

**Network Simplification AT&T Mexico**

Integration/Migration MOP Netsimp

Error! MergeField was not found in header record of data source. Error! MergeField was not found in header record of data source. Error! MergeField was not found in header record of data source.

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About This Integration/Migration MOP Netsimp

|  |  |
| --- | --- |
| Author | Day1 IPBH/Netsimp team |
| Change Authority | Cisco Day1 Netsimp team |
| Project ID | **Error! MergeField was not found in header record of data source.** |

History

|  |  |  |  |
| --- | --- | --- | --- |
| Version No. | Issue Date | Status | Reason for Change |
| 1.0 | **Error! MergeField was not found in header record of data source.** | Released | First draft |
|  |  |  |  |

Review

|  |  |  |
| --- | --- | --- |
| Reviewer’s Details | Version No. | Date |
|  |  |  |
|  |  |  |

Document Conventions

|  |  |
| --- | --- |
| D:\Pad and pen.jpg | Alerts readers to take note. Notes contain helpful suggestions or references to material not covered in the document. |
| D:\Caution.jpg | Alerts readers to be careful. In this situation, you might do something that could result in equipment damage or loss of data. |
| D:\Warning.JPG | Alerts readers of a situation that could cause bodily injury. They need to be aware of the hazards involved with electrical circuitry and familiarize themselves with standard practices for preventing accidents. |
| D:\clock.jpg | Alerts the reader that they can save time by performing the action described in the paragraph affixed to this icon. |
| D:\Tip icon.jpg | Alerts the reader that the information affixed to this icon will help them solve a problem. The information might not be troubleshooting or even an action, but it could be useful information similar to a Timesaver. |

# Introduction

## Preface

This document is created for the Network simplification project. Its main audience is AT&T Mexico Engineering, Deployment, Change Control, NOC and Operations teams which oversee execution of the Maintenance Windows to integrate **Error! MergeField was not found in header record of data source.** devices AT&T network to the Blue or Red domain and to migrate services on a production AT&T device to this new Cisco device. The MOP is structured to be generic and the Scripts to be executed are specific to the device involved during the Maintenance Window.

## Related Documents

|  |  |
| --- | --- |
| Document | Version |
| ATTMx Netsimp Phase 2 - Customer Requirements Document Presentation - 2020Jun22 | 1.0 |
| ATTMx Netsimp Phase 2 - Customer Requirements Document - 2020Jun22 | 1.0 |
| 914781\_AT&T\_NETSIM\_LLD\_V1.2\_2021\_April\_12 | 1.2 |
| 914781\_Netsimp phase 2\_NCS560\_Access\_Golden\_Config\_2021Feb19 v1.0 | 1.0 |

## Devices involved

Table 1 –Cisco Site-names and Hostnames

|  |  |  |
| --- | --- | --- |
| Location | Hostname | IP address |
| Error! MergeField was not found in header record of data source. | Error! MergeField was not found in header record of data source. | Error! MergeField was not found in header record of data source. |

Non-Cisco devices that are involved and require configuration are:

Table 2 – Non-Cisco Site-names and Hostnames

|  |  |  |
| --- | --- | --- |
| Sitename | Hostname | IP Address |
| **Error! MergeField was not found in header record of data source.** | **Error! MergeField was not found in header record of data source.** | **Error! MergeField was not found in header record of data source.** |
| **Error! MergeField was not found in header record of data source.** | **Error! MergeField was not found in header record of data source.** | **Error! MergeField was not found in header record of data source.** |
| **Error! MergeField was not found in header record of data source.** | **Error! MergeField was not found in header record of data source.** | **Error! MergeField was not found in header record of data source.** |

