

Packaged Contact Center Enterprise (PCCE) 11.5 Deployment Errors On VM Hosts Screen

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Introduction

This document describes how to troubleshoot and fix invalid datastores issue on VM Hosts screen during PCCE deployment.

Prerequisites

Cisco recommends that you have knowledge of these topics:

- PCCE
- Unified Computing System (UCS)
- RAID Configuration

Components Used

PCCE 11.5

Hardware - UCS 240 M4SX

RAID Configuration Utility

Problem

To setup PCCE 11.5 deployment, you need to log in to webadmin page from AW/HDS server. On the VM hosts screen, PCCE asks for ESXi host credentials. After you enter credentials and click next, ESXi credentials are verified. After verification, ESXi queries and compares current hardware configurations.

If the hardware configuration is invalid, PCCE webadmin returns error message "**Invalid Host-Error reason-Invalid Datastores: Must match expected configuration.**"

On C240 M4SX server, Redundant Array Of Independent Disks (RAID) manual configuration is not necessary. The disk array configuration for this server was set up to match the requirement of PCCE.

Verify the settings as follows:

- Virtual Drive Info: RAID 5 with 5 (Physical Disks) * 4 (Virtual Drives/Datastores)
- Stripe Size: 128KB
- Write Policy: Write Back with BBU
- Read Policy: Read Ahead Always

Scenario1

System Deployment

Configure your deployment

Deployment > **VM Hosts** > Credentials > Settings > Initialize

Select Unified CM Deployment Configuration: UCS C240 M4SX: On box Unified CM

Side A - Invalid Host Host: 10.161.224.119

Error Reason	Current Configuration	Expected Configuration
Invalid Datastores: Must match expected configuration	271 GB 2227 GB 2227 GB	Min: 1104 GB, Max: 1108 GB Min: 1111 GB, Max: 1115 GB Min: 1111 GB, Max: 1115 GB

Side B - Invalid Host Host: 10.105.7.30

Error Reason	Current Configuration	Expected Configuration
Invalid Datastores: Must match expected configuration	271 GB 2227 GB 2506 GB	Min: 1104 GB, Max: 1108 GB Min: 1111 GB, Max: 1115 GB Min: 1111 GB, Max: 1115 GB

