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Gerencia General
Dirección General de Administración y Finanza
Coordinación de Recursos Administrativos
Departamento de Informática

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Asunción, 26 de noviembre de 2024

Nota N°: 7765

A la atención de:
LIC. JORGE LUIS VEGA PINEDA
DIRECTOR GENERAL DE ADMINISTRACION Y FINANZAS – M.E.F.
Ministerios de Economía y Finanzas
Ref.: Contrato N° 45-2023

Objeto: Presentación de documentos

Presente

Nosotros, Logicalis Paraguay S.A., tenemos a bien dirigirnos a ustedes a fin de presentar los siguientes documentos

01_FO-OPR-17 V02-01 Informe Infraestructura Cliente LSC_SNPR91009_Hybrid Cloud
02_FO-OPR-17 V02-01 Informe Infraestructura Cliente LSC_SNPR91009_Networking
03_FO-OPR-17 V02-01 Informe Infraestructura Cliente LSC_SNPR91009_Security

Sin otro particular, nos despedimos con nuestra consideración más distinguida.

Pablo Greenwood
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Noviembre 2024

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Sección 1. Control de Cambios

Cambios del Documento

Ultima Elaboración Fernando BELLO

Autorizado para modificar el presente documento: Logicalis

Historia

Versión No.	Fecha	Estado	Razón del Cambio
01-00	24 de Noviembre de 2024	Primer Draft/Entregable	Inicio de Documento

Revisión

Detalle de la Revisión	Revisión No.	Versión No.	Fecha
Inicio de Documento	00-02	01-00	24 de Noviembre de 2024

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Sección 2. Introducción

Resumen de Contenidos

En este documento se provee un análisis sobre la infrastructura de un Cisco Nexus 5548UP y cuatro Nexus 2248TP-E del cliente. ***Este tercer informe es parte de un total de tres.***

2.1. Detalle de los Requisitos del Cliente

El proyecto comprende relevar, analizar y proveer un informe al cliente sobre su infrastructura de red de Cisco Nexus 5548UP.

2.2. Visión General de la Solución

La plataforma Cisco Nexus 5500 amplía la versatilidad líder en la industria de los switches de datacenter Cisco Nexus 5000 Series especialmente diseñados de 10 Gigabit Ethernet y proporciona avances innovadores hacia mayor densidad, menor latencia y servicios multicapa.

Los Fabric Extenders Cisco Nexus serie 2000 comprenden una categoría de productos de datacenter diseñados para simplificar la arquitectura y las operaciones de acceso. La serie Cisco Nexus 2000 utiliza la arquitectura de extensor de estructura de Cisco para proporcionar una plataforma unificada de acceso al servidor altamente escalable en una gama de entornos de 100 Megabit Ethernet, 1 y 10 Gigabit Ethernet, estructura unificada, conectividad de cobre y fibra y servidores en rack y blade. La plataforma es ideal para admitir los entornos tradicionales de 1 Gigabit Ethernet actuales y, al mismo tiempo, permite una migración transparente a tecnologías de máquinas virtuales de 10 Gigabit Ethernet.

Los extensores de estructura Cisco Nexus serie 2000 se comportan como tarjetas de línea remotas para un switch Cisco Nexus. Los extensores de estructura son esencialmente extensiones de la estructura del switch principal Nexus, donde los extensores de estructura y el switch principal forman juntos un sistema modular distribuido. Esta arquitectura permite topologías físicas con la flexibilidad y los beneficios de las implementaciones tanto en la parte superior del rack (ToR) como en el final de la fila (EoR).

2.3. Documentos Relacionados

- √ https://www.cisco.com/c/en/us/products/collateral/switches/nexus-5000-series-switches/data_sheet_c78-618603.html
- √ https://www.cisco.com/c/en/us/products/collateral/switches/nexus-2000-series-fabric-extenders/data_sheet_c78-507093.html

Sección 3. Diseño de la Solución

Contenidos

3.1. Cisco Nexus 5548UP y Nexus 2248TP-E

La plataforma Cisco Nexus 5500 es ideal para implementaciones de capa de acceso a servidores de datacenter de clase empresarial en un conjunto diverso de entornos de centros de datos físicos, virtuales, de acceso al almacenamiento y de computación de alto rendimiento (HPC).

El Cisco Nexus 5548UP es un switch de una unidad de rack de 10 Gigabit Ethernet, Fibre Channel y FCoE que ofrece hasta 960 Gbps de rendimiento y hasta 48 puertos. El switch tiene 32 puertos unificados y una ranura de expansión.

Cisco Nexus 2248TP-E es un extensor de estructura de 1 Gigabit Ethernet de uso general con mejoras dirigidas a cargas de trabajo como bases de datos de gran volumen, almacenamiento distribuido y edición de video. El Nexus 2248TP-E admite 48 puertos orientados al host 100/1000BASE-T y cuatro interfaces de estructura Ethernet de 10 Gigabit. También admite búferes compartidos de 32 MB.

3.2. Descripción de Equipamiento

En esta sección se detalla el equipamiento físico de la solución.

3.2.1. Cisco Nexus 5548UP

Descripción Cisco: Nexus 5548UP Switch, 48 SFP+

Puertos de datos: 32 puertos SFP+ fijos (1 or 10 Gbps)

Puertos de gestión: Uno puerto de management de 10/100/1000, un puerto serial de consola RS-232

Puerto USB: Uno

Dimensiones (Alto,Ancho, Prof): 4.4 x 43.9 x 74.9 cm

Potencia máxima: 750W

3.2.2. Cisco Nexus 2248TP-E

Descripción Cisco: Nexus 2248TP-E Fabric Extender

Puertos de datos: 48 puertos RJ45 fijos (10/100/1000)

Puertos de Fabric: 4 puertos SFP+ fijos (10Gbps)

Puertos de gestión: No tiene. Se gestiona desde el Nexus padre.

Puerto USB: No tiene

Dimensiones (Alto,Ancho, Prof): 4.37 x 43.94 x 44.96 cm

Potencia máxima: 110W

3.3. Servicios

Los siguientes servicios son configurados:

DNS: no hay servidores DNS configurados.

NTP: 10.20.2.5

3.4. Nomenclatura y IDs de equipos

Para el equipo se utilizará la siguiente nomenclatura:

- SW-N5K

Management:

El cliente alcanza la interface de gestión a través de un trunk donde se permite la vlan 450 que actua como VLAN de MANAGEMENT.

***Nota**: esta sección no tiene cambios desde el último reporte.*

Sección 4. Diagrama Físico de la Solución

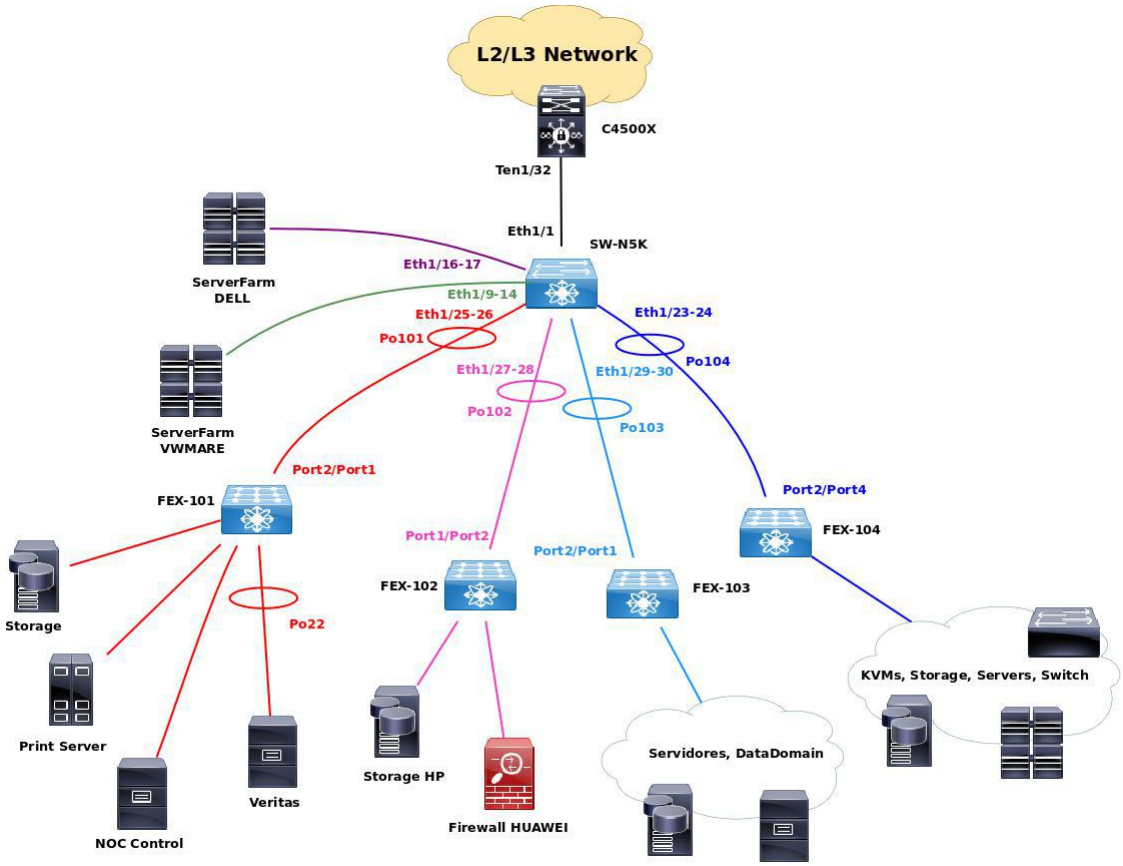
Contenidos

En la siguiente sección se presenta la topología relevada y su análisis posterior.

4.1. Topología Dominio de Virtual Port-channel (vPC)

Al ser sólo un switch Cisco Nexus 5548UP no se puede formar un dominio de vPC ni dar redundancia en la capa de acceso de estos equipos a nivel equipo físico.

4.2. Topología de Acceso y Fabric Extender



***Nota**: la topología se mantiene igual que en el reporte anterior.*

En el siguiente cuadro se detalla la conectividad física de los equipos conectados al Nexus 5548UP y a los Fabric Extenders asociados.

Lado A				Lado B			
Rack	Equipo	Puerto	Descripcion	Rack	Equipo	Puerto	Descripcion
	SW-N5K	Eth1/1	## C4500X # Ten1/321/1 ##		C4500X	Ten1/32	## SW-N5K # Eth1/1 ##
	SW-N5K	Eth1/9	## VMWARE ESXi # Host Port ##		VMWARE ESXi	Host Port	## SW-N5K # Eth1/9 ##
	SW-N5K	Eth1/10	## VMWARE ESXi # Host Port ##		VMWARE ESXi	Host Port	## SW-N5K # Eth1/10 ##
	SW-N5K	Eth1/11	## VMWARE ESXi # Host Port ##		VMWARE ESXi	Host Port	## SW-N5K # Eth1/11 ##
	SW-N5K	Eth1/12	## VMWARE ESXi # Host Port ##		VMWARE ESXi	Host Port	## SW-N5K # Eth1/12 ##
	SW-N5K	Eth1/13	## VMWARE ESXi # Host Port ##		VMWARE ESXi	Host Port	## SW-N5K # Eth1/13 ##
	SW-N5K	Eth1/14	## VMWARE ESXi # Host Port ##		VMWARE ESXi	Host Port	## SW-N5K # Eth1/14 ##
	SW-N5K	Eth1/16	## BLADE DELL # A1 ##		BLADE DELL	A1	## SW-N5K # Eth1/16 ##
	SW-N5K	Eth1/17	## BLADE DELL # A2 ##		BLADE DELL	A2	## SW-N5K # Eth1/17 ##
	SW-N5K	Eth1/23	## FEX-104 # Port 2 ##		FEX-104	Port 2	## SW-N5K # Eth1/23 ##
	SW-N5K	Eth1/24	## FEX-104 # Port 4 ##		FEX-104	Port 4	## SW-N5K # Eth1/24 ##
	SW-N5K	Eth1/25	## FEX-101 # Port 2 ##		FEX-101	Port 2	## SW-N5K # Eth1/25 ##
	SW-N5K	Eth1/26	## FEX-101 # Port 1 ##		FEX-101	Port 1	## SW-N5K # Eth1/26 ##
	SW-N5K	Eth1/27	## FEX-102 # Port 1 ##		FEX-102	Port 1	## SW-N5K # Eth1/27 ##
	SW-N5K	Eth1/38	## FEX-102 # Port 2 ##		FEX-102	Port 2	## SW-N5K # Eth1/28 ##
	SW-N5K	Eth1/29	## FEX-103 # Port 2 ##		FEX-103	Port 2	## SW-N5K # Eth1/29 ##
	SW-N5K	Eth1/30	## FEX-103 # Port 1 ##		FEX-103	Port 1	## SW-N5K # Eth1/30 ##

4.3. Relevamiento Físico

- No se observan indicios de que los racks estén en mal estado o que tenga falta de refrigeración. El sitio provee buen mantenimiento dentro de la sala.
- El equipo SW-N5K se observa con una instalación adecuada y con buena refrigeración.
- No se observan faltantes o golpes en los racks que puedan generar cualquier tipo de inconveniente a los equipos rackeados ni a su funcionamiento.
- La temperatura es la adecuada en el rack o mismo en la sala.
- No se observan alarmas físicas.

