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CR00XXXXXXX TITAN Chassis Swap

Method of Procedure

**Engineering IP Transport**

# - History

**Document Information**

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Date | Person | Comments |
|  |  |  |  |
|  |  |  |  |

**Successful Implementation:**

To obtain successful implementation of your work, we have found that the more times the work request is looked over, and most importantly, proper testing, the more successful it is. In this endeavor, we require the following tasks to be a part of this work order. We also recommend that when coordination between multiple Tier 2 teams is required for an ongoing project, that you be on the bridge the first 2-3 times it is implemented to work out any issues and ensure proper deployment.

**Tester Task:**

Please list the people or teams that are required to verify the functionality of the call or data flow that this work will be affecting. The “**Tester**” task should be put in their group name with in PIER and they are required to be informed and available at the time of implementation or notes in the work log of this task stating other arrangements and why

- Overview

## - Introduction

**Short name for your request (250 char limit)**

End of Support Chassis Swap for

**Brief description including the business reason**

Replacing End of Support device () with a new ()

**Who is the requestor of this change?**

|  |  |
| --- | --- |
| **Name** | **Contact Number** |
| MOP Creator – |  |
| Change Requestor – |  |

## - MOP type (Required Information)

MOP types:

* One-time implementation MOP
  + Definition: one-time execution, not project related
* Project related MOP
  + Definition: MOP will be executed a minimum of Five times, Project MOP template required
* End 2 End Project MOP
  + Definition: MOP related to an approved E2E project

**Select one type below:**

|  |
| --- |
| One time implementation MOP |

**Select one of the above choices and include the following info:**

* Name of Project:

Name of Lead Reviewer : .

## - Primary Details

**Brief description of changes**

EOS Chassis Swap migration. Old is and end of service. Replacing to new . Matching config no change in ip addressing or routing.

**What devices will be changed?**

ARATTN21, ASMTTN41, ARATTN22

## - Implementation Summary

**Provide a high-level summary of work plan & testing plan. For details, see section 4 (4.1.1)**

1. Log all your sessions
2. Turn “terminal on” to see all the messages to capture any noticeable output
3. Run all pre-cap verification commands and verify the important outputs
4. Identify the right device we are working by following the steps below;
   1. Identify the hostname label
   2. Physically identify the port status are “GREEN”
   3. Unplug the suggested port identified by WWT MW engineer to validate the proper chasiss prior to swap (Mgmt/Console or very less impacted port)
5. Disable downstream interfaces on
6. Power down ()
7. Complete service validation – TMO NOC/Tier 2 Validation
8. Physically Replace Chassis with Pre-Staged Chassis
9. Power on new () Chassis à See section 4.1.4
10. Connect the Mgmt and Console cable only
11. Once the new device is UP and Management / Uplink connected, test your access to the device
12. Enable uplink interfaces
13. Move all the downlink cables as per the cable matrix
14. Validate services;
    1. Compare the UP and Connected interfaces with pre-cap output, make sure they match
    2. Compare the MAC table with pre-cap output, make sure they match
    3. Actively PING the ARP table and compare it with pre-cap
    4. Compare the Spanning-tree topology, make sure it converged correctly
    5. Make sure to validate allowed VLAN list for the uplinks on target device and upstream devices. Update the allowed VLAN list as needed

**2.5 - Backout Summary**

**Provide a high-level summary of backout plan. For details, see section 5.**

1. Log all your sessions
2. Turn “terminal on” to see all the messages to capture any noticeable output
3. Run all pre-cap verification commands and verify the important outputs
4. Disable downstream interfaces on
5. Power down new ()
6. Physically restore the existing ) chassis
7. Power on existing ()
8. Enable uplink interfaces ()
9. Enable downstream interfaces ()
10. Validate services;
    1. Compare the UP and Connected interfaces with pre-cap output, make sure they match
    2. Compare the MAC table with pre-cap output, make sure they match
    3. Actively PING the ARP table and compare it with pre-cap
    4. Compare the Spanning-tree topology, make sure it converged correctly
    5. Make sure to validate allowed VLAN list for the uplinks on target device and upstream devices . Update the allowed VLAN list as needed
11. Validate service are now reachable through ASATTN1L ()

## - Risk and Impact

Fill in the following table by placing an “X” in the cell that best represents the level of risk (the probability of something going wrong) and the potential impact (the consequences of something going wrong) of this change. The intersection of RISK and IMPACT provides guidance for the author and the reviewer on what kind of review would be appropriate for this Work Order. Low risk WO’s with medium or low impact are good candidates for the regular One review process. Medium or high-risk WO’s with medium or high impact may be better suited for either a Round Table or Round Table (Lite) review.

