**Device Configuration Process for Monitor Mode**

# Pre-Change Window

* Identify Site
  + CCAC2 Point of Contact: Name
    - Email:
    - Desk Phone:
    - Cell:
  + Lakewood FHC
    - Email:
    - Desk Phone:
    - Cell:
  + Avon Hospital
    - Email:
    - Desk Phone:
    - Cell:
* Selection of Candidate Device Mode/Versions
  + The switch schedule will be located on Share file
  + “Name of File”
  + This file will contain:
    - Schedule Date/ Site/Hostname/IP Address/Model/Current Version

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Scheduled Date | Site | Name | IP Address | Model | Current Version | Affected Departments | Department Contacts |
| 1/11/21 | Brecksville DC | DC-02-106-4510-S2 |  | 4510sup7 |  | User Area | Dragan  Matt |
| 2/1/21 | CCAC2 |  |  |  |  |  |  |

* Gather Device Configuration Pre-Configuration
  + Method (Manual/Script)
    - SSH/Telnet into device
      * From Putty
      * Session > Logging
      * Check: All Session output
      * Save the file as: {{switch-hostname}}-shows-MM-DD-YYY.txt
      * Run the following commands:
      * Terminal length 0
      * Show run
      * Show cdp neighbor
      * Show cdp neighbor detail
      * Show inventory
      * Show version
      * Show ip arp
      * Show mac address-table
      * Show interface status
      * Show module
  + Verify connectivity to ISE PSN Servers from Network Device:
    - PSN IP:
    - PSN IP:
    - PSN IP:
* Review Configuration
  + Policy Node (RADIUS) selection based on location.
  + These will be configured at the RADIUS servers for the given location

|  |  |  |
| --- | --- | --- |
| Site | Hostname | IP Address |
| DC | PSN Hostname |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

* Identify ports for 802.1X configuration
  + Uplink to Core (Note will NOT be configured for 802.1x)
    - Using the “show cdp neighbors” output gathered from the show commands identify the “Local Interfaces” uplink ports. They will not be configured for 802.1x They will only be configured for DHCP Snooping Trust.
  + Downlinks to other switches (Note will NOT be configured for 802.1x)
  + Using the “show cdp neighbors” output gathered from the show commands identify the “Local Interfaces” uplink ports.
  + Access Point (AP) ports (Note will NOT be configured for 802.1x)
    - Using the “show cdp neighbors” output gathered from the show commands identify the “Local Interfaces” uplink ports.
  + Normal Data/Voice ports (Note these will be configured for 802.1x)
    - Identify Data Access VLANs
    - Look over the device “show running” configuration
  + Identify Management interface
    - Look for the interface VLAN with the MGMT IP
    - This will be used for “source-interface” command
* Create Device Configuration
  + Using Device/Version Template to generate device configuration
  + Python Script that will use a jinja2 template to create configuration based of the values in the CSV file
  + Remember to verify all values

|  |
| --- |
| Python <name of the python file> -C <name of csv file with values.csv> -O <name of output file.txt> |

* Review configuration
  + Post configuration and shows to Sharefile:
  + Sharefile URL:
  + Directory:
  + Post file to Month
  + Configuration goes into the aaa folder
  + Shows goes into the shows folder
  + Customer will review the proposed configuration
* Maintenance window/Change Request
  + Reviewed configurations
* Add Device to ISE before the maintenance
  + Import new device Manually
    - Administration > Network Resources > Network Devices
    - Add
    - Name: {{switch-hostname}}
    - Descriptoin: {{switch-hostname}}
    - IP Address: {{mgmt. ip}}
    - Location:
      * Select down arrow
      * From All Locations
      * Pick site
    - Device type:
      * Select down arrow
      * From Device Type, select side arrow
      * Select device type
    - Check RADIUS Authentication Settings
    - Shared Secret: {{radius key}}
    - Check SNMP Settings
    - Select SNMP Version: 2c
    - SNMP RO Community: {{snmp\_ro\_string}}
    - Select save at the bottom
    - Done
  + Via CSV
    - Administration > Network Resources > Network Devices
    - Select import
    - Choose file
    - Select import
    - Verify new devices have been imported
    - Done

# During Maintenance Window

* Pre-Endpoint verification
  + - Ping Sweep (the number of endpoints off this switch)
      * Ping Info view
      * This will be matched to the Ping Sweep after the configuration
      * Show Commands to gather the IP + MAC Address
* Log all session output
  + - Login to device (SSH/TELNET)
      * From Putty
      * Session > Logging
      * Check: All session output
      * Save the file as: {{switch-hostname}}-session-MM-DD-YYYY.txt
* Backup Device configuration
  + - Local backup of current running configuration

Copy running-config bootflash:/{{switch-hostname}}-cfg-MM-DD-YYYY.txt

Copy running-config flash:/{{switch-hostname}}-cfg-MM-DD-YYYY.txt

* Pre-Configuration Show Commands
  + Terminal length 0
  + Show run
  + Show cdp neighbor
  + Show cdp neighbor detail
  + Show inventory
  + Show version
  + Show ip arp
  + Show mac address-table
  + Show interface status
  + Show module
  + Terminal length 24
* Device Configuration
  + Verify connectivity to ISE servers from Network Device
    - Ping {{ISE-PSNs}}
  + Copy then paste in configurations in sections
    - Configure RADIUS
    - Stop and test RADIUS via CLI on device
      * Verify by looking on ISE Operation>RADIUS>Live Logs
    - Configure logging
    - Configure SNMP
    - Configure IP Device Tracking
    - Configure Device sensor
    - Configure Access Ports for 801.x/MAB

**\*\*\*NOTE\*\*\* Access ports will be shut/no shut as part of the configuration**

* Device to ISE RADIUS Verification
  + Operations>RADIUS>Live Logs
* Endpoint Verification
  + Ping sweep (Need to gather the IP+MAC Address)
  + \*\*\*NOTE\*\*\* Some endpoints may take time to recover
  + USE the Pre Configuration show commands gathered to verify working operations
* Post Show Commands
  + Terminal length 0
  + Show run
  + Show cdp neighbor
  + Show cdp neighbor detail
  + Show inventory
  + Show version
  + Show ip arp
  + Show mac address-table
  + Show interface status
  + Show module
  + Terminal length 24
  + Save configuration only whe the team gives the OK
  + Device is now in Monitor Mode

# Post Maintenance Window

Next Day Support

Profile Configuration based on unknown