***Nota**: esta sección no tiene cambios desde el último reporte.*

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Sección 5. Esquema Direcciones

Contenidos

Tabla 1 | Direccionamiento IP

Dispositivo	IP	Máscara	Gateway
SW-N5K	192.168.150.15	255.255.255.0	192.168.150.1

En la siguiente tabla se presentan la IP configurada en el equipo para que sea accesible desde cualquier parte de la red.

***Nota**: esta sección no tiene cambios desde el último reporte.*

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Sección 6. Servicio de la Solución

Contenidos

En la siguiente sección se trabajará sobre el análisis de los comandos tomados junto con el cliente para ver estado del switch Cisco Nexus 5548UP dentro de la infrastructura de red.

6.1. Inventario

El equipo a analizar es un Nexus 5548UP de 32 puertos unificados sin slot de expansión.

Están asociados a este equipo cuatro Fabric Extender Nexus 2248TP-E.

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6.1.1. SW-N5K

```
NAME: "Chassis", DESCR: "Nexus5548 Chassis"
PID: N5K-C5548UP       , VID: V01 , SN: SSI203200G8

NAME: "Module 1", DESCR: "O2 32X10GE/Modular Universal
Platform Supervisor"
PID: N5K-C5548UP       , VID: V01 , SN: FOC20373ZWC

NAME: "Fan 1", DESCR: "Chassis fan module"
PID: N5548P-FAN        , VID: N/A , SN: N/A

NAME: "Fan 2", DESCR: "Chassis fan module"
PID: N5548P-FAN        , VID: N/A , SN: N/A

NAME: "Power supply 1", DESCR: "AC power supply"
PID: N55-PAC-750W      , VID: V02 , SN: ART2034109Y

NAME: "Power supply 2", DESCR: "AC power supply"
PID: N55-PAC-750W      , VID: V02 , SN: ART2034109L

NAME: "Module 3", DESCR: "O2 Non L3 Daughter Card"
PID: N55-DL2           , VID: V02 , SN: FOC203854QJ

NAME: "FEX 101 CHASSIS", DESCR: "N2K-C2248TP-E-1GE  CHASSIS"
PID: N2K-C2248TP-E-1GE , VID: V03 , SN: FOX2032G9D6

NAME: "FEX 101 Module 1", DESCR: "Fabric Extender Module:
48x1GE, 4x10GE Supervisor"
PID: N2K-C2248TP-E-1GE , VID: V03 , SN: FOC203331XZ

NAME: "FEX 101 Fan 1", DESCR: "Fabric Extender Fan module"
PID: N2K-C2248-FAN     , VID: N/A , SN: N/A

NAME: "FEX 101 Power Supply 1", DESCR: "Fabric Extender AC
power supply"
PID: N2200-PAC-400W    , VID: V05 , SN: LIT20260HL5

NAME: "FEX 101 Power Supply 2", DESCR: "Fabric Extender AC
power supply"
PID: N2200-PAC-400W    , VID: V05 , SN: LIT20260HWL

NAME: "FEX 102 CHASSIS", DESCR: "N2K-C2248TP-E-1GE  CHASSIS"
PID: N2K-C2248TP-E-1GE , VID: V03 , SN: FOX2032GCXZ

NAME: "FEX 102 Module 1", DESCR: "Fabric Extender Module:
48x1GE, 4x10GE Supervisor"
PID: N2K-C2248TP-E-1GE , VID: V03 , SN: FOC203331N9
```

```
NAME: "FEX 102 Fan 1", DESCR: "Fabric Extender Fan module"
PID: N2K-C2248-FAN      , VID: N/A , SN: N/A

NAME: "FEX 102 Power Supply 1", DESCR: "Fabric Extender AC
power supply"
PID: N2200-PAC-400W     , VID: V05 , SN: LIT20290LZY

NAME: "FEX 102 Power Supply 2", DESCR: "Fabric Extender AC
power supply"
PID: N2200-PAC-400W     , VID: V05 , SN: LIT20290LM9

NAME: "FEX 103 CHASSIS", DESCR: "N2K-C2248TP-E-1GE  CHASSIS"
PID: N2K-C2248TP-E-1GE , VID: V03 , SN: FOX2032GCXV

NAME: "FEX 103 Module 1", DESCR: "Fabric Extender Module:
48x1GE, 4x10GE Supervisor"
PID: N2K-C2248TP-E-1GE , VID: V03 , SN: FOC20330MTL

NAME: "FEX 103 Fan 1", DESCR: "Fabric Extender Fan module"
PID: N2K-C2248-FAN      , VID: N/A , SN: N/A

NAME: "FEX 103 Power Supply 1", DESCR: "Fabric Extender AC
power supply"
PID: N2200-PAC-400W     , VID: V05 , SN: LIT20290LLR

NAME: "FEX 103 Power Supply 2", DESCR: "Fabric Extender AC
power supply"
PID: N2200-PAC-400W     , VID: V05 , SN: LIT20290MDU

NAME: "FEX 104 CHASSIS", DESCR: "N2K-C2248TP-E-1GE  CHASSIS"
PID: N2K-C2248TP-E-1GE , VID: V03 , SN: FOX2032GCXY

NAME: "FEX 104 Module 1", DESCR: "Fabric Extender Module:
48x1GE, 4x10GE Supervisor"
PID: N2K-C2248TP-E-1GE , VID: V03 , SN: FOC20330MWB

NAME: "FEX 104 Fan 1", DESCR: "Fabric Extender Fan module"
PID: N2K-C2248-FAN      , VID: N/A , SN: N/A

NAME: "FEX 104 Power Supply 1", DESCR: "Fabric Extender AC
power supply"
PID: N2200-PAC-400W     , VID: V05 , SN: LIT20290LKN

NAME: "FEX 104 Power Supply 2", DESCR: "Fabric Extender AC
power supply"
PID: N2200-PAC-400W     , VID: V05 , SN: LIT20290LAG
```

Recomendación: De acuerdo al link de End of Life y End of Support proporcionado por Cisco para estos equipos es necesario empezar a ver un reemplazo natural para el Nexus 5548UP.

https://www.cisco.com/c/en/us/products/collateral/switches/nexus-5000-series-switches/eos-eol-notice-c51-740720.html

Los puntos relevantes del documento:

Last Date of Support: HW,OS SW	The last date to receive applicable service and support for the product as entitled by active service contracts or by warranty terms and conditions. After this date, all support services for the product are unavailable, and the product becomes obsolete.	May 31, 2024

HW = Hardware OS SW = Operating System Software App. SW = Application Software

***Nota**: no ha habido cambio de HW desde el último reporte.*

6.2. Versión NXOS

El equipo y sus extensores se encuentran con la misma versión de sistema operativo siendo esta la 7.3(8)N1(1).

Kickstart file: bootflash:///n5000-uk9-kickstart.7.3.8.N1.1.bin
System file: bootflash:///n5000-uk9.7.3.8.N1.1.bin

Recomendación: La versión que tienen los equipos tiene fecha de publicación en Julio de 2020. Es conveniente llevar el software del equipo a una versión más actualizada.

De acuerdo al siguiente documento...

https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus5500/sw/release/recommended_releases/n5500_recommended_nx-os_releases.html

...es conveniente llevarlo a las siguientes versiones dependiendo del modelo.

Platform Series	Minimum Recommended Release	Recommended Release
Nexus 5500	NX-OS 7.3(8)N1(1)	NX-OS 7.3(13)N1(1)

La versión recomendada es la ***7.3(13)N1(1).***

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***Nota**: la versión de software se mantiene desde el último reporte. No se realiza el upgrade debido a que el impacto que puede causar si algo no saliera bien es mucho mayor que los beneficios que la nueva versión puede brindar.*

6.3. Licencias

Las siguientes licencias se encuentran instaladas en el equipo:

```
Feature                      Ins  Lic   Status Expiry Date Comments
                                 Count
--------------------------------------------------------------------
FCOE_NPV_PKG                  Yes   -   Unused never       -
FM_SERVER_PKG                 No    -   Unused             -
ENTERPRISE_PKG                Yes   -   Unused never       -
FC_FEATURES_PKG               Yes   -   In use never       -
VMFEX_FEATURE_PKG             No    -   Unused             -
ENHANCED_LAYER2_PKG           No    -   Unused             -
NETWORK_SERVICES_PKG          No    -   Unused             -
LAN_BASE_SERVICES_PKG         No    -   Unused             -
LAN_ENTERPRISE_SERVICES_PKG   No    -   Unused             -
--------------------------------------------------------------------
```

Esta licencia comprende los siguientes protocolos:

- Soporte Fiber Channel(FC) Nativo, protocolo Fiber Channel over Ethernet (FCoE), topología NPV, Fiber Channel(FC) Port Security, Fabric Binding, Fiber Channel Security Protocol (FC-SP) authentication
- Soporte para Fiber Channel over Ethernet (FCoE) NPV

Recomendación: Con el licenciamiento actual de los equipos y su utilización no es necesario realizar ningún upgrade de licencia.

***Nota**: esta sección no tiene cambios desde el último reporte.*

6.4. vPC Domain

No existe dominio de vPC debido a que la topología esta compuesta por sólo un Nexus 5548UP.

Recomendación: Si existe la necesidad de proveer redundancia sobre la infrastructura es conveniente armar un domino de vPC. Esto lleva a la migración del equipo Nexus 5548UP a un modelo más nuevo debido a su EoS y a la adquisición de uno nuevo del mismo modelo.

***Nota**: esta sección no tiene cambios desde el último reporte.*

6.5. Features habilitados

Se encuentran habilitados los siguientes features:

```
Feature Name          Instance  State
--------------------  --------  --------
fcoe                  1         enabled
fex                   1         enabled
interface-vlan        1         enabled
lacp                  1         enabled
lldp                  1         enabled
sshServer             1         enabled
vpc                   1         enabled
vtp                   1         enabled
```

Recomendación: Los features habilitados son los necesarios para la infrastructura que tiene desplegada el cliente. Se recomienda revisar la interface vlan1 en el switch SWK-N5K si realmente es necesario que este levantada.

***Nota**: no se agregan features desde el último reporte.*

6.6. Port-channels

Una de las características en una red switcheada es el uso de Portchannels de manera de poder agregar bandwidth entre dos equipos o para evitar loops físicos que puedan generar disrupciones.

Este tipo de elementos agregan también redundancia a la red ante posible problemas en los links de conexión. En este escenario se ven cuatro port-channels configurados que sirven de conexión entre los FABRIC EXTENDERs y el Nexus principal.

En la infrastructura podemos apreciar lo siguiente:

6.6.1. SW-N5K

```
Flags:  D - Down        P - Up in port-channel (members)
        I - Individual  H - Hot-standby (LACP only)
```

```
        s - Suspended   r - Module-removed
        S - Switched    R - Routed
        U - Up (port-channel)
        M - Not in use. Min-links not met
--------------------------------------------------------------------------------
Group Port-       Type     Protocol  Member Ports
      Channel
--------------------------------------------------------------------------------
1     Po1(SU)     Eth      NONE      Eth103/1/29(P)  Eth103/1/30(P)
                                     Eth103/1/31(P)  Eth103/1/32(P)
22    Po22(SD)    Eth      NONE      --
101   Po101(SU)   Eth      NONE      Eth1/25(P)   Eth1/26(P)
102   Po102(SU)   Eth      NONE      Eth1/27(P)   Eth1/28(P)
103   Po103(SU)   Eth      NONE      Eth1/29(P)   Eth1/30(P)
104   Po104(SU)   Eth      NONE      Eth1/23(P)   Eth1/24(P)
```

Recomendación: Según la topología propuesta, no hay recomendación para realizar.

***Nota**: el port-channel 22 en estado DOWN se debe al cambio de configuraciones de las interfaces.*

6.7. Interfaces

En la siguiente sección se aborda el estado de interfaces y verificación de conteo de errores en las mismas. Se aplica cambios según recomendación en reportes previos.