All the EOS devices should be considered HIGH Impact devices. Refer to the “Risk and Impact” document provided by TMO for project guidelines.

|  |  |  |
| --- | --- | --- |
|  | **Low Risk** | **High Risk** |
| **Low Impact** |  | X |
| **High Impact** |  | X |

**What is the risk of making this change?**

**Does this change require an outage?**

**What services/groups will be impacted by this change?**



- Pre-implementation

## - Configuration Backup

Backup all devices in section 2.3 Use MFNA to take a snapshot of all affected devices.

## – Staged Configuration

Configuration QC file after staging has been attached for validation check & reference purpose.



## - Functionality Baseline

1. Pre-testing, to validate functionality before changes begin.
2. Begin actively pinging IP addresses (PingInfoView tool).
3. Test pinging L3 Neighbors. Also ping valid static routes included below from
4. Static routes should be validated

**Request for TMO NOC to perform any pre-checks they are required to perform.**

**If the pre-checks cannot be completed, immediately begin escalations to close the MW**

Verify the Field Engineer has completed their checklist (verify they found correct chassis, verify the FE and NSE are working from the same Cable Matrix, verify all labeling is completed, etc.)

Log and save the following as “ \_CR#00XXXXXXX\_Task1\_precap.txt”

!  
terminal length 0

!

show version

show inventory

show module

dir bootflash:

show environment

show environment all

show interfaces transceiver

show diagnostic result module all

show cdp neighbors

show cdp neighbors detail

show interfaces status

show int status | ex disable

show int description | ex admin

show ip int brief | ex una|admin

show etherchannel summary

show int status err-disabled

show errdisable recovery

show errdisable detect

show vlan brief

show vtp status

show ip arp

show bfd neighbor

show mac address-table

show process cpu

show process cpu history

show process memory

show logging last 200

show spanning-tree

show spanning-tree mst

show spanning-tree mst configuration

show spanning-tree root

show bgp vrf \* all sum

show tacacs

show authentication sessions

show ip ssh

show udld neighbors

show udld

show ntp status

show ntp associations

show snmp

show snmp host

show standby brief

show ip access-lists

show ip route

show ip route summary

show ip route static

show ip route vrf mgmtVrf static

show ip ospf route

show ip route ospf

show ip route bgp

show monitor sess all

show policy-map

show class-map

sh ip ospf neighbors

sh ip eigrp neighbors

sh ip bgp summ

sh ip bgp all summ

sh ip bgp sum vrf all | in ^10

sh bgp vrf EIT\_VRF summary

sh bgp vrf NMNET summary

sh bgp vrf METROE-E summary

sh vrf all

sh mpls ldp neigh

sh ip protocols

show run

!

!

show run | in username

show snmp user

!

copy running-config startup-config

!

!

### ARP Table

!  
!

Ping Downlink and uplink devices

192.168.1.10  
172.16.0.25  
10.0.0.5

!

### Pre Check Command

MANDATORY PRE VERIFICATION

!

show interface status

Count the connected interfaces with the cable matrix and pre-capture log, make sure the right number of interfaces are connected.

!

show ip interface brief | in UP

Count and compare the UP interfaces with the cable matrix and pre-capture log

!

show mac address-table

Compare the mac address-table with the pre-capture log

!

