

TROUBLESHOOTING GUIDE

HYCU™

Backup and Recovery
for Nutanix

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Chapter 1

About HYCU troubleshooting

This guide is designed as a self-help resource to help you define the cause and the workaround for any problem that you may encounter when working with HYCU. It provides a list of most common problems and a set of questions that may help you solve a problem on your own. If the information in this guide does not address your particular situation and the problem still persists, this guide will help you determine what information you need to collect before submitting it to Comtrade Software Support for analysis.

When solving a problem, use the following approach:

1. Check if your problem is described in [“Known problems and solutions” on page 7](#) and apply the recommended solution.
2. If you cannot find the problem in the list of known problems, try to solve it on your own.

When solving a problem on your own, you first need to identify the cause of the problem, collect and analyze all available information about it, and then solve the problem. Answering the following questions may help you to solve your problem:

- a. Is your system up to date?

Make sure that you apply the most recent patch because it may contain a software update that solves your problem. In addition, for information about supported environments and compatibility with other products, see the *HYCU Compatibility Matrix*.

- b. Have you made sure that the following does not apply to your problem?

- You are not running into last-minute limitations and known problems that are described in the *HYCU Release Notes* or [Knowledge base](#).
- You have appropriate prerequisite software installed and configured according to the instructions in the *HYCU User Guide*.

- c. Do you receive any errors?

You can view all events that occurred in your environment in the Events panel. In addition, you can track jobs that are running in your environment and get an insight into the specific job status. For this purpose, use the Jobs panel. For detailed information about events and jobs, see the *HYCU User Guide*.

- d. Can you find information about your problem in log files?

For details about the log files, see [“HYCU log files” on page 19](#).

e. Is your problem related to any third-party hardware or software?

Contact the respective vendor for support.

3. If the problem still persists, contact [Comtrade Software Support](#).

It is recommended that you collect and send the following information to Comtrade Software Support:

- Description of your environment
- Description of your problem
- Log files
- Results of any testing you have done (if available)

The following flowchart shows the major steps of the troubleshooting process:

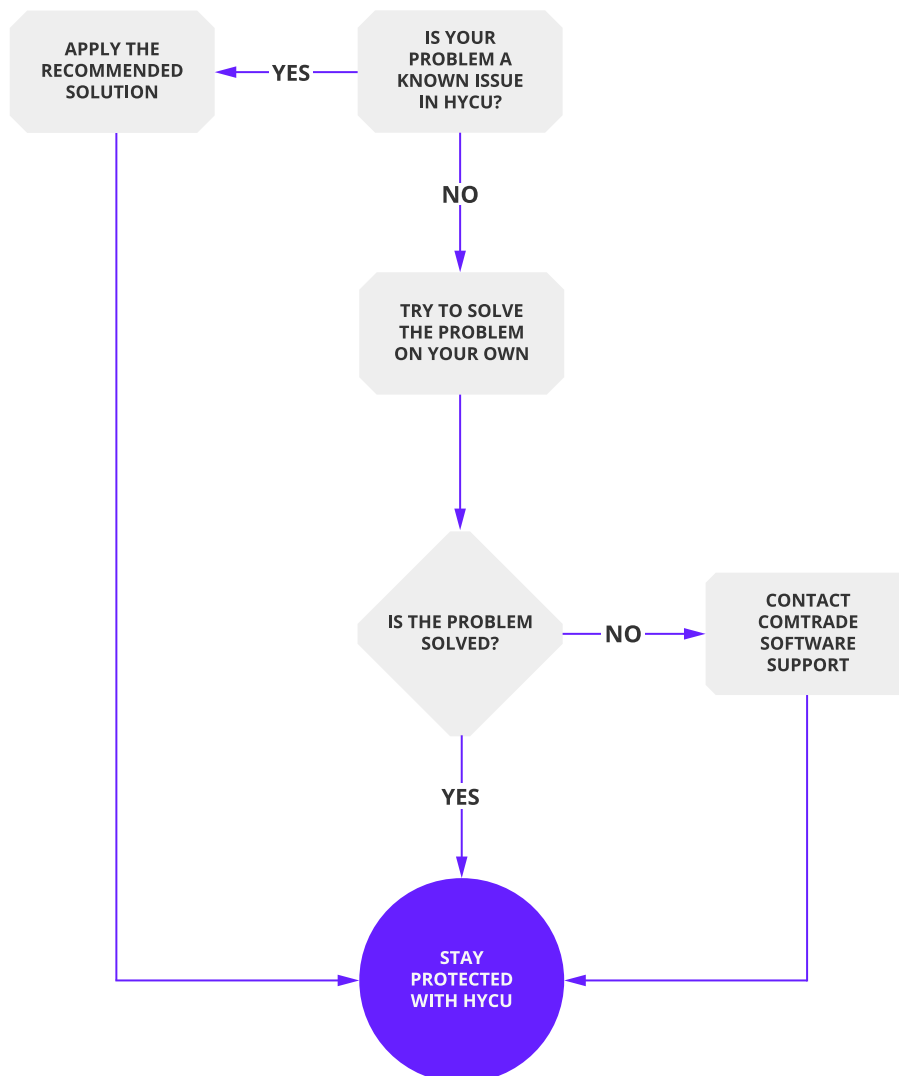


Figure 1-1: Major steps of the troubleshooting process

Chapter 2

Known problems and solutions

When using HYCU, you can encounter some problems and limitations. After you identify the most probable area where the problem originates, search for your problem and its solution. Depending on the area of troubleshooting, see one of the following sections:

- [“Deployment and upgrade problems” below](#)
- [“Nutanix REST API v3 problems” on page 10](#)
- [“Storage problems” on page 11](#)
- [“Data protection problems” on page 12](#)

Deployment and upgrade problems

This section contains information about troubleshooting deployment and upgrade problems.

For detailed information about deploying the HYCU virtual appliance or upgrading HYCU, see the *HYCU User Guide*.

HYCU web user interface is not accessible after deployment

Problem

After deploying the HYCU virtual appliance, you cannot access the HYCU web user interface.

Cause

There are several potential causes why this problem occurs.

Solution

To solve this problem, do the following:

1. Try to connect to the HYCU web user interface by entering the HYCU URL in a web browser: `https://<IP_address>:<port>`. The default port is 8443.

By doing so, you eliminate your host name not being properly resolved as the cause of the problem.

2. Check your firewall settings to make sure that your firewall allows you to connect to the HYCU URL.
3. Check your browser proxy settings to make sure they do not cause a connection problem.
4. Try to connect to the HYCU web user interface from different virtual machines in your Nutanix environment.
5. If your problem still persists, check the HYCU web server (the Grizzly server) by connecting to the HYCU backup controller virtual machine by using SSH. The default SSH credentials are:

User name: **hycu**

Password: **hycu/4u**

For detailed information about accessing the HYCU backup controller virtual machine by using SSH, see the *HYCU User Guide*.

After you connect to the HYCU backup controller virtual machine by using SSH, do the following:

- a. Check the current HYCU host name and IPv4 settings:

```
sudo nmcli general hostname
```

```
sudo nmcli con show 'Wired connection 1' | grep ipv4
```

- b. Check the IP address that HYCU is using:

```
sudo ip address list
```

The following is an example of the output:

Example

```
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast
state UP ql en 1000
    link/ether 50:6b:8d:40:e8:b4 brd ff:ff:ff:ff:ff:ff
    inet 10.17.63.199/16 brd 10.17.255.255 scope global eth0
       valid_lft forever preferred_lft forever
```

- c. Check the IP address and the port on which the HYCU web server is listening:

```
sudo /usr/bin/netstat -nap | grep java | grep LISTEN
```

The HYCU web server should be listening on the IP address from step 5b, for example:

```
tcp 0 0 10.17.63.199:8443 0.0.0.0:* LISTEN 13687/java
```


d. Check if the HYCU web server responds locally:

```
wget --no-check-certificate https://<IP_from_step_5b>:<port_from_step_5c>/rest/v1.0/api-docs -O -
```

If HYCU responds locally on the correct IP address, double-check steps 1–4.