La recomendación ha sido subsanada:

Recomendación Previa: Todas las interfaces que se encuentran en DOWN, ADMINISTRATIVELY DOWN o SFP NOT INSERTED sería conveniente defaultear la interface y luego hacerle un SHUTDOWN.

Algunas interfaces permitiría una mejor lectura si se completan las descripciones de las mismas.

6.7.1. Errores en las interfaces

En ambos equipos se verifca que no cuenten errores las interfaces.

En ningún caso se registra ni INPUT ni OUTPUT errors.

Recomendación: No existe ninguna mejora a realizar ya que físicamente el cableado no presenta ningún tipo de errores.

6.8. TRANSCEIVER para Fibra Optica

De acuerdo a lo verificado en los transceivers de Fibra óptica donde se puede realizar la verificación del estado de la fibra y

la luz que emite y recibe se puede ver que tanto la TX como la RX se encuentran entre los valores esperados.

6.8.1. SW-N5K

```
Ethernet1/1
    transceiver is present
    type is 10Gbase-SR
    name is OEM
    part number is SFP-10G-SR
    revision is
    serial number is A3611160196
    nominal bitrate is 10300 MBit/sec
    cisco id is --
    cisco extended id number is 4

            SFP Detail Diagnostics Information (internal calibration)
  ----------------------------------------------------------------------------
                Current              Alarms                  Warnings
                Measurement     High        Low         High          Low
  ----------------------------------------------------------------------------
  Temperature   30.22 C        80.00 C    -15.00 C     75.00 C      -10.00 C
  Voltage        3.25 V         3.59 V      3.00 V      3.50 V        3.09 V
  Current       10.03 mA       15.00 mA     0.00 mA    12.00 mA       0.00 mA
  Tx Power      -2.80 dBm       2.99 dBm   -9.31 dBm    1.99 dBm     -7.30 dBm
  Rx Power      -1.30 dBm       2.99 dBm  -13.09 dBm    1.99 dBm    -11.13 dBm
  ----------------------------------------------------------------------------
  Note: ++  high-alarm; +  high-warning; --  low-alarm; -  low-warning


Ethernet1/9
    transceiver is present
    type is 10Gbase-SR
    name is OEM
    part number is AN-UM-SFP+SR
    revision is 1.0
    serial number is AN2209210020106
    nominal bitrate is 10300 MBit/sec
    Link length supported for 50/125um OM2 fiber is 82 m
    Link length supported for 62.5/125um fiber is 26 m
    Link length supported for 50/125um OM3 fiber is 300 m
    cisco id is --
    cisco extended id number is 4

            SFP Detail Diagnostics Information (internal calibration)
  ----------------------------------------------------------------------------
                Current              Alarms                  Warnings
                Measurement     High        Low         High          Low
  ----------------------------------------------------------------------------
  Temperature   33.74 C        80.00 C    -10.00 C     75.00 C       -5.00 C
  Voltage        3.15 V         3.59 V      3.00 V      3.50 V        3.09 V
  Current        9.40 mA       15.00 mA     1.00 mA    13.00 mA       2.00 mA
  Tx Power      -2.17 dBm       2.99 dBm   -8.01 dBm    1.99 dBm     -7.52 dBm
  Rx Power      -1.42 dBm       0.49 dBm  -17.21 dBm    0.00 dBm    -16.57 dBm
  ----------------------------------------------------------------------------
  Note: ++  high-alarm; +  high-warning; --  low-alarm; -  low-warning

Ethernet1/10
    transceiver is present
    type is 10Gbase-SR
    name is OEM
    part number is AN-UM-SFP+SR
    revision is 1.0
    serial number is AN2209210020131
    nominal bitrate is 10300 MBit/sec
    Link length supported for 50/125um OM2 fiber is 82 m
    Link length supported for 62.5/125um fiber is 26 m
    Link length supported for 50/125um OM3 fiber is 300 m
    cisco id is --
    cisco extended id number is 4

            SFP Detail Diagnostics Information (internal calibration)
  ----------------------------------------------------------------------------
                Current              Alarms                  Warnings
                Measurement     High        Low         High          Low
  ----------------------------------------------------------------------------
  Temperature   33.26 C        80.00 C    -10.00 C     75.00 C       -5.00 C
  Voltage        3.21 V         3.59 V      3.00 V      3.50 V        3.09 V
  Current        7.55 mA       15.00 mA     1.00 mA    13.00 mA       2.00 mA
  Tx Power      -1.94 dBm       2.99 dBm   -8.01 dBm    1.99 dBm     -7.52 dBm
```

```
  Rx Power      -2.04 dBm       0.49 dBm  -17.21 dBm    0.00 dBm    -16.57 dBm
  ----------------------------------------------------------------------------
  Note: ++  high-alarm; +  high-warning; --  low-alarm; -  low-warning

Ethernet1/11
    transceiver is present
    type is 10Gbase-SR
    name is OEM
    part number is AN-UM-SFP+SR
    revision is 1.0
    serial number is AN2209210020130
    nominal bitrate is 10300 MBit/sec
    Link length supported for 50/125um OM2 fiber is 82 m
    Link length supported for 62.5/125um fiber is 26 m
    Link length supported for 50/125um OM3 fiber is 300 m
    cisco id is --
    cisco extended id number is 4

            SFP Detail Diagnostics Information (internal calibration)
  ----------------------------------------------------------------------------
                Current              Alarms                  Warnings
                Measurement     High        Low         High          Low
  ----------------------------------------------------------------------------
  Temperature   34.21 C        80.00 C    -10.00 C     75.00 C       -5.00 C
  Voltage        3.17 V         3.59 V      3.00 V      3.50 V        3.09 V
  Current        6.92 mA       15.00 mA     1.00 mA    13.00 mA       2.00 mA
  Tx Power      -2.72 dBm       2.99 dBm   -8.01 dBm    1.99 dBm     -7.52 dBm
  Rx Power      -1.03 dBm       0.49 dBm  -17.21 dBm    0.00 dBm    -16.57 dBm
  ----------------------------------------------------------------------------
  Note: ++  high-alarm; +  high-warning; --  low-alarm; -  low-warning

Ethernet1/12
    transceiver is present
    type is 10Gbase-SR
    name is OEM
    part number is AN-UM-SFP+SR
    revision is 1.0
    serial number is AN2209210020116
    nominal bitrate is 10300 MBit/sec
    Link length supported for 50/125um OM2 fiber is 82 m
    Link length supported for 62.5/125um fiber is 26 m
    Link length supported for 50/125um OM3 fiber is 300 m
    cisco id is --
    cisco extended id number is 4

            SFP Detail Diagnostics Information (internal calibration)
  ----------------------------------------------------------------------------
                Current              Alarms                  Warnings
                Measurement     High        Low         High          Low
  ----------------------------------------------------------------------------
  Temperature   33.74 C        80.00 C    -10.00 C     75.00 C       -5.00 C
  Voltage        3.26 V         3.59 V      3.00 V      3.50 V        3.09 V
  Current        7.18 mA       15.00 mA     1.00 mA    13.00 mA       2.00 mA
  Tx Power      -2.10 dBm       2.99 dBm   -8.01 dBm    1.99 dBm     -7.52 dBm
  Rx Power      -0.68 dBm       0.49 dBm  -17.21 dBm    0.00 dBm    -16.57 dBm
  ----------------------------------------------------------------------------
  Note: ++  high-alarm; +  high-warning; --  low-alarm; -  low-warning

Ethernet1/13
    transceiver is present
    type is 10Gbase-SR
    name is OEM
    part number is AN-UM-SFP+SR
    revision is 1.0
    serial number is AN2209210020088
    nominal bitrate is 10300 MBit/sec
    Link length supported for 50/125um OM2 fiber is 82 m
    Link length supported for 62.5/125um fiber is 26 m
    Link length supported for 50/125um OM3 fiber is 300 m
    cisco id is --
    cisco extended id number is 4

            SFP Detail Diagnostics Information (internal calibration)
  ----------------------------------------------------------------------------
                Current              Alarms                  Warnings
                Measurement     High        Low         High          Low
  ----------------------------------------------------------------------------
  Temperature   29.47 C        80.00 C    -10.00 C     75.00 C       -5.00 C
  Voltage        3.17 V         3.59 V      3.00 V      3.50 V        3.09 V
  Current        7.89 mA       15.00 mA     1.00 mA    13.00 mA       2.00 mA
  Tx Power      -1.95 dBm       2.99 dBm   -8.01 dBm    1.99 dBm     -7.52 dBm
  Rx Power      -1.21 dBm       0.49 dBm  -17.21 dBm    0.00 dBm    -16.57 dBm
  ----------------------------------------------------------------------------
  Note: ++  high-alarm; +  high-warning; --  low-alarm; -  low-warning
```

```
Ethernet1/14
    transceiver is present
    type is 10Gbase-SR
    name is OEM
    part number is AN-UM-SFP+SR
    revision is 1.0
    serial number is AN2209210020094
    nominal bitrate is 10300 MBit/sec
    Link length supported for 50/125um OM2 fiber is 82 m
    Link length supported for 62.5/125um fiber is 26 m
    Link length supported for 50/125um OM3 fiber is 300 m
    cisco id is --
    cisco extended id number is 4

            SFP Detail Diagnostics Information (internal calibration)
  ----------------------------------------------------------------------------
                Current              Alarms                  Warnings
                Measurement     High        Low         High          Low
  ----------------------------------------------------------------------------
  Temperature   40.15 C        80.00 C    -10.00 C     75.00 C       -5.00 C
  Voltage        3.12 V         3.59 V      3.00 V      3.50 V        3.09 V
  Current        7.51 mA       15.00 mA     1.00 mA    13.00 mA       2.00 mA
  Tx Power      -2.53 dBm       2.99 dBm   -8.01 dBm    1.99 dBm     -7.52 dBm
  Rx Power      -1.50 dBm       0.49 dBm  -17.21 dBm    0.00 dBm    -16.57 dBm
  ----------------------------------------------------------------------------
  Note: ++  high-alarm; +  high-warning; --  low-alarm; -  low-warning

Ethernet1/16
    transceiver is present
    type is 10Gbase-SR
    name is CISCO-AVAGO
    part number is SFBR-709SMZ-CS1
    revision is G4.1
    serial number is AVD1928A280
    nominal bitrate is 10300 MBit/sec
    Link length supported for 50/125um OM2 fiber is 82 m
    Link length supported for 62.5/125um fiber is 26 m
    Link length supported for 50/125um OM3 fiber is 300 m
    cisco id is --
    cisco extended id number is 4

            SFP Detail Diagnostics Information (internal calibration)
  ----------------------------------------------------------------------------
                Current              Alarms                  Warnings
                Measurement     High        Low         High          Low
  ----------------------------------------------------------------------------
  Temperature   31.95 C        75.00 C     -5.00 C     70.00 C        0.00 C
  Voltage        3.24 V         3.63 V      2.97 V      3.46 V        3.13 V
  Current        5.64 mA       10.50 mA     2.50 mA    10.50 mA       2.50 mA
  Tx Power      -2.24 dBm       1.69 dBm  -11.30 dBm   -1.30 dBm     -7.30 dBm
  Rx Power      -2.84 dBm       1.99 dBm  -13.97 dBm   -1.00 dBm     -9.91 dBm
  ----------------------------------------------------------------------------
  Note: ++  high-alarm; +  high-warning; --  low-alarm; -  low-warning

Ethernet1/17
    transceiver is present
    type is 10Gbase-SR
    name is CISCO-AVAGO
    part number is SFBR-709SMZ-CS1
    revision is G4.1
    serial number is AVD1928AAXG
    nominal bitrate is 10300 MBit/sec
    Link length supported for 50/125um OM2 fiber is 82 m
    Link length supported for 62.5/125um fiber is 26 m
    Link length supported for 50/125um OM3 fiber is 300 m
    cisco id is --
    cisco extended id number is 4

            SFP Detail Diagnostics Information (internal calibration)
  ----------------------------------------------------------------------------
                Current              Alarms                  Warnings
                Measurement     High        Low         High          Low
  ----------------------------------------------------------------------------
  Temperature   28.41 C        75.00 C     -5.00 C     70.00 C        0.00 C
  Voltage        3.24 V         3.63 V      2.97 V      3.46 V        3.13 V
  Current        6.28 mA       10.50 mA     2.50 mA    10.50 mA       2.50 mA
  Tx Power      -2.25 dBm       1.69 dBm  -11.30 dBm   -1.30 dBm     -7.30 dBm
  Rx Power      -2.95 dBm       1.99 dBm  -13.97 dBm   -1.00 dBm     -9.91 dBm
  ----------------------------------------------------------------------------
  Note: ++  high-alarm; +  high-warning; --  low-alarm; -  low-warning
```

Recomendación: Los valores se encuentran entre los umbrales esperados permitiendo concluir que tanto la fibra como los transceivers que conectan este equipos con el otro extremo se encuentra en buen estado y funcionando correctamente.

