Work with netgroups

ONTAP 9

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Work with netgroups

Working with netgroups overview

You can use netgroups for user authentication and to match clients in export policy rules. You can provide access to netgroups from external name servers (LDAP or NIS), or you can load netgroups from a uniform resource identifier (URI) into SVMs using the `vserver services name-service netgroup load` command.

What you'll need

Before working with netgroups, you must ensure the following conditions are met:

- All hosts in netgroups, regardless of source (NIS, LDAP, or local files), must have both forward (A) and reverse (PTR) DNS records to provide consistent forward and reverse DNS lookups.

  In addition, if an IP address of a client has multiple PTR records, all of those host names must be members of the netgroup and have corresponding A records.

- The names of all hosts in netgroups, regardless of their source (NIS, LDAP, or local files), must be correctly spelled and use the correct case. Case inconsistencies in host names used in netgroups can lead to unexpected behavior, such as failed export checks.
- All IPv6 addresses specified in netgroups must be shortened and compressed as specified in RFC 5952.

  For example, 2011:hu9:0:0:0:0:3:1 must be shortened to 2011:hu9::3:1.

About this task

When you work with netgroups, you can perform the following operations:

- You can use the `vserver export-policy netgroup check-membership` command to help determine whether a client IP is a member of a certain netgroup.
- You can use the `vserver services name-service getxxbyyy netgrp` command to check whether a client is part of a netgroup.

  The underlying service for doing the lookup is selected based on the configured name service switch order.

Load netgroups into SVMs

One of the methods you can use to match clients in export policy rules is by using hosts listed in netgroups. You can load netgroups from a uniform resource identifier (URI) into SVMs as an alternative to using netgroups stored in external name servers (`vserver services name-service netgroup load`).

What you'll need

Netgroup files must meet the following requirements before being loaded into an SVM:

- The file must use the same proper netgroup text file format that is used to populate NIS.

  ONTAP checks the netgroup text file format before loading it. If the file contains errors, it will not be loaded

and a message is displayed indicating the corrections you have to perform in the file. After correcting the errors, you can reload the netgroup file into the specified SVM.

- Any alphabetic characters in host names in the netgroup file should be lowercase.
- The maximum supported file size is 5 MB.
- The maximum supported level for nesting netgroups is 1000.
- Only primary DNS host names can be used when defining host names in the netgroup file.

  To avoid export access issues, host names should not be defined using DNS CNAME or round robin records.

- The user and domain portions of triples in the netgroup file should be kept empty because ONTAP does not support them.

  Only the host/IP part is supported.

About this task

ONTAP supports netgroup-by-host searches for the local netgroup file. After you load the netgroup file, ONTAP automatically creates a netgroup.byhost map to enable netgroup-by-host searches. This can significantly speed up local netgroup searches when processing export policy rules to evaluate client access.

Step

1. Load netgroups into SVMs from a URI:

   `vserver services name-service netgroup load -vserver` *`vserver_name`* `-source {ftp|http|ftps|https}://`*`uri`*

   Loading the netgroup file and building the netgroup.byhost map can take several minutes.

   If you want to update the netgroups, you can edit the file and load the updated netgroup file into the SVM.

Example

The following command loads netgroup definitions into the SVM named vs1 from the HTTP URL `http://intranet/downloads/corp-netgroup`:

```
vs1::> vserver services name-service netgroup load -vserver vs1
-source http://intranet/downloads/corp-netgroup
```

Verify the status of netgroup definitions

After loading netgroups into the SVM, you can use the `vserver services name-service netgroup status` command to verify the status of netgroup definitions. This enables you to determine whether netgroup definitions are consistent on all of the nodes that back the SVM.

Steps

1. Set the privilege level to advanced:

```
set -privilege advanced
```

2. Verify the status of netgroup definitions:

   ```
   vserver services name-service netgroup status
   ```

   You can display additional information in a more detailed view.

3. Return to the admin privilege level:

   ```
   set -privilege admin
   ```

Example

After the privilege level is set, the following command displays netgroup status for all SVMs:

```
vs1::> set -privilege advanced

Warning: These advanced commands are potentially dangerous; use them only
when
         directed to do so by technical support.
Do you wish to continue? (y or n): y

vs1::*> vserver services name-service netgroup status
Virtual
Server    Node            Load Time           Hash Value
--------- --------------- --------------------
--------------------------------
vs1
          node1           9/20/2006 16:04:53
e6cb38ec1396a280c0d2b77e3a84eda2
          node2           9/20/2006 16:06:26
e6cb38ec1396a280c0d2b77e3a84eda2
          node3           9/20/2006 16:08:08
e6cb38ec1396a280c0d2b77e3a84eda2
          node4           9/20/2006 16:11:33
e6cb38ec1396a280c0d2b77e3a84eda2
```

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