If there is an issue with network data, you can modify the HYCU web server host name and port by editing the GRIZZLY_HTTP_PORT and GRIZZLY_HOST variables in the `grizzly` configuration file:

```
sudo vi /etc/default/grizzly
```

You can edit the virtual machine network configuration by running the following command:

```
sudo nmtui
```

After applying any changes, restart the HYCU web server. To do so, run the following command:

```
sudo service grizzly restart
```

Software upgrade drop-down list is empty

Problem

When trying to upgrade HYCU, the drop-down list of available versions to which you could upgrade HYCU is empty.

Cause

HYCU cannot find an adequate HYCU image in your Nutanix image configuration repository.

Solution

To solve this problem, make sure that when uploading the HYCU virtual appliance image to a Nutanix cluster, you enter the HYCU image name in the format that corresponds to that of the HYCU virtual machine disk image name (`hycu-x.y.zzzzz`). For details about uploading the HYCU virtual appliance image, see the *HYCU User Guide*.

Upgrading HYCU fails

Problem

When performing a HYCU upgrade, the upgrade fails.

Cause

There are several potential causes why this problem occurs.

Solution

To solve this problem, follow these steps:

1. Revert the HYCU backup controller to a previous snapshot:
 - a. Log on to the Nutanix Prism web console by using your Nutanix logon credentials.
 - b. In the menu bar, click **Home**, and then select **VM**.
 - c. Click the **Table** tab, and then, from the list of virtual machines, select the HYCU backup controller virtual machine.
 - d. Click **VM Snapshots**, and then select the desired snapshot and click **Restore**.
 - e. Click **Power on** to turn on the HYCU backup controller virtual machine.
2. Retry upgrading HYCU.

Nutanix REST API v3 problems

This section contains information about troubleshooting Nutanix REST API v3 problems.

Nutanix REST API v3 is not accessible

Problem

When adding a Nutanix cluster to HYCU, the following warning message appears:

REST API V3 is not available on the cluster.

Cause

HYCU uses REST API v3 for its operations, but this REST API is not active on the Nutanix cluster.

Solution

Make sure REST API v3 is running. To check that it is running, go to the following webpage:

`https://<Nutanix_cluster>:<Nutanix_port>/api/nutanix/v3/api_explorer/index.html`

If REST API v3 is not running, see Nutanix documentation as a reference for further troubleshooting.

Nutanix REST API v3 authentication error

Problem

When adding a Nutanix cluster to HYCU, the following warning message appears:

Failed to connect to Nutanix cluster: (401) Unauthorized

Cause

The specified password is wrong or the user account that you use to add a Nutanix cluster does not have required REST API v3 permissions.

Solution

Specify the correct password or the user account that has access to REST API v3 granted.

Keep in mind that REST API v3 can be accessed by:

- Built-in Nutanix Prism admin account

When specifying the admin user, make sure to use lowercase. Otherwise, REST API v3 cannot be accessed.

- Active Directory user

To grant a user REST API v3 access to an Active Directory account, do the following:

1. Link the Nutanix cluster with the Active Directory.
2. Map the Active Directory account to the Cluster Admin role.
3. Through the Prism self-service portal, assign SSP administrator privileges to the user.

For details about the Prism web console, see Nutanix documentation.

Storage problems

This section contains information about troubleshooting storage problems.

Storage containers cannot be mounted when adding a Nutanix cluster

Problem

When adding a Nutanix cluster to HYCU, one of the storage containers cannot be added.

