

Sharepoint Plugin

Bacula Systems Documentation

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1 Scope

Sharepoint plugin allows Bacula to backup Sharepoint site collections.

This documentation presents solutions for **Bacula Enterprise** 14.0.0 and higher, and is not applicable to prior versions of Bacula.

2 Features

- Backup site collection(s) based on url name
- Restore complete site collection(s) images

3 Installation

The Bacula File Daemon and the **Sharepoint plugin** need to be installed on the Sharepoint host server. The **Sharepoint plugin** windows installer will deploy required files within the Bacula File Daemon plugins directory.

📙 l 🖸 📙 🖛 l plugi	ins				
File Home S	5hare View				~ 🕐
$\leftarrow \rightarrow \cdot \uparrow$	> This PC > Local Disk (C:) > Program Files > Bao	cula > plugins	ڻ ~	Search plugins	Q
	^ Name	Date modified	Туре	Size	
X Quick access	alldrives-fd.dll	9/1/2021 8:04 AM	Application extension	517 KB	
📃 Desktop 💉	cdp-fd-dll	9/1/2021 8:04 AM	Application extension	1,158 KB	
👆 Downloads 🖈	sharepoint	9/1/2021 8:04 AM	Windows PowerShell Script	23 KB	
🔮 Documents 🖈	sharepoint-fd.dll	9/1/2021 8:04 AM	Application extension	584 KB	
📰 Pictures 🛛 🖈	Windows feldti	9/1/2021 8:04 AM	Application extension	2,368 KB	
LOGS					
plugins					
System32					
This PC					
🚺 CD Drive (D:) 16.0	D.				
Catalog					
Files					
Global					
Setup					
Updates					
WSS.en-us					
💣 Network					
💻 DC1	v				
5 items					

To configure the Bacula File Daemon, refer to the general installation documentation.

Verify the correct installation of the FD and the **Sharepoint plugin** by running status client from the beonsole or from BWeb.

```
*status client=share1hyperv-fd
Connecting to Client share1hyperv-fd at 172.22.22.50:9102
share1hyperv-fd Version: 14.0.1 (21 January 2022) VSS Linux Cross-compile Win64
Daemon started 26-Jan-22 07:40. Jobs: run=1 running=0 max=20.
Microsoft Windows Server 2012 Standard Edition (build 9200), 64-bit
Heap: heap=4,984,832 smbytes=44,624 max_bytes=4,886,808 bufs=142 max_bufs=307
Sizes: boffset_t=8 size_t=8 debug=0 trace=1 mode=0,2010 bwlimit=0kB/s
Crypto: fips=no crypto=OpenSSL
Plugin: alldrives(1.2) cdp(0.1) sharepoint(0.1) winbmr(3.1.0)
```

Verify **sharepoint** is in the Plugin line.

4 Configuration

4.1 Credentials Settings

Important: In order to access and backup Sharepoint site collections, the delegation of the User credentials must be enabled on the Sharepoint server and the Bacula file daemon must be logged as an authorized user within the Sharepoint server. Read access are sufficient to backup. Full read-write access is mandatory for restore.

Enable the delegation of the user credentials on the Hyper-V server

1. Run gpedit.msc (normally in C:\Windows\System32) on the Hyper-V server and look at the following policy: Computer Configuration -> Administrative Templates -> System -> Credentials Delegation -> Allow Delegating Fresh Credentials.

Local Group Policy Editor				– 🗆 X
File Action View Help				
← ⇒ 2 📰 🗟 🖬 🍸				
Local Computer Policy	Credentials Delegation			
v 👰 Computer Configuration	Allow delegation from based anticle	Cotting	State	Commont
> 📔 Software Settings	Allow delegating fresh credentials		State	Comment
> iii Windows Settings	Edit policy setting	E Allow delegating default credentials with NTLM-only server	Not configured	No
Administrative Templates		E Allow delegating default credentials	Not configured	No
> 🚞 Control Panel	Requirements:	Encryption Oracle Remediation	Not configured	No
> 🔛 Network	At least Windows Vista	Allow delegating fresh credentials	Not configured	No
Printers	Description	Allow delegating fresh credentials with NTLM-only server a	Not configured	No
Server	This policy setting applies to	Remote host allows delegation of non-exportable credentials	Not configured	No
Start Menu and Taskbar	applications using the Cred SSP	Allow delegating saved credentials	Not configured	No
V System	component (for example: Remote	E Allow delegating saved credentials with NTLM-only server a	Not configured	No
Access-Denied Assistance	Desktop Connection).	E Deny delegating default credentials	Not configured	No
> App-V	This policy setting applies when	Deny delegating fresh credentials	Not configured	No
Audit Process Creation	server authentication was	Deny delegating saved credentials	Not configured	No
Credentials Delegation	achieved via a trusted X509	Restrict delegation of credentials to remote servers	Not configured	No
Device Guard	certificate or Kerberos.			
Device Health Attestation Service	If you applie this policy setting			
> Device Installation	you can specify the servers to			
Disk NV Cache	which the user's fresh credentials			
Disk Quotas	can be delegated (fresh			
Display	credentials are those that you are			
> Distributed COM	application)			
Driver Installation	application).			
Early Launch Antimaiware	If you do not configure (by			
Ennanced storage Access	default) this policy setting, after			
File Classification Infrastructure	proper mutual authentication,			
File share shadow Copy Provider	permitted to Remote Desktop	× _		
Filesystem	Estended (Standard	•		
	Extended / Standard			

