Recovering the Deploy utility for a two-node cluster

ONTAP Select

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If the ONTAP Select Deploy utility fails or becomes unavailable for some reason, you lose the ability to administer ONTAP Select nodes and clusters. In addition, all two-node clusters lose HA capability because the mediator service included with Deploy is unavailable. If an unrecoverable failure occurs, you must recover the Deploy utility instance to restore administrative and HA functionality.

Before you begin

You should prepare before attempting to recover an instance of the Deploy utility to assure success.

Required skills and information

You should be familiar with several administrative procedures and have the required information.

Installing the Deploy virtual machine

You must be able to install a new instance of the ONTAP Select Deploy utility in your hypervisor environment.

ONTAP command line interface

You must be able to sign in to the ONTAP CLI of the ONTAP Select cluster and use the shell interface.

Availability of Deploy utility configuration backup

You must determine if you have a backup of the configuration data from the failed Deploy utility instance that contains the ONTAP Select two-node cluster. You might have a backup that does not contain the cluster.

Restoring a backup of the Deploy configuration

You should be able to restore a backup of the Deploy configuration data, depending on the recovery procedure used.

IP address of the original Deploy virtual machine

You must know the IP address of the original Deploy utility virtual machine that failed.

Storage capacity licensing

You must determine whether capacity pools or capacity tiers licensing is used. If you use capacity pools licensing, you must reinstall each capacity pool license after recovering or restoring the Deploy

instance.

Deciding which recovery procedure to use

You must decided which procedure to use when recovering an instance of the ONTAP Select Deploy utility. Your decision is based on whether or not you have a backup of the configuration data from the original failed Deploy utility that contains the ONTAP Select two-node cluster.

Do you have a Deploy backup containing the two-node cluster?	Recovery procedure to use
Yes	Restoring a Deploy utility instance using a configuration backup
No	Reconfiguring and recovering a Deploy utility instance

Restoring a Deploy utility instance using a configuration backup

If you have a backup of the failed Deploy utility instance containing the two-node cluster, you can restore the configuration data to the new Deploy virtual machine instance. You must then complete the recovery by performing additional configuration of the two nodes in the ONTAP Select cluster.

Before you begin

You must have a backup of the configuration data from the original failed Deploy virtual machine that contains the two-node cluster. You must be able to sign in to the ONTAP CLI of the two-node cluster and know the ONTAP names of the two nodes.

About this task

Because the configuration backup you restore contains the two-node cluster, the mediator iSCSI targets and mailboxes are recreated in the new Deploy utility virtual machine.

Steps

1. Prepare a new instance of the ONTAP Select Deploy utility:
   a. Install a new Deploy utility virtual machine.
   b. Restore the Deploy configuration from a previous backup to the new virtual machine.

      Refer to the related tasks for more detailed information about the install and restore procedures.
2. Sign in to the ONTAP command line interface of the ONTAP Select two-node cluster.
3. Enter advanced privilege mode:

   ```
   set adv
   ```
4. If the IP address of the new Deploy virtual machine is different than the original Deploy virtual

machine, you must remove the old mediator iSCSI targets and add new targets:

```
storage iscsi-initiator remove-target -node * -target-type mailbox

storage iscsi-initiator add-target -node <node1_name> -label mediator -target-type
mailbox -target-portal <ip_address> -target-name <target>

storage iscsi-initiator add-target -node <node2_name> -label mediator -target-type
mailbox -target-portal <ip_address> -target-name <target>
```

The `<ip_address>` parameter is the IP address of the new Deploy virtual machine.

These commands allow the ONTAP Select nodes to discover the mailbox disks on the new Deploy utility virtual machine.

5. Determine the names of the mediator disks:

   ```
   disk show --container-type mediator
   ```

6. Assign the mailbox disks to the two nodes:

   ```
   disk assign -disk <mediator-disk1-name> -owner <node1-name>
   disk assign -disk <mediator-disk2-name> -owner <node2-name>
   ```

7. Verify that storage failover is enabled:

   ```
   storage failover show
   ```

After you finish

If you use capacity pools licensing, you must reinstall each capacity pool license. See *Reinstalling a capacity pool license* for additional details.

