

Clear Data Protection Network Configuration in Hyperflex

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Introduction

This document describes how to clear the replication in Hyperflex.

Prerequisites

Requirements

Cisco recommends knowledge in these topics:

- Unified Computing System Manager (UCSM)
- HyperFlex
- vCenter
- Networking
- DNS

Components Used

The information in this document is based on these software and hardware versions:

- HyperFlex Connect 5.0.2d
- Hyperflex Stretch Cluster
- Hyperflex Standard Cluster
- UCSM 4.2(11)
- vCenter 7.0 U3

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Background Information

Replication configuration can be cleared if necessary, clusters can be paired with new targets, to do that, the current replication configuration needs to be cleared from the cluster.

Additional Background Information

- For clearing the data protection, you must unprotect all the VMs. Then, remove them from the protection groups.
- Protection Groups can remain on the cluster if no VMs belong to them.
- Ensure dependencies from replication pairs are removed in both types of clusters, local and remote.
- Administrator access for both clusters is required for this operation.

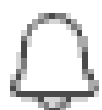
Procedure

Step 1. Log into the Hyperflex system as administrator and go to the **Replication** option in the left action pane:

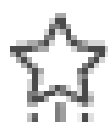


Dashboard

MONITOR



Alarms

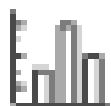


Events



Activity

ANALYZE



Performance

- When the VM is not removed from the protection, use ping to test connectivity, and check if the eth2 is running. If there is no connectivity and the eth2 is not running, open a case with TAC.

It is a best practice to delete the protection groups if no VMs belong to them. This is not required.

The screenshot shows the VMware vSphere Replication console. On the left, there is a navigation menu with sections: Activity, ANALYZE (Performance), PROTECT (Replication), and MANAGE (System Information, Datastores, iSCSI, Virtual Machines, Upgrade, Web CLI, Kubernetes). The main area displays 'OUTGOING REPLICATION' and 'INCOMING REPLICATION' both as 'Active' with 0 VMs. Below this, there are tabs for 'Local VMs', 'Remote VMs', 'Replication Activity', and 'Replication Pairs'. The 'Replication Pairs' tab is active, showing a table with columns: 'Virtual Machine Name', 'Protection Status', 'Last Protection Time', 'Direction', 'Protection Group', and 'Interval'. The table currently shows 'No records found'. On the left side of the main area, there is a 'Protection Groups' sidebar with a '+ Create Group' button and a list containing 'Demo (0 VM)' with a status of 'Active' and a refresh icon.

Delete Protection Groups

A prompt ask you if you want to delete the protection group. Click **Delete**:

The dialog box has a dark blue header with the title 'Delete Protection Group' and a close button (X) in the top right corner. In the center, there is a large red circle containing a white exclamation mark. Below the circle, the text reads: 'This action will unprotect any VMs in the group. Are you sure you want to delete Demo?'. At the bottom, there are two buttons: a light gray 'Cancel' button and a red 'Delete' button.

Protection Group Deletion Confirmation

Step 4. Remove datastore mapping and select **Replication**> **Replication Pairs**>**Edit**.

Name	Remote Cluster	Remote Cluster Status	VMs Outgoing	Replications Outgoing	VMs Incoming	Replications Incoming	Mapped Datastores
> ReplicationDemo	T	Online	0 VMs 0 Protection Groups	0	0 VMs 0 Protection Groups	0	2

Remove Datastore Dependencies

You are prompted to select which datastores to unmap. Select the remote and choose the **Do not map this datastore** option for each of the mapped datastores. Then click on **Map Datastore**.

? ×

Edit Replication Pair

Native Protection Other DRO Protection

Local Datastore	Remote Datastore
San Jose-LAB 1.1 TiB	Pick a datastore
Replication Demo Sj 10 GiB	Do not map this datastore

Cancel
Map Datastores

Unmap Datastores

Note: Once the datastores are unmapped, the HX connect needs to be refreshed to proceed with the replication pair deletion.