2. Verify that it is enabled and configured with the WSMAN SPN appropriate for the target computer.

For example, for a target computer name "myserver.domain.com", the SPN can be one of the following: WS-MAN//myserver.domain.com or WSMAN//*.domain.com. Introduce it in the "Add servers to the list": "Show" dialog box.

3. Finally run a powershell console on the Hyper-V server (normally in C:\Windows\Systeme32\WindowsPowerShellv1.0powershell.exe) and enter the following commands:

```
Enable-WSManCredSSP -Role Server -Force
Enable-WSManCredSSP -Role "Client" -DelegateComputer myserver.domain.com -Force
```

1 Allow delegating fresh cred	entials				_		×
Allow delegating fresh cred	entials		Previous Setting	y Next Se	etting		
O Not Configured Commer	nt:						^
Enabled							
○ Disabled							\sim
Support	ed on: At least Windo	ows Vista					^
							\sim
Options:		Help:					
Add servers to the list: Show	v h input above	This policy component This policy achieved via If you enable which the u credentials the applicat If you do no proper mut permitted to machine (T If you disab not permitt Note: The " be set to on	setting applies to t (for example: Re setting applies wh a a trusted X509 c le this policy setti iser's fresh creden are those that you tion). t configure (by d ual authentication o Remote Desktop ERMSRV/*). le this policy setti ed to any machin Allow delegating ie or more Service	applications u mote Desktop nen server auth ertificate or Ke ng, you can sp tials can be de u are prompted lefault) this po n, delegation c p Session Host ing, delegatior e. fresh credentia	ising the Connection Connection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection Protection P	Cred SSP ion). on was servers to fresh n execution og, after redentials on any credential y setting c	g s is an V
				OK	Cancel	Ар	bly

Show (Contents	_		\times
Add s	ervers to the list:			
	Value			
1	WSMAN/myserver_domain.com			
		01/	<u> </u>	
		OK	Cano	el

Impersonification of the Sharepoint plugin

The impersonification of the Sharepoint plugin can be achieved in different ways.

1. Specify the user name and password locally on the sharepoint server. This is the **recommanded method**. In a bacula-sharepoint.pwd file, located by the bacula-fd.conf config file (typically C:\Program Files\Bacula).

bacula-sharepoint.pwd contains the user name followed by the user password, separated by a colon.

name@domain.com:mypassword

or

DOMAIN\name:mypassword

- 2. Impersonificate the **Sharepoint plugin** by passing user and password, as plugin options See *Job Configuration* for user_name and user_password options.
- 3. Manually change the Bacula File Daemon default login account.

Log on to the Sharepoint server with administrative privileges.

From the Windows Start menu, type "Services" and press enter - this will show a list of the installed services.

Find the Bacula File Backup Service and right-click on it. Choose Properties, select the Log On tab. By default it should look like this:

4. Add the default Bacula file daemon login as Sharepoint site Collection user

By default the Bacula file daemon is logged as "NT Authority\System".

With Sharepoint administrator privilege, do the following:

From the Windows start menu, launch the SharePoint Central Administration.