!

show version  
! verify software and hardware  
!  
show inventory all  
! verify hardware including SFPs  
!  
show module  
! verify module status

!  
show environment power  
! verify power supply status  
!  
show environment  
! verify environment status

!

show spanning-tree  
! verify spanning-tree status

# - Implementation

## Nest, mute alarms for devices in section 2.3##

## - Implementation Steps (from section 2.4)

1. Log all your SecureCRT sessions
2. Turn on “terminal on” to capture all noticeable output
3. Instruct the on site technician to readout the chassis lable, pull 1 cable Mgmt/CSM (Less possible impacted port) to confirm that he’s working on the right device

Console Connection

Console connection details for ASATTN1L

[CSMARO09]>

Press Enter Twice

username: adm\_aamiree1

password:

ASATTN1L>

### –Shut Down Downstream Interfaces ()

##

!

Config t#

!

Interface Eth1/3, Eth1/4, Eth1/5, Eth1/13, Eth1/18, Eth1/19, Eth1/22, Eth1/23, Eth1/24, Eth1/25, Eth1/26, Eth1/38, Eth1/39, Eth1/40, Eth1/43, Eth1/46, Eth1/47, Eth1/48, Eth1/49/1, Eth1/49/2, Eth1/49/3, Eth1/50/1, Eth1/50/2, Eth1/50/3, Po1, Po2, Po28

shut

!

Verification: sh int status

Copy run start

### –Shut Down Upstream Interfaces ()

##

!

Config t#

!

Interface eth1/3-4

shut

!

Verification: sh int status

Copy run start

### – Power Down () – Refer to bullet 5 of 2.4

Ask the on site technician to power down the legacy device and take notes of the existing ports / connections / cables details. Verify the on site technician is working from the **latest Cable Matrix**.

NOTE: All new device(s) will be configured with a username/password shown below that can be used to ensure not to be locked out of the device. The ops password should also be supplied to the Maintenance Window Engineer for further backup.

username wwt privilege 15 secret T\_Mobile123

### – Complete Service Validation – TMO NOC/Tier 2 Required

After completion of traffic isolation of , request NOC to perform Run-Books for all applications in

market. We expect all applications to function normally, if any application experiences outage or downtime,

Application owner must perform log collection to determine root cause.

### – Integration of New Chassis

Instruct the on site technician to install and power UP the new device () , first, connect the Mgmt and Console cables only. Login to the device, apply the configuration below.

### Enable Uplink and downlink Interfaces ()

The following table shows the uplink and downlink port connected to the new device with description as per the working cable matrix.

|  |  |  |
| --- | --- | --- |
| **Device name** | **Upstream Device** | **Uplink Ports** |
|  | to 123.07\_ARATTN21 | Eth1/49/3 |
|  | Auto\_Cable\_Testing | Eth1/4 |
|  | to 123.07\_ARATTN21 | Eth1/3 |
|  | No description found | mgmt0 |
|  | to 124.07\_ARATTN22 | Eth1/50/3 |
|  | to 124.07\_ARATTN22 | Eth1/50/2 |
|  | to 124.07\_ARATTN22 | Eth1/50/1 |
|  | to 123.07\_ARATTN21 | Eth1/49/1 |

#PORT-CHHNNEL CONFIGURATION FOR UPSTREAM DEVICES#

##

Config t#

!

interface po253

description 113.06\_ASATTN1L\_Po1

switchport

switchport mode trunk

switchport trunk allowed vlan 30,1646-1647

spanning-tree port type network

spanning-tree guard root

mtu 9216

storm-control broadcast level 0.40

storm-control multicast level 0.40

no shutdown

!

!

interface Ethernet2/47

channel-group 253 mode active

no shutdown

!

verification: sh int status

!

copy run start

##

Config t#

!

interface po253

description 113.06\_ASATTN1L\_Po2

switchport

switchport mode trunk

switchport trunk allowed vlan 30,1646-1647

spanning-tree port type network

spanning-tree guard root

mtu 9216

storm-control broadcast level 0.40

storm-control multicast level 0.40

no shutdown

!

!

interface Ethernet2/47

channel-group 253 mode active

no shutdown

!

verification:sh int status

!

copy run start

##

Config t

!

Interface

no shut

!

Interface

No Shut

!