Step 5. Delete the replication pairs the local and remote clusters. Select **Replication>Replication Pairs>Delete**.

The screenshot shows the vSphere Replication Pairs management interface. The left sidebar contains navigation menus for Events, Activity, ANALYZE (Performance), PROTECT (Replication), and MANAGE (System Information, Datastores, iSCSI, Virtual Machines, Upgrade, Web CLI, Kubernetes). The main panel displays the 'Replication Pairs' tab with a table of replication pairs. The 'ReplicationDemo' pair is selected, showing it is 'Online' and has 2 mapped datastores. Below the table, the 'Local Datastore' and 'Remote Datastore' details are visible.

Name	Remote Cluster	Remote Cluster Status	VMs Outgoing	Replications Outgoing	VMs Incoming	Replications Incoming	Mapped Datastores
ReplicationDemo	Tokio (10.31.123.208)	Online	0 VMs 0 Protection Groups	0	0 VMs 0 Protection Groups	0	2

Local Datastore

- San Jose-LAB
Total space: 1.1 TiB
- Replication Demo S
Total space: 10 GiB

Remote Datastore

- None
- Replication Demo T
Free space: 0 B

Delete Pairs

You need remote cluster Admin credentials to remove the pair. Enter the credentials and click on **Delete**

Delete Replication Pair



When a replication pair is deleted, you can no longer configure protection for any virtual machines between the local and remote cluster.

Enter the user name and password for T

User Name

admin

Password



Cancel

Delete

Peer Deletion Confirmation

Behavior of Replication Pair

- When a replication pair is deleted, you can no longer configure protection for any virtual machines between the local and remote cluster.
- This action clears the protection in both clusters
- A replication network test is done when the replication pair is attempted to be done or modified.
- A replication network test is also done when the datastores are attempted to be unmapped.
- If the replication test does not pass, the changes are not allowed. Refer to the Troubleshoot session in this document to check connectivity if necessary.
- For further assistance regarding the eth2 connectivity, open a case with TAC.

Step 6. To clear the replication network, use the command:

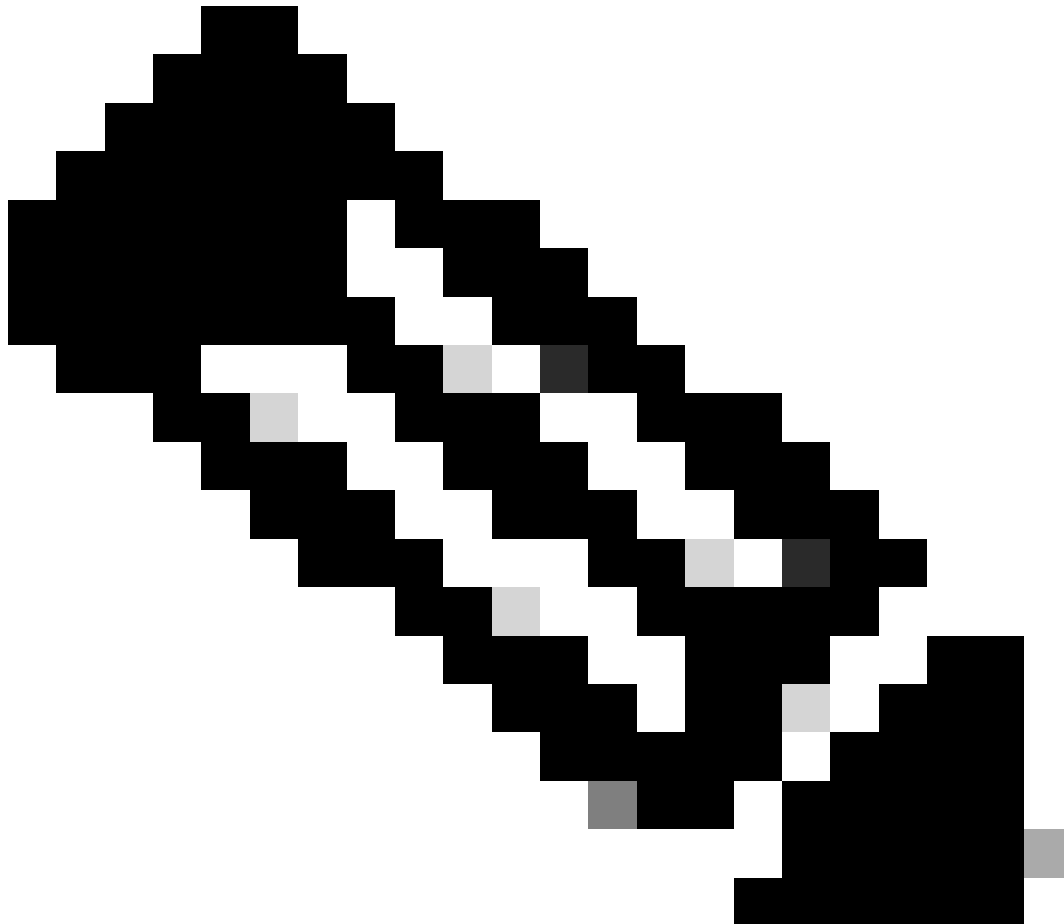
```
stcli drnetwork cleanup
```

```
hxshell:~$ stcli drnetwork cleanup
DR network cleanup job bc61b782-09e3-4827-ac58-15123bcd6ea8 started, check Activity tab for status
hxshell:~$
```