6.9. SPANNING-TREE

El protocolo SPANNING-TREE evita que se pueda producir un loop físico de capa 2 poniendo en riesgo performance y disponibilidad de la red switcheada.

Este protocolo cuando detecta que existe este tipo de riesgo, bloquea un puerto del switch dependiendo de ciertos parametros de manera que solo termine quedando un solo camino entre origen y destino.

Dentro de la infrastructura podemos constatar que el root de STP se encuentra por fuera del switch Nexus SW-N5K para la mayoría de las VLANs.

Las vlans cuyo ROOT BRIDGE es el Nexus SW-N5K son la VLAN 3, 5 y 333.

El resto de las VLANs tienen su ROOT BRIDGE que lo alcanza por la interface Ethernet1/1 conectado a un switch Cisco C4500X.

```
VLAN0098
  Spanning tree enabled protocol rstp
  Root ID    Priority    32866
             Address     006b.f156.b400
             Cost        2000
             Port        129 (Ethernet1/1)
             Hello Time  2  sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority    32866  (priority 32768 sys-id-ext 98)
             Address     00de.fb14.c301
             Hello Time  2  sec  Max Age 20 sec  Forward Delay 15 sec
```

Recomendación: se detectan cambios en la topología de capa 2 en las VLANs 111, 431, 433, 434, 442, 443 y 500. Todas provenientes desde la interface Ethernet 1/1 donde se encuentra conectado el Catalyst 4500. Se debe verificar si no hay alguna configuración o equipo que este sumando ruido a la red.

Se ha aplicado la utilización del method long para el cálculo de costos en SPANNING-TREE permitiendo una mejor

performace y utilización de los valores de las interfaces (BW) para encontrar el Root de STP de las vlans.

```
Spanning tree default pathcost method used is long
```

Recomendación Previa: Verificar que el resto de los dispositivos de la red switcheada (L2) soportan realizar el cálculo de costos de STP con el method LONG. De ser posible, cambiar el algoritmo de cálculo en toda la red o en su defecto en el switch SW-N5K.

***Nota**: se ha aplicado la recomendación de utilizar el method long para el cálculo de STP.*

6.10. Recursos del sistema

Los recursos que se analizan son el de almacenamiento, memoria y CPU.

6.10.1. SW-N5K

De la comandos ejecutados se obtienen los siguientes datos:

6.10.1.1. Almacenamiento

Recomendación Previa: Conviene borrar los archivos de sistema que no se utilizan para liberar espacio.

***Nota**: se ha aplicado la recomendación de liberar espacio.*

6.10.1.2. Memoria

```
PID    MemAlloc  MemLimit    MemUsed     StackBase/Ptr      Process
-----  --------  ----------  ----------  -----------------  ----------------
 PID    MemAlloc  MemLimit    MemUsed     StackBase/Ptr      Process
-----  --------  ----------  ----------  -----------------  ----------------
 4207  508989440  1275996864  784826368   7fc8c870/7fc8c6b0  arp
 4260  474046464  1449975270  783474688   7ff6d510/7ff6d170  netstack
 4211  500600832  1234090278  770871296   7fa0de30/7fa0dd20  pktmgr
 4419  566366208  1153767577  758939648   7f844480/7f842a30  ipqosmgr
 4319  443543552  1467611174  758128640   7f949910/7f9495e0  igmp
 4323  428814336  1347086502  748486656   7f8e3810/7f8e36f0  mrib
 4160  477401088  1234766118  745582592   7f862440/7f862090  adjmgr
 4089  503074816  1509232819  739819520   7fce7e10/7fce7a50  urib
 4389  428105728  1172773427  738848768   7fba58d0/7fba57f0  mcastfwd
 4326  445722624  1223470579  734621696   7fa19750/7fa19640  rpm
 4210  450088960  1227304435  734289920   7ff990a0/7ff98b48  icmpv6
 4153  540930048  1187149708  730902528   7fc48610/7fc48290  npacl
 4161  471392256  1224344256  730488832   7fcbfb00/7fcbf9c0  u6rib
 3981  544784384  1184558988  726593536   7f88d6c0/7f88d310  smm
 4022  299548672  1271707852  551522304   7ff50a00/7ff4e68c  port-profile
 4068  160788480  621501900   352100352   7fee6e80/7fee6430  carmelusd
 4134  83267584   1052905497  347811840   7ff25550/7ff2336c  fwm
 4423  19582976   588388096   304406528   7fe57570/7fe5564c  vpc
...
...
...
 4036  11128832   354791289   201682944   7f86d370/7f86cce8  vman
```

```
 4675  14233600  396242457   201539584   7fe66d60/7fe64c5c  port
 3954  17121280  353528384   200986624   7fff51d0/7fff0a9c  syslogd
 4040  14163968  0           200806400   7fc04130/7fc03f00  sunnyvale
 4093  12021760  601953369   199639040   7fbe6160/7fbe4930  aclmgr
 4417  13565952  542731622   199540736   7fd068f0/7fd045cc  eth_port_channel
 4082  10121216  0           199348224   7fa21f50/7fa2019c  cert_enroll
 3985   9740288  337683033   198983680   7f84c270/7f84bc28  licmgr
 3956  13332480  0           198664192   7faf6490/7faf45a4  pfma
 4151  10342400  545894553   198254592   7ff25f10/7ff246b0  copp
 4420  12300288  345155148   197206016   7fddfae0/7fdde4d0  lacp
 4075  12718080  458507315   196157440   7f8d4710/7f8d3d50  athertonusd
 2588  10424320  0           196001792   7fe1ec00/7fe1e5a0  sysmgr
 4061  10158080  334042508   195309568   7fc20690/7fc1f100  evms
 4693  10117120  435160140   195125248   7fc4cd20/7fc4c0d0  zone
...
...
...
 4320    516096  220539264   79826944    7fcf6190/7fcf5de8  ip_dummy
 4321    516096  220539264   79826944    7fe305e0/7fe30238  ipv6_dummy
 4039   3907584  304524774   77709312    7ff8cad0/7ff8c94c  sysinfo
 4048    339968  247434176   74272768    7fe7fc20/7fe7f390  plog_sup
 4117   290816  0           73809920    7fd67c80/7fd67838  core-client
 4884  12898304  0           18296832    7ff59030/7ff589a0  libvirtd
 4002    385024  0           3026944     7fa35cc0/7fa35b20  cisco
 4877    204800  0           2908160     7fa0c1a0/7fa0bbc8  sh
 3984    237568  0           2854912     7f838350/7f836fe0  lmgrd
 3952    385024  251529625   2433024     7f886f30/7f886da0  xinetd
 3953    434176  132729625   2195456     7fc540a0/7fc53ee0  tftpd
    1    159744  0           2035712     7f918480/7f917f70  init
 2537    176128  0           1966080     7fb3ba40/7fb3b7b0  rpc.statd
 2565    188416  0           1904640     7f8cff30/7f8cfd10  rpc.mountd
 2528    167936  0           1798144     7f8f1190/7f8f108c  portmap
 4009    167936  353528384   1691648     7fa841c0/7fa840c8  klogd
 3513    147456  0           745472      7fa60b90/0         insmod

All processes: MemAlloc = 8720044032

Memory usage:   8253792K total,   1907238K used,   6346554K free
```

6.10.1.3. CPU

```
    5 1553             1                                3        1
    37948517 1 18 45 68272713 161142711 2621  53 25 817117212271
100
 90
 80
 70
 60     #
 50 #  ##
 40 #  ###                                            #
 30 #  ###                                            #
 20 # ####                                            #
 10 ###### #    #  # #### #    #    #    #    #   # # #  #    ##
    0....5....1....1....2....2....3....3....4....4....5....5....
              0    5    0    5    0    5    0    5    0    5

              CPU% per second (last 60 seconds)
                     # = average CPU%


    5556323334313234134233443532432524413323243232122232432233 23
    8911268316294772842582321159085369962633536674846101003880 55
100
 90
 80
 70
 60 ** *
 50 ****     *               *     * **
 40 ****  *  *    **  * * ** ** ** * **  *   ** *       *   *  *
 30 *********** **** ****************** ** ******   * * ** *****
 20 ************************************************************
 10 #####*********************************#***************########
    0....5....1....1....2....2....3....3....4....4....5....5....
              0    5    0    5    0    5    0    5    0    5

              CPU% per minute (last 60 minutes)
             * = maximum CPU%   # = average CPU%
```


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```
    5555555554545544445555555657555545556555557555545555555555454555555545555
    0412067518697288891013063014006594017230434443693188183825927142264842 14
[7m--More--[27m
100
 90
 80
 70                          *        *     *
 60      ***  * *          * * *  **    *     *   *   ** * * *       *
 50 ************************************************************************
 40 ************************************************************************
 30 ************************************************************************
 20 ************************************************************************
 10 ************************************************************************
    0....5....1....1....2....2....3....3....4....4....5....5....6....6....7.
              0    5    0    5    0    5    0    5    0    5    0    5    0

                 CPU% per hour (last 72 hours)
                * = maximum CPU%   # = average CPU%
```

> ***Recomendación***: El equipo se ve con carga pero la utilización de recursos y disponibilidad de los mismos permiten un buen funcionamiento del switch. No es necesario ningún tipo de cambio.

6.11. FANs y Power Supply Units

En la siguiente sección se analizan el estado de los componentes físicos de los switches.

6.11.1. SW-N5K

De la comandos ejecutados se obtienen los siguientes datos:

6.11.1.1. FANs

Los FANs físicos y los FANs que tiene cada una de las fuentes (PSU) se encuentran correctamente funcionando.

```
Fan:
-------------------------------------------------------
Fan              Model                 Hw         Status
-------------------------------------------------------
Chassis-1        N5548P-FAN            --         ok
Chassis-2        N5548P-FAN            --         ok
PS-1             N55-PAC-750W          --         ok
PS-2             N55-PAC-750W          --         ok


Temperature
-----------------------------------------------------------------
Module    Sensor      MajorThresh   MinorThres   CurTemp     Status
                      (Celsius)     (Celsius)    (Celsius)
-----------------------------------------------------------------
1         Fan side    100           90           16          ok
1         Outlet-1    100           90           44          ok
1         Intake-0    100           90           34          ok
1         Intake-1    100           90           41          ok
1         Sunnyvale   125           100          33          ok
1         Carmel-0    125           100          31          ok
```

```
1        Carmel-1   125          100          26          ok
1        Carmel-2   125          100          23          ok
1        Port side  100          90           30          ok
1        Control    58           53           16          ok
```

6.11.1.2. Fuentes (Power Supply Units)

```
Power Supply:
Voltage: 12 Volts
-----------------------------------------------------------
PS  Model                Input Power       Current   Status
                         Type  (Watts)     (Amps)
-----------------------------------------------------------
1   N55-PAC-750W         AC     744.00     62.00     ok
2   N55-PAC-750W         AC     744.00     62.00     ok


Mod Model                    Power     Current     Power     Current     Status
                             Requested Requested   Allocated Allocated
                             (Watts)   (Amps)      (Watts)   (Amps)
--- ----------------------   -------   ----------  --------- ----------  ----------
1    N5K-C5548UP-SUP         492.00    41.00       492.00    41.00       powered-up
3    N55-DL2                 24.00     2.00        24.00     2.00        powered-up


Power Usage Summary:
--------------------
Power Supply redundancy mode:                 Redundant
Power Supply redundancy operational mode:     Redundant

Total Power Capacity                             1488.00 W

Power reserved for Supervisor(s)                  492.00 W
Power currently used by Modules                    24.00 W

                                                -------------
Total Power Available                             972.00 W
                                                -------------
```

6.11.2. Fabric Extender

De la comandos ejecutados se obtienen los siguientes datos:

6.11.2.1. FANs

Los FANs físicos y los FANs que tiene cada una de las fuentes (PSU) se encuentran correctamente funcionando.