Interface

No Shut

!

verification: sh cdp neigh

sh int status

copy run start

|  |  |  |
| --- | --- | --- |
| **Device name** | **Downstream Device** | **Downstream Port** |
|  | to 123.07\_ARATTN21 | Eth1/3 |
|  | Auto\_Cable\_Testing | Eth1/4 |
|  | Auto\_Cable\_Testing | Eth1/5 |
|  | 101.07\_ASATTN91\_MGT | Eth1/13 |
|  | 101.02\_ARETTN63\_MGT | Eth1/18 |
|  | 0101.003.51\_ARZTTN17\_mgmt0 | Eth1/19 |
|  | 0101.007.47\_ARBTTN39\_mgmt0 | Eth1/22 |
|  | 0101.013\_ASATTN0172\_1-MGMT0 | Eth1/23 |
|  | 0101.08.43\_ASATTN61\_Mgmt0 | Eth1/24 |
|  | 101.08\_ARETTN41\_MGT | Eth1/25 |
|  | 0101.009.47\_ARZTTN09\_mgmt0 | Eth1/26 |
|  | Auto\_Cable\_Testing | Eth1/38 |
|  | Auto\_Cable\_Testing | Eth1/39 |
|  | Auto\_Cable\_Testing | Eth1/40 |
|  | Auto\_Cable\_Testing | Eth1/43 |
|  | Auto\_Cable\_Testing | Eth1/46 |
|  | Auto\_Cable\_Testing | Eth1/47 |
|  | 101.08\_CSMTTN41\_Eth1 | Eth1/48 |
|  | to 123.07\_ARATTN21 | Eth1/49/1 |
|  | to 123.07\_ARATTN21 | Eth1/49/2 |
|  | to 123.07\_ARATTN21 | Eth1/49/3 |
|  | to 124.07\_ARATTN22 | Eth1/50/1 |
|  | to 124.07\_ARATTN22 | Eth1/50/2 |
|  | to 124.07\_ARATTN22 | Eth1/50/3 |
|  | -- | Po1 |
|  | No data available | No data available |
|  | No data available | No data available |

##

Config t#

!

Interface (sh\_int\_status\_|\_in\_connected}

no shut

!

!

Verification: sh int status

Copy run start

### – Post Baseline

MANDATORY POST VERIFICATION

!

show interface status

Count the connected interfaces with the cable matrix and pre-capture log, make sure the right number of interfaces are connected.

!

show ip interface brief | in UP

Count and compare the UP interfaces with the cable matrix and pre-capture log

!

show mac address-table

Compare the mac address-table with the pre-capture log

!

!

show version  
! verify software and hardware  
!  
show inventory all  
! verify hardware including SFPs  
!  
show module  
! verify module status

!  
show environment power  
! verify power supply status  
!  
show environment  
! verify environment status

!

show spanning-tree  
! verify spanning-tree status

DETAILED VERIFICATION

Verify all the hardware parameters and functionalilty baseline outputs of the chassis after power up. Log and save the file as “\_CR00XXXXXXX\_postcap.txt”

!  
terminal length 0

!

show version

show inventory

show module

dir bootflash:

show environment

show environment all

show interfaces transceiver

show diagnostic result module all

show cdp neighbors

show cdp neighbors detail

show interfaces status

show int status | ex disable

show int description | ex admin

show ip int brief | ex una|admin

show etherchannel summary

show int status err-disabled

show errdisable recovery

show errdisable detect

show vlan brief

show vtp status

show ip arp

show bfd neighbor

show mac address-table

show process cpu

show process cpu history

show process memory

show logging last 200

show spanning-tree

show spanning-tree mst

show spanning-tree mst configuration

show spanning-tree root

show bgp vrf \* all sum

show tacacs

show authentication sessions

show ip ssh

show udld neighbors

show udld

show ntp status

show ntp associations

show snmp

show snmp host

show standby brief

show ip access-lists

show ip route

show ip route summary

show ip route static

show ip route vrf mgmtVrf static

show ip ospf route

show ip route ospf

show ip route bgp

show monitor sess all

show policy-map

show class-map

sh ip ospf neighbors

sh ip eigrp neighbors

sh ip bgp summ

sh ip bgp all summ

sh ip bgp sum vrf all | in ^10

sh bgp vrf EIT\_VRF summary

sh bgp vrf NMNET summary

sh bgp vrf METROE-E summary

sh vrf all

sh mpls ldp neigh

sh ip protocols

show run

!

