

Backup Exec™ Cloud Storage for Nirvanix Installation Guide

Release 2.0



The software described in this book is furnished under a license agreement and may be used only in accordance with the terms of the agreement.

Documentation version: 2012

Legal Notice

Copyright © 2012 Symantec Corporation. All rights reserved.

Symantec and the Symantec Logo are trademarks or registered trademarks of Symantec Corporation or its affiliates in the U.S. and other countries. Other names may be trademarks of their respective owners.

This Symantec product may contain third party software for which Symantec is required to provide attribution to the third party ("Third Party Programs"). Some of the Third Party Programs are available under open source or free software licenses. The License Agreement accompanying the Software does not alter any rights or obligations you may have under those open source or free software licenses. Please see the Third Party Legal Notice Appendix to this Documentation or TPIP ReadMe File accompanying this Symantec product for more information on the Third Party Programs.

The product described in this document is distributed under licenses restricting its use, copying, distribution, and decompilation/reverse engineering. No part of this document may be reproduced in any form by any means without prior written authorization of Symantec Corporation and its licensors, if any.

THE DOCUMENTATION IS PROVIDED "AS IS" AND ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT SUCH DISCLAIMERS ARE HELD TO BE LEGALLY INVALID. SYMANTEC CORPORATION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE FURNISHING, PERFORMANCE, OR USE OF THIS DOCUMENTATION. THE INFORMATION CONTAINED IN THIS DOCUMENTATION IS SUBJECT TO CHANGE WITHOUT NOTICE.

The Licensed Software and Documentation are deemed to be commercial computer software as defined in FAR 12.212 and subject to restricted rights as defined in FAR Section 52.227-19 "Commercial Computer Software - Restricted Rights" and DFARS 227.7202, "Rights in Commercial Computer Software or Commercial Computer Software Documentation", as applicable, and any successor regulations. Any use, modification, reproduction release, performance, display or disclosure of the Licensed Software and Documentation by the U.S. Government shall be solely in accordance with the terms of this Agreement.

Symantec Corporation
350 Ellis Street
Mountain View, CA 94043

<http://www.symantec.com>

Printed in the United States of America.

10 9 8 7 6 5 4 3 2 1

Technical Support

Symantec Technical Support maintains support centers globally. Technical Support's primary role is to respond to specific queries about product features and functionality. The Technical Support group also creates content for our online Knowledge Base. The Technical Support group works collaboratively with the other functional areas within Symantec to answer your questions in a timely fashion. For example, the Technical Support group works with Product Engineering and Symantec Security Response to provide alerting services and virus definition updates.

Symantec's support offerings include the following:

- A range of support options that give you the flexibility to select the right amount of service for any size organization
- Telephone and/or Web-based support that provides rapid response and up-to-the-minute information
- Upgrade assurance that delivers software upgrades
- Global support purchased on a regional business hours or 24 hours a day, 7 days a week basis
- Premium service offerings that include Account Management Services

For information about Symantec's support offerings, you can visit our Web site at the following URL:

www.symantec.com/business/support/

All support services will be delivered in accordance with your support agreement and the then-current enterprise technical support policy.

Contacting Technical Support

Customers with a current support agreement may access Technical Support information at the following URL:

www.symantec.com/business/support/

Before contacting Technical Support, make sure you have satisfied the system requirements that are listed in your product documentation. Also, you should be at the computer on which the problem occurred, in case it is necessary to replicate the problem.

When you contact Technical Support, please have the following information available:

- Product release level

- Hardware information
- Available memory, disk space, and NIC information
- Operating system
- Version and patch level
- Network topology
- Router, gateway, and IP address information
- Problem description:
 - Error messages and log files
 - Troubleshooting that was performed before contacting Symantec
 - Recent software configuration changes and network changes

Licensing and registration

If your Symantec product requires registration or a license key, access our technical support Web page at the following URL:

www.symantec.com/business/support/

Customer service

Customer service information is available at the following URL:

www.symantec.com/business/support/

Customer Service is available to assist with non-technical questions, such as the following types of issues:

- Questions regarding product licensing or serialization
- Product registration updates, such as address or name changes
- General product information (features, language availability, local dealers)
- Latest information about product updates and upgrades
- Information about upgrade assurance and support contracts
- Information about the Symantec Buying Programs
- Advice about Symantec's technical support options
- Nontechnical presales questions
- Issues that are related to CD-ROMs, DVDs, or manuals

Support agreement resources

If you want to contact Symantec regarding an existing support agreement, please contact the support agreement administration team for your region as follows:

Asia-Pacific and Japan customercare_apac@symantec.com

Europe, Middle-East, and Africa semea@symantec.com

North America and Latin America supportsolutions@symantec.com

Contents

Technical Support	4	
Chapter 1	Installation Instructions	9
	About installing the Backup Exec Cloud Storage for Nirvanix OpenStorage plug-in	9
	Requirements for using Backup Exec with the Nirvanix OpenStorage plug-in	10
	About provisioning the Nirvanix storage space	11
	Installing the Nirvanix OpenStorage plug-in for Backup Exec	11
	Files in the installer package for Windows systems	12
	About the Nirvanix configuration utility	12
	Running the Nirvanix configuration utility on a Windows platform	13
	Nirvanix configuration utility options	14
	Adding the Nirvanix OpenStorage device to Backup Exec	15
Chapter 2	Preferences file	17
	Creating the Preferences file	17
	Preferences file options	18
Appendix A	Setting up Nirvanix storage	21
	Setting up Nirvanix storage for Backup Exec	21

Installation Instructions

This chapter includes the following topics:

- [About installing the Backup Exec Cloud Storage for Nirvanix OpenStorage plug-in](#)
- [Requirements for using Backup Exec with the Nirvanix OpenStorage plug-in](#)
- [About provisioning the Nirvanix storage space](#)
- [Installing the Nirvanix OpenStorage plug-in for Backup Exec](#)
- [About the Nirvanix configuration utility](#)
- [Adding the Nirvanix OpenStorage device to Backup Exec](#)

About installing the Backup Exec Cloud Storage for Nirvanix OpenStorage plug-in

The Backup Exec™ Cloud Storage for Nirvanix OpenStorage plug-in enables Symantec data protection applications to access the Nirvanix Storage Delivery Network.

Use this installation guide to set up Nirvanix storage space and to install the Nirvanix OpenStorage plug-in package onto your Backup Exec server.

Table 1-1 Installing the Backup Exec Cloud Storage for Nirvanix OpenStorage plug-in

Step	Action	More information
Step 1	Provision the Nirvanix storage space.	See “About provisioning the Nirvanix storage space” on page 11.

Table 1-1 Installing the Backup Exec Cloud Storage for Nirvanix OpenStorage plug-in (*continued*)

Step	Action	More information
Step 2	Ensure that all requirements are met.	See “ Requirements for using Backup Exec with the Nirvanix OpenStorage plug-in ” on page 10.
Step 3	Install the Nirvanix OpenStorage plug-in.	See “ Installing the Nirvanix OpenStorage plug-in for Backup Exec ” on page 11.
Step 4	Run the Nirvanix configuration utility.	See “ About the Nirvanix configuration utility ” on page 12.
Step 5	Add the Nirvanix OpenStorage device to Backup Exec.	See “ Adding the Nirvanix OpenStorage device to Backup Exec ” on page 15.
(Optional) Step 6	Create a preferences file to tune the Nirvanix plug-in.	See “ Creating the Preferences file ” on page 17.

Requirements for using Backup Exec with the Nirvanix OpenStorage plug-in

The following items are required to run Backup Exec with the Nirvanix OpenStorage plug-in:

- Nirvanix storage
 You can purchase Nirvanix storage through the following Web site:
<http://www.nirvanix.com/partners/symantec.aspx>
- A configured Nirvanix storage account
- Backup Exec 2012

You must install the following items:

- The Nirvanix OpenStorage plug-in must be installed on the Backup Exec server and on the remote computers that you want to access the Nirvanix storage. You must provision the Nirvanix storage space before you install the plug-in. See “[About provisioning the Nirvanix storage space](#)” on page 11.
- The Agent for Windows must be installed on the remote computers that you want to access the Nirvanix storage.

See [“Installing the Nirvanix OpenStorage plug-in for Backup Exec”](#) on page 11.

About provisioning the Nirvanix storage space

Before you install the Nirvanix OpenStorage plug-in, you must provision the Nirvanix storage space. Use the Nirvanix Management Portal to obtain a Nirvanix Master Account (MA). The MA is used for administrative operations.

To use the integrated storage pool (SDN application) management features, you must have default node-replication policy settings for your Nirvanix account. New storage pools inherit the default policies, but you can adjust them for each storage pool to fit your business needs. For more information or to verify that your account has the proper settings, please contact Nirvanix customer support using the Nirvanix Management Portal.

See [“Requirements for using Backup Exec with the Nirvanix OpenStorage plug-in”](#) on page 10.