File Home	Share	View						~ 🕐
← → • ↑ 📘	> Tł	nis PC → Local Disk (C:) → Program File	s → Bacula			ٽ ~	Search Bacula	م
		Name	Date modified	Туре	Size			^
 A Quick access 		platforms	5/27/2022 4:37 PM	File folder				
📃 Desktop	*		11/14/2022 5:23 PM	File folder				
👆 Downloads	*	working	11/15/2022 11:35	File folder				
🔮 Documents	*	bacula.dll	11/15/2022 10:57	Application extens	10.612 KB			
Pictures	*	bacula-fd.conf	6/15/2022 12:40 PM	CONF File	2 KB			
Wolume1	*	bacula-fd.exe	11/15/2022 10:57	Application	6,440 KB			
Bacula		bacula-sharepoint.pwd	11/14/2022 2:53 PM	PWD File	1 KB			
obceite		bacula-tray-monitor.conf	5/27/2022 4:37 PM	CONF File	1 KB			
piugins		bacula-tray-monitor.exe	11/15/2022 10:57	Application	2,268 KB			
System32		bconsole.conf	5/27/2022 4:37 PM	CONF File	1 KB			
working		bconsole.exe	11/15/2022 10:57	Application	1,064 KB			
🗸 💻 This PC		📧 bsleep.exe	11/15/2022 10:57	Application	577 KB			
> 1 3D Objects		📧 bsmtp.exe	11/15/2022 10:57	Application	652 KB			
Desisten		cdp-client.exe	11/15/2022 10:57	Application	1,319 KB			
		expr64.exe	11/15/2022 10:57	Application	792 KB			
Documents		install.log	11/15/2022 11:06	Text Document	5 KB			
> 🕂 Downloads		libcrypto-1_1-x64.dll	11/15/2022 10:57	Application extens	3,419 KB			
> 🎝 Music		libgcc_s_seh-1.dll	11/15/2022 10:57	Application extens	1,237 KB			
> 📰 Pictures		libssl-1_1-x64.dll	11/15/2022 10:57	Application extens	945 KB			
> 📑 Videos		libstdc++-6.dll	11/15/2022 10:57	Application extens	18,988 KB			
> 🏪 Local Disk (C	:)	libwinpthread-1.dll	11/15/2022 10:57	Application extens	579 KB			
		LICENSE	11/15/2022 10:57	File	0 KB			
> 💣 Network		openssl.cnf	11/15/2022 10:57	CNF File	11 KB			
		openssl.exe	11/15/2022 10:57	Application	1,226 KB			
		Qt5Core.dll	11/15/2022 10:57	Application extens	6,159 KB			
		Qt5Gui.dll	11/15/2022 10:57	Application extens	5,859 KB			
		Qt5Network.dll	11/15/2022 10:57	Application extens	1,644 KB			
		Qt5Widgets.dll	11/15/2022 10:57	Application extens	5,549 KB			~
35 items								

Under Application Management, select "Manage web applications" and you should see the list of available site collections.

For each backup target collection, select it, then choose User Policy from the ribbon menu.

4.2 Job Configuration

Once the Bacula File Daemon and the **Sharepoint plugin** are correctly installed and configured, setting a backup job up is as simple as adding the job and the fileset within the Bacula Director configuration file.

Important: The Enable VSS parameter must be set to no in the FileSet (see examples below).

The following plugin options are supported :

Name		Description Status	Startup Type	Log On As
ActiveX Installer (AxInstSV)		Provides Us	Disabled	Local System
🔍 AllJoyn Router Service	Racula File Rackup Service	Properties (Local Computer)	× ·	Local Service
App Readiness	bacula File backup Service	Properties (Local Computer)	^	Local System
AppFabric Caching Service	General Log On Recove	erv Dependencies		SUPPORTLAB\ad-
Application Host Helper Service				Local System
Application Identity	Log on as:			Local Service
Application Information	Local System account			Local System
Application Layer Gateway Service	Allow service to inte	eract with desktop		Local Service
🆏 Application Management				Local System
AppX Deployment Service (AppXSVC	O This account:		Browse	Local System
🖏 ASP.NET State Service	Password:			Network Service
🎑 Auto Time Zone Updater				Local Service
AVCTP service	Confirm password:			Local Service
🧟 Background Intelligent Transfer Servi				Local System
🗟 Background Tasks Infrastructure Serv				Local System
🍓 Bacula File Backup Service				ad-admin@supp
🧟 Base Filtering Engine				Local Service
🖏 Bluetooth Audio Gateway Service				Local Service
🖏 Bluetooth Support Service				Local Service
🖏 Capability Access Manager Service				Local System
🖏 CaptureService_253e80				Local System
🖏 CaptureService_a3092				Local System
🔍 Certificate Propagation				Local System
🖏 Claims to Windows Token Service				Local System
Client License Service (ClipSVC)		OK Cancel	Apply	Local System
🖏 Clipboard User Service_253e80				Local System
🎑 Clipboard User Service_a3092		This user se	Manual	Local System
🎑 CNG Key Isolation		The CNG ke Running	Manual (Trig	Local System
🧠 COM+ Event System		Supports Sy Running	Automatic	Local Service
COM+ System Application		Manages th	Manual	Local System
Connected Devices Platform Service		This service Running	Automatic (D	Local Service
10		T1 1 D 1	A	1 10 1

Fig. 1: Toggle the selection from "Local System account" to "This account". Enter the credentials of a Sharepoint administrator user (either read only or read-write). Click OK.



