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Knowledgebase Solution

Question:	How to reset the VNX for File/Unified system back to a state where the VNX Installation Assistant can be rerun
Environment:	EMC SW: VNX Operating Environment (OE) for File version 7.0
Environment:	Product: VNX5300
Environment:	Product: VNX5500
Environment:	Product: VNX5700
Environment:	Product: VNX7500
Environment:	Feature: VNX Installation Assistant (VIA)
Problem:	Want to rerun the re-initialization of the VNX File/Unified, but cannot reset it.
Problem:	VIA Cable Check failure when going from Dual CS to a Single CS reset: Cable check failed. X Control Station 1 MGMT A detail.... Severity: Error Message: Secondary Control Station is unreachable on primary network. Event Code: 15301279749
Problem:	startup_wiz.log entries for VIA Cable Check failure when going from Dual CS to a Single CS reset: INFO 2011-11-22 11:33:24,968 [com.emc.celerra.startup.healthcheck.screens.WizHealthCheckForm]: Status Control Station 1 MGMT A is: Err 1003001003 INFO 2011-11-22 11:33:49,453 [com.emc.celerra.startup.healthcheck.screens.WizHealthCheckForm]: Error code is 1003001003

Root Cause:	<p>This solution outlines a methodology for putting the VNX for File/Unified system back to a state where the VNX Installation Assistant can be rerun to initialize the system. For those who are familiar with the Celerra products that use the CSA, the reset process described below is very similar to previous product releases. One key difference here is that the reset process takes into account systems that are using Dual Control Stations.</p>
Fix:	<p>Use the following procedure to set the Unified/File system back to a state where the Control Station(s) and Storage Processor (SP) IP addresses can be re-initialized using the VNX Installation Assistant:</p> <ol style="list-style-type: none">1. Establish a serial cable connection between your Windows client and the Primary Control Station's serial console port, then use Putty to connect:<ol style="list-style-type: none">a) Select the Serial radial button under Basic Options, then the Serial setting at the bottom of the "Category" tree, then use the following settings:<pre>Enter COM1 or COM2 [depends on your Client system] Speed: 19200 Data bits: 8 Stop bits: 1 Parity: None Flow Control: None</pre>b) Log in to the Control Station as user "nasadmin," then su to root user.<p>Note: For dual Control Station systems, you can elect to shutdown CS1, unplug its power cable, and complete the VIA reset & initialization process using only CS0, then add CS1 to the configuration using the "Add Secondary Control Station" procedure, or, follow the steps outlined below to prepare the dual Control Station system for the VIA initialization process.</p>c) Identify and record the MAC address for CS0 [and CS1 if applicable] for interface "eth3", by reading the label on the Control Station(s), or running the following command: # /sbin/ifconfig eth3 eth3 Link encap:Ethernet HWaddr 00:1B:21:76:C1:60 -->MAC Address--useful when running the VNX Installation Assistant to identify the correct system2. If applicable, remove the Proxy ARP configuration on CS0 in order to restore the SP IP addresses back to their factory defaults: SPA--128.221.252.200 SPB--128.221.253.201 Note: If the VIA Initialization process did not complete the Pre-Configuration apply changes phase, the Proxy ARP service is most likely not configured, and the SPs still have their default factory IP address settings.

a) If the following command output shows "Not configured", then you do not need to run the `clariion_mgmt -stop` command and can proceed with Step 3.

```
# /nasmcd/sbin/clariion_mgmt -info
```

```
Error 12: Not configured
```