Cause

One of the storage containers has a storage container-level whitelist set that overrides the global whitelist for this storage container.

Solution

HYCU works also if one of the storage containers is not added, but does not list virtual machines that have disks residing on inaccessible storage containers. Therefore, to solve this problem, add HYCU to the container-level whitelist, or remove the container-level whitelist so that the storage container inherits the global whitelist.

Data protection problems

This section contains information about troubleshooting data protection problems.

Application discovery fails on a virtual machine

Problem

After application discovery is completed, the following error message appears when you hover over the virtual machine row:

```
Discovery failed. Connection error occurred. Please verify virtual machine's WinRM configuration and accessibility.
```

Cause

There are several potential causes why this problem occurs.

Solution

Before you start solving this problem, do the following:

- Open a remote session to the HYCU backup controller virtual machine and make sure you can ping the virtual machine on which the application is running.
- Make sure you can access the HYCU web user interface from the virtual machine. In a supported browser, enter the following URL:

```
https://<HYCU_server>:8443
```

In this instance, `<HYCU_server>` is the HYCU backup controller IP address or host name (for example, `https://hycu.example.com:8443`).

If you cannot access the HYCU web user interface, see [“HYCU web user interface is not accessible after deployment” on page 7](#).

Caution Because this is a case of troubleshooting a third-party problem, keep in mind that the following instructions do not intend to replace instructions in official Microsoft documentation. Therefore, it is highly recommended to check the Microsoft documentation for any updates.

To solve this problem, check the following:

1. Make sure that you have PowerShell version 3.0 or later installed. If you are running an earlier version of PowerShell, HYCU's debug logs will show that the `Get-CimInstance` command is not recognized.
2. If you are using a local built-in administrator account, application discovery should work out-of-the-box on Windows Server 2012 and Windows Server 2016. For Windows Server 2008 R2 and Windows 7, 8, and 10, run the following command to enable application discovery:

```
winrm quickconfig
```

If the problem still persists, go to the next steps.

3. Verify that WinRM is configured properly:
 - a. Verify that the WinRM service is running:

To check that the WinRM service is running on a local or remote virtual machine, run the following command:

```
test-wsman
```

The following example is a sample output of the `test-wsman` command if the WinRM service is running on the local virtual machine:

Example

```
> test-wsman
wsmid :
http://schemas.dmtf.org/wbem/wsman/identity/1/wsmanidentity.xsd
ProtocolVersion : http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd
ProductVendor   : Microsoft Corporation
ProductVersion  : OS: 0.0.0 SP: 0.0 Stack: 3.0
```

If the WinRM service is not running on the local virtual machine, an error message is displayed.

To check that the WinRM service is running on a remote virtual machine, run the following command:

```
test-wsman -computername <name_of_remote_VM> -credential
<domain>\<user> -authentication default
```

- b. Verify that a WinRM listener is configured:

To list all WinRM listeners, run the following command:

```
winrm enumerate winrm/config/listener
```

If this command does not return any output, WinRM is not configured properly. In this case, you can use the following command to automatically configure a listener:

```
winrm quickconfig
```

- c. Make sure that WinRM communication is not blocked by a firewall or an antivirus program.
4. Grant WinRM access to the user account if it is not a built-in administrator:
 - On Windows Server 2012 or Windows Server 2016:
 - a. Add the user to the Backup Operators group:

```
net localgroup "Backup Operators" /add <domain>\<user>
```

- b. Change default WinRM remote access:

```
winrm configsdll default
```

- c. In the permission dialog box that appears, do the following:
- Click **Add...** to add the user to the list, and then under Allow, select all check boxes except Special permissions.
 - Click **Apply** followed by **OK**.
- d. Allow the user to access the Root\CIMV2 namespace. To do so, follow these steps:
- Select **Administrative Tools > Computer Management > Services and Applications > WMI Control**.
 - Right-click **WMI Control**, and then select **Properties**.
 - On the Security tab, select the **Root\CIMV2** namespace, and then click **Security**.
 - In the Security dialog box, click **Add...** to add the user to the list, and then under Allow, select the **Execute Methods, Enable Account, and Remote Enable** check boxes.
- e. Restart the WinRM service:

```
restart-service WinRM
```