Fig. 2: Right-click on the Bacula File Backup Service entry again, and click "Restart", so the changes are applied.

	ntm -42086/, admin/WebAppRestonList.aspx	- ♂ Search	× ወ – මେමා ක ଇ - ୧
			System Account •
BROWSE WEB APPLICATIONS			🖓 SHARE 💭
New Extend Delete	Manage Fatures Manager Manager		
Central Administration	Name	URL	Port
Application	SharePoint - 80	http://win-mdjntmpnntm/	80
Management	SharePoint Central Administration v4	http://win-mdjntmpnntm:42088/	42088
System Settings			
Monitoring			
Backup and Restore			
Security			
Upgrade and Migration			
General Application Settings			
Apps			
Office 365			
Configuration Wizards			

Fig. 3: The Policy for Web Application windows is displayed. Click "Add Users".

Polic	cy for We	b Application			1
				ок	
Addin Share crawl	g or updatin Point Search freshness an dd/remove u	g Web application policy wi crawl over all content cover d increase crawl load. Consi users from security groups to	ith new users or groups will red by that policy. This can ider using security groups a o avoid this.	l trigger a reduce search t the policy level	
	dd Users 🕽 Zone	K Delete Selected Users □	Edit Permissions of Select User Name	ted Users Permissions	

Fig. 4: Add "NT AUTHORITY\SYSTEM" in the Users box and check "Full Read" for backup only, or "Full Control" for backup and restore.

Press the finish button.

Name	Sta-	De-	Description
	tus	fault	
in-	Op-	In-	a Unix shell-style wildcards pattern for including a site, bases on its URL
clude	tional	clude	
		all	
		(*)	
ex-	Op-	Ex-	a Unix shell-style wildcards pattern for excluding a site, bases on its URL
clude	tional	clude	
		none	
tmp_di	r Op-	Work-	locate the working folder for the Sharepoint plugin. Make sure there's enough space in
	tional	ing	this location to create sites snapshots and exports.
user_na	m@p-	None	the user name that will run the backup/restore operation. This is not the recommended
	tional	l	method. The user name can be specified locally on the hyper-v node in a bacula-sp.usr
			file located in the FD plugins folder.
user_pa	ssappro	None	the user password that will run the backup/restore operation. This is not the recommended
	tional		method. The user password can be specified locally on the hyper-v node in a bacula-sp.
			pwd file located in the fd plugins folder.

4.3 Examples

Example 1: Backup All Sites Using Bacula's Default Working Directory

```
Job {
   Name = "SharepointBackupAll"
   Type = Backup
   Client= w2019-sp01-fd
   FileSet="SimplestSharepointFileSet"
   Storage = File
```

(continues on next page)

Zone			
The security policy will apply to requests made through the specified zone.	Zone: (All zones)		
Choose Users			
You can enter user names or group names. Separate with semi-colons.	Users: NT AUTHORITY\system		
			∛ 🔢
Choose Permissions			
Choose the permissions you	Permissions:		
want these users to have,	Full Control - Has full control.		
	Pull Read - Has full read-only access. Deny Write - Has no write access		
	Deny All - Has no access.		
Choose System Settings	_		
System accounts will not be recorded in the User Information lists unless the account is directly added to the permissions of the site.	∟ Account operates as System		
Any changes made by a system account will be recorded as made by the			
system instead of the actual user account.			
		< Back	Finish

Fig. 5: In addition, you also need to grant access to the Sharepoint MSSQL databases to Bacula File Daemon. From the Windows start menu, launch the SQL server Management Studio and log in with MSSQL administrator privileges.



Fig. 6: Under Security/Logins, find "NT AUTHORITY\SYSTEM", right click on it and select properties. Select the Server Roles page, check sysadmin.