* AT&T team is responsible to configure non-Cisco devices

## Escalation matrix

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Responsible | Role | Telephone number | Email | Triggers when |
| Alfonso Eduardo Espinoza | Cisco project lead | 5569669920 | alfesping@cisco.com | There is an issue when integrating the router and can lead to a failed MW  After 15 minutes TS an issue and there is no resolution  Immediately after services are impacted because of the execution of this MOP |
| Victor Suarez | Cisco project lead | 5535154023 | visuarez@cisco.com | There is an issue when integrating the router and can lead to a failed MW  After 20 minutes TS an issue and there is no resolution  Immediately after services are impacted because of the execution of this MOP  When a decision out of the scope of the MOP is needed and immediate action is required |
| Hiram Cortes | Cisco project manager | 5576911247 | hcortesp@cisco.com | Immediately after services are impacted because of the execution of this MOP  When an administrative decision out of the scope of the MOP is needed and immediate action is required |
| Viridiana Lugo | Cisco in site personnel remote-supervision | 5541874127 | viridiana.lugo@axity.com | Personnel in site can’t access the site  There is material missing or pending needed for the completion of the MW  There are activities considered out of the scope for the personnel in site |
| Francisco Garcia | Cisco in site personnel remote-manager | 5541874101 | jfrancisco.garciaz@axity.com | Immediately after services are impacted because of physical reasons  Electrical issues that can impact the services or the installation of the router  There is an incident with the personnel in site and immediate action is required |
| Alberto Rodriguez | Cisco delivery manager | 5569174742 | alberod2@cisco.com | After major services are impacted because of the execution of this MOP  Highest escalation contact in Cisco during this project |
| Jose Guido Trujano | AT&T datacom engineer | 5573075182 | jt632e@att.com | When connections planned to be migrated in this MOP are not allowed to be moved during the MW  When a service not listed/reported to be migrated is left in the migration router  When a service is affected, or a non-cisco device is not working properly, or a port is not working properly  If there is need to talk with deployment or operations department for a troubleshooting action  Immediately after a rollback action is performed and services are still impacted |
| Anaid Tejada | AT&T datacom lead | 5570488199 | at330m@att.com | After 20 minutes reviewing and there is no resolution: When connections reserved for this MOP are not allowed to be used during the MW  After 20 minutes reviewing and there is no resolution: When a service is affected, or a device is not working properly, or a port is not working properly  When a decision out of the scope of the MOP is needed regarding an AT&T decision and immediate action is required  Immediately after a rollback action is performed and services are still impacted |
| Jorge Martinez | AT&T datacom manager | 5549812635 | jm646s@att.com | After 40 minutes and there is no resolution: After major services are impacted because of the execution of this MOP  After 40 minutes reviewing and there is no resolution: a rollback action is performed and services are still impacted  When a decision out of the scope of the MOP is needed and immediate action is required |
| Edwin Cervantes | Deployment | 5572388326 | ec766c@att.com | When passwords for the MW are not issued  When CRQ is not approved |
| Efrain Reyes | AT&T project manager | 5519630900 | er462w@att.com | When an administrative decision out of the scope of the MOP is needed and immediate action is required |

# Ask yourself

* Lead engineer to execute this activity must read this section and be sure the Maintenance window is well prepared before starting the activity.

|  |  |
| --- | --- |
| Task description | Answer |
| Have I read the entire MOP before the start of the maintenance window? | Yes  No |
| Do I have all required migration scripts as well as rollback scripts for the execution of the activity? | Yes  No |
| Do I understand the activity and I am sure of the procedure? | Yes  No |
| Is the activity is scheduled and approved? | Yes  No |
| Do I know the Change Request number (CRQ #)? | Yes  No |
| Can open a TAC case in Cisco if something in the maintenance window occurs? | Yes  No |
| In case this is a sensitive maintenance window: have I opened a TAC case and shared the MOP with them before the start of the activity? | Yes  No |
| Can I reach **Error! MergeField was not found in header record of data source.** through IP address **Error! MergeField was not found in header record of data source.**? | Yes  No |
| Can I connect to the device **Error! MergeField was not found in header record of data source.** through SSH protocol? have I tested the connection prior to the maintenance window? | Yes  No |
| Can I verify the status of **Error! MergeField was not found in header record of data source.** and no major alarm that could impact the activity is showing? | Yes  No |
| Have the personnel in the field inform they have gained access to the site?  OR  Have I reached personnel in the field to make sure they can access the site? | Yes  No |
| Have I sent an email to gain privilege access to the **Error! MergeField was not found in header record of data source.** device? | Yes  No |
| Have I sent a mail notifying customer and Cisco about the start of the activity? | Yes  No |
| Have I received a mail from customer indicating the start of the activity is allowed? | Yes  No |
| Does the activity have a Webex link where all parties involved in the activity will join? If not, can I generate the Webex link? | Yes  No |
| Have I shared the Webex link with parties involved in the migration activity OR someone involved in the activity have shared it? | Yes  No |
| Aggregation router integration scripts created by AT&T Engineers are included in the MW documents. Am I sure they have it for the execution of the maintenance window? | Yes  No |
| CX-600 devices migration scripts created by AT&T Engineers are included in the MW documents. Am I sure they have it for the execution of the maintenance window? | Yes  No |
| Have I joined the Webex conference and started recording it? | Yes  No |
| Am I sharing my SSH terminal to be recorded during the maintenance window? | Yes  No |
| After the maintenance window: Did I reach AT&T engineers to verify services are not impacted? | Yes  No |
| Did I send a closure email sending the pre maintenance window and post maintenance window health checks? | Yes  No |

# Pre-Maintenance window activities

This section and its sub-sections are all mandatory and are meant to be executed at least 30 minutes before the start of the maintenance window.