```
Temperature Fex 101:
-----------------------------------------------------------------
Module   Sensor     MajorThresh   MinorThres   CurTemp     Status
                    (Celsius)     (Celsius)    (Celsius)
-----------------------------------------------------------------
1        Center     90            80           18          ok
1        Fan-side   90            80           21          ok
1        Port-side  90            80           19          ok
1        Die-1      125           100          25          ok
1        Control-1  70            60           20          ok


Fan Fex: 101:
-------------------------------------------------------
Fan             Model                Hw         Status
-------------------------------------------------------
Chassis         N2K-C2248-FAN        --         ok
PS-1            N2200-PAC-400W       --         ok
PS-2            N2200-PAC-400W       --         ok
```

```
Temperature Fex 102:
----------------------------------------------------------------
Module   Sensor     MajorThresh   MinorThres   CurTemp     Status
                    (Celsius)     (Celsius)    (Celsius)
----------------------------------------------------------------
1        Center     90            80           20          ok
1        Fan-side   90            80           22          ok
1        Port-side  90            80           20          ok
1        Die-1      125           100          26          ok
1        Control-1  70            60           21          ok


Fan Fex: 102:
-------------------------------------------------------
Fan             Model                Hw         Status
-------------------------------------------------------
Chassis         N2K-C2248-FAN        --         ok
PS-1            N2200-PAC-400W       --         ok
PS-2            N2200-PAC-400W       --         ok

Temperature Fex 103:
----------------------------------------------------------------
Module   Sensor     MajorThresh   MinorThres   CurTemp     Status
                    (Celsius)     (Celsius)    (Celsius)
----------------------------------------------------------------
1        Center     90            80           27          ok
1        Fan-side   90            80           32          ok
1        Port-side  90            80           28          ok
1        Die-1      125           100          33          ok
1        Control-1  70            60           30          ok


Fan Fex: 103:
-------------------------------------------------------
Fan             Model                Hw         Status
-------------------------------------------------------
Chassis         N2K-C2248-FAN        --         ok
PS-1            N2200-PAC-400W       --         ok
PS-2            N2200-PAC-400W       --         ok

Temperature Fex 104:
----------------------------------------------------------------
Module   Sensor     MajorThresh   MinorThres   CurTemp     Status
                    (Celsius)     (Celsius)    (Celsius)
----------------------------------------------------------------
1        Center     90            80           20          ok
1        Fan-side   90            80           21          ok
1        Port-side  90            80           19          ok
1        Die-1      125           100          24          ok
1        Control-1  70            60           20          ok


Fan Fex: 104:
-------------------------------------------------------
Fan             Model                Hw         Status
-------------------------------------------------------
Chassis         N2K-C2248-FAN        --         ok
PS-1            N2200-PAC-400W       --         ok
PS-2            N2200-PAC-400W       --         ok
```

6.11.2.2. Fuentes (Power Supply Units)

```
Power Supply Fex 101:
-------------------------------------------------------------------------------
Voltage: 12 Volts
-----------------------------------------------------
PS  Model                Power       Power     Status
                         (Watts)     (Amp)
-----------------------------------------------------
1   N2200-PAC-400W        396.00     33.00     ok
2   N2200-PAC-400W        396.00     33.00     ok


Mod Model                Power     Power       Power     Power       Status
                         Requested Requested   Allocated Allocated
                         (Watts)   (Amp)       (Watts)   (Amp)
--- -------------------  -------   ----------  --------- ----------  ----------
1    N2K-C2248TP-E-1GE   38.40     3.20        38.40     3.20        powered-up


Power Usage Summary:
--------------------
Power Supply redundancy mode:                 redundant
Power Supply redundancy operational mode:     Redundant

Total Power Capacity                              792.00 W

Power reserved for Supervisor(s)                   38.40 W
Power currently used by Modules                     0.00 W

                                                -------------
Total Power Available                             753.60 W
                                                -------------

Power Supply Fex 102:
-------------------------------------------------------------------------------
Voltage: 12 Volts
-----------------------------------------------------
PS  Model                Power       Power     Status
                         (Watts)     (Amp)
-----------------------------------------------------
1   N2200-PAC-400W        396.00     33.00     ok
2   N2200-PAC-400W        396.00     33.00     ok



Mod Model                Power     Power       Power     Power       Status
                         Requested Requested   Allocated Allocated
                         (Watts)   (Amp)       (Watts)   (Amp)
--- -------------------  -------   ----------  --------- ----------  ----------
1    N2K-C2248TP-E-1GE   36.00     3.00        36.00     3.00        powered-up


Power Usage Summary:
--------------------
Power Supply redundancy mode:                 redundant
Power Supply redundancy operational mode:     Redundant

Total Power Capacity                              792.00 W

Power reserved for Supervisor(s)                   36.00 W
Power currently used by Modules                     0.00 W

                                                -------------
Total Power Available                             756.00 W
                                                -------------


Power Supply Fex 103:
-------------------------------------------------------------------------------
Voltage: 12 Volts
-----------------------------------------------------
PS  Model                Power       Power     Status
                         (Watts)     (Amp)
-----------------------------------------------------
1   N2200-PAC-400W        396.00     33.00     ok
2   N2200-PAC-400W        396.00     33.00     ok
```

```
Mod Model                Power     Power       Power     Power       Status
                         Requested Requested   Allocated Allocated
                         (Watts)   (Amp)       (Watts)   (Amp)
--- -------------------  -------   ----------  --------- ----------  ----------
1    N2K-C2248TP-E-1GE   43.20     3.60        43.20     3.60        powered-up


Power Usage Summary:
--------------------
Power Supply redundancy mode:                 redundant
Power Supply redundancy operational mode:     Redundant

Total Power Capacity                              792.00 W

Power reserved for Supervisor(s)                   43.20 W
Power currently used by Modules                     0.00 W

                                             -------------
Total Power Available                             748.80 W
                                             -------------

Power Supply Fex 104:
-----------------------------------------------------------------------------
Voltage: 12 Volts
-----------------------------------------------------
PS  Model                Power       Power     Status
                         (Watts)     (Amp)
-----------------------------------------------------
1   N2200-PAC-400W        396.00     33.00     ok
2   N2200-PAC-400W        396.00     33.00     ok


Mod Model                Power     Power       Power     Power       Status
                         Requested Requested   Allocated Allocated
                         (Watts)   (Amp)       (Watts)   (Amp)
--- -------------------  -------   ----------  --------- ----------  ----------
1    N2K-C2248TP-E-1GE   34.80     2.90        34.80     2.90        powered-up


Power Usage Summary:
--------------------
Power Supply redundancy mode:                 redundant
Power Supply redundancy operational mode:     Redundant

Total Power Capacity                              792.00 W

Power reserved for Supervisor(s)                   34.80 W
Power currently used by Modules                     0.00 W

                                             -------------
Total Power Available                             757.20 W
                                             -------------
```

Recomendación: Ambos equipos se ven bien en cuanto a temperatura y funcionamiento de los componentes. No es necesario ningún tipo de cambio.

6.12. Diagnósticos de inicio

En la siguiente sección se chequea el estado del Hardware del equipo luego del último booteo.

6.12.1. SW-N5K

```
Current bootup diagnostic level: complete

Module 1: O2 32X10GE/Modular Universal Platform Supervisor  SerialNo : FOC20373ZWC

  Overall Diagnostic Result for Module 1 : PASS
  Diagnostic level at card bootup: complete

  Test results: (. = Pass, F = Fail, I = Incomplete,
```

```
              U = Untested, A = Abort)

  1) TestUSBFlash ------------------------> .
  2) TestSPROM ---------------------------> .
  3) TestPCIe ----------------------------> .
  4) TestLED -----------------------------> .
  5) TestOBFL ----------------------------> .
  6) TestNVRAM ---------------------------> .
  7) TestPowerSupply ---------------------> .
  8) TestTemperatureSensor ---------------> .
  9) TestFan -----------------------------> .
 10) TestVoltage -------------------------> .
 11) TestGPIO ----------------------------> .
 12) TestInbandPort ----------------------> .
 13) TestManagementPort ------------------> .
 14) TestMemory --------------------------> .
 15) TestFabricEngine :

Eth     1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20
Port ------------------------------------------------------------------------------
        .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .

Eth    21  22  23  24  25  26  27  28  29  30
Port ----------------------------------------
        .   .   .   .   .   .   .   .   .   .


Fc      1   2
Port --------
        .   .

 16) TestFabricPort :

Eth     1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20
Port ------------------------------------------------------------------------------
        .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .

Eth    21  22  23  24  25  26  27  28  29  30
Port ----------------------------------------
        .   .   .   .   .   .   .   .   .   .


Fc      1   2
Port --------
        .   .

 17) TestForwardingEngine :

Eth     1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20
Port ------------------------------------------------------------------------------
        .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .

Eth    21  22  23  24  25  26  27  28  29  30
Port ----------------------------------------
        .   .   .   .   .   .   .   .   .   .


Fc      1   2
Port --------
        .   .

 18) TestForwardingEnginePort :

Eth     1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20
Port ------------------------------------------------------------------------------
        .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .

Eth    21  22  23  24  25  26  27  28  29  30
Port ----------------------------------------
        .   .   .   .   .   .   .   .   .   .


Fc      1   2
Port --------
        .   .

 19) TestFrontPort :

Eth     1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20
Port ------------------------------------------------------------------------------
        .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .

Eth    21  22  23  24  25  26  27  28  29  30
Port ----------------------------------------
        .   .   .   .   .   .   .   .   .   .


Fc      1   2
Port --------
        .   .
```

Recomendación: El hardware del equipo completó satisfactoriamente el diagnóstico de último inicio de booteo. No es necesario ningún tipo de test adicional.

***Nota**: no ha cambiado el diagnśtico debido a que el switch no se ha reiniciado.*

Sección 7. Conclusiones Finales

Contenidos

De acuerdo a los puntos anteriores analizados, se concluye que el equipos de acceso denominado SW-N5K presta servicio correctamente. Es posible algunos puntos de mejora pero a nivel físico todo se encuentra en los valores esperados.

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Sección 8. Configuraciones

Contenidos

En la siguiente sección se presentan las configuraciones del equipo tomada junto con el cliente.

8.1. SW-N5K

```
!Command: show running-config
!Time: Mon Nov 11 14:07:28 2024

version 7.3(8)N1(1)
feature fcoe

hostname SW-N5K

no feature telnet
cfs eth distribute
feature interface-vlan
feature lacp
feature vpc
feature lldp
feature vtp
feature fex