!

show run | in username

show snmp user

!

! copy running-config startup-config

!

**Begin actively pinging IP addresses (PingInfoView tool).**

**Test pinging L3 Neighbors. Also ping valid static routes included below from**

**(Static routes have been validated by MOP author)**

!  
!

Ping Downlink and uplink devices

192.168.1.10  
172.16.0.25  
10.0.0.5

1. Backup all devices in section 2.3, using post-cap commands
2. Take snapshot of all affected devices using MFNA.
   1. https://mfna.t-mobile.comlogin with your credentials
   2. Put host (all caps) or IP of device in the “search” field.
   3. Click “edit” then “take snapshot”.
   4. Under Task Options, click the check box for “make snapshot a checkpoint” and click “save”.
3. Upload the log files in Pier’s supporting documents section

**Request for TMO NOC to perform any post-checks they are required to perform.**

**Verify the Field Engineer has completed their checklist (verify they found correct chassis, verify the FE and NSE are working from the same Cable Matrix, verify all labeling is completed, etc.)**

### - Compliance

Verify the chassis is compliant with TMO using MFNA

Run the compliancy check with the “Test Policy Compliance” tool. Any configuration elements that are out of compliancy may be fixed at this point. This includes tacacs, user group change, logging servers, and route-maps.

### – DA and Final Steps

Once the new device is accessible with your T-Mobile NT-ID credentials then remove the WWT username. Complete DA Documentation checklist (details on separate document)

**Remove WWT Login**

Run the following commands:

!

**no username wwt password 0 T\_Mobile123**

!

wr

Confirm WWT Login is removed with “sh run | in username”

**Confirm snmp User**

Validate if snmp user configured ( Only if VAR replacement is catalyst )

!

sh snmp user

If snmp user is not configured, apply the following command and reconfirm :

snmp-server user RO-GROUP v3 auth sha priv aes 128 access SNMPv3-EIT

wr

# SevOne

## Traffic Verification Pre and Post (Mandatory)

Log in to SevOne <https://10.148.6.36/#Dashboard/noParamsOnRefresh=1> to verify traffic pattern before and after the chassis swap. Follow the steps below to capture the interface traffic logs;

1. Login to SevOne with your T-Mobile credentials
2. Search for the device you are working on, in top right corner search box
3. Scroll down to interfaces and click on the intended interface number to collect the traffic log
4. For the pre-cap, collect the last 2 hours traffic log by clicking on the setting, right top corner
5. For the post-cap, collect the last 30 minutes traffic log, setting  Change Timespan  Custom
6. Take screenshots of the traffic log and paste it on DA-Checklist word file and upload it as a supporting document in PIER

Note : The newly swapped device might not provide the real time traffic log because SevOne needs to syn with the new device in few hours but we can collect the traffic log from the other side connected port.

# - Backout

Understanding that unforeseen consequences sometimes occur, the following procedure is detailed to provide a failsafe in the event of failure. This process is to be utilized only in the instance the original procedure detailed no longer proves viable. The ultimate result is to restore services to a stable state, similar if not exactly as was prior to modification.

1. During the MW, in case of any failure / issue,WWT MW Engineer will work and try to fix the issue within 30 minutes
2. If WWT MW Engineer is not able resolve the issue within 30 minutes then it will be escalated to;
   1. WWT Command Center for additional engineering and trouble shooting support
   2. WWT MW Engineer will contact the PM and T-Mobile technical resource for further trouble-shooting support
3. Upon T-Mobile resource engagement, the WWT MW Engineer will initiate a request to Cisco TAC to join the bridge for further engineering technical assistance
4. In consultation with TMO resource and command center, a dission will confirm the rollback

## - Forensic Information

Prior to backout, capture the following information to assist with executing this work order correctly the next time.