Installing the Nirvanix OpenStorage plug-in for Backup Exec

Install the Nirvanix OpenStorage plug-in and run the Nirvanix configuration utility. You can also run the configuration utility at a later time.

See [“About installing the Backup Exec Cloud Storage for Nirvanix OpenStorage plug-in”](#) on page 9.

To install the Nirvanix OpenStorage plug-in for Backup Exec

- 1 Install Backup Exec if it is not already installed.
- 2 Double-click the Windows MSI file (`SYMCpinirvanix-<version>_AMD64.msi` or `SYMCpinirvanix-<version>_x86.msi`) that was downloaded.

See [“Files in the installer package for Windows systems”](#) on page 12.

- 3 On the **Setup** dialog box, check the **I accept the terms in the License Agreement** check box, and then click **Install**.
- 4 Do one of the following:

- To start the Nirvanix configuration utility when the plug-in installation completes
- To close the plug-in installation and run the Nirvanix configuration utility later
- Do the following in the order listed:
- On the **Completed** dialog box, click the **Launch the Nirvanix configuration utility on exit** check box and then click **Finish** to complete the setup.
 - On the Nirvanix configuration utility, complete the appropriate options. See [“Nirvanix configuration utility options”](#) on page 14.
- On the **Completed** dialog box, click **Finish**. See [“About the Nirvanix configuration utility”](#) on page 12.

Files in the installer package for Windows systems

The Windows package is delivered in the `SYMcpinirvanix-<version>_AMD64.msi` file or the `SYMcpinirvanix-<version>_x86.msi` file.

Table 1-2 Files in the Windows package

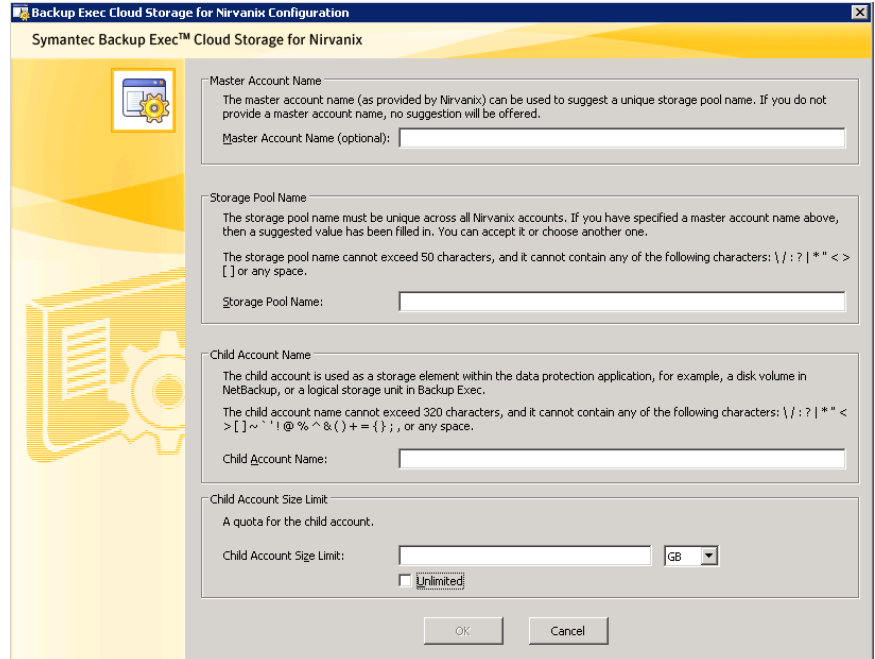
File	Description
libstspinirvanix.dll	Contains the Nirvanix OpenStorage plug-in
vxcrypto.dll	Provides general uses in certificate management
vxssl.dll	Provides Secure Sockets Layer (SSL v2/v3) and Transport Layer Security (TLS v1) protocols
vxml4c.dll	Provides XML parsing for multiple encodings
nirvanix_config.exe	Contains the Windows Configuration utility
cacert.pem	Contains the SSL certificate of authentication

About the Nirvanix configuration utility

Use the Nirvanix configuration utility to enter the master account name, storage pool name, and the child account name and size limit. These values are used to automatically create the Nirvanix application and child account. When you add the OpenStorage device to Backup Exec, these settings automatically update your Nirvanix Storage Delivery Network account. These values are saved to the following file:

C:\Program Files\Symantec\Backup Exec\libstspinirvanix.conf

The Nirvanix configuration utility appears as follows:



See [“Running the Nirvanix configuration utility on a Windows platform”](#) on page 13.