CleanUp Local

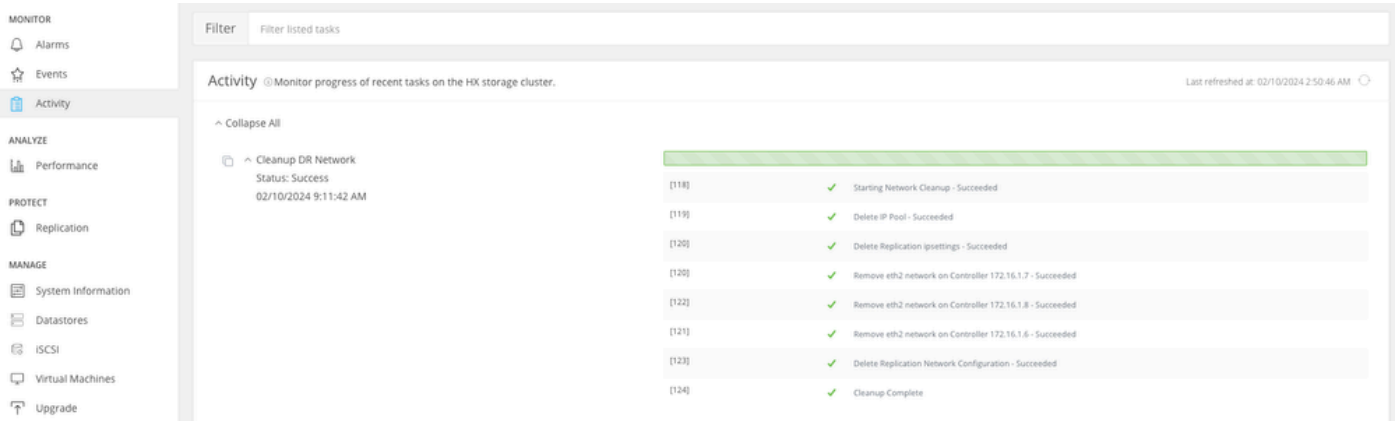
```
[hxshell:~$ stcli drnetwork cleanup  
DR network cleanup job db7e3ff7-cc27-4f42-b7af-2e8281893e2e started, check Activ  
ity tab for status  
hxshell:~$ ]
```