## Request for read/write permissions with the AT&T’s Network Security team

Send an email to the Network Security (NS) Team Mailer to request for Read/Write permissions and wait for approval. Permissions should be granted before the start of the maintenance window.

* **TO:** Log Net Access Managment <LogNetAccessManagment@mx.att.com>
* **CC:** day1-attmex-netsimp(mailer list) <day1-attmex-netsimp@cisco.com>
* **Subject:** Solicitud de privilegios **CRQ YYYYY**

Buena noche Team Network Security,

Solicitando de su valioso apoyo para la actividad **CRQ YYYYY**, nos pueden ayudar a otorgar los privilegios al equipoError! MergeField was not found in header record of data source.para realizar la integración del NE en el proyecto NETSIMPL.

|  |  |
| --- | --- |
| **Usuario:** | XXXXXX**(ISE)** |
| **Actividad CRQ:** | **CRQ YYYYY** |
| **OT de privilegios:** | **WO0000000xxxxxx** |
| **OT de creación/renovación proveedores:** | **WO0000000xxxxxx** |
| **Elementos solicitados: (IP y Hostname)** | Error! MergeField was not found in header record of data source.***-***Error! MergeField was not found in header record of data source. |
| **Comentarios:** | Ventana de Integración |

* Replace the X values with the user assigned to XXXXXX (ISE) or XXXXXX (TACACs)
* Replace the **Y** values with the correct number of **CRQ** that we have related to the activity in CRQ
* Change the value of **x** to our current WO number in **WO0000000xxxxxx**
* Once approved, test permissions, proceed with the next step.
* In case permissions are not approved, please contact AT&T’s engineer owner of the CRQ.

## Confirm with the AT&T’s NOC team that Network Changes will be done before starting

Send an email to the Network Operations Center (NOC) Team Mailer to inform Start of the Activity and wait for the start time of the maintenance window.

* **TO:** 'ALMAGUER FERNANDEZ, EDUARDO' <ea321v@att.com>; 'Mexico NOC IP Backhaul' <mx.noc.ipbh@mx.att.com>; 'Mexico NOC BO Transporte' <mx.noc.tx@mx.att.com>; 'Mexico NOC FO ATT' <mx.noc.att@mx.att.com>; 'Mexico Noc Bo Core Ip' <mx.noc.ipcore@mx.att.com>; 'Mexico Noc Bo Ran' <mx.noc.ran@mx.att.com>; 'Mexico Soporte Telecom CS' <mx.stcoreipsupport@mx.att.com>
* **CC:**'MX FO Deployment tx' <fo.deployment.tx@att.com.mx>; 'REYES MARTINEZ, EFRAIN' <er462w@att.com>; Emmanuel Perez Guillen (eperezgu) <eperezgu@cisco.com>; day1-attmex-netsimp(mailer list) <day1-attmex-netsimp@cisco.com>; Alberto Rodriguez Sanchez (alberod2) <alberod2@cisco.com>; 'am169m@att.com'; 'francisco.arriaga@verveba.com'; 'netsimp.ext@external.cisco.com'
* **Subject:** Solicitud de inicio de actividad con **CRQ YYYYY** Error! MergeField was not found in header record of data source.

Buenas Noches Team NOC,

**Su apoyo con el vo.bo. para el inicio del CRQ YYYYY el cual consta de: Ventana de Integración del equipo** Error! MergeField was not found in header record of data source. **sitio** Error! MergeField was not found in header record of data source. **.**

Anexo el formato de cisco para el inicio de la ventana y al final se anexarán los pre-checks y post-checks.

