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How can we help you?

Use CrashPlan on a headless computer

Last updated: Aug 12, 2017

Applies to:

Version 4

- CrashPlan for Small Business (Mac only)
- CrashPlan PROe

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Overview

The CrashPlan app is designed with the assumption that the CrashPlan user interface and the CrashPlan service are running on the same computer. When the CrashPlan app is installed on a computer without a graphical environment, also called "running on a headless computer," the CrashPlan service must be administered from another computer.

Although running the CrashPlan service on a headless computer is an **unsupported feature**, this article describes a process that some users have found useful.

This process applies to CrashPlan for Home, CrashPlan for Small Business (previously CrashPlan PRO), and Code42 for Enterprise version 4.3 and later. Code42 for Enterprise administrators for earlier versions may refer to Using CrashPlan On A Headless Computer (Version 4.2 and earlier).

Definitions

The following terms are used throughout this article.

CrashPlan service

The CrashPlan service or engine that performs all backup operations in the background on a device running the CrashPlan app.

CrashPlan user interface

The application that you can launch from your menu or icon bar. It is responsible for displaying the CrashPlan interface and configuring your backup settings.

headless computer

A computer that does not have a graphical environment or does not have a monitor attached.

local computer

A computer that uses the CrashPlan app to configure settings on the remote computer.

remote computer

A "headless computer" that runs the CrashPlan service but does not display the CrashPlan interface.

Considerations

- **Port Configurations**: This article describes forwarding local port 4200 to remote port 4243, the default listening port used by the CrashPlan app. This is an example configuration; the ports used by your computer may vary:
  - The CrashPlan app communicates with the CrashPlan service using port 4243 by default.
  - Backing up from one computer to another—for example, backing up from your local computer to your remote computer—uses port 4242 by default.
  - *Version 4.3 and later only*: If the default ports are already in use on your computer, CrashPlan uses another pair of available ports. You should identify the ports used by the CrashPlan app on your computer.
  - While this article uses the example port 4200, you can use any available port on your local computer.
- **CrashPlan app Upgrades**:
  - The CrashPlan app will not automatically upgrade if it does not connect to a local CrashPlan service. If your CrashPlan app is configured only to connect to a remote CrashPlan service, then you must manually uninstall and reinstall the CrashPlan app when an upgrade is available.
  - The configurations shown in this article are overwritten during each upgrade to the CrashPlan app and CrashPlan service. After upgrading, you must repeat the steps shown here.
- **CPU Settings**:
  - CrashPlan's default settings use more CPU when a user is away or idle. If you observe high load when running a headless computer, consider lowering the allowed CPU percentage in the CrashPlan app.
  - Headless computers are almost always in this state, so the CrashPlan app will try to use a larger percentage of available CPU.

- The CrashPlan app on Linux cannot detect when a user is away, so Linux devices always use the away setting.