Reconfiguring and recovering a Deploy utility instance

If you do not have a backup of the failed Deploy utility instance containing the two-node cluster, you must configure the mediator iSCSI target and mailbox in the new Deploy virtual machine. You must then complete the recovery by performing additional configuration of the two nodes in the ONTAP Select cluster.

Before you begin

You must have the name of the mediator target for the new Deploy utility instance. You must be able to sign in to the ONTAP CLI of the two-node cluster and know the ONTAP names of the two nodes.

About this task

You can optionally restore a configuration backup to the new Deploy virtual machine even though it does not contain the two-node cluster. Because the two-node cluster is not recreated with the restore, you must manually add the mediator iSCSI target and mailbox to the new Deploy utility instance through the ONTAP Select online documentation web page at the Deploy. You must be able to sign in to the two-node cluster and know the ONTAP names of the two nodes.

The goal of the recovery procedure is to restore the two-node cluster to a healthy state, where normal HA takeover and giveback operations can be performed.

Steps

1. Prepare a new instance of the ONTAP Select Deploy utility:
   a. Install a new Deploy utility virtual machine.
   b. Optionally restore the Deploy configuration from a previous backup to the new virtual machine.

      If you restore a previous backup, the new Deploy instance will not contain the two-node cluster. Refer to the related information section for more detailed information about the install and restore procedures.
2. Sign in to the ONTAP command line interface of the ONTAP Select two-node cluster.
3. Enter advanced privileged mode:

   ```
   set adv
   ```
4. Get the mediator iSCSI target name:

   ```
   storage iscsi-initiator show -target-type mailbox
   ```
5. Access the online documentation web page at the new Deploy utility virtual machine and sign in using the admin account:

   ```
   http://<ip_address>/api/ui
   ```

   You must use the IP address of your Deploy virtual machine.
6. Click **Mediator** and then **GET /mediators**.
7. Click **Try it out!** to display a list of mediators maintained by Deploy.

   Note the ID of the desired mediator instance.
8. Click **Mediator** and then **POST**.
9. Provide the value for mediator_id.
10. Click the **Model** next to `iscsi_target` and complete the name value.

    Use the target name for the iqn_name parameter.

11. Click **Try it out!** to create the mediator iSCSI target.

    If the request is successful, you will receive HTTP status code 200.

12. If the IP address of the new Deploy virtual machine is different than the original Deploy virtual machine, you must use the ONTAP CLI to remove the old mediator iSCSI targets and add new targets:

    ```
    storage iscsi-initiator remove-target -node * -target-type mailbox

    storage iscsi-initiator add-target -node <node1_name> -label mediator -target-type
    mailbox -target-portal <ip_address> -target-name <target>

    storage iscsi-initiator add-target -node <node2_name> -label mediator-target-type
    mailbox -target-portal <ip_address> -target-name <target>
    ```

    The `<ip_address>` parameter is the IP address of the new Deploy virtual machine.

These commands allow the ONTAP Select nodes to discover the mailbox disks on the new Deploy utility virtual machine.

1. Determine the names of the mediator disks:

   ```
   disk show --container-type mediator
   ```

2. Assign the mailbox disks to the two nodes:

   ```
   disk assign -disk <mediator-disk1-name> -owner <node1-name>

   disk assign -disk <mediator-disk2-name> -owner <node2-name>
   ```

3. Verify that storage failover is enabled:

   ```
   storage failover show
   ```

After you finish

If you use capacity pools licensing, you must reinstall each capacity pool license. See Reinstalling a capacity pool license for additional details.

Related information

Installing ONTAP Select Deploy
Restoring the Deploy configuration data to the new virtual machine
Reinstalling a capacity pool license