CleanUp Remote



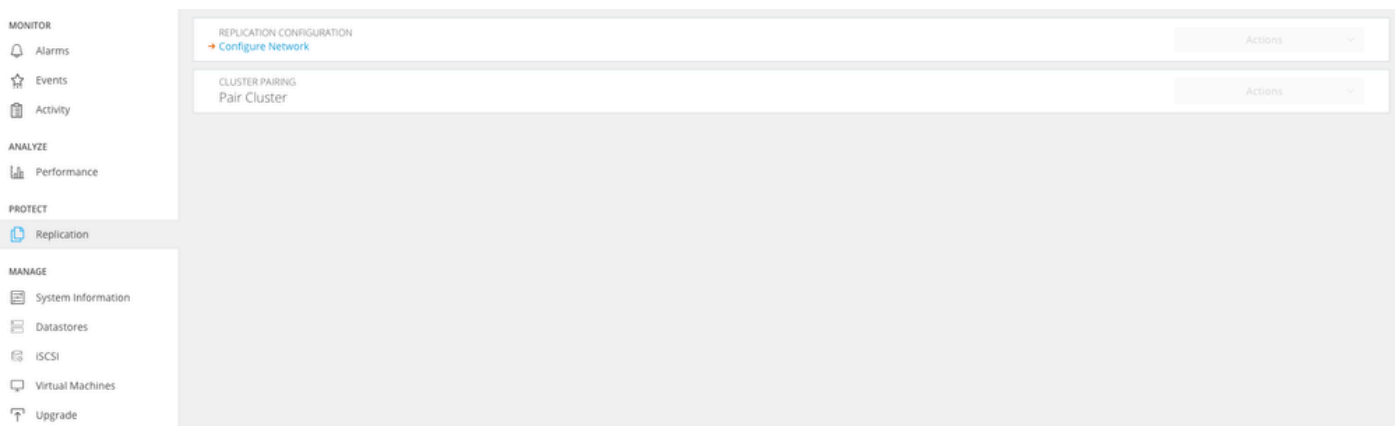
Note: Ensure the **stcli drnetwork cleanup** command is executed in both local and remote clusters.

Data replication network clean up can be monitored in the Activity tab in HX connect



Monitor Data Replication Network CleanUp

Refresh HX connect data replication network configuration appears unconfigured and ready to be configured again if required.



Data Replication Network Cleared

Troubleshoot

Verify VMs Protection

Ensure no VMs are being protected. To check this use the command:

```
stcli dp vm list --brief
```

Example with a protected VM:

```
HyperFlex StorageController 5.0(2d)
admin password:
This is a Restricted shell.
Type '?' or 'help' to get the list of allowed commands.
hxshell:~$ stcli dp vm list --brief

vmInfo:
  name: Installer 4.5
  uuid: 564deba1
hxshell:~$
hxshell:~$
```

How to List Protected VMs

Example with no VM protected

```
hxshell:~$ stcli dp vm list --brief
hxshell:~$
```

No VM Protected



Note: Ensure no VMs are protected. The next image shows an example of the VM protection.

Check Data Protection Peer List

The Peer List can be checked. To ensure no entries appear when the replication is cleared, use the command:

```
stcli dp peer list
```

Example for data protection peer configured:

```
hxshell:~$ stcli dp peer list
Management IP:      .208
Replication IP:     .7
Description:
Name: ReplicationDemo
Datastores:
  quiesce: False
  storageOnly: False
  backupOnly: False
  aDs:
    clEr:
      id: 1453
      type: cluster
      name: T
    dsEr:
      id: 00000000c
      type: datastore
      name: Replication Demo T
  bDs:
    clEr:
      id: 7435
      type: cluster
    dsEr:
      id: 000000002
      type: datastore
      name: Replication Demo S
hxshell:~$
```

How to Check Peer List

This is an example for the cleared data protection peer:

```
[hxshell:~$ stcli dp peer list
hxshell:~$
```