b) If Proxy ARP is configured, run the following command to unconfigure the service and restore the SP IPs to the default addresses:

```
# /nasmcd/sbin/clariion_mgmt -stop
```

```
Checking if running as root...yes
```

```
Checking if model is supported...yes
```

```
Checking for integrated system...yes
```

```
Checking if interface eth3 is configured...yes
```

```
Checking if SP (10.241.168.206) is up...yes
```

```
Checking if SP (10.241.168.207) is up...yes
```

```
Step 1/12 [28185788417]: Changing SPA IP address.
```

```
Changing SPA IP from 10.241.168.206 to 128.221.252.200 (subnetmask 255.255.255.0, gateway 128.221.252.104)
```

```
Step 2/12 [28185788421]: Waiting for SPA to restart.
```

```
Waiting for SPA to go down.....done (19 secs)
```

```
Step 3/12 [28185788425]: Waiting for ping response from SPA.
```

```
Waiting for 128.221.252.200 to respond...done (2 secs)
```

```
Step 4/12 [28185788427]: Waiting for CLARiiON software to start on SPA.
```

```
Waiting for CLARiiON software to start on SPA...done (61 secs)
```

```
Waiting until SPB sees 128.221.252.200 in the domain...done (4 secs)
```

```
Step 5/12 [28185788429]: Updating NAS database with SPA IP address.
```

```
Adding rules to allow outbound traffic from SPB
```

```
Updating SYMAPI database with new CLARiiON IP addresses...done (33 secs)
```

```
Step 6/12 [28185788433]: Removing Proxy ARP for SPA on Control Station
```

```
Removing host specific route for SPA
```

```
Removing rules that allow outbound traffic from SPA
```

```
Removing ARP entry for SPA
```

```
Updating /etc/hosts entry for SPA
```

```
Step 7/12 [28185788418]: Changing SPB IP address.
```

```
Changing SPB IP from 10.241.168.207 to 128.221.253.201 (subnetmask 255.255.255.0, gateway 128.221.253.104)
```

```
Step 8/12 [28185788422]: Waiting for SPB to restart.
```

```
Waiting for SPB to go down.....done (18 secs)
```

```
Step 9/12 [28185788426]: Waiting for ping response from SPB.
```

```
Waiting for 128.221.253.201 to respond.....done (14 secs)
Step 10/12 [28185788428]: Waiting for CLARiiON software to start on SPB.
Waiting for CLARiiON software to start on SPB...done (37 secs)
Waiting until SPA sees 128.221.253.201 in the domain...done (2 secs)
Step 11/12 [28185788430]: Updating NAS database with SPB IP address.
Updating SYMAPI database with new CLARiiON IP addresses...done (20 secs)
Step 12/12 [28185788434]: Removing Proxy ARP for SPB on Control Station
Removing host specific route for SPB
Removing rules that allow outbound traffic from SPB
Removing ARP entry for SPB
Updating /etc/hosts entry for SPB
FINISH: Operation took a total time of 4 minutes 35 seconds to complete.
```

3. Check to determine if the S95cable_check file is still in the /etc/rc3.d directory. Depending on how far the VIA initialization process progressed, the file may or may not be present. This script is required in order to successfully run the VIA initialization tool.

```
# cd /etc/rc3.d
# ls -la S95cable_check
```

4. If the /etc/rc3.d/S95cable_check script is missing, and you do not have a backup copy, you can locate and copy the file from the VNX OE for File Classic or Express Installation media that matches the version of the system that you are using. The following steps illustrate how to retrieve the S95cable_check file from a loop mounted ISO image file from Classic Installation media (Option 1), or from the Express Install media (Option 2):

a) **# mkdir /celerra/dvdiso /celerra/upgrade**

b) **# mount /dev/hda10 /celerra/dvdiso**

c) Use FTP or WinSCP to transfer the ISO media file <.iso> to the /celerra/dvdiso directory on the Control Station
Note: Make sure that you transfer the file using binary mode

Option 1: Copying the S95cable_check script from classic installation media: 7.0.12.0_image_DVD.iso

(1) Loop mount the .iso image:

```
# mount -t iso9660 -r -o loop /celerra/dvdiso/7.0.12.0_image_DVD.iso /celerra/upgrade
```