Running the Nirvanix configuration utility on a Windows platform

Run the Nirvanix configuration utility to enter values for the Nirvanix application and child account.

See [“About the Nirvanix configuration utility”](#) on page 12.

To run the Nirvanix configuration utility on a Windows platform

- 1 On the computer on which you installed the Nirvanix OpenStorage plug-in, go to the following directory:

C:\Program Files\Symantec\Backup Exec

- 2 Double-click `nirvanix_config.exe`.

- 3 Complete the options as appropriate.
See [“Nirvanix configuration utility options”](#) on page 14.
- 4 Click OK.

Nirvanix configuration utility options

The Nirvanix configuration utility contains the configuration of the Cloud Storage for Nirvanix.

See [“Running the Nirvanix configuration utility on a Windows platform”](#) on page 13.

Table 1-3 Nirvanix configuration utility options

Item	Description
Master Account Name	<p>Lets you specify the name of the Nirvanix Master Account (MA) that you obtained when you provisioned the Nirvanix storage space. This field is optional. If this name is entered, it is used to provide a suggestion for the storage pool name (the next field to be filled in). The suggested storage pool name is created by using the entry with a suffix appended to it (“_backup”).</p> <p>For example, if you enter the Master Account Name as “Symantec-India”, the utility suggests “Symantec-India_backup” as the storage pool name. You can then edit the suggested name if you want.</p> <p>Note that this value is not added to the configuration file.</p>
Storage Pool Name	<p>Displays a storage pool name based on the entry in the Master Account Name field, if that field was filled in. This name is used as the application name in the Nirvanix cloud storage. You can accept this name or create a different name.</p> <p>This value is added to the configuration file as STORAGE_POOL_NAME=<storage pool name></p>

Table 1-3 Nirvanix configuration utility options (*continued*)

Item	Description
Child Account Name	<p>Lets you specify a name for the child account that the plug-in creates under the storage pool. Backup Exec treats the child account as the location of the OpenStorage logical storage unit (LSU).</p> <p>See “Adding the Nirvanix OpenStorage device to Backup Exec” on page 15.</p> <p>The Child Account Name cannot exceed 100 characters.</p> <p>This value is added to the configuration file as CHILD_ACCOUNT_NAME=<child account name></p>
Child Account Size	<p>Lets you specify the maximum allowable size of the storage pool. This field is optional. You can enter the value in megabytes, gigabytes, or terabytes. If the Unlimited box is checked (default condition), the child account storage space is unlimited.</p> <p>If specified, this value is added to configuration file as CHILD_ACCOUNT_SIZE=<child account size in bytes></p>

Adding the Nirvanix OpenStorage device to Backup Exec

You must use the Configure Storage wizard on the Backup Exec Administration Console to add the Nirvanix OpenStorage device.

For more information about Backup Exec, see the *Backup Exec Administrator's Guide*.

To add the Nirvanix OpenStorage device to Backup Exec

- 1 On the Backup Exec Administration Console, on the **Storage** tab, in the **Configure** group, click **Configure Storage**.
- 2 Click **Network Storage**, then click **Next**.
- 3 Click **Cloud Storage**, then click **Next**.

- 4 Enter the name of the Nirvanix device such as Nivanix001 in the **Name** field, enter a description if you want, and then click **Next**.
- 5 For the provider, click **Nirvanix**, then click **Next**.
- 6 When you are prompted to enter the connection information for the cloud device, type the server name that Nirvanix provided, or type **Nirvanix.com** in the **Server name** field, then click.
- 7 When you are prompted to select a logon account to use when connecting to this server, click **New**.
- 8 Complete the three **Account credentials** fields and the **Account Name** field, and then click **OK**.
- 9 When you are prompted to enter the connection information for the cloud device again, click **Next**.
- 10 To select the location for the cloud device, click the child account name that you entered in the Nirvanix configuration utility, and then click **Next**.
See [“About the Nirvanix configuration utility”](#) on page 12.
- 11 Review the summary screen, and then click **Finish**.
- 12 When you are prompted to restart the Backup Exec services to bring the device online, click **Yes**.
- 13 On the **Backup Exec Services Manager** dialog box, click **Restart all services**, and then click **Close** when the restart operation is complete.
- 14 On the **Connect to Backup Exec server** dialog box, enter the user name and password, and then click **Connect** to bring the cloud storage device online.

Preferences file

This chapter includes the following topics:

- [Creating the Preferences file](#)
- [Preferences file options](#)

Creating the Preferences file

The Preferences file is an optional file that you can create to tune the Nirvanix OpenStorage plug-in.