Delete Manually the Peer When Necessary

In case the remote peer is permanently unavailable, or not available for a long period of time, this command is for clearing the peer relation:

```
stcli dp peer forget --name <pair-name>
```

Example of the **peer forget** command:

```
hxshell:~$ stcli dp peer list
Description:
Replication IP: 172.      .7
Management IP: 10.      .208
Name: ReplicationDemo
hxshell:~$ stcli dp peer forget --name ReplicationDemo
hxshell:~$ stcli dp peer list
hxshell:~$ █
```

Replication Peer Forget Command

Take into account

- The cluster pairing is cleared from the HX connect as shown in the procedure in this document
- If this command is issued by mistake in one of the clusters when they still have connectivity with each other, ensure it is executed in the other peer as well.
- The command only clears the peer details on the cluster where it is executed.

Common Issues

Dependencies issues

Ensure VM protection is removed along with datastore mapping.

When trying to delete a replication pair without removing the VM Protection/Datastore Mapping, a pop up window appears indicating the dependencies must be cleared.

Delete Replication Pair



Remove dependencies: Remove protection configuration. Remove datastore mappings.

OK

Peer Deletion Error



Note: It is expected this operation cannot be completed if communication issues are present between the cluster on the eth2 network.

Connectivity Issues

Connectivity issues can lead to difficulties with the clean up process because each of the storage controller virtual machines from each cluster are in active communication with their peers through the eth2. If at least one controller virtual machine does not respond through the eth2 network, it can cause the replication and cleanup activities to fail.

- Verify the eth2 is present. Use the **ifconfig** command on **eachstorage** Controller virtual machines to confirm the eth2 appears up, if not up TAC intervention is needed.
- Use **ping** to test connectivity between the eth2 interfaces for each storage controller virtual machines.

```

eth2      Link encap:Ethernet  HWaddr
inet addr:172.17.0.3 Bcast:172.17.0.255 Mask:255.255.255.0
UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
RX packets:797975 errors:0 dropped:87 overruns:0 frame:0
TX packets:799505 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:74023721 (74.0 MB)  TX bytes:74168965 (74.1 MB)

eth2:0    Link encap:Ethernet  HWaddr
inet addr:172.17.0.2 Bcast:172.17.0.255 Mask:255.255.255.0
UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1

eth0:mgmtip Link encap:Ethernet  HWaddr
inet addr:10.31.123.255 Bcast:10.31.123.255 Mask:255.255.255.0
UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1

lo        Link encap:Local Loopback
inet addr:127.0.0.1 Mask:255.0.0.0
UP LOOPBACK RUNNING  MTU:65536  Metric:1
RX packets:15509057612 errors:0 dropped:0 overruns:0 frame:0
TX packets:15509057612 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:3349146489309 (3.3 TB)  TX bytes:3349146489309 (3.3 TB)

hxshell:~$ ping 172.17.0.9
PING 172.17.0.9 (172.17.0.9) 56(84) bytes of data.
64 bytes from 172.17.0.9: icmp_seq=1 ttl=64 time=0.332 ms
64 bytes from 172.17.0.9: icmp_seq=2 ttl=64 time=0.119 ms
64 bytes from 172.17.0.9: icmp_seq=3 ttl=64 time=0.127 ms
64 bytes from 172.17.0.9: icmp_seq=4 ttl=64 time=0.107 ms
64 bytes from 172.17.0.9: icmp_seq=5 ttl=64 time=0.106 ms
64 bytes from 172.17.0.9: icmp_seq=6 ttl=64 time=0.132 ms
64 bytes from 172.17.0.9: icmp_seq=7 ttl=64 time=0.123 ms
64 bytes from 172.17.0.9: icmp_seq=8 ttl=64 time=0.114 ms
64 bytes from 172.17.0.9: icmp_seq=9 ttl=64 time=0.144 ms
^C
--- 172.17.0.9 ping statistics ---
9 packets transmitted, 9 received, 0% packet loss, time 8194ms
rtt min/avg/max/mdev = 069 ms
hxshell:~$ █

eth2      Link encap:Ethernet  HWaddr
inet addr:172.17.0.3 Bcast:172.17.0.255 Mask:255.255.255.0
UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
RX packets:30774 errors:0 dropped:29 overruns:0 frame:0
TX packets:32960 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:2893235 (2.8 MB)  TX bytes:3141789 (3.1 MB)

eth2:0    Link encap:Ethernet  HWaddr
inet addr:172.17.0.7 Bcast:172.17.0.255 Mask:255.255.255.0
UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1

eth0:mgmtip Link encap:Ethernet  HWaddr
inet addr:10.31.123.255 Bcast:10.31.123.255 Mask:255.255.255.0
UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1

lo        Link encap:Local Loopback
inet addr:127.0.0.1 Mask:255.0.0.0
UP LOOPBACK RUNNING  MTU:65536  Metric:1
RX packets:12876504225 errors:0 dropped:0 overruns:0 frame:0
TX packets:12876504225 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:2722351786798 (2.7 TB)  TX bytes:2722351786798 (2.7 TB)

hxshell:~$ ping 172.17.0.3
PING 172.17.0.3 (172.17.0.3) 56(84) bytes of data.
64 bytes from 172.17.0.3: icmp_seq=1 ttl=64 time=0.158 ms
64 bytes from 172.17.0.3: icmp_seq=2 ttl=64 time=0.137 ms
64 bytes from 172.17.0.3: icmp_seq=3 ttl=64 time=0.115 ms
64 bytes from 172.17.0.3: icmp_seq=4 ttl=64 time=0.107 ms
64 bytes from 172.17.0.3: icmp_seq=5 ttl=64 time=0.143 ms
64 bytes from 172.17.0.3: icmp_seq=6 ttl=64 time=0.105 ms
64 bytes from 172.17.0.3: icmp_seq=7 ttl=64 time=0.149 ms
64 bytes from 172.17.0.3: icmp_seq=8 ttl=64 time=0.140 ms
64 bytes from 172.17.0.3: icmp_seq=9 ttl=64 time=0.145 ms
^C
--- 172.17.0.3 ping statistics ---
9 packets transmitted, 9 received, 0% packet loss, time 8199ms
rtt min/avg/max/mdev = 019 ms
hxshell:~$ █