()

terminal length 0  
!  
show version  
show inventory all  
show module  
dir bootflash:  
show environment  
show diagnostic result module all  
show cdp neighbors   
show cdp neighbor detail  
show interface  
show interface status  
show int status | include connected  
show int status | include disabled  
show interface description  
show interface description | include up  
show interface description | include down  
show ip interface brief | exclude down  
show ip interface brief   
show port-channel summary  
show bgp all summary vrf all  
show int status err-disabled  
show errdisable recovery  
show errdisable detect  
show vlan brief  
show vlan summary  
show vtp status  
show vtp interface  
show vtp counters   
show ip arp  
show bfd neighbor  
show mac address-table  
show process cpu  
show process cpu history  
show process memory  
show logging  
show spanning-tree  
show spanning-tree summary  
show spanning-tree mst  
show spanning-tree mst configuration  
show spanning-tree root  
show hsrp  
show hsrp brief  
show tacacs  
show ssh server  
show ssh key  
show udld neighbor  
show udld  
show ntp status  
show ntp peer-status  
show snmp  
show snmp host  
show snmp community  
show snmp group  
show snmp user  
show ip access-lists  
show ip route  
show ipv6 route  
show ip route summary  
show ip route static  
show ip route bgp  
show policy-map  
show class-map  
show run  
!  
copy run start  
!

## - Backout Steps (from section 2.5)

1. Log all your sessions
2. Turn “terminal on” to see all the messages to capture any noticeable output
3. Run all pre-cap verification commands and verify the important outputs
4. Disable downstream interfaces on ASATTN1L
5. Power down new ()
6. Physically restore the existing chassis
7. Power on existing ()
8. Enable uplink interfaces ()
9. Enable downstream interfaces ()
10. Validate services;
    1. Compare the UP and Connected interfaces with pre-cap output, make sure they match
    2. Compare the MAC table with pre-cap output, make sure they match
    3. Actively PING the ARP table and compare it with pre-cap
    4. Compare the Spanning-tree topology , make sure it converged correctly
    5. Make sure to validate allowed VLAN list for the uplinks on target device and upstream devices . Update the allowed VLAN list as needed
11. Validate service are now routing through ()

### -Disable Downstream Interfaces (N-9K)

##

!! Disable Downlink Ports

!

Interface Eth1/3, Eth1/4, Eth1/5, Eth1/13, Eth1/18, Eth1/19, Eth1/22, Eth1/23, Eth1/24, Eth1/25, Eth1/26, Eth1/38, Eth1/39, Eth1/40, Eth1/43, Eth1/46, Eth1/47, Eth1/48, Eth1/49/1, Eth1/49/2, Eth1/49/3, Eth1/50/1, Eth1/50/2, Eth1/50/3, Po1, Po2, Po28

Shut

!

Verification: sh int status

!

Copy run start

### -Disable Upstream Interfaces (N-9K)

##

!! Disable Uplink Ports

Config t#

!

interface

shut

!

interface

shut

!

interface Eth1/49/3

shut

!

interface Eth1/4

shut

!

Verification: sh int status

Copy run start

### - Integration of Existing Chassis

Instruct the on site technician to power down and begin replacement of the chassis with the existing

with devices. Verify the on-site technician is working from the latest Cable Matrix.

After the legacy device is racked, connect the console cable to the legacy device before it is powered up to verify the POST and monitor the device while the cables are being restored. Power on the legacy device once the chassis swap has been completed, monitor the device to ensure it boots with no issues.

MANDATORY ROLLBACK VERIFICATION

Once the legacy device is up and accessible, before running the long list of detailed verification commands, run the following basic commands and compare the same command’s output with the pre-capture log and make sure it matches.

!

show interface status

Count the connected interfaces with the cable matrix and pre-capture log, make sure the right number of interfaces are connected.

!

show ip interface brief | in UP

Count and compare the UP interfaces with the cable matrix and pre-capture log

!

show mac address-table

Compare the mac address-table with the pre-capture log

!

!

show version  
! verify software and hardware  
!  
show inventory all  
! verify hardware including SFPs  
!  
show module  
! verify module status

!  
show environment power  
! verify power supply status  
!  
show environment  
! verify environment status

!

show spanning-tree  
! verify spanning-tree status

### - Enable Upstream Interfaces ()

#PORT-CHANNEL CONFIGURATION FOR UPSTREAM DEVICES#

##

Config t#

!

default interface Ethernet2/47

!

interface Ethernet2/47

description 113.06\_ASATTN1L\_T1/49

switchport

switchport mode trunk

switchport trunk allowed vlan 30,1646-1647

spanning-tree port type network

spanning-tree guard root

mtu 9216

storm-control broadcast level 0.40

storm-control multicast level 0.40

no shutdown

!

no interface po253

!