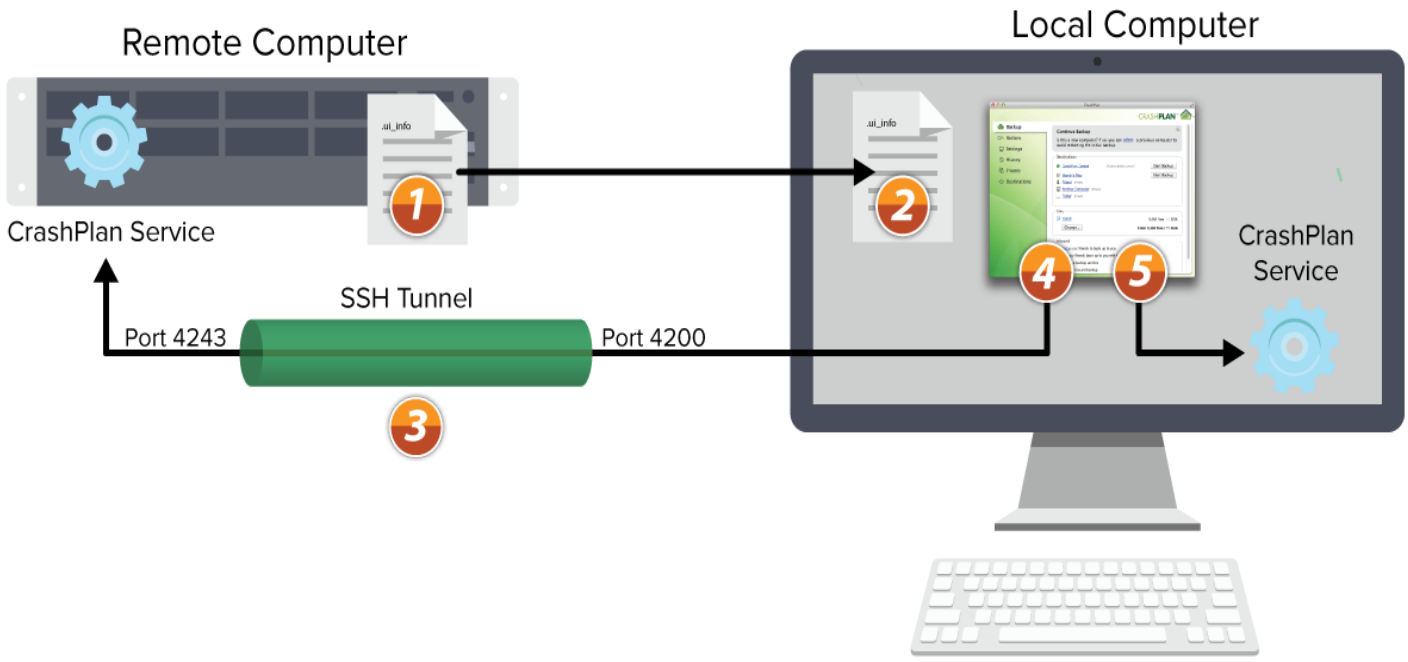
- **Network Attached Storage (NAS) Considerations**
  - Installing CrashPlan directly on a NAS device is **unsupported**, which means our Customer Champions are unable to assist you with any issues you encounter with this configuration.
  - CrashPlan does support backing up NAS devices only as mounted network shares for Mac and Linux, but does not support this configuration for Windows.
  - Most NAS hardware isn't able to handle high-I/O operations like compression, encryption, and de-duplication, which are essential components of CrashPlan. We **strongly recommend** directly-attached storage for best performance.
  - Most NAS devices cannot back up large amounts of data due to the devices' memory limitations. However, it may be possible to change these settings.

Unsupported process
The information presented here is intended to offer information to advanced users. However, Code42 does not design or test products for the use described here. This information is presented because of user requests.

Our Customer Champions cannot assist you with unsupported processes, so you assume all risk of unintended behavior. You may want to search our support forum for information from other users.

Before you begin

- Install CrashPlan on the local computer and the remote computer.
- Set up an SSH server on the remote computer and verify that it is accessible from the local computer.
- *(Windows only)* Install PuTTY or another SSH client on the local computer.



Step 1: Copy the authentication token

Copy the authentication token from the .ui_info file from the remote computer to the local computer. The .ui_info file contains port information and an authentication token for connecting a CrashPlan app with a CrashPlan service. In version 4.3.2 and later of the CrashPlan app, .ui_info also contains an IP address used by the CrashPlan app.

On the remote computer:

1. Close the CrashPlan app, if necessary.
2. Navigate to the file .ui_info.
   - On Linux, .ui_info is located at /var/lib/crashplan/.ui_info.
   - *A list of .ui_info locations by operating system is provided below.*
3. Open .ui_info.
4. Copy the authentication token from .ui_info for use on the local computer.
   The authentication token is the string of alphanumeric characters and dashes that follows the comma.
5. Close .ui_info.

Step 2: Edit the local CrashPlan configuration

Change the CrashPlan app configuration on the local computer to use a forwarded port.

Changes can be reset
The changes made in this step are reset when the CrashPlan service on the local computer restarts. To avoid overwriting your changes, leave the CrashPlan service running on your local computer.

On the local computer:

1. Close the CrashPlan app.
2. Edit the the .ui_info file:
   1. On your file system, locate the .ui_info file.
      A list of .ui_info locations by operating system is provided below.
   2. Create a backup copy of .ui_info, such as original.ui_info.
   3. Open .ui_info in a plain text editor.
   4. Change the port to `4200`.
   5. Replace the existing authentication token with the authentication token from the remote computer.
   6. Save your changes.
   7. Close .ui_info.

Additional configuration for version 4.3.0

If you are using version 4.3.0 of the CrashPlan app, you must edit an additional configuration file. You can identify your version of the CrashPlan app in **Settings > Account**.

- The name of the .ui_<username>.properties file differs based on your username on your local computer.
- If you installed CrashPlan per user, the file is named simply ui.properties.

Edit the .ui_<username>.properties file:

1. On your file system, locate the .ui_<username>.properties file.
   A list of .ui_<username>.properties locations by operating system is provided below.
2. Create a backup copy of .ui_<username>.properties, such as original.ui_<username>.properties.
3. Open .ui_<username>.properties in a plain text editor.
4. Change the port to `4200`.
5. Save your changes.
6. Close .ui_<username>.properties.