- On Windows Server 2008 R2:

- a. Add the user to the Backup Operators group:

```
net localgroup "Backup Operators" /add <domain>\<user>
```


- b. Change default WinRM remote access:

```
winrm configsdll default
```

- c. In the permission dialog box that appears, do the following:
- Click **Add...** to add the user to the list, and then under Allow, select all check boxes except Special permissions.
 - Click **Apply** followed by **OK**.
- d. Allow the user to access the Root\CIMV2 namespace. To do so, follow these steps:
- Select **Administrative Tools > Computer Management > Services and Applications > WMI Control**.
 - Right-click **WMI Control**, and then select **Properties**.
 - On the Security tab, select the **Root\CIMV2** namespace, and then click **Security**.

- iv. In the Security dialog box, click **Add...** to add the user to the list, and then under Allow, select the **Execute Methods, Enable Account, and Remote Enable** check boxes.
- e. Run the following command:

```
Set-PSsessionConfiguration -name Microsoft.PowerShell
-ShowSecurityDescriptorUI
```

 **Important** If the previous command does not work, run the following one:

```
Set-PSsessionConfiguration -name Microsoft.PowerShell32
-ShowSecurityDescriptorUI
```

- f. In the permission dialog box that appears, do the following:
 - i. Click **Add...** to add the user to the list, and then under Allow, select all check boxes except Special permissions.
 - ii. Click **Apply** followed by **OK**.
- g. Restart the WinRM service:

```
restart-service WinRM
```

5. Enable PowerShell script execution:

Make sure that PowerShell script execution is not restricted on hosts to be managed. To determine the current execution policy, run the following command:

```
get-executionpolicy
```

If this command returns Restricted, you will not be able to run scripts. Change the policy to **RemoteSigned** (recommended) or **Unrestricted** by running the following command:

```
set-executionpolicy {RemoteSigned | Unrestricted}
```

File-level restore fails with "Unable to connect to the remote server"

Problem

A file-level restore fails with the Unable to connect to the remote server message.

Cause

During a file-level restore, HYCU cannot use the Windows Remote Management (WinRM) service to download the HYCU restore script from the HYCU virtual machine and execute it on the client virtual machine to restore individual files or folders.

Solution

Make sure that access from the client virtual machine to HYCU is not disabled by a firewall rule. To do so, open a web browser on the Windows client virtual machine and try to access the HYCU web user interface. If there is a problem with the firewall, this attempt will fail, and you must therefore configure the firewall rules to allow access to HYCU.

HYCU fails to perform application-consistent backups from the Virtual Machines panel

Problem

Hovering over the virtual machine row or checking its backup status shows Consistency as crash consistent.

Cause

When you perform backups from the Applications panel, application consistency is ensured by HYCU. However, when you perform backups from the Virtual Machines panel, VSS-based application consistency is achieved by using Nutanix Guest Tools (NGT). Therefore, not having NGT installed and configured on the client virtual machine causes this problem.

Solution

Make sure that the NGT software bundle is properly installed on the client virtual machine. For detailed information about installing, configuring, and troubleshooting NGT, see Nutanix documentation.

Backup policy cannot be assigned to both a virtual machine and one or more applications running on it

Problem

If you try to simultaneously assign the backup policy to a virtual machine and one or more applications running on it, the following warning message is displayed:

```
Policy is assigned to virtual machine hosting that application already.
```

Cause

The backup policy cannot be assigned to both the virtual machine and one or more applications running on it at the same time. Because there is no need to back up the same data twice, the backup policy can be assigned only to the virtual machine or one or more applications.