The default values are used if the Preferences file is not available or if you do not specify other values in the option file.

The following are the contents of a sample Preferences file:

```
BUFFER_SIZE=10485760
CURL_CONNECT_TIMEOUT=300
CURL_TIMEOUT=600
LOG_CURL=YES
USE_SSL=YES
USE_SSL_RW=YES
```

To create the Preferences file

- 1 Create a file in the same directory where the Nirvanix OpenStorage plug-in is installed.
- 2 Name the file `libstspnirvanix.pref`.
- 3 Add the options that you want to use and the appropriate values.

See [“Preferences file options”](#) on page 18.

Preferences file options

You can set the default values for the options in the Preferences file.

See [“Creating the Preferences file”](#) on page 17.

Table 2-1 Preferences file options

Option	Description	Default value
BUFFER_SIZE	<p>Specifies the size in bytes of the buffers that are used in the buffer cache.</p> <p>The maximum allowed buffer size is 1073741824 (1 GB). Any value beyond that size resets to 1 GB.</p> <p>Set BUFFER_SIZE to zero to disable the use of buffers.</p>	10485760
CURL_CONNECT_TIMEOUT	<p>Specifies the length of time in seconds that the host tries to connect to the Nirvanix storage server. After this time, <code>libcurl</code> times out if no connection is made. Up to two more retries are made.</p> <p>For example, if CURL_CONNECT_TIMEOUT is set to 300 seconds, the host tries up to 300 seconds to connect.</p> <p>Set CURL_CONNECT_TIMEOUT to zero to disable this timeout.</p>	300 (seconds, or 5 minutes)
CURL_TIMEOUT	<p>Specifies the length of time in seconds that is allowed for the completion of a data operation. If the operation does not complete in the specified time, the operation is terminated. Up to two more retries are made.</p> <p>Symantec recommends that you set this option to a value no greater than the default value of 900 (15 minutes).</p> <p>Set CURL_TIMEOUT to zero to disable this timeout.</p>	900 (seconds, or 15 minutes)
LOG_CURL	<p>Enables debug logging for <code>libcurl</code> messages when you specify the value YES. Use this parameter to debug any <code>libcurl</code> or communication issues with Nirvanix.</p>	NO
RESTRICT_IP	<p>Determines if multiple consumer IPs can upload and download using an upload-download token.</p> <p>If you set RESTRICT_IP to NO, then multiple consumer IPS are allowed to upload and download using an upload-download token.</p> <p>If you set RESTRICT_IP to YES, then upload-download activity is restricted to a single consumer IP on an upload-download token.</p> <p>If you use network address translation (NAT) or proxies, you must set RESTRICT_IP to NO.</p>	YES

Table 2-1 Preferences file options (*continued*)

Option	Description	Default value
USE_SSL	<p>Determines if the plug-in uses SSL for all connectivity other than reads or writes. USE_SSL is the global option to switch on SSL.</p> <p>If you set USE_SSL to NO, SSL is not used and USE_SSL_RW is ignored.</p> <p>If you set USE_SSL to YES, SSL is used for all interactions with Nirvanix other than data read-write.</p>	YES
USE_SSL_RW	<p>Determines if the plug-in uses SSL to encrypt all the data read-writes with Nirvanix.</p> <p>If you set USE_SSL to NO, USE_SSL_RW is ignored.</p>	YES

Setting up Nirvanix storage

This appendix includes the following topics:

- [Setting up Nirvanix storage for Backup Exec](#)

Setting up Nirvanix storage for Backup Exec

The Nirvanix configuration utility automatically manages the storage setup. Use this procedure only for more advanced configuration such as when you want to create multiple child accounts.

To set up Nirvanix storage for Backup Exec

- 1 Access the Nirvanix Management Portal Web site at the following URL:
<https://nmp.nirvanix.com/>
- 2 Enter your Nirvanix master account credentials, such as symantec.dev7.
- 3 Click **Applications** , and then click **Create New Application**.
- 4 Enter a name.

For example, use “BackupExec-9” if the master account name is <Nirvanix_Customer_Account>. The naming convention ensures that the application (storage pool) names are unique within the Nirvanix global namespace.

Nirvanix creates a unique application (storage pool) key for your application (storage pool).

- 5 Choose the application that you have created.

- 6 To create a child account that Backup Exec treats as a logical storage unit (LSU) under the storage pool server in Backup Exec, click **Create New Child Account**.
- 7 To set different quotas such as the maximum storage space on the child account, click **View** in the **Details** tab of the child account.