Sin más por el momento y en espera del apoyo quedo, saludos.

|  |  |
| --- | --- |
| **CISCO** | **AT&T Mexico** |
| [paste here the link of the scheduled webex session] |
| **Notificación de Inicio de Ventana** |
| **V Formato 0.83 AT&T** |  |
|  | |
| **CRQ #** | **CRQ YYYYY** |
| **Caso Proactivo** | ***[paste #]*** |
| **Link Webex** | [paste here the link of the scheduled webex session] |
| **Proyecto** | Error! MergeField was not found in header record of data source.**–**Error! MergeField was not found in header record of data source. ***NETSIMPL*** |
| **Sitios a Intervenir** | Error! MergeField was not found in header record of data source.***-***Error! MergeField was not found in header record of data source. |
| **Objectivo De la Actividad  :** | ***Integración de NE*** |
|  |
| **Riesgos de la Actividad:** | **0** |  |
| **OBSERVACIONES** |  |  |

* Replace the **Y** values with the correct number of **CRQ** that we have related to the activity in CRQ
* Once approved, proceed with the next step.
* In case start of the activity is not approved, please contact AT&T’s engineer owner of the CRQ.

## Remote Access Verification on Error! MergeField was not found in header record of data source.

* Perform an SSH connection to the Error! MergeField was not found in header record of data source. Error! MergeField was not found in header record of data source. Management IP Address Error! MergeField was not found in header record of data source..

## Verifying Software version and Hardware

The recommended Cisco IOS XR version is:

Table Device and software

|  |  |
| --- | --- |
| **Device** | **Software Version** |
| Error! MergeField was not found in header record of data source. | Error! MergeField was not found in header record of data source. |

Capture the following outputs:

RP/0/RP0/CPU0:Error! MergeField was not found in header record of data source.# show version

RP/0/RP0/CPU0:Error! MergeField was not found in header record of data source.# show inventory

RP/0/RP0/CPU0:Error! MergeField was not found in header record of data source.# show install active

RP/0/RP0/CPU0:Error! MergeField was not found in header record of data source.# show install committed

Expected results:

* Router must be using expected software version.
* Expected software version and SMUs are committed.
* Confirm expected module interfaces and SFPs are installed the router.

## Perform health checks

Capture the following outputs:

RP/0/RP0/CPU0:Error! MergeField was not found in header record of data source.# show hw-module fpd all

RP/0/RP0/CPU0:Error! MergeField was not found in header record of data source.# show alarms brief system active

RP/0/RP0/CPU0:Error! MergeField was not found in header record of data source.# show platform

RP/0/RP0/CPU0:Error! MergeField was not found in header record of data source.# admin

RP/0/RP0/CPU0:Error! MergeField was not found in header record of data source.(admin)# show environment all

Expected results:

* Confirm sensors display as normal
* Confirm there are not alarms
* Verify there are not environmental values close to a threshold
* If Error! MergeField was not found in header record of data source. has any condition that may impact its functionality, the MW should be rescheduled to a later date. Executing this may impact service or high availability of services.

## Verifying Error! MergeField was not found in header record of data source. device state

Connect to **Error! MergeField was not found in header record of data source.** and execute following commands, record the output and save the output in a file. This file will be shared after the maintenance window activity with team members and customer.

RP/0/RP0/CPU0:Error! MergeField was not found in header record of data source.#

!

Error! MergeField was not found in header record of data source.

* If a minor alarm shows up in the verification and you are sure it doesn’t impact the activity, inform about it during the start of the activity email.
* If device shows a major alarm that could impact the activity or a verification fails, the MW should be rescheduled to a later date. Executing this may impact services or high availability.

# Maintenance window activities

## Pre migration check point

Create a rollback check point before starting the migration.

Execute the following commands to create a checkpoint before the migration. This checkpoint is useful to rollback configuration as it was before the migration. No other use is intended, and command execution here changes nothing in the current configuration of the device.

Error! MergeField was not found in header record of data source.#

Error! MergeField was not found in header record of data source.

## Aggregation device configuration (Error! MergeField was not found in header record of data source. , Error! MergeField was not found in header record of data source.)

Activities on Aggregation routers will be performed remotely, it’s AT&T responsibility to configure 7750 and CX-600 devices.