```

Eth2 Ping Test Example

- Ensure the Replication VLAN in both clusters match.
- Ensure the replication VLAN is properly configured in all the paths between the clusters.
- Ensure the MTU matches in both clusters local and remote for the replication network
- Use the **Test Remote Replication Network** Option to verify connectivity. Select **Replication**, in the cluster pairing, select **Actions > Test Remote Replication Network**:

Test Remote Replication Network

- Monitor this operation in the **Activity** tab.

Example of a successful test:

MONITOR

- Alarms
- Events
- Activity

ANALYZE

- Performance

PROTECT

- Replication

MANAGE

- System Information
- Datastores
- iSCSI
- Virtual Machines
- Upgrade
- Web CLI
- Kubernetes

DR REPLICATION PAIR NETWORK CHECK-ReplicationDemo
Status: Success
02/10/2024 8:22:51 AM

DR REPLICATION PAIR NETWORK CHECK ✓ Test Replication Network (Direction: Both, MTU: 1500)

San_Jose ✓ Validation test

- Gateway connectivity check disabled: Gateway connectivity check disabled.
- Local Cluster Replication Network is valid: Local Cluster Replication Network is valid.
- Peer Cluster Replication Cluster IP 172. .7 reachable from 172. .3: Peer Cluster Replication Cluster IP 172. .7 reachable from 172. .3.

Tokio ✓ Validation test

- Gateway connectivity check disabled: Gateway connectivity check disabled.
- Local Cluster Replication Network is valid: Local Cluster Replication Network is valid.
- Peer Cluster Replication Cluster IP 172. .2 reachable from 172. .8: Peer Cluster Replication Cluster IP 172. .2 reachable from 172. .8.