Step 3: Start port forwarding on the local computer

Forward an unused port on the local computer to the listening port on the remote computer. These steps show how to forward local port 4200 to remote port 4243, the default listening port, using the `ssh` command. For other options, see Alternative Port Forwarding Options below.

On the local computer:

1. Open a command prompt, such as Terminal.
2. Use the `ssh` command with the `-L` flag to forward local port 4200 to remote port 4243.
   Example command:

```
1| ssh -L 4200:localhost:4243 user@192.0.2.2
```

3. Sign in to the remote computer using your SSH credentials.
4. *(Optional)* Use `telnet` to confirm the connection.

Step 4: Configure remote settings from the local computer

Use the local computer's CrashPlan app to apply settings to the CrashPlan service on the remote computer.

On the local computer:

1. Open the CrashPlan app with port forwarding active.
2. Configure CrashPlan settings for the remote computer.
3. Close the CrashPlan app.

Step 5: Restore normal operation

To use CrashPlan normally on the local computer, stop port forwarding and allow the CrashPlan app to connect to the local CrashPlan service.

On the local computer:

1. Close the tool you used to configure port forwarding.
2. On your file system, locate the .ui_info files you created in Step 2.
   A list of .ui_info locations by operating system is provided below.
3. Delete your modified .ui_info file.
4. Move or rename the backup copy of .ui_info you created in Step 2 so that the file name and location match the file's correct location for your operating system.

Now that you have restored the original network settings and stopped port forwarding, any changes you make on the local computer's CrashPlan app are applied only to the CrashPlan service on the local computer.

Additional information

File locations on all operating systems

Locations of .ui_info

- **Windows Vista, 7, 8, 10, Server 2008, and Server 2012**
  - **Installed for everyone**: C:\ProgramData\CrashPlan\.ui_info
    To view this hidden folder, open a file browser and paste the path in the address bar.
  - **Installed per user**: C:\Users\<username>\AppData\<Local|Roaming>\CrashPlan\.ui_info
    To view this hidden folder, open a file browser and paste the path in the address bar.
- **Windows XP**
  - **Installed for everyone**: C:\Documents and Settings\All Users\Application Data\CrashPlan\.ui_info
    To view this hidden folder, open a file browser and paste the path in the address bar.
  - **Installed per user:** C:\Documents and Settings\<username>\Application Data\CrashPlan\.ui_info
    To view this hidden folder, open a file browser and paste the path in the address bar.
- **OS X**:
  - **Installed for everyone**: /Library/Application Support/CrashPlan/.ui_info
  - **Installed per user**: ~/Library/Application Support/CrashPlan/.ui_info
- **Linux**: /var/lib/crashplan/.ui_info
- **Solaris**: /var/lib/crashplan/.ui_info

Locations of .ui_<username>.properties

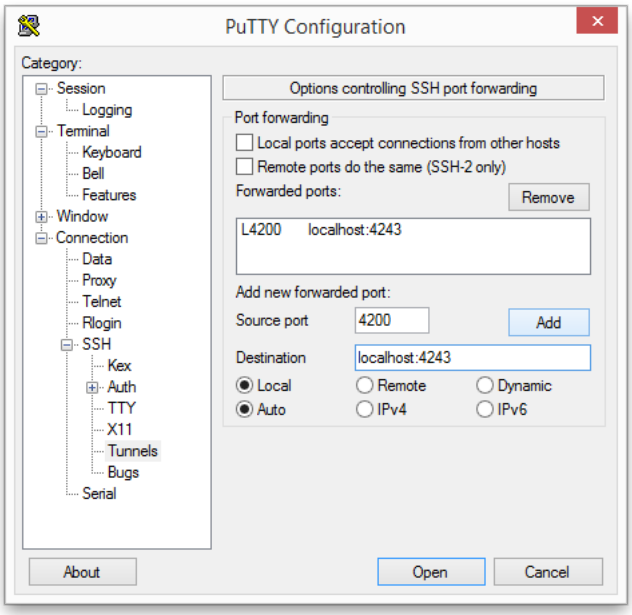
- **Windows Vista, 7, 8, 10, Server 2008, and Server 2012**
  - **Installed for everyone**: C:\ProgramData\CrashPlan\conf
    To view this hidden folder, open a file browser and paste the path in the address bar.
  - **Installed per user**: C:\Users\<username>\AppData\<Local|Roaming>\Programs\CrashPlan\conf
    To view this hidden folder, open a file browser and paste the path in the address bar.
- **Windows XP**
  - **Installed for everyone**: C:\Documents and Settings\All Users\Application Data\CrashPlan\conf
    To view this hidden folder, open a file browser and paste the path in the address bar.
  - **Installed per user:** C:\Documents and Settings\<username>\Application Data\Programs\CrashPlan\conf
    To view this hidden folder, open a file browser and paste the path in the address bar.
- **OS X**
  - **Installed for everyone**: /Library/Application Support/CrashPlan/conf/
  - **Installed per user**: ~/Library/Application Support/CrashPlan/conf/
- **Linux**: /usr/local/crashplan/conf
- **Solaris**: /opt/sfw/crashplan/conf