Connect uplinks between Error! MergeField was not found in header record of data source. and Aggregation routers and proceed to verify optical Levels (Tx and Rx). Reference levels for SFP+ are included below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| SFP+ | Type | Tx power (dBm)  Maximum / Minimum | | Rx power (dBm)  Maximum / Minimum | |
| SFP-10G-SR-S | 10GBASE-SR 850nm MMF. Beige | -1.2 | -7.3 | -1.0 | -9.9 |
| SFP-10G-SR-X | 10GBASE-SR, 10GBASE-SW and OTU2e 850nm MMF. Beige | -1.2 | -7.3 | -1.0 | -9.9 |
| SFP-10G-LR-S | 10GBASE-LR 1310nm SMF. Blue | 0.5 | -8.2 | 0.5 | -14.4 |
| SFP-10G-LR | 10GBASE-LR 1310nm SMF. Blue | 0.5 | -8.2 | 0.5 | -14.4 |
| SFP-10G-LR-X | 10GBASE-LR, 10GBASE-LW and OTU2e 1310nm SMF | 0.5 | -8.2 | 0.5 | -14.4 |
| SFP-10G-ER-S | 10GBASE-ER 1550nm SMF. Red | 4.0 | -4.7 | -1 | -15.8 |
| SFP-10G-ER | 10GBASE-ER 1550nm SMF. Red | 4.0 | -4.7 | -1 | -15.8 |
| SFP-10G-ZR-S | 10GBASE-ZR 1550nm SMF. Green | 4.0 | 0 | -7 | -24 |
| SFP-10G-ZR | 10GBASE-ZR 1550nm SMF. Green | 4.0 | 0 | -7 | -24 |

Configure ISIS, LDP, BGP, BFD protocols on the interfaces of the Aggregation devices.

Table IP addressing for NetSim scenario devices

|  |  |  |  |
| --- | --- | --- | --- |
| **IP addressing** | | | |
| **Device AGGs** | **Interface** | **IP address** | **Mask** |
| **Error! MergeField was not found in header record of data source.** | **Error! MergeField was not found in header record of data source.** | **Error! MergeField was not found in header record of data source.** | 255.255.255.254 |
| **Error! MergeField was not found in header record of data source.** | **Error! MergeField was not found in header record of data source.** | **Error! MergeField was not found in header record of data source.** | 255.255.255.254 |
| **Device** Error! MergeField was not found in header record of data source. | **Interface** | **IP address** | **Mask** |
| **Error! MergeField was not found in header record of data source.** | **Error! MergeField was not found in header record of data source.** | **Error! MergeField was not found in header record of data source.** | 255.255.255.254 |
| **Error! MergeField was not found in header record of data source.** | **Error! MergeField was not found in header record of data source.** | 255.255.255.254 |

## Link integration towards

Verify that the cables are connected to the ports assigned.

Configure Error! MergeField was not found in header record of data source.**,** Error! MergeField was not found in header record of data source.interface **Error! MergeField was not found in header record of data source.** to

Configure terminal

!

interface Error! MergeField was not found in header record of data source.

description To-Error! MergeField was not found in header record of data source.**-**Error! MergeField was not found in header record of data source.

mtu 9212

service-policy input PM-INGRESS

service-policy output PM-EGRESS

ipv4 address Error! MergeField was not found in header record of data source. 255.255.255.254

carrier-delay up 2000 down 0

load-interval 30

**no shutdown**

!

commit

Verify the connection

show interface Error! MergeField was not found in header record of data source.

ping **Error! MergeField was not found in header record of data source.**

## Configure

* Use the logging facility of the terminal emulator program used to record all activity in the devices. Enable “terminal monitor” to display logs on the terminal connection.
* Make a backup of the configuration and the results of commands used in CLI.

Connect to a neighbouring AGG device, SSH to the Error! MergeField was not found in header record of data source.using directly connected interface IP address. Use local user configured ATTIPBH and password or Use ISE user and password

Apply configurations to the Error! MergeField was not found in header record of data source.device. Configurations are in **.txt files**. Contains configurations for routing protocols like BGP, ISIS in state down and others functional configuration like communities.

Apply configuration in the script **“step\_1\_**Error! MergeField was not found in header record of data source.**.txt”.**

configure terminal

**commit**

* Wait for AT&T team to apply changes in AGG devices.

