Business Cloud Backup uses the native Microsoft VSS writers to back up the data while the services are running. Microsoft VSS support is only available on Windows 2003 server or later.

If these services are running on your machine, the Spectrum Business Cloud Backup client automatically detects the available services and displays them in the Backup Sets tab.

To back up these applications for file sets, select the check box next to the backup set. The Spectrum Business Cloud Backup client then automatically uses the VSS Writer to do the backup.

At the time of backup, if the Exchange services are running, a request is made to the VSS, which notifies the Exchange services that a backup is about to take place. Once the backup has occurred, Exchange is notified that the backup has occurred successfully and Exchange deletes the Exchange logs.

For Microsoft SQL Server to back up, the SQL Server VSS Writer service must be started before the backup set displays. It's suggested that you set the SQL Server VSS Writer service to automatically start when Windows starts. When the backup sets appear for Microsoft SQL Server, each database displays as a separate backup set. The SQL Server services and SQL Server VSS Writer then flush any transactions pending in memory to the store file to ensure that the backup includes the most recent changes available; after which, a snapshot of the files are backed up.

After Spectrum Business Cloud Backup has backed up the file, only the changed blocks of the file are transmitted. This happens at the block level, not the file level, so subsequent backups can take minutes instead of hours. This style of Exchange and SQL Server backup results in a significantly reduced impact on the performance of the server as well as on the SQL/Exchange services. Because Spectrum Business Cloud Backup avoids interfacing with the services directly, no downtime or slowdown of any kind is experienced.

Note: If you're configuring Spectrum Business Cloud Backup to back up a Microsoft Exchange Server residing on the same hardware as the domain controller, it's important to select the VSS Active Directory and Windows File Replication Service (SYSVOL) backup sets.

Microsoft Exchange Server & SQL Disaster Recovery Plan

A successful backup of Microsoft Exchange and Microsoft SQL is critical and shouldn't interrupt regular business operations. Keeping your Exchange and SQL servers online is only one part of the equation.

With Spectrum Business Cloud Backup as a key component to your disaster recovery plan, you can keep your Exchange and SQL servers running, maintain performance during backup, and manage all the necessary components of Exchange and SQL. Exchange and SQL backup sets in Spectrum Business Cloud Backup and support for VSS make this kind of disaster recovery feasible.

Backup sets for Microsoft Exchange Server and Microsoft SQL are dynamically created by the Exchange writer and SQL writer, so Spectrum Business Cloud Backup knows exactly what files need to be backed up and where to find them regardless of their configuration.

Spectrum Business Cloud Backup support for VSS keeps your Exchange and SQL servers online, freezing I/O write requests, while preparing an accurate snapshot of your data before encrypting and transferring it to secure data centers.

Performing VSS Restores

If you backed up VSS data such as Microsoft SQL Server, Microsoft Exchange Server, Active Directory, and the Windows File Replication Service (for example, SYSVOL), you can use the VSS Restore to recover this data.

Note: The process for restoring VSS data is slightly different depending upon the type of data you are restoring.

Restoring Microsoft Exchange Server Data

Dismount All Mailbox Stores

Before you restore the Microsoft Exchange data, you must dismount all the mailbox stores:

- 1. Open the Microsoft Exchange System Manager and navigate to the **Servers** folder.
- 2 Expand each storage group.
- 3. For each mailbox store, right-click the mailbox store, then select **Dismount Store**.

Perform the Restore

Once each mailbox store has been successfully dismounted, you can perform the restore.

- 1. Right-click the Spectrum Business Cloud Backup icon in the system tray, then select **Restore Files.**
- 2 Choose VSS Restore.
- 3. Select the VSS: MS Exchange Server backup set.

Note: Selecting the **Authoritative Restore** forces the restored directory database to be replicated to other servers on the domain after the backups have been restored.

- 1. Select the method used to access the backup set:
 - Download files from the Spectrum Business Cloud Backup Remote Backup Server.
 - Use previously downloaded restore.
- 2 If you select to use a previously downloaded restore, browse to the location where the files are stored, then select **Next**.
- 3. The VSS downloading window appears.
- 4. Once the data has been downloaded, the VSS writer automatically copies the files to the correct locations.

Mount All Mailbox Stores

Once the restore has been completed, all mailbox stores need to be mounted.

- 1. Open the Microsoft Exchange System Manager and navigate to the **Servers** folder.
- 2 Expand each storage group.
- 3. For each mailbox store, right-click the mailbox store, then select **Mount Store**.

Restoring Active Directory and SYSVOL Data

Restart the Server in Directory Service Restore Mode

Before restoring data to Active Directory and SYSVOL, you must restart the server in Directory Service Restore mode.