logging level pltfm_config 4
logging level xmlma 6
username admin password 5
$5$Vyy27U6l$/rm9p1/iCWp8vkLCpuZ/knEOqVG1Pp8bvjVgm.cGtSA  role
network-admin
username infocadmin password 5
$5$jczxUP05$6nV3iByRPth3epY61QId18edpoh1tUKrrO5dMr/q2q6  role
network-admin
username infocadmin passphrase  lifetime 99999 warntime 14
gracetime 3
ip domain-lookup
crypto key param rsa label SW-N5K modulus 1024
fex 101
  pinning max-links 1
  description "SW F2 - RACK D"
fex 102
  pinning max-links 1
  description "SW F2 - RACK C"
fex 103
  pinning max-links 1
  description "SW F2 - RACK B"
fex 104
  pinning max-links 1
  description "SW F1 - RACK C"
slot 1
  port 31-32 type fc
snmp-server user admin network-admin auth md5
0xcdd967da7426629c37eaaba3ab54a23a priv
0xcdd967da7426629c37eaaba3ab54a23a localizedkey
snmp-server user infocadmin network-admin auth md5
0xac78bda7032526a97241b873e8f55859 priv
0xac78bda7032526a97241b873e8f55859 localizedkey
```


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```
rmon event 1 log description FATAL(1) owner PMON@FATAL
rmon event 2 log description CRITICAL(2) owner PMON@CRITICAL
rmon event 3 log description ERROR(3) owner PMON@ERROR
rmon event 4 log description WARNING(4) owner PMON@WARNING
rmon event 5 log description INFORMATION(5) owner PMON@INFO
snmp-server enable traps callhome event-notify
snmp-server enable traps callhome smtp-send-fail
snmp-server enable traps cfs state-change-notif
snmp-server enable traps lldp lldpRemTablesChange
snmp-server enable traps cfs merge-failure
snmp-server enable traps aaa server-state-change
snmp-server enable traps feature-control FeatureOpStatusChange
snmp-server enable traps sysmgr cseFailSwCoreNotifyExtended
snmp-server enable traps config ccmCLIRunningConfigChanged
snmp-server enable traps snmp authentication
snmp-server enable traps link cisco-xcvr-mon-status-chg
snmp-server enable traps vtp notifs
snmp-server enable traps vtp vlancreate
snmp-server enable traps vtp vlandelete
snmp-server enable traps bridge newroot
snmp-server enable traps bridge topologychange
snmp-server enable traps stpx inconsistency
snmp-server enable traps stpx root-inconsistency
snmp-server enable traps stpx loop-inconsistency
snmp-server enable traps system Clock-change-notification
snmp-server enable traps syslog message-generated
snmp-server community hacienda group network-operator
snmp-server community mhdacrainfo group network-operator
ntp server 10.20.2.5
system qos
  service-policy type queuing input fcoe-default-in-policy
  service-policy type queuing output fcoe-default-out-policy
  service-policy type qos input fcoe-default-in-policy
  service-policy type network-qos fcoe-default-nq-policy

ip route 0.0.0.0/0 192.168.150.1
vlan 3333
  name DSNC-CATASTRO

spanning-tree pathcost method long
vrf context management


interface Vlan1
  no shutdown

interface Vlan450
  description --> MANAGMENT <--
  no shutdown
  ip address 192.168.150.15/24

interface Vlan3333
  no shutdown
  ip address 172.16.16.1/24

interface port-channel1
  description (2.28)DATADOMAIN-DELL/EMC
  no lacp suspend-individual
  switchport access vlan 211

interface port-channel22
```

```
  description VERITAS-NIC-Teamimng(2.214)
  switchport access vlan 211

interface port-channel101
  description FEX101 - SW F2 - RACK D
  switchport mode fex-fabric
  no lacp suspend-individual
  fex associate 101

interface port-channel102
  description FEX102 - SW F2 - RACK C
  switchport mode fex-fabric
  no lacp suspend-individual
  fex associate 102

interface port-channel103
  description FEX103 - SW F2 - RACK B
  switchport mode fex-fabric
  no lacp suspend-individual
  fex associate 103

interface port-channel104
  description FEX104 - SW F1 - RACK C
  switchport mode fex-fabric
  no lacp suspend-individual
  fex associate 104

interface fc1/31(interface shutdown)

interface fc1/32(interface shutdown)

interface Ethernet1/1
  description [Ten1/32]C4500X
  switchport mode trunk

interface Ethernet1/2
  description Firepower Servidores
  shutdown
  switchport access vlan 211
  spanning-tree port type edge
  speed 1000
  duplex full

interface Ethernet1/3
  description FO-SET.MHDA:Lambare
  shutdown
  switchport access vlan 333
  spanning-tree port type edge
  speed 1000
  duplex full

interface Ethernet1/4
  shutdown

interface Ethernet1/5
  shutdown

interface Ethernet1/6
  shutdown

interface Ethernet1/7
```

```
  shutdown

interface Ethernet1/8
  shutdown

interface Ethernet1/9
  description ESXI-VMWARE
  switchport mode trunk
  switchport access vlan 442
  switchport trunk allowed vlan
2,98,111,211,216,300,423,430,442,450-451,500,503,600-601

interface Ethernet1/10
  description ESXI-VMWARE
  switchport mode trunk
  switchport access vlan 442
  switchport trunk allowed vlan
2,98,111,211,216,300,423,430,442,450-451,500,503,600-601

interface Ethernet1/11
  description ESXI-VMWARE
  switchport mode trunk
  switchport access vlan 442
  switchport trunk allowed vlan
2,98,111,211,216,300,423,430,442,450-451,500,503,600-601

interface Ethernet1/12
  description ESXI-VMWARE
  switchport mode trunk
  switchport access vlan 442
  switchport trunk allowed vlan
2,98,111,211,216,300,423,430,442,450-451,500,503,600-601

interface Ethernet1/13
  description ESXI-VMWARE
  switchport mode trunk
  switchport access vlan 442
  switchport trunk allowed vlan
2,98,111,211,216,300,423,430,442,450-451,500,503,600-601

interface Ethernet1/14
  description ESXI-VMWARE
  switchport mode trunk
  switchport access vlan 442
  switchport trunk allowed vlan
2,98,111,211,216,300,423,430,442,450-451,500,503,600-601

interface Ethernet1/15
  shutdown

interface Ethernet1/16
  description Blade Dell A1
  switchport mode trunk
  switchport trunk allowed vlan
2,98,111,211,216,300,423,442,450-451,500,503,600-601,700,3333

interface Ethernet1/17
  description Blade Dell A2
  switchport mode trunk
  switchport trunk allowed vlan
2,98,111,211,216,300,423,442,450-451,500,503,600-601,700,3333
```

```
interface Ethernet1/18
  shutdown

interface Ethernet1/19
  shutdown

interface Ethernet1/20
  description FO-SET.MHDA:Lambare
  shutdown
  switchport access vlan 333
  spanning-tree port type edge
  speed 1000
  duplex full

interface Ethernet1/21
  shutdown

interface Ethernet1/22
  shutdown

interface Ethernet1/23
  description FEX104 - UPLINK 2
  switchport mode fex-fabric
  fex associate 104
  channel-group 104

interface Ethernet1/24
  description FEX104 - UPLINK 4
  switchport mode fex-fabric
  fex associate 104
  channel-group 104

interface Ethernet1/25
  description FEX101 - UPLINK 2
  switchport mode fex-fabric
  fex associate 101
  channel-group 101

interface Ethernet1/26
  description FEX101 - UPLINK 1
  switchport mode fex-fabric
  fex associate 101
  channel-group 101

interface Ethernet1/27
  description FEX102 - UPLINK 1
  switchport mode fex-fabric
  fex associate 102
  channel-group 102

interface Ethernet1/28
  description FEX102 - UPLINK 2
  switchport mode fex-fabric
  fex associate 102
  channel-group 102

interface Ethernet1/29
  description FEX103 - UPLINK 2
  switchport mode fex-fabric
  fex associate 103
```

```
  channel-group 103

interface Ethernet1/30
  description FEX103 - UPLINK 1
  switchport mode fex-fabric
  fex associate 103
  channel-group 103

interface mgmt0
  vrf member management

interface Ethernet101/1/1
  description Conectado a Servidor UCS - Prime FireSight
  shutdown
  switchport access vlan 450
  spanning-tree port type edge

interface Ethernet101/1/2
  description Storage
  switchport access vlan 216
  spanning-tree port type edge

interface Ethernet101/1/3
  description (8.153)iLO.DATASCAN.2
  shutdown
  switchport access vlan 216
  spanning-tree port type edge

interface Ethernet101/1/4
  description (2.42)Mngmnt-HITACHI
  shutdown
  switchport access vlan 211
  spanning-tree port type edge

interface Ethernet101/1/5
  description ServidorImpresion(143.9)
  switchport access vlan 443
  spanning-tree port type edge

interface Ethernet101/1/6
  description (2.80)VERITAS.NUEVO
  shutdown
  switchport access vlan 211
  spanning-tree port type edge

interface Ethernet101/1/7
  description NOC-Control
  switchport access vlan 442
  spanning-tree port type edge

interface Ethernet101/1/8
  description CCTV.DELL
  shutdown
  switchport access vlan 442
  spanning-tree port type edge

interface Ethernet101/1/9
  shutdown

interface Ethernet101/1/10
  shutdown
```

```
interface Ethernet101/1/11
  shutdown

interface Ethernet101/1/12
  shutdown

interface Ethernet101/1/13
  shutdown

interface Ethernet101/1/14
  shutdown

interface Ethernet101/1/15
  shutdown

interface Ethernet101/1/16
  shutdown

interface Ethernet101/1/17
  shutdown

interface Ethernet101/1/18
  shutdown

interface Ethernet101/1/19
  shutdown

interface Ethernet101/1/20
  shutdown

interface Ethernet101/1/21
  shutdown

interface Ethernet101/1/22
  shutdown

interface Ethernet101/1/23
  shutdown

interface Ethernet101/1/24
  shutdown

interface Ethernet101/1/25
  shutdown

interface Ethernet101/1/26
  shutdown

interface Ethernet101/1/27
  shutdown

interface Ethernet101/1/28
  shutdown

interface Ethernet101/1/29
  shutdown

interface Ethernet101/1/30
  shutdown
```

```
interface Ethernet101/1/31
  shutdown

interface Ethernet101/1/32
  shutdown

interface Ethernet101/1/33
  shutdown

interface Ethernet101/1/34
  shutdown

interface Ethernet101/1/35
  switchport access vlan 216
  spanning-tree port type edge

interface Ethernet101/1/36
  shutdown

interface Ethernet101/1/37
  description VERITAS-NIC-Teamimng(2.214)
  switchport access vlan 211

interface Ethernet101/1/38
  description (2.214)VERITAS-NIC-Eth02
  switchport access vlan 211

interface Ethernet101/1/39
  description VERITAS-NIC-Teamimng(2.214)
  switchport access vlan 211

interface Ethernet101/1/40
  description VERITAS-NIC-Teamimng(2.214)
  switchport access vlan 211

interface Ethernet101/1/41
  shutdown

interface Ethernet101/1/42
  shutdown

interface Ethernet101/1/43
  shutdown

interface Ethernet101/1/44
  shutdown

interface Ethernet101/1/45
  shutdown

interface Ethernet101/1/46
  shutdown

interface Ethernet101/1/47
  shutdown

interface Ethernet101/1/48
  shutdown

interface Ethernet102/1/1
  description 8.37-oceanStor-2
```

```
  switchport access vlan 216
  spanning-tree port type edge

interface Ethernet102/1/2
  description 8.38-oceanStore-2b
  switchport access vlan 216
  spanning-tree port type edge

interface Ethernet102/1/3
  description (I.SCSI)StorageHuawei
  switchport access vlan 600
  spanning-tree port type edge

interface Ethernet102/1/4
  description SNAPSERVER:2.36
  shutdown
  switchport access vlan 211
  spanning-tree port type edge

interface Ethernet102/1/5
  description SNAPSERVER:123.28
  shutdown
  switchport access vlan 423
  spanning-tree port type edge

interface Ethernet102/1/6
  description Controladora A HP2k
  switchport access vlan 216
  spanning-tree port type edge
  speed 10

interface Ethernet102/1/7
  description Controladora B  HP2k
  switchport access vlan 216
  spanning-tree port type edge
  speed 10

interface Ethernet102/1/8
  description ServidorImpresion(143.10)
  shutdown
  switchport access vlan 443
  spanning-tree port type edge

interface Ethernet102/1/9
  description (10.8.3.5)dahuaNVR
  shutdown
  switchport access vlan 111
  spanning-tree port type edge

interface Ethernet102/1/10
  description (2.99)Konecta
  shutdown
  switchport access vlan 211
  spanning-tree port type edge

interface Ethernet102/1/11
  description FirewallHuawei.8.120
  switchport access vlan 216
  spanning-tree port type edge

interface Ethernet102/1/12
```

```
  description FirewallHuawei.8.121
  switchport access vlan 216
  spanning-tree port type edge

interface Ethernet102/1/13
  shutdown

interface Ethernet102/1/14
  shutdown

interface Ethernet102/1/15
  shutdown

interface Ethernet102/1/16
  shutdown

interface Ethernet102/1/17
  shutdown

interface Ethernet102/1/18
  shutdown

interface Ethernet102/1/19
  shutdown

interface Ethernet102/1/20
  shutdown

interface Ethernet102/1/21
  shutdown

interface Ethernet102/1/22
  shutdown

interface Ethernet102/1/23
  shutdown

interface Ethernet102/1/24
  description TEST-SET-Lambare-
  switchport access vlan 442

interface Ethernet102/1/25
  shutdown

interface Ethernet102/1/26
  shutdown

interface Ethernet102/1/27
  shutdown

interface Ethernet102/1/28
  shutdown

interface Ethernet102/1/29
  shutdown

interface Ethernet102/1/30
  shutdown

interface Ethernet102/1/31
  shutdown
```

```
interface Ethernet102/1/32
  shutdown

interface Ethernet102/1/33
  shutdown

interface Ethernet102/1/34
  shutdown

interface Ethernet102/1/35
  shutdown

interface Ethernet102/1/36
  shutdown

interface Ethernet102/1/37
  shutdown

interface Ethernet102/1/38
  shutdown

interface Ethernet102/1/39
  shutdown

interface Ethernet102/1/40
  shutdown

interface Ethernet102/1/41
  shutdown

interface Ethernet102/1/42
  shutdown

interface Ethernet102/1/43
  shutdown

interface Ethernet102/1/44
  shutdown

interface Ethernet102/1/45
  shutdown

interface Ethernet102/1/46
  shutdown

interface Ethernet102/1/47
  shutdown

interface Ethernet102/1/48
  description SW-KVM-DC
  switchport access vlan 442

interface Ethernet103/1/1
  description (2.55)Veritas
  switchport access vlan 211
  spanning-tree port type edge

interface Ethernet103/1/2
  description (123.55)Veritas
  switchport access vlan 423
```

```
  spanning-tree port type edge

interface Ethernet103/1/3
  description (10.8.3.249)NVR-BCKP(DELL-Interface3)
  switchport access vlan 111
  spanning-tree port type edge

interface Ethernet103/1/4
  description (2.32)NVR-DELL
  switchport access vlan 211
  spanning-tree port type edge

interface Ethernet103/1/5
  description (2.33)TapeBackup
  switchport access vlan 211
  spanning-tree port type edge

interface Ethernet103/1/6
  description (8.110)DataDomainDELL
  switchport access vlan 216
  spanning-tree port type edge

interface Ethernet103/1/7
  description LENOVO-(**)
  switchport access vlan 216
  spanning-tree port type edge

interface Ethernet103/1/8
  description (8.41)HUAWEI-STORAGE
  shutdown
  switchport access vlan 216
  spanning-tree port type edge

interface Ethernet103/1/9
  description NOC-WINDOWS-UPDATE
  switchport access vlan 216
  spanning-tree port type edge

interface Ethernet103/1/10

interface Ethernet103/1/11
  description XFUSION(iSCI)
  switchport access vlan 600
  spanning-tree port type edge

interface Ethernet103/1/12
  description XFUSION(VMotion)
  switchport access vlan 216
  spanning-tree port type edge

interface Ethernet103/1/13
  description LENOVO-(**)
  switchport access vlan 216
  spanning-tree port type edge

interface Ethernet103/1/14
  description LENOVO-(**)
  switchport access vlan 216
  spanning-tree port type edge

interface Ethernet103/1/15
```

```
  description (8.21)NOTEBOOK-XAV
  shutdown
  switchport access vlan 216
  spanning-tree port type edge

interface Ethernet103/1/16
  shutdown

interface Ethernet103/1/17
  description HuaweiFusionComp
  shutdown
  switchport access vlan 211
  spanning-tree port type edge

interface Ethernet103/1/18
  description HuaweiFusionComp
  switchport mode trunk
  switchport trunk allowed vlan 2,98,111,211,216,253-
254,300,423,430,442,450-451,500

interface Ethernet103/1/19
  description HuaweiFusionComp
  switchport access vlan 211
  spanning-tree port type edge

interface Ethernet103/1/20
  description ServidorUNIFLOW(143.220)
  shutdown
  switchport access vlan 211
  spanning-tree port type edge

interface Ethernet103/1/21
  description SWITCH-HUAWEI-(**)
  switchport access vlan 216
  spanning-tree port type edge
  spanning-tree bpdufilter enable

interface Ethernet103/1/22
  description SWITCH-HUAWEI-(**)
  switchport access vlan 216
  spanning-tree port type edge
  spanning-tree bpdufilter enable

interface Ethernet103/1/23
  description LAMBARE-MONITOREO
  shutdown
  switchport access vlan 442
  spanning-tree port type edge

interface Ethernet103/1/24
  shutdown

interface Ethernet103/1/25
  description (10.8.3.220)QNAP-Eth1
  switchport access vlan 111
  spanning-tree port type edge

interface Ethernet103/1/26
  description (10.8.3.220)QNAP-Eth2
  switchport access vlan 111
  spanning-tree port type edge
```

```
interface Ethernet103/1/27
  description (10.8.3.220)QNAP-Eth3
  switchport access vlan 111
  spanning-tree port type edge

interface Ethernet103/1/28
  description (10.8.3.220)QNAP-Eth4
  switchport access vlan 111
  spanning-tree port type edge

interface Ethernet103/1/29
  description (2.28)DATADOMAIN-DELL/EMC
  switchport access vlan 211
  spanning-tree port type edge
  channel-group 1

interface Ethernet103/1/30
  description (2.28)DATADOMAIN-DELL/EMC
  switchport access vlan 211
  spanning-tree port type edge
  channel-group 1

interface Ethernet103/1/31
  description (2.28)DATADOMAIN-DELL/EMC
  switchport access vlan 211
  spanning-tree port type edge
  channel-group 1

interface Ethernet103/1/32
  description (2.28)DATADOMAIN-DELL/EMC
  switchport access vlan 211
  spanning-tree port type edge
  channel-group 1

interface Ethernet103/1/33
  description (2.163)Veeam-Backup
  switchport access vlan 211
  spanning-tree port type edge

interface Ethernet103/1/34
  shutdown

interface Ethernet103/1/35
  description UCS220M4(10.8.3.X)
  switchport access vlan 111
  spanning-tree port type edge

interface Ethernet103/1/36
  shutdown

interface Ethernet103/1/37
  description ServidorImpresion(2.140)
  switchport access vlan 211
  spanning-tree port type edge

interface Ethernet103/1/38
  shutdown

interface Ethernet103/1/39
  shutdown
```

```
interface Ethernet103/1/40
  shutdown

interface Ethernet103/1/41
  shutdown

interface Ethernet103/1/42
  shutdown

interface Ethernet103/1/43
  shutdown

interface Ethernet103/1/44
  shutdown

interface Ethernet103/1/45
  shutdown

interface Ethernet103/1/46
  shutdown

interface Ethernet103/1/47
  shutdown

interface Ethernet103/1/48
  shutdown

interface Ethernet104/1/1
  description KVM1(ETH3:2.14)
  switchport access vlan 216
  spanning-tree port type edge

interface Ethernet104/1/2
  description KVM1(ETH1:2.12)
  switchport access vlan 216
  spanning-tree port type edge

interface Ethernet104/1/3
  description KVM2(ETH3:2.11)
  shutdown
  switchport access vlan 442
  spanning-tree port type edge

interface Ethernet104/1/4
  description KVM2(ETH1:2.13)
  shutdown
  switchport access vlan 211
  spanning-tree port type edge

interface Ethernet104/1/5
  description KVM2(ETH2:123.21)
  shutdown
  switchport access vlan 423
  spanning-tree port type edge

interface Ethernet104/1/6
  description NOC04
  switchport access vlan 700
  spanning-tree port type edge
```

```
interface Ethernet104/1/7
  description VM1-dl370g6:(2.21)
  shutdown
  switchport access vlan 211
  spanning-tree port type edge

interface Ethernet104/1/8
  description DEB165:(2.22)
  shutdown
  switchport access vlan 211
  spanning-tree port type edge

interface Ethernet104/1/9
  description VM1-dl370g6:(123.26)
  shutdown
  switchport access vlan 423
  spanning-tree port type edge

interface Ethernet104/1/10
  description DEB165:(123.27)
  shutdown
  switchport access vlan 423
  spanning-tree port type edge

interface Ethernet104/1/11
  description (192.168.8.)ILoHPG6
  shutdown
  switchport access vlan 216
  spanning-tree port type edge

interface Ethernet104/1/12
  description DSNC-MEF/INFO
  switchport access vlan 3333
  spanning-tree port type edge
  spanning-tree bpdufilter enable
  speed 1000
  duplex full

interface Ethernet104/1/13
  description HuaweiFusionComp
  switchport access vlan 211
  spanning-tree port type edge

interface Ethernet104/1/14
  description HuaweiFusionComp
  switchport mode trunk
  switchport trunk allowed vlan
2,98,111,211,216,300,423,430,442,450-451,500
  spanning-tree port type edge

interface Ethernet104/1/15
  description HuaweiFusionComp
  shutdown
  switchport access vlan 211
  spanning-tree port type edge

interface Ethernet104/1/16
  shutdown

interface Ethernet104/1/17
  description HuaweiSTGProduccionContA
```

```
  switchport access vlan 600
  spanning-tree port type edge

interface Ethernet104/1/18
  description HuaweiSTGProduccionContB
  switchport access vlan 600
  spanning-tree port type edge

interface Ethernet104/1/19
  description (i.SCSI)XFusion
  switchport access vlan 600
  spanning-tree port type edge

interface Ethernet104/1/20
  shutdown
  switchport access vlan 150
  spanning-tree port type edge

interface Ethernet104/1/21
  description (VMotion)XFusion
  switchport access vlan 216
  spanning-tree port type edge

interface Ethernet104/1/22
  description SwCisco2960-DA-->enlace lambare
  shutdown
  switchport access vlan 150
  spanning-tree port type edge

interface Ethernet104/1/23
  switchport access vlan 442

interface Ethernet104/1/24
  shutdown

interface Ethernet104/1/25
  shutdown

interface Ethernet104/1/26
  shutdown

interface Ethernet104/1/27
  shutdown

interface Ethernet104/1/28
  shutdown

interface Ethernet104/1/29
  description HuaweiContB-H3
  switchport access vlan 601
  spanning-tree port type edge

interface Ethernet104/1/30
  description HuaweiContA-H3
  switchport access vlan 601
  spanning-tree port type edge

interface Ethernet104/1/31
  shutdown

interface Ethernet104/1/32
```

```
  shutdown

interface Ethernet104/1/33
  shutdown

interface Ethernet104/1/34
  shutdown

interface Ethernet104/1/35
  shutdown

interface Ethernet104/1/36
  description Firepower Servidores
  switchport access vlan 211
  spanning-tree port type edge

interface Ethernet104/1/37
  shutdown

interface Ethernet104/1/38
  shutdown

interface Ethernet104/1/39
  shutdown

interface Ethernet104/1/40
  shutdown

interface Ethernet104/1/41
  shutdown

interface Ethernet104/1/42
  shutdown

interface Ethernet104/1/43
  shutdown
  switchport access vlan 423
  spanning-tree port type edge
  spanning-tree bpdufilter enable

interface Ethernet104/1/44
  shutdown

interface Ethernet104/1/45
  description (10.8.3.208)MonitorNOC
  shutdown
  switchport access vlan 111
  spanning-tree port type edge

interface Ethernet104/1/46
  shutdown
  switchport access vlan 500
  spanning-tree port type edge

interface Ethernet104/1/47
  description NOC-02
  shutdown
  switchport access vlan 98

interface Ethernet104/1/48
  description NOC-D01(CALA)
```

```
  shutdown
  switchport access vlan 423
  spanning-tree port type edge
clock timezone PST -4 0
line console
line vty
boot kickstart bootflash:/n5000-uk9-kickstart.7.3.8.N1.1.bin
boot system bootflash:/n5000-uk9.7.3.8.N1.1.bin
poap transit
interface fc1/31
interface fc1/32
logging server 192.168.150.18
```