Side A Host: 10.161.224.119

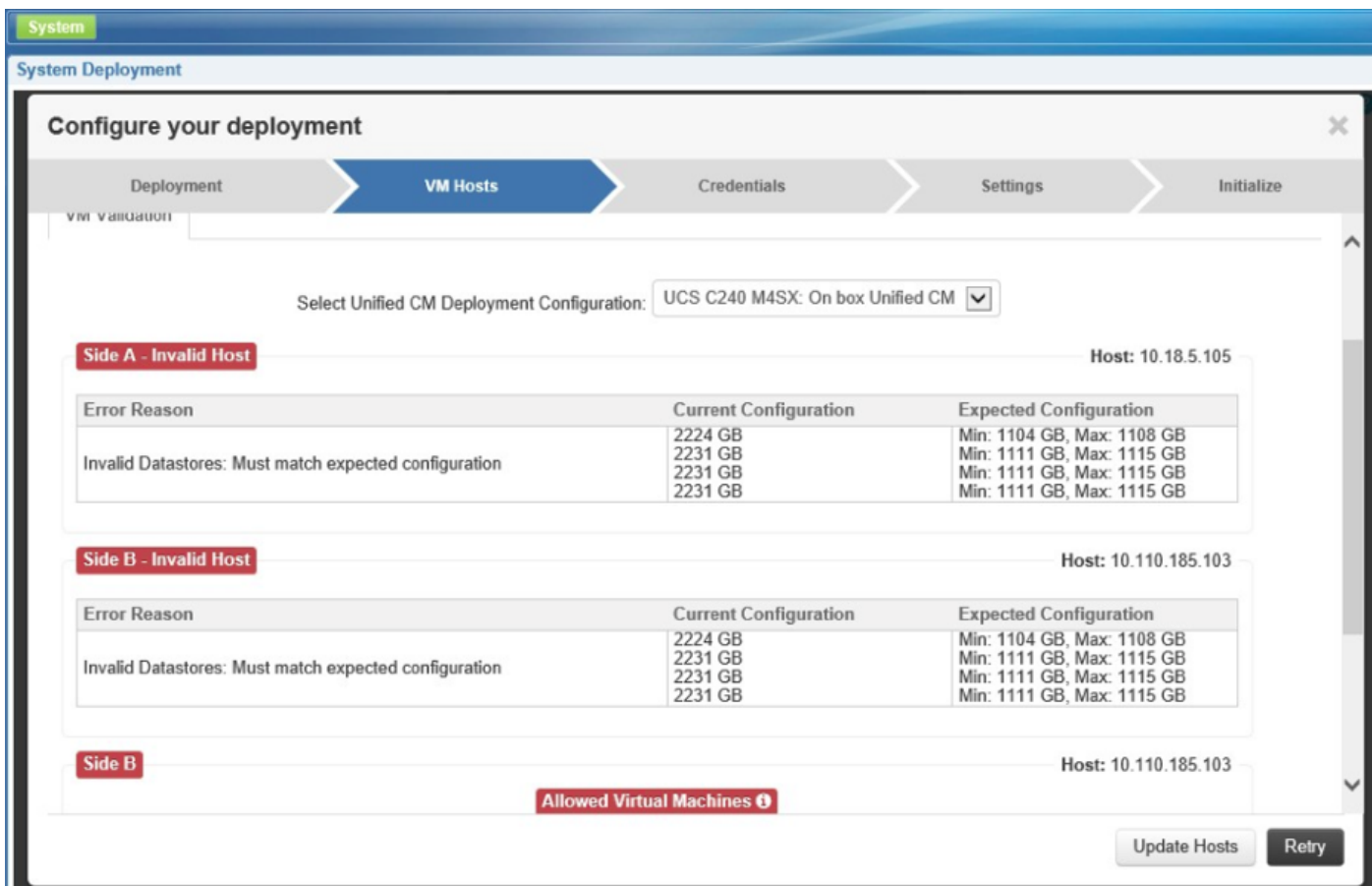
Unmatched Virtual Machines

- AUSTCMRGRPRD00
- AUSTCMPLMPRD00

Allowed Virtual Machines

- Unified CCE Rogger

Scenario2



Solution

Scenario1

Error on screen says there is a mismatch with expected datastore configuration. PCCE 11.5 requires 4 datastores to be configured with specific size mentioned as below. However, in scenario 1, there are only 3 datastores configured.

Datastore1 - Min:1104 GB and Max:1108 GB

Datastore2 - Min:1104 GB and Max:1115 GB

Datastore3 - Min:1104 GB and Max:1108 GB

Datastore4 - Min:1104 GB and Max:1108 GB

VMValidation logs show 3 data stores.

```
Found HD(s) (GB): [VMDatastoreData[sizeInGB=271, name=local-irvtcmvmhprd00],
VMDatastoreData[sizeInGB=2227, name=datastore01-irvtcmvmhprd00],
VMDatastoreData[sizeInGB=2506, name=datastore02-irvtcmvmhprd00]]
```

Verify your RAID configuration with RAID config Validator
Utility>PackagedCCERaidConfigValidator-11.5.zip.

[https://software.cisco.com/download/release.html?mdfid=284360381&softwareid=284416107&release=11.5\(1...>](https://software.cisco.com/download/release.html?mdfid=284360381&softwareid=284416107&release=11.5(1...>)

Then, run this command **java -jar PackagedCCEr raidConfigValidator-10.5.jar <IP Address of the Side A server> <username> <password>**.

For example: C:\Users\Administrator\Desktop>java -jar PackagedCCEr raidConfigValidator-10.5.jar xx.xx.xxx.xxx userName password

From RAID config. validate output, we see wrong number of Datastores were configured.

IOS profile C240M4 matches C240M4.2.0.8b.0.080620151546; checking data stores.

Actual number of data stores found = 3

Expected number of data stores = 4

Wrong number of data stores found

BIOS profile C240M4 matches C240M4.2.0.8b.0.080620151546; checking data stores.

Actual number of data stores found = 3

Expected number of data stores = 4

Wrong number of data stores found

BIOS profile C240M4 matches C240M4.2.0.8b.0.080620151546; checking data stores.

Actual number of data stores found = 3

Expected number of data stores = 4

Wrong number of data stores found

BIOS profile C240M4 matches C240M4.2.0.8b.0.080620151546; checking data stores.

Actual number of data stores found = 3

Expected number of data stores = 4

Wrong number of data stores found

XXX *** Validation Complete -- RAID Configuration is Invalid *** XXX

Reconfigure the RAID with these steps:

Ensure that you have following settings in your environment:

1. The UCS C240 M4 SX server is a brand new one with only RAID configured with some level. There is no data. Any existing data will be lost.
2. No changes were made to the Adapter Settings under Adapter Settings in the webBIOS screen.

All the RAID configuration is done with LSI MegaRAID WEBBIOS CU(Configuration Utility). We use this procedure to create RAID configurations on LSI MegaRAID SAS controllers.

Step 1. Power on the UCS server. Ensure Quiet Boot was disabled in BIOS.

Step 2. When you see LSI MegaRAID SAS BIOS screen, press Control+H to enter the MegaRAID BIOS configuration utility. The Controller Selection window appears.

Step 3. You see a screen with the details of the SAS Controller(s).

Step 4. Select the RAID controller which you want to work with. Usually, there is only one listed.

Step 5. Select **Start**.

Step 6. You land up at the webBIOS page. This screen lists Physical Drives and Virtual Drives. In the new server there must not be any Virtual Devices ideally.

Step 7. We need to delete/clear existing/previous configuration. In the menu list to the left, select Configuration Wizard.

Step 8. The WebBIOS Configuration Method window opens. Select the Clear Configuration radio button.

Step 9. Click **Next**.

Step 10. Click **Yes** for the message This is a Destructive Operation!.