(2) Change to the correct directory on the mounted ISO file and copy the S95cable_check file to /etc/rc3.d:

```
# cd /celerra/upgrade/EMC/nas
# cp S95cable_check /etc/rc3.d
# chmod 755 /etc/rc3.d/S95cable_check
```

Option 2: Copying from the Express Installation Media: EI_DVD_7.0.12.0.iso

(1) Loop mount the .iso image

(2) cd /celerra/upgrade/tools

(3) Copy the S95nas_tools.tar.gz file to /home/nasadmin, unzip/untar the contents, copy the file to /etc/rc3.d, then chmod the file to make it executable:

```
# tar -zxvf S95nas_tools.tar.gz
# cp S95cable_check /etc/rc3.d
# chmod 755 S95cable_check
```

5. Remove any temporary factory and .factory_* files from the /tmp directory:

```
# rm -rf /tmp/.factory*
# rm -rf /tmp/factory*
```

Example files:

```
-rw-r--r-- 1 root root 17 Feb 7 18:01 .factory_check_model
-rw-r--r-- 1 root root 0 Feb 7 18:02 .factory_check_successful
```

6. Delete the Control Station's External IP address configuration file, but save a copy first:

```
# cd /etc/sysconfig/network-scripts
# cp -ip ifcfg-eth3 /home/nasadmin
# rm -f ifcfg-eth3
```

Note: If doing the VIA reset from a dual CS configuration, back to a single CS setup, you need to remove the following files so that the VIA will not think that there is a CS1.

```
# rm /nasmcd/.ipmi_arp_entry
# rm /nasmcd/.csheartbeat
```

7. Using the **vi** editor, edit the /etc/hosts file and remove the line with Hostname and IP address for the Primary Control Station (CS0):

vi /etc/hosts

10.241.168.204 c250.w2k.pvt.dns c250 -->Example entry to remove using **dd**

Note: If CS1 was configured, removed the entry for CS1 as well

8. For Dual Control Station environments, perform these additional steps before continuing with Step 9 to reboot CS0. For Single Control Station systems, proceed with Step 9:

a) From CS0, open an SSH session to CS1 using Putty, to 128.221.252.101, then login with the Root user password

ssh 128.221.252.101

[root@128.221.252.101's](#) password:

[root@c5700cs1 ~]#

b) Stop NAS services on CS1:

/sbin/service nas stop

c) Exit from the ssh session on CS1, then stop NAS services on CS0:

##/sbin/service nas stop

d) Establish a serial connection to CS1, then create a serial putty session and login as nasadmin, then su to root, and perform the following steps on CS1:

1. Copy S95cable_check script to /etc/rc3.d
2. Remove CS1's Hostname & IP Address entry from /etc/hosts
3. Remove CS1's /etc/sysconfig/network-scripts/ifcfg-eth3 file for the external interface
4. Reboot CS1, and verify the following message via serial console connection:
Waiting for VNX Installation Assistant to continue....

9. From a serial connection to CS0, reboot CS0, then wait for the following message to display on the Control Station console before continuing:

```
Starting cable check: This is an VNX5500 system waiting to be configured by Celerra Startup
Assistant (CSA). Use CSA to verify that the system has been cabled properly. Once the check is
complete, CSA will instruct the Cable Check Utility to continue and NAS services will be started
and a login prompt provided.
```

	<p>If you want to break out from this and login to the Control Station (you must really know what you are doing) press "L".</p> <p>Waiting for Celerra Startup Assistant (CSA), to continue.....</p> <p>10. Launch the VNX Installation Assistant (VIA) application and begin the initialization process for the VNX for File/Unified system.</p>	
Notes:	<p>The VNX Installation Assistant (VIA) was formerly referred to as the Celerra Startup Assistant (CSA). You can obtain File OE code from Powerlink > Navigator > EMC Services Partner Web > VNX & VNXe or from the NGOE > Support by Products > VNX > Downloads site.</p>	