***Nota**: se han realizdo cambios en la configuración desde el último reporte. Los cambios se han marcado en rojo.*

Sección 9. Contactos

Información General - Contactos

En la presente sección complete proporcionando una síntesis de la información complementaria o adicional que se desee insertar en el suplemento y que debe estar relacionado a los sistemas y la solución que fueron proporcionadas al cliente.

Sitio 1	Datacenter D.A.	
Dirección	Chile 252, Asunción	
Contacto	José Luis CABRERA PORTILLO - jose_cabrera@hacienda.gov.py	N/A
Acceso Remoto	SI ☐ NO ☒	

Personal Propio	Personal del Cliente
Fernando BELLO Coordinador DC & Cloud +54 11.5282.0400 fernando.bello@la.logicalis.com	**José Luis CABRERA PORTILLO** Jefe de Dpto de Informática - jose_cabrera@hacienda.gov.py
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Ingeniería de Proyectos
Informe de Infraestructura

Servicios Logicalis

Confeccionado por Logicalis para
Ministerio de Hacienda

SNPR91009
Noviembre 2024

TETÃ VIRU MOHENDAPY MOTENONDEHA
MINISTERIO DE HACIENDA

CISCO

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Sección 1. Control de Cambios

Cambios del Documento

Ultima Elaboración : Ing. Jesús Piñanez

Autorizado para modificar el presente documento: Logicalis

Historia

Versión No.	Fecha	Estado	Razón del Cambio
01-00	12 de noviembre de 2024	Borrador	Inicio de Documento
02-00	12 de noviembre de 2024	Final	Agregado de Outputs y análisis
03-00	12 de noviembre de 2024	Final	Corrección de cuadros

Revisión

Detalle de la Revisión	Revisión No.	Versión No.	Fecha
Inicio de Documento	00-01	01-00	12 de noviembre de 2024
Agregado de Outputs y análisis	00-01	02-00	12 de noviembre de 2024
Corrección de cuadros	00-01	03-00	12 de noviembre de 2024

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Sección 2. Introducción

Resumen de Contenidos

En este documento se provee un análisis sobre la infrastructura de del cliente.

2.1. Detalle de los Requisitos del Cliente

El presente documento fue redactado para dar a conocer detalles del Soporte y Servicios brindados sobre los de equipos de red indicados en el llamado denominado "Extensión de garantía de equipos de comunicación de la Dirección Administrativa".