Login Properties - NT AUTH	HORITY\SYSTEM	_		\times
Select a page General Server Roles User Mapping Securables Status	Script ▼ Pelp Server role is used to grant server-wide security privileges to a user. Server roles: bulkadmin dbcreator diskadmin processadmin vpublic serveradmin setupadmin sysadmin			
Connection Server: SHARE1HYPERV Connection: SUPPORTLAB\ad-admin Y View connection properties Progress Ready Ready				
		ОК	Can	cel

(continued from previous page)

```
Messages = Standard
Pool = Default
}
FileSet {
  Name = "SimplestSharepointFileSet"
  Enable VSS = no
  Include {
     Options {
        signature=MD5
      }
     Plugin = "sharepoint:"
  }
}
```

Example 2: Backup Only Sites Which URLs Contain «Linux», Using Bacula's Default Working Directory

```
Job {
 Name = "SharepointBackupOnlyLinux"
 Type = Backup
 Client= w2019-hv01-fd
 FileSet="LinuxSharepointFileSet"
 Storage = File
 Messages = Standard
 Pool = Default
}
FileSet {
  Name = "LinuxSharepointFileSet"
  Enable VSS = no
  Include {
   Options {
      signature=MD5
   }
   Plugin = "sharepoint: include=\"*Linux*\""
 }
}
```

Example 3: Backup Any Site Having «Windows» in Its Name, Using a Custom Working Directory

```
Job {
   Name = "SharepointBackupOnlyWindowsOnF"
   Type = Backup
   Client= w2019-hv01-fd
   FileSet="WindowsOnSiteFileSet"
   Storage = File
   Messages = Standard
   Pool = Default
}
```

(continues on next page)

```
FileSet {
  Name = "WindowsOnSiteFileSet"
  Enable VSS = no
  Include {
    Options {
        signature=MD5
     }
    Plugin = "sharepoint: include=\"*Windows*\" tmp_dir=\"F:/backup\""
  }
}
```

5 Operations

5.1 Backup

The Sharepoint server backed up files will appear in a bconsole or prefixed with /@SHAREPOINT/ .

Typically, a Site Collection backup data is organized as follows:

```
/@SHAREPOINT/a4d05f41-e9e0-43f6-9478-d8adb337cf6c_sharepoint_backup.2022-01-26_07.
14.22_14.bak /@SHAREPOINT/a4d05f41-e9e0-43f6-9478-d8adb337cf6c_sharepoint_backup.
2022-01-26_07.14.22_14.xml
```

Incremental-Differential backups: the Site Collection backup doesn't support incremental-differential backup.

5.2 Restore

Although it's possible to cherry pick the backed up files, it's recommended to select the Site Collection UID folder for a single Site Collection in order.

When restoring a Site Collection on a server that already hosts a VM with the same name, the restored Site Collection name is post-fixed with "Restore.<date>_<time>".

6 Best practices

While it is technically possible to backup multiple Site Collections in one Bacula **Sharepoint plugin** backup job, this is not necessarily the best way to perform backup. It is strongly recommended that one backup Job is created for each Site Collection being backed up for the following reasons:

- If one of your Site Collection fails to backup in a "multi-SiteCollections" backup job, the main Bacula job will terminate **Backup OK with warnings**. The catalog's "JobStatus" for jobs that terminate **Backup OK** and **Backup OK with warnings** are not differentiated. They are both 'T' so this means that you will have to carefully monitor your backup jobs logs in case some Site Collections backups fail and pay attention to the "JobErrors" field.
- There is a **Sharepoint plugin** option abort_on_error but, if you use this option, and Site Collection number 11 in a list of 50 Site Collections fails, then the whole job will fail, and VMs 12-50 will not be backed up during that job's run.

- A 1:1 (one VM per job) configuration means that the abort_on_error option will make more sense to enable in each job, so you will immediately know when a VM fails to backup since the Bacula job will terminate with a "Backup failed" message and 'f' in the catalog for the job.
- In the case describing the 50 Site Collections, without a 1:1 configuration, there is no way to easily re-run a backup of just the 1 Site Collection that failed to backup.
- With a 1:1 configuration, re-running a specific Site Collections backup job is simple to do after the cause of the failure is investigated.
- With a 1:1 configuration, job metrics will have more meaning because each Site Collection will be one job, and you will know to expect a specific number of jobs each night with each one representing one machine, or Site Collection.
- With a "multi-Site Collections" configuration, each Site Collection will be backed up "serially", one at a time, disk by disk, Site Collection by Site Collection. A 1:1 configuration will allow several Site Collection backups to be run concurrently which will reduce the overall time to perform the Site Collections backups (paying close attention to SD and Sharepoint resources of course, and adjusting the number of concurrent jobs accordingly).

7 Limitations

- Sharepoint site collection(s) backup doesn't support incremental and differential.
- Single item restore is not supported.
- It's recommended to restore full site collection(s).
- The restart command has limitations with plugins, as it initiates the Job from scratch rather than continuing it. Bacula determines whether a Job is restarted or continued, but using the restart command will result in a new Job.