San_Jose-San-Jose-Server-3 ✓ Connectivity test passed

- Connectivity successful from 172. .5 to 172. .11, 172. .10, 172. .5, 172. .8
- Firewall check for DR Network: Firewall check for DR Network passed
- Port Connectivity successful from 172. .5 to all ports on 172. .11, 172. .10, 172. .5, 172. .8
- Firewall check for DR Pairing: Firewall check for DR Pairing passed

Tokio-Tokio-server-1 ✓ Connectivity test passed

- Firewall check for DR Network: Firewall check for DR Network passed
- Connectivity successful from 172. .8 to 172. .4, 172. .5, 172. .3
- Port Connectivity successful from 172. .8 to all ports on 172. .4, 172. .5, 172. .3
- Firewall check for DR Pairing: Firewall check for DR Pairing passed

Tokio-Tokio-server-3 ✓ Connectivity test passed

- Port Connectivity successful from 172. .3 to all ports on 172. .4, 172. .5, 172. .3

Successful Test Example

Example of a failed test:

MONITOR

- Alarms
- Events
- Activity

ANALYZE

- Performance

PROTECT

- Replication

MANAGE

- System Information
- Datastores
- iSCSI
- Virtual Machines
- Upgrade
- Web CLI
- Kubernetes

DR REPLICATION PAIR NETWORK CHECK-ReplicationDemo
Status: Failed
02/10/2024 7:55:35 AM

DR REPLICATION PAIR NETWORK CHECK ! Test Replication Network (Direction: Both, MTU: 1500)

San_Jose ✓ Validation test

- Gateway connectivity check disabled: Gateway connectivity check disabled.
- Local Cluster Replication Network is valid: Local Cluster Replication Network is valid.
- Peer Cluster Replication Cluster IP 172. .7 reachable from 172. .3: Peer Cluster Replication Cluster IP 172. .7 reachable from 172. .3.

Tokio ✓ Validation test

- Gateway connectivity check disabled: Gateway connectivity check disabled.
- Local Cluster Replication Network is valid: Local Cluster Replication Network is valid.
- Peer Cluster Replication Cluster IP 172. .2 reachable from 172. .8: Peer Cluster Replication Cluster IP 172. .2 reachable from 172. .8.

San_Jose-San-Jose-Server-2 ! Please check cluster logs. Unable to reach the peer nodes with replication IP 172. .10

- Port Connectivity successful from 172. .3 to all ports on 172. .11, 172. .9, 172. .8
- Firewall check for DR Network: Firewall check for DR Network passed
- Connectivity fails from 172. .3: Please check cluster logs. Unable to reach the peer nodes with replication IP 172. .10
- Port Connectivity fails from 172. .3: [to 3049,9098,4049,4059 on 172. .10]
- Connectivity successful from 172. .3 to 172. .11, 172. .5, 172. .8
- Firewall check for DR Pairing: Firewall check for DR Pairing passed

Tokio-Tokio-server-2 ! Please check cluster logs. Unable to reach the peer nodes with replication IP 172. .4, 172. .5, 172. .3

- Connectivity fails from 172. .10: Please check cluster logs. Unable to reach the peer nodes with replication IP 172. .4, 172. .5, 172. .3
- Firewall check for DR Network: Firewall check for DR Network passed
- Port Connectivity fails from 172. .10: [to 3049,9098,4049,4059 on 172. .4], [to 3049,9098,4049,4059 on 172. .5], [to 3049,9098,4049,4059 on 172. .3]
- Firewall check for DR Pairing: Firewall check for DR Pairing passed

Unsuccessful Test

Related Information

- [Cisco HyperFlex Data Platform Administration Guide, Release 5.0](#)
- [Cisco HyperFlex Data Platform CLI Guide, 5.0](#)
- [Cisco Technical Support & Downloads](#)