## Verify protocols

Verify the protocols become active between the and the Aggregation routers

Verify alarms on interfaces

show show alarms brief system active

Verify ARP table

show arp

show arp

show arp

Verify BFD on interfaces to aggregation routers

show bfd ipv4 session interface

show bfd ipv4 session interface

show logging process bfd

Verify ISIS adjacencies

show isis neighbors detail

show isis adjacency detail

show logging process isis

Verify learns Aggregation routers Loopbacks in ISIS

show isis route /32 detail

show isis route /32 detail

If there is a connection to the Red domain, verify LDP

show mpls ldp summary

show mpls ldp neighbor

show mpls ldp discovery

show mpls ldp interface

show mpls ldp interface

Verify Cisco Express Forwarding is installing the Aggregation routers using an MPLS Label

show cef /32 detail

show cef /32 detail | include local

show cef /32 detail

show cef /32 detail | include local

Verify BGP sessions

show bgp ipv4 labeled-unicast summary

show bgp vpnv4 unicast summary

show bgp ipv4 rt-filter summary

show logging process bgp

show bgp ipv4 labeled-unicast advertised

show bgp vpnv4 unicast advertised

show bgp ipv4 labeled-unicast process

show bgp ipv4 rt-filter | i 0:0x0000:0:0/0

Once ISIS and BGP neighborhood from to Aggregation routers are up remove the default static route.

router static

vrf ATT\_OAM

address-family ipv4 unicast

no 0.0.0.0/0 GigabitEthernet0/5/0/12

**commit confirmed minutes 10**

Before saving the configuration, use **commit confirm minutes 10** and confirm the device is reachable through the Aggregation routers using SSH from your computer to and using ISE/TACACs username and password. Once confirmed, commit the static route removal.

commit

## Verifying Error! MergeField was not found in header record of data source. Error! MergeField was not found in header record of data source. device state after integration

Apply the following commands to verify the state of the device after all ports have been integrated.

Error! MergeField was not found in header record of data source.#

**Error! MergeField was not found in header record of data source.**

## Migration port mapping

The following port mapping and scripts names are listed in the following table.

Table 4 – Port mapping and scripts

|  |  |  |  |
| --- | --- | --- | --- |
| **Interface CX** | **Service Description** | **Interface** Error! MergeField was not found in header record of data source. **Cisco** | **Script name** |
| **Error! MergeField was not found in header record of data source.** | **Error! MergeField was not found in header record of data source.** | **Error! MergeField was not found in header record of data source.** | **Error! MergeField was not found in header record of data source.** |
|  |  |  |  |

## Migration procedure

* Log all terminal inputs and outputs using terminal emulator log feature. This can help in case an unexpected event occurs during the execution.

Execute the following steps for each port listed in the Table 4 – Port mapping and scripts

* Verify VLANs hosts in the CX device, use ping commands and/or ARP table.
* Execute script on **Error! MergeField was not found in header record of data source.** named in the Script name field of the table.
* Disconnect CX port state in the Interface CX field.
* Unconfigure CX device VLAN interfaces and Static routes.
* Connect **Error! MergeField was not found in header record of data source.** port listed in the Interface Error! MergeField was not found in header record of data source.field of Table 4 – Port mapping and scripts to the end device described in the Service Description field of the table.
* Verify hosts in each VLAN migrated using ping commands and/or ARP table.
* In case verification failed or service is negatively impacted execute rollback script stated in the rollback section below.

## Link integration to

Verify that the cables are connected to the ports assigned.

Configure Error! MergeField was not found in header record of data source.**,** Error! MergeField was not found in header record of data source.interface **Error! MergeField was not found in header record of data source.** towards

Configure terminal

!

interface Error! MergeField was not found in header record of data source.

description To-Error! MergeField was not found in header record of data source.**-**Error! MergeField was not found in header record of data source.

mtu 9212

service-policy input PM-INGRESS

service-policy output PM-EGRESS

ipv4 address Error! MergeField was not found in header record of data source. 255.255.255.254

carrier-delay up 2000 down 0

load-interval 30

**no shutdown**

!

commit

Verify the connection

show interface Error! MergeField was not found in header record of data source.

ping **Error! MergeField was not found in header record of data source.**

## Verify protocols

Verify the protocols become active between the and the Aggregation routers

Verify alarms on interfaces

show show alarms brief system active

Verify ARP table

show arp

show arp

show arp

Verify BFD on interfaces to aggregation routers

show bfd ipv4 session interface

show bfd ipv4 session interface

show logging process bfd

Verify ISIS adjacencies

show isis neighbors detail

show isis adjacency detail

show logging process isis

Verify learns Aggregation routers Loopbacks in ISIS

show isis route /32 detail

show isis route /32 detail

If there is a connection to the Red domain, verify LDP

show mpls ldp summary

show mpls ldp neighbor

show mpls ldp discovery

show mpls ldp interface

show mpls ldp interface

Verify Cisco Express Forwarding is installing the Aggregation routers using an MPLS Label