Alternative port forwarding options

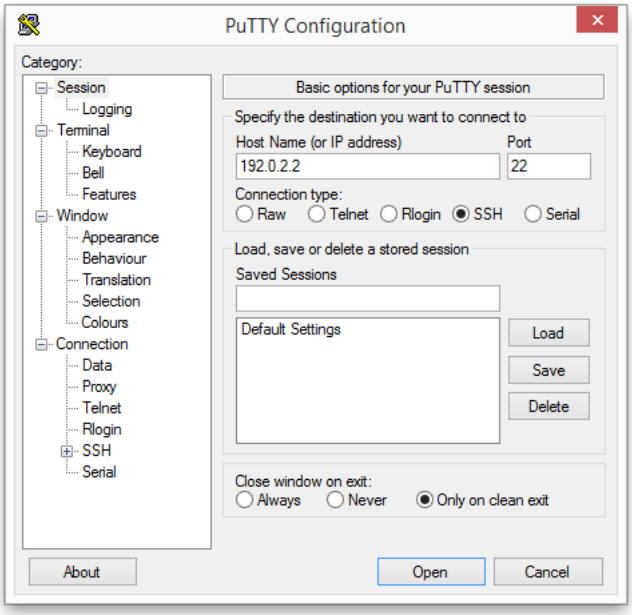
Windows computers do not have a command-line SSH option available. We recommend installing PuTTY to create an SSH tunnel on Windows.

1. Open PuTTY.
2. Go to the settings for **Connection > SSH > Tunnels**.
3. Enter these settings:
   - **Source port**: `4200`
   - **Destination**: `localhost:4243`

4. Click **Add**.



5. Go to the **Session** settings.
6. Enter the appropriate connection information in **Host Name (or IP address)** field.



7. *(Optional)* To save these connection options for later reuse, enter a label in **Saved Sessions** and click **Save**.
8. Click **Open** to open the SSH tunnel.
9. Sign in to the remote computer using your SSH credentials.
10. *(Optional)* Use `telnet` to confirm the connection.

Confirm SSH tunneling with telnet

After establishing an SSH tunnel, you can use the `telnet` command to contact the local port. If the SSH tunnel is connected, the `telnet` connection to the local port will return a positive result.

- Example command:

```
telnet localhost 4200
```

- Example output of a successful connection:

```
username$ telnet localhost 4200
Trying 127.0.0.1...
Connected to localhost.
Escape character is '^]'.
```

Confirm the listening port

If you cannot connect from the local computer to the CrashPlan service on the remote computer, you can confirm on the remote computer that the CrashPlan service is listening and locate the listening port.

1. Open a command prompt, such as Windows Powershell or OS X Terminal.
2. Use a network statistics command to show listening ports.
   - On OS X and Linux, use `netstat` with `grep` to filter the list:

     ```
     netstat -na | grep LISTEN | grep 42
     ```

   - On Windows, use PowerShell to filter the list:

     ```
     Get-NetTCPConnection -State Listen -LocalPort 4243
     ```

The output of your command should show that port 4243 is listening on the local address:

```
username$ netstat -na | grep LISTEN | grep 42
tcp4       0      0  *.4242                 *.*                    LISTEN
tcp4       0      0  127.0.0.1.4243         *.*                    LISTEN
```

External resources

There are numerous resources on the Internet for installing CrashPlan on a NAS device. Here are a few how-to articles for several popular devices:

- Synology NAS
- Netgear ReadyNAS
- QNAP NAS

For additional information on PuTTY and SSH port forwarding, review the following:

- PuTTY
- How to use SSH local and remote port forwarding

Related articles

- Enthusiast's Guide To CrashPlan
- Backing Up To Another Computer You Own
- Identifying Ports Used By The CrashPlan app
- Beyond The Code: Unsupported CrashPlan Configurations

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