Step 11. You must not see any Virtual Drives post Step 11.

Step 12. **Verify** that all Physical Drives are in good condition.

Step 13. Select Configuration wizard and then select New Configuration radio button in the WebBIOS Configuration Method window. Click Yes for the message This is a Destructive Operation!.

Step 14. Select Custom/Manual Configuration.

Step 15. You see DG Definition screen shows Physical Drives and Disk Groups. You see a Disk Group DG0.

Step 16. Select the first five drives. [Control to select multiple].

Step 17. Click on the **Add** to Array button.

Note: If you need to undo the changes, click Reclaim.

Step 18. Click on the **Accept** DG button to add the drives to the Disk Group DG0.

Step 19. Select the next five drives.

Step 20. Click on the **Add** to Array button.

Step 21. Click on the **Accept** to DG button to add the drives to the Disk Group DG1.

Step 22. Similarly add five drives to DG2 and DG3.

Step 23. You must now have 4 Disk Groups.

Step 24. Click **Next** on the DG Definition Screen.

Step 25. The Span Definition screen is displayed.

Step 26. Select DG0 on the left side and click Add to SPAN. The DG should be now under the SPAN side.

Step 27. Click **Next**. This leads to the VD Definition screen. You see a VD0 under DG0.

Step 28. Configure Virtual Drive (DV).

a) For RAID Level, select RAID 5.

b) For Stripe Size, select 128KB.

c) For Read Policy, select read ahead = always.

d) For Write Policy, select write back with bbu.

e) Click **Update** Size to finalize the RAID volume and to determine the size of the resulting volume. It comes to TB.

f) Click **Accept** to accept the virtual drive definition, VD0.

g) Click **Next**.

h) Click back to add the second RAID5 array.

Step 29. Select Disk Group 1. Click on Add to span. Click on **Next**. Follow the instructions in Step 29.

Step 30. Repeat this for the other two Disk Groups.

Step 31. Click **Yes** at the BBU warning screen.

Step 32. Click **Next** at the Virtual Live Definition screen to indicate that you have finished defining virtual drives.

Step 33. Click **Accept** at the Configuration Preview screen to accept the RAID configuration.

Step 34. Click **Yes** to save the Configuration.

Step 35. Click on **Yes** to start the drive configuration.

Step 36. When finished click **Home**. Click on **Exit** in the Menu options in the left pane.

This completes RAID 5 configuration on UCS C240 M4 SX server.

Verifications

With Cisco Integrated Management Controller, ensure following settings are configured correctly:

1) Virtual Drive Info: RAID 5 with 5 (Physical Disks) * 4 (Virtual Drives/Datstores)

2) Stripe Size: 128KB

3) Write Policy: Write Back with BBU

4) Read Policy: Read Ahead Always

Scenario 2

For scenario 2, you see 4 data stores were configured. However, the size of data store is not what PCCE expects. It shows doubled the size than expected.

Run RAID config validator utility to see what exactly the cause is. Here is the output:

```
2017-01-26 13:29:46,423 [main] INFO - BIOS profile C240M4 matches
C240M4.2.0.10c.0.032320160820; checking data stores.

2017-01-26 13:29:46,427 [main] INFO - Actual number of data stores found = 4

2017-01-26 13:29:46,427 [main] ERROR - Misconfigured datastores.

2017-01-26 13:29:46,427 [main] INFO - Actual Data Store Size - 2224GB

2017-01-26 13:29:46,427 [main] INFO - Actual Data Store Size - 2231GB

2017-01-26 13:29:46,427 [main] INFO - Actual Data Store Size - 2231GB

2017-01-26 13:29:46,427 [main] INFO - Actual Data Store Size - 2231GB

2017-01-26 13:29:46,427 [main] INFO - Expected Data Store must be between 1104GB and
1108GB

2017-01-26 13:29:46,427 [main] INFO - Expected Data Store must be between 1111GB and
1115GB

2017-01-26 13:29:46,427 [main] INFO - Expected Data Store must be between 1111GB and
1115GB

2017-01-26 13:29:46,427 [main] INFO - Expected Data Store must be between 1111GB and
1115GB

2017-01-26 13:29:46,427 [main] INFO - XXX *** Validation Complete -- RAID Configuration is
Invalid *** XXX
```

Why does it show 2224 GB?

C240 M4SX TRC#1 comes with 20 physical disks each with 300GB of capacity. Refer link - http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/collaboration-virtua...

So, based on above datastore requirements, each data store will be of 1200GB (1.2 TB). However, what we see is 2400GB (2.4 TB). Refer this RAID calculator.

<http://www.raid-calculator.com/default.aspx>

HDD in C240 M4SX TRC#1 came with doubled the capacity of its actual size. PCCE is very restrict with the validation rule as it was tested with defined hardware specifications.

Contact your ordering team to verify ordering guide and order the correct hardware.

References

http://docwiki.cisco.com/wiki/Virtualization_for_Cisco_Packaged_CCE

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/collaboration-virtua...

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/pcce/pcce_11_5_1/inst...