- 1. Reboot the server.
- 2 During the reboot process, press and hold the **F8** key on your computer keyboard.
- 3. When the **Windows Advanced Options** menu appears, select **Directory Services Restore Mode** and press **Enter**.
- 4. When the Authentication window appears, sign in as the local Administrator.

Restore Data to Active Directory and SYSVOL

Once you've restarted the server in Directory Services Repair mode, you're ready to begin restoration.

- 1. Right-click the Spectrum Business Cloud Backup icon in the system tray, then select **Restore Files**.
- 2 Choose VSS Restore.
- 3. Select VSS Active Directory and SYSVOL.

Note: When you select the Authoritative Restore, Windows causes Active Directory to replicate and overwrites objects and object trees of objects to all domain controllers in the domain.

- 4. Select the method used to access the backup sets:
 - Download files from the Spectrum Business Cloud Backup Remote Backup Server.
 - Use previously downloaded restore.
- 5. If you select to use a previously downloaded restore, browse to the location where the files are stored, then select **Next**.
- 6. The VSS downloading window appears.
- 7. Once the data has been downloaded, the VSS writer automatically copies the files to the correct locations.
- 8. After successfully restoring Active Directory and SYSVOL, restart Windows Server in normal mode, then sign on as the domain controller Admin.

Restoring Microsoft SQL Server Data

- 1. Select **Start** > **Run**, then enter **Services.msc** and choose **OK**.
- 2 Right-click the **SQL Server service**, then select **Stop**.
 - Note: Don't stop the SQL Server VSS writer process.
- 3. Right-click the Spectrum Business Cloud Backup icon in the system tray, then select **Restore Files**.
- 4. Choose VSS Restore.
- 5. Select the VSS: MS SQL Server backup sets that need to be restored.
- 6. Select the method used to access the backup set:
 - Download files from the Remote Backup Server.
 - Use previously downloaded restore. If you select to use a previously downloaded restore, browse to the location where the files are stored.
- 7. Select **Next**, then the VSS downloading window appears.
- 8. Once the data has been downloaded, the VSS writer automatically copies the files to the correct locations.
- 9. Select **Start** > **Run**, then enter **Services.msc** and choose **OK**.
- 10. Right-click the SQL Server service, then select Start.

Restoring COM+ or the Registry

- 1. Right-click the Spectrum Business Cloud Backup icon in the system tray, then select **Restore Files**.
- Choose VSS Restore.
- 3. Select the VSS: COM+ or VSS: Registry backup set:
 - Download files from Spectrum Business Cloud Backup Remote Backup Server.
 - Use previously downloaded web restore or files copied from DVD restore. If you select to
 use a previously downloaded restore, browse to the location where either the files or the
 DVD is stored.
- 4. Select **Next**. The VSS downloading window appears.
- Once the data has been downloaded, the VSS writer automatically copies the files to the correct locations. Once you have completed the restore, you must restart Windows for the restore to take effect.

Restore a Microsoft Hyper-V Virtual Machine Using VSS

Prerequisites: To back up a Hyper-V virtual machine and be able to restore it, you must enable the VSS backup set associated with that virtual machine. A backup set for each virtual machine hosted on the server is automatically created and included in the list of backup sets. If no virtual machines are listed, set HKEY_LOCAL_MACHINE\SOFTWARE\Spectrum Business Cloud Backup\state\vss_scan in the registry to 1. This makes the backup software aware of Hyper-V. Enabling a backup set for a virtual machine selects all of the files needed to back up and restore the machine. You don't need to manually select any additional files.

When you restore a virtual machine using VSS, several things occur:

- If a version of the machine being restored is running on the server and is backed up using saved state, the machine state is saved and then the machine is shut down. After the restoration, the saved state is restored to the machine. If you're using child partition, the state isn't saved.
 Whether a backup is done using saved state or child partition is specified in the Hyper-V administration console.
- If a version of the machine files is present on the server, they're deleted.
- The virtual machine is restored from the Spectrum Business Cloud Backup data center.
- The machine being restored is registered with Hyper-V.

To restore a Microsoft Hyper-V Virtual Machine using VSS:

- 1. Right-click the Spectrum Business Cloud Backup icon in the notification area, then select **Settings** > **More Settings**.
- Choose the **Restore** tab, then select the **VSS Restore** button. The VSS Restore Wizard window opens.
- 3. Select Download files from Spectrum Business Cloud Backup servers, then choose Next.
- 4. Select the machine. If the machine you're restoring is a domain controller, select the **Authoritative Restore** check box and choose **Next**.
- 5. When you're ready to perform the restoration, select **Next**.
- 6. Select Finish.