show cef /32 detail

show cef /32 detail | include local

show cef /32 detail

show cef /32 detail | include local

Verify BGP sessions

show bgp ipv4 labeled-unicast summary

show bgp vpnv4 unicast summary

show bgp ipv4 rt-filter summary

show logging process bgp

show bgp ipv4 labeled-unicast advertised

show bgp vpnv4 unicast advertised

show bgp ipv4 labeled-unicast process

show bgp ipv4 rt-filter | i 0:0x0000:0:0/0

## Cleanup Error! MergeField was not found in header record of data source.

Delete the temporal user in Error! MergeField was not found in header record of data source.in case it exists.

Error! MergeField was not found in header record of data source.# configure terminal

no username **ATTIPBH**

!

Clean interface configuration on

Error! MergeField was not found in header record of data source.# configure terminal

interface Error! MergeField was not found in header record of data source.

no description

no vrf

no ipv4 address

no load-interval

shutdown

## Verifying Error! MergeField was not found in header record of data source. Error! MergeField was not found in header record of data source. device state after migration

Apply the following commands to verify the state of the device after all ports have been migrated.

Error! MergeField was not found in header record of data source.#

!

**Error! MergeField was not found in header record of data source.**

## High availability test

Configure Interface Loopback20 for ATT\_3G VRF and Interface Loopback40 for ATT\_LTE VRF

Configure terminal

interface loopback20

vrf ATT\_3G

ipv4 address 10.244.62.225/32

no shutdown

interface looback40

vrf ATT\_LTE

ipv4 address 10.243.62.225/32

no shutdown

commit

Execute a ping test on a different terminal each, while on another terminal shutdown interface **Error! MergeField was not found in header record of data source.**

ping vrf ATT\_LTE <> source loopback40 repeat 10000

ping vrf ATT\_3G <> source loopback20 repeat 10000

ping vrf ATT\_OAM 10.32.209.29 source loopback1 repeat 10000

Configure terminal

interface

shutdown

commit

Turn up interface **Error! MergeField was not found in header record of data source.**

Configure terminal

interface

no shutdown

commit

* Pause: Be sure both interfaces are in up state at this point before proceeding.

show isis neighbors

show bgp vpnv4 unicast summary

show interface

show interface

Execute a ping test on a different terminal each, while on another terminal shutdown interface **Error! MergeField was not found in header record of data source.**

ping vrf ATT\_LTE <> source loopback40 repeat 10000

ping vrf ATT\_3G <> source loopback20 repeat 10000

ping vrf ATT\_OAM 10.32.209.29 source loopback1 repeat 10000

Configure terminal

interface

shutdown

commit

Turn up interface **Error! MergeField was not found in header record of data source.**

Configure terminal

interface

no shutdown

commit

Remove interfaces Loopback20 and Loopback40

configure terminal

no interface loopback20

no interface loopback40

commit

Verify protocols are all OK again after the high availability tests execute the following commands:

show bfd ipv4 session

show isis neighbor

show bgp ipv4 label summary

show bgp vpnv4 unicast summary

show show alarms brief system active

SSH to the Error! MergeField was not found in header record of data source. loopback1 **Error! MergeField was not found in header record of data source.**. Use TACACS / ISE user and password.

# Rollback

Execute script name listed in Script name filed of the table below to execute services rollback.

Table 5 – Port mapping and Rollback scripts

|  |  |  |  |
| --- | --- | --- | --- |
| **Interfaces CX** | **Service** | **Interfaces** Error! MergeField was not found in header record of data source. **Cisco** | **Script name** |
| **Error! MergeField was not found in header record of data source.** | **Error! MergeField was not found in header record of data source.** | **Error! MergeField was not found in header record of data source.** | Rollback\_**Error! MergeField was not found in header record of data source.** |
|  |  |  |  |

Execute following commands to reconfigure connection to the CX device.

Error! MergeField was not found in header record of data source.# configure terminal

interface Error! MergeField was not found in header record of data source.

description To--

vrf ATT\_OAM

ipv4 address 255.255.255.254

load-interval

no shutdown

commit

AT&T must reconfigure CX device VLAN interfaces and Static routes.

Revert protocols configured on AGGs to Netsimp PE

Verify connection to Error! MergeField was not found in header record of data source. by SSH using TACACS / ISE username and password.

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