Verification: sh int status

Copy run start

##

Config t#

!

default interface Ethernet2/47

!

interface Ethernet2/47

description 113.06\_ASATTN1L\_T1/50

switchport

switchport mode trunk

switchport trunk allowed vlan 30,1646-1647

spanning-tree port type network

spanning-tree guard root

mtu 9216

storm-control broadcast level 0.40

storm-control multicast level 0.40

no shutdown

!

no interface po253

!

Verification: sh int status

Copy run start

##

Config t

!

Interface eth1/3-4

no shut

!

verification: show cdp neigh

sh int status

copy run start

### - Enable Downstream Interfaces ()

##

Config t#

!

Interface

no shut

!

!

Verification: sh int status

Copy run start

### - Verification

**Log and save the following as “\_CR00XXXXXXX\_postcap.txt”**

terminal length 0

!

show version

show inventory

show module

dir bootflash:

show environment

show environment all

show interfaces transceiver

show diagnostic result module all

show cdp neighbors

show cdp neighbors detail

show interfaces status

show int status | ex disable

show int description | ex admin

show ip int brief | ex una|admin

show etherchannel summary

show int status err-disabled

show errdisable recovery

show errdisable detect

show vlan brief

show vtp status

show ip arp

show bfd neighbor

show mac address-table

show process cpu

show process cpu history

show process memory

show logging last 200

show spanning-tree

show spanning-tree mst

show spanning-tree mst configuration

show spanning-tree root

show bgp vrf \* all sum

show tacacs

show authentication sessions

show ip ssh

show udld neighbors

show udld

show ntp status

show ntp associations

show snmp

show snmp host

show standby brief

show ip access-lists

show ip route

show ip route summary

show ip route static

show ip route vrf mgmtVrf static

show ip ospf route

show ip route ospf

show ip route bgp

show monitor sess all

show policy-map

show class-map

sh ip ospf neighbors

sh ip eigrp neighbors

sh ip bgp summ

sh ip bgp all summ

sh ip bgp sum vrf all | in ^10

sh bgp vrf EIT\_VRF summary

sh bgp vrf NMNET summary

sh bgp vrf METROE-E summary

sh vrf all

sh mpls ldp neigh

sh ip protocols

show run

show run | in username

show snmp user

!

copy running-config startup-config

### – Monitor/Service Validation and Soak

While monitoring the devices work with TMO Tier 2 and service validation teams to complete testing.

Once traffic restoral has been completed, please wait 30-minutes before asking for the final post checks from NOC Teams. Maintain a term mon session on both routers and monitor for logging messages. Once the 30 Minute Soak has been completed, NOC Teams should run their final post checks and release us from the Webex. If the NOC Team encounters issues with the services traversing these devices, have them escalate to their respective Tier 2 Support Team.  
  
During the 30-minute soak compare pre/post checks and captures as well as work on administrative activities such as MFNA Driver change and NNMi discovery.

**Removing the Device from the old NNMi servers:**

NXOS devices point to different NNMI servers than IOS devices and updates are required. Use the link below to remove device from the old NNMi servers.

<https://resolve.gsm1900.org:8443/resolve/jsp/rsclient.jsp#RS.wiki.Main/name=Automation.DeviceDecom>

**Adding the Device to the new NNMi servers:**

Point IOS device to proper NNMi server now that the old association has been removed. Use the link below to add device to new NNMi servers.

<https://resolve.gsm1900.org:8443/resolve/jsp/rsclient.jsp?#RS.wiki.Main/name=Runbook.IPNENMSPROVISIONING>

VERIFICATION

**USE MFNA to take a snapshot of all affected devices**

- <https://mfna.t-mobile.com> login with your credentials

- Put host (all caps) or IP of device in the “search” field.

- Click “edit” then “take snapshot”.

- Under Task Options, click the check box for “make snapshot a checkpoint” and click “save”.

**END OF MOP**