Solution

When application discovery is completed, it is recommended that you protect your applications from the HYCU Applications panel. When starting a backup from the HYCU Applications panel, HYCU ensures application consistency and no additional tools need to be installed on the client virtual machine. The same backup will also protect the entire virtual machine that will be visible and restorable from the HYCU Virtual Machines panel.

Antivirus software may recognize HYCU as a threat

Problem

When you perform an application backup or restore, or a file-level restore, some antivirus software may recognize HYCU binaries and data files as a threat.

Cause

HYCU may upload several binaries related to the application and file-level backup and restore functionality to the virtual machine. These binaries may be treated as a threat by some antivirus software.

Solution

To solve this problem, add the `%ProgramData%\HYCU` folder that contains the uploaded binary files to your antivirus exception list.

Backup fails after restoring a virtual machine in a ROBO environment

Problem

After restoring a virtual machine to its original location in a ROBO environment, the virtual machine backup fails.

Cause

When you restore the virtual machine to its original location, new disk identifiers are generated for the virtual machine. However, because the last available snapshot created during the backup of this virtual machine still has the old disk identifiers, an identifier mismatch occurs and therefore the backup fails.

Solution

After you restore the virtual machine, remove it from the protection domain on the Nutanix cluster, and then add it again to the same protection domain.

Mounting a snapshot for a virtual machine fails

Problem

Mounting a snapshot for a virtual machine fails, resulting in no access to data included in the snapshot.

Cause

The cause of this problem is unknown.

Solution

To solve this problem, in the `config.properties` file, set the `imagemounter.alwaysinspect` configuration setting to **true**, and then restart the HYCU web server (the Grizzly server) for the change to take effect.

For detailed information on how to customize HYCU configuration settings, see the *HYCU User Guide*.

Mounting some file systems fails

Problem

Mounting some file systems fails, resulting in not all file systems being visible in the file system hierarchy.

Cause

The cause of this problem is unknown.

Solution

To solve this problem, in the `config.properties` file, set the `imagemounter.alwaysinspect` configuration setting to **true**, and then restart the HYCU web server (the Grizzly server) for the change to take effect.

For detailed information on how to customize HYCU configuration settings, see the *HYCU User Guide*.


Chapter 3

Solving problems on your own

If you cannot find your problem described in the list of known issues with HYCU, many times you can identify the cause of the problem and solve the problem on your own. For example, you can do this by verifying that your system is up to date, checking error messages, viewing log files, and so on.

HYCU log files

If you encounter a problem when using HYCU, the information in log files can help you determine the symptom of the problem. Use one of the following approaches to access the HYCU log files:

- From the HYCU web user interface:
 1. Click  **Administration**, and then select **Logging**.
 2. In the Logging dialog box, set the maximum log file size and the maximum number of log files to keep (used for log rotation). The active log file is always `opt/grizzly/logs/grizzly.log.0`.
 3. Select the severity level of activity that is recorded to log files (the higher the level, the more information is logged):

All	All activity is recorded to log files. Selecting All is highly recommended for troubleshooting purposes.
Severe	Errors that affect the immediate operation of HYCU are recorded to log files.
Warning	Potentially harmful situations that do not represent an immediate threat to the operation of HYCU are recorded to log files.
Informational	Informational messages about the operation of HYCU are recorded to log files.

4. When required, you can download the log files by clicking **Download Logs**. After you extract the `log.zip` file, you can check the log files at the following location:

`/opt/grizzly/logs/`

5. Click **Save**.

- By using a command-line terminal:

The HYCU log files are located at:

`/opt/grizzly/logs/`

In addition, you can find the HYCU command-line user interface (hyCLI) log files at `.Hycu/log` under your home directory.

Provide feedback

For any suggestions and comments regarding this product or its documentation, send us an e-mail to:

hycu@comtradesoftware.com

We will be glad to hear from you!

