Manage domain controller connections

ONTAP 9

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Manage domain controller connections

Display information about ONTAP SMB discovered servers

You can display information related to discovered LDAP servers and domain controllers on your CIFS server.

Step

1. To display information related to discovered servers, enter the following command: `vserver cifs domain discovered-servers show`

Example

The following example shows discovered servers for SVM vs1:

```
cluster1::> vserver cifs domain discovered-servers show

Node: node1
Vserver: vs1

Domain Name     Type     Preference DC-Name     DC-Address    Status
--------------- -------- ---------- ----------- ------------- -------
example.com     MS-LDAP  adequate   DC-1        1.1.3.4       OK
example.com     MS-LDAP  adequate   DC-2        1.1.3.5       OK
example.com     MS-DC    adequate   DC-1        1.1.3.4       OK
example.com     MS-DC    adequate   DC-2        1.1.3.5       OK
```

Related information

- Reset and rediscover servers
- Stop or start servers

Reset and rediscover ONTAP SMB servers

Resetting and rediscovering servers on your CIFS server allows the CIFS server to discard stored information about LDAP servers and domain controllers. After discarding server information, the CIFS server reacquires current information about these external servers. This can be useful when the connected servers are not responding appropriately.

Steps

1. Enter the following command: `vserver cifs domain discovered-servers reset-servers -vserver` *`vserver_name`*
2. Display information about the newly rediscovered servers: `vserver cifs domain discovered-servers show -vserver` *`vserver_name`*

Example

The following example resets and rediscovers servers for storage virtual machine (SVM, formerly known as

Vserver) vs1:

```
cluster1::> vserver cifs domain discovered-servers reset-servers -vserver
vs1

cluster1::> vserver cifs domain discovered-servers show

Node: node1
Vserver: vs1

Domain Name     Type     Preference DC-Name     DC-Address    Status
--------------- -------- ---------- ----------- ------------- -------
example.com     MS-LDAP  adequate   DC-1        1.1.3.4       OK
example.com     MS-LDAP  adequate   DC-2        1.1.3.5       OK
example.com     MS-DC    adequate   DC-1        1.1.3.4       OK
example.com     MS-DC    adequate   DC-2        1.1.3.5       OK
```

Related information

- Display information about discovered servers
- Stop or start servers

Manage ONTAP SMB domain controller discovery

Beginning with ONTAP 9.3, you can modify the default process by which domain controllers (DCs) are discovered. This enables you to limit discovery to your site or to a pool of preferred DCs, which can lead to performance improvements depending on the environment.

About this task

By default, the dynamic discovery process discovers all available DCs, including any preferred DCs, all DCs in the local site, and all remote DCs. This configuration can lead to latency in authentication and accessing shares in certain environments. If you have already determined the pool of DCs that you want to use, or if the remote DCs are inadequate or inaccessible, you can change the discovery method.

In ONTAP 9.3 and later releases, the `discovery-mode` parameter of the `cifs domain discovered-servers` command enables you to select one of the following discovery options:

- All DCs in the domain are discovered.
- Only DCs in the local site are discovered.

  The `default-site` parameter for the SMB server can be defined to use this mode with LIFs that are not assigned to a site in sites-and-services.

- Server discovery is not performed, the SMB server configuration depends only on preferred DCs.

  To use this mode, you must first define the preferred DCs for the SMB server.

Before you begin

You must be at the advanced privilege level.

Step

1. Specify the desired discovery option: `vserver cifs domain discovered-servers discovery-mode modify -vserver vserver_name -mode {all|site|none}`

   Options for the `mode` parameter:

   - `all`

     Discover all available DCs (default).

   - `site`

     Limit DC discovery to your site.

   - `none`

     Use only preferred DCs and not perform discovery.

Add preferred ONTAP SMB domain controllers

ONTAP automatically discovers domain controllers through DNS. Optionally, you can add one or more domain controllers to the list of preferred domain controllers for a specific domain.

About this task

If a preferred domain controller list already exists for the specified domain, the new list is merged with the existing list.

Step

1. To add to the list of preferred domain controllers, enter the following command: `vserver cifs domain preferred-dc add -vserver vserver_name -domain domain_name -preferred-dc IP_address, …+`

   `-vserver vserver_name` specifies the storage virtual machine (SVM) name.

   `-domain domain_name` specifies the fully qualified Active Directory name of the domain to which the specified domain controllers belong.

   `-preferred-dc IP_address,…` specifies one or more IP addresses of the preferred domain controllers, as a comma-delimited list, in order of preference.

Example

The following command adds domain controllers 172.17.102.25 and 172.17.102.24 to the list of preferred domain controllers that the SMB server on SVM vs1 uses to manage external access to the cifs.lab.example.com domain.

```
cluster1::> vserver cifs domain preferred-dc add -vserver vs1 -domain
cifs.lab.example.com -preferred-dc 172.17.102.25,172.17.102.24
```

Related information

Commands for managing preferred domain controllers

ONTAP commands for managing preferred SMB domain controllers

You need to know the commands for adding, displaying, and removing preferred domain controllers.

If you want to…	Use this command…
Add a preferred domain controller	`vserver cifs domain preferred-dc add`
Display preferred domain controllers	`vserver cifs domain preferred-dc show`
Remove a preferred domain controller	`vserver cifs domain preferred-dc remove`

Learn more about `vserver cifs domain preferred-dc` in the ONTAP command reference.

Related information

Add preferred domain controllers

Enable encrypted connections to ONTAP SMB domain controllers

Beginning with ONTAP 9.8, you can specify that connections to domain controllers be encrypted.

About this task

ONTAP requires encryption for domain controller (DC) communications when the `-encryption-required-for-dc-connection` option is set to `true`; the default is `false`. When the option is set, only the SMB3 protocol will be used for ONTAP-DC connections, because encryption is only supported by SMB3.

When encrypted DC communications are required, the `-smb2-enabled-for-dc-connections` option is ignored, because ONTAP only negotiates SMB3 connections. If a DC doesn't support SMB3 and encryption, ONTAP will not connect with it.

Step

1. Enable encrypted communication with the DC: `vserver cifs security modify -vserver` *`svm_name`* `-encryption-required-for-dc-connection true`

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