Este informe se ha elaborado con el propósito de proporcionar una descripción exhaustiva de los servicios de soporte y las prestaciones ofrecidas en relación con los equipos de red específicamente mencionados en el llamado "Extensión de garantía de equipos de comunicación de la Dirección Administrativa". A través de este documento, se busca brindar una visión detallada de los diversos aspectos relacionados con el soporte técnico, así como los servicios adicionales que se han implementado para garantizar un funcionamiento óptimo de los equipos de comunicación mencionados.

En el contenido de este informe, se abordarán aspectos tales como el alcance del soporte proporcionado, detallando las áreas específicas cubiertas por los servicios, los procedimientos de mantenimiento preventivo aplicados a los equipos, las actualizaciones de firmware y software realizadas durante el período de extensión de garantía, así como cualquier otra mejora o modificación implementada para optimizar el rendimiento y la eficiencia de los equipos en cuestión.

Asimismo, se incluirá un análisis detallado de los resultados obtenidos durante el período de extensión de garantía, destacando cualquier incidencia detectada y las acciones correctivas tomadas para resolverlas. Este documento se presenta como una herramienta integral para comprender el valor agregado proporcionado a través de los servicios de soporte y cómo estos han contribuido al mantenimiento y mejora de los equipos de comunicación de la Dirección Administrativa.

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Sección 3. Situación Actual

Se presenta un informe sobre el estado actual de los equipos que se encuentran bajo soporte. Además, se llevó a cabo una exhaustiva revisión de cada uno de ellos, teniendo en cuenta sus respectivos números de serie.

Durante esta fase de trabajo, se ha realizado una verificación completa de todos los equipos, enfocándonos especialmente en identificar cualquier cambio o actualización aplicable al sistema operativo, ya sea en términos de firmware (FW) o software (SW).

3.1. Descripción del HW/SW de Equipos

MODEL NAME	SITE	IP	LOCATION	SN	PN	MODEL	SW Version	EOS
Cisco Prime Infrastructure	HACIENDA D.A	192.168.150.18	DATACENTER D.A	5673J3A394B	CON-ECMU-RMGMT3XN	R-MGMT3XN-K9	3.10	30/9/2028
Cisco Catalyst 4500X-32 SFP+ Switch	HACIENDA D.A	192.168.151.1	DATACENTER D.A	JAE203904YG	CON-SNTP-C45X32SF	S-C4500X-32SFP+	3.9.10E	31/10/2025
Cisco 5508 Wireless LAN Controller (Active)	HACIENDA D.A	192.168.150.16	DATACENTER D.A	FCW2039B1TB	CON-SNTP-CT082	WLC C5508-25-K9	8.0.140.0	31/7/2023
Cisco 5508 Wireless LAN Controller(Standby)	HACIENDA D.A	192.168.150.16	DATACENTER D.A	FCW1850LOHH	CON-SNTP-C082	WLC C5508-25-K9	8.0.140.0	30/11/2023
Cisco ASR 1000 Series (Border Router)	HACIENDA D.A	192.168.150.10	DATACENTER D.A	FOX2026GC1Y	CON-SNTP-ASR1002X	ASR 1002-X	17.09.05	31/7/2027
Cisco ASR 1000 Series	HACIENDA D.A	192.168.150.11	DATACENTER D.A	FOX1906GH2A	CON-SNTP-ASR1002X	ASR 1002-X	17.09.05	31/7/2027

Equipos_MDAH.xlsx

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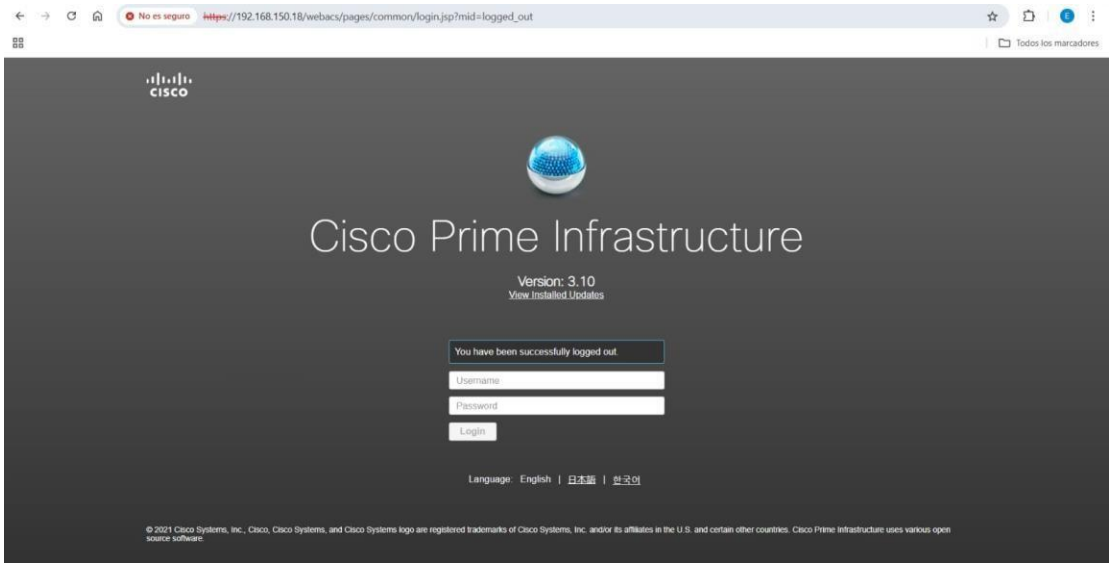
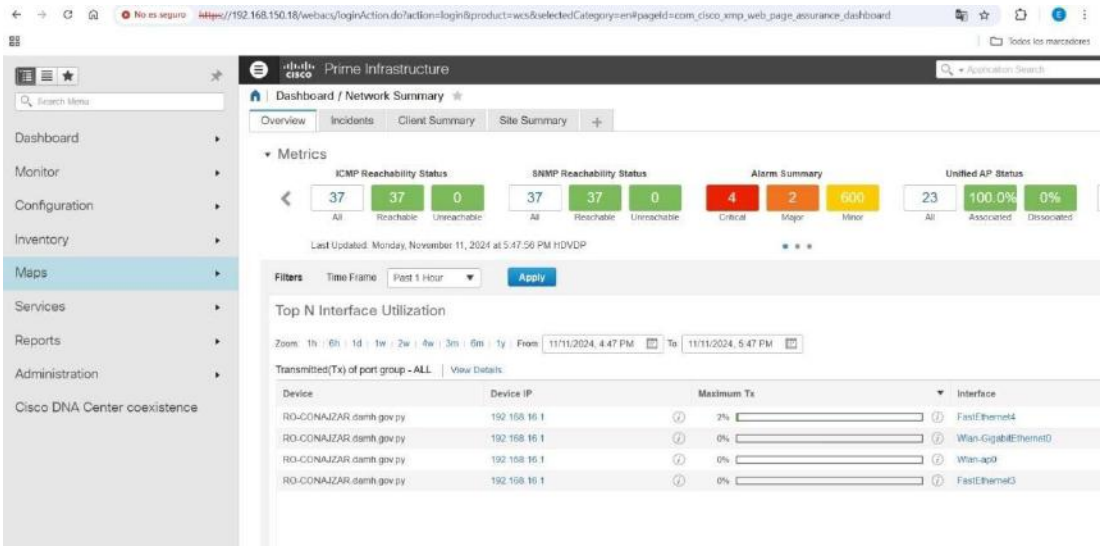
Sección 4. Análisis HW/SW en garantía

4.1. Cisco Prime

El appliance virtual actualmente se encuentra en la versión 3.10 y está operando en el entorno de VMware dentro de la infraestructura del cliente. Según la información proporcionada por el fabricante, la fecha anunciada para el final de soporte es el 30 de septiembre de 2028.





Equipos supervisados en Prime

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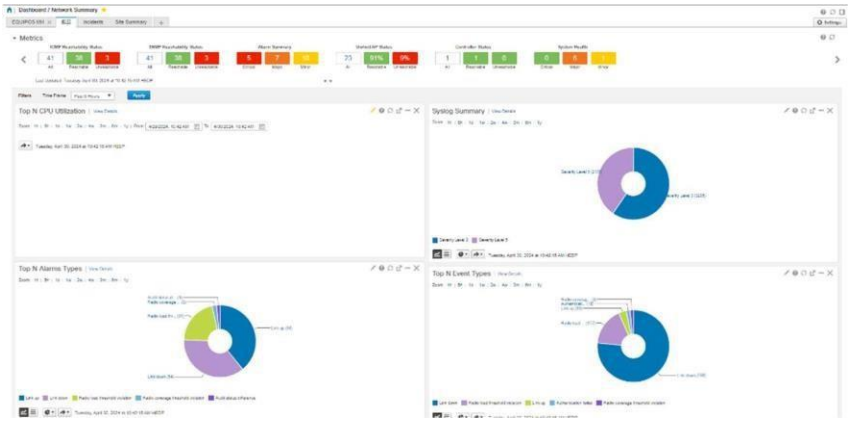
Reachability	Admin Status	Device Name	IP Address
✓	Managed	SW_MH_DC_2960X_POE.hacienda.gov....	192.168.8.4
✓	Managed	SW_MH_DC_3750X.hacienda.gov.py	192.168.8.5
✓	Managed	MHDA-DC101.hacienda.gov.py	192.168.8.101
✗	Un-Managed		192.168.8.200
✓	Managed	RO-CONAJZAR.damh.gov.py	192.168.16.1
✓	Un-Managed		192.168.16.10
✓	Un-Managed		192.168.20.1
✗	Maintenance	UES-CISCO.hacienda	192.168.144.9
✓	Managed	SW-NSK	192.168.150.15
✓	Managed	Cisco_98:87:44	192.168.150.16
✓	Managed	CITI5to-150.20.hacienda.gov.py	192.168.150.20
✗	Managed	MH-UMI(150.21).damh.gov.py	192.168.150.21
✓	Managed	MH-CITYSTO-150.22.hacienda.gov.py	192.168.150.22
✓	Managed	MH-PB01-23.hacienda.gov.py	192.168.150.23
✓	Managed	MH-PB01-24.hacienda.gov.py	192.168.150.24
✓	Managed	MH-PB01-25.hacienda.gov.py	192.168.150.25
✓	Managed	MH-PB01-26.hacienda.gov.py	192.168.150.26
✓	Managed	MH-PB01-27.hacienda.gov.py	192.168.150.27
✓	Managed	MH-EP01-28.hacienda.gov.py	192.168.150.28
✓	Managed	MH-EP01-29.hacienda.gov.py	192.168.150.29
✓	Managed	MHDA-1P-B-30.hacienda.gov.py	192.168.150.30
✓	Managed	MHDA-1P-B-31.hacienda.gov.py	192.168.150.31
✓	Managed	MHDA-1P-B-32.hacienda.gov.py	192.168.150.32
✓	Managed	MHDA-1P-B-33.hacienda.gov.py	192.168.150.33
✓	Managed	MHDA-1P-A-34.hacienda.gov.py	192.168.150.34
✓	Managed	MHDA-1P-A-35.hacienda.gov.py	192.168.150.35
✓	Managed	MHDA-1P-A-36.hacienda.gov.py	192.168.150.36
✗	Managed	MHDA-1P-A-37.hacienda.gov.py	192.168.150.37
✓	Managed	CITI4to-150.38.hacienda.gov.py	192.168.150.38
✓	Managed	CITI6b-150.39.hacienda.gov.py	192.168.150.39
✓	Managed	MH-PB01-40.hacienda.gov.py	192.168.150.40
✓	Managed	MH-EP01-41.hacienda.gov.py	192.168.150.41
✓	Managed	MHDA-1P-B-42.hacienda.gov.py	192.168.150.42
✓	Managed	MHDA-1P-A-43.hacienda.gov.py	192.168.150.43
✓	Managed	CITI-1-47.hacienda.gov.py	192.168.150.47
✓	Managed	CITI-1-60.damh.gov.py	192.168.150.60
✓	Managed	CITI-1-61.damh.gov.py	192.168.150.61
✓	Managed	CITI5-80.hacienda.gov.py	192.168.150.80
✓	Managed	CITI6-81.hacienda.gov.py	192.168.150.81
✓	Managed	CITI4-82.hacienda.gov.py	192.168.150.82
✓	Managed	SW-INDIGO-CITY.hacienda.gov.py	192.168.150.83
✓	Managed	CORE-HACIENDA.hacienda.gov.py	192.168.151.1
✓	Managed	BORDE-HACIENDA.hacienda.gov.py	192.168.151.10
⚠	Un-Managed		192.168.152.2
✓	Managed	CORE-HACIENDA.hacienda.gov.py	192.168.154.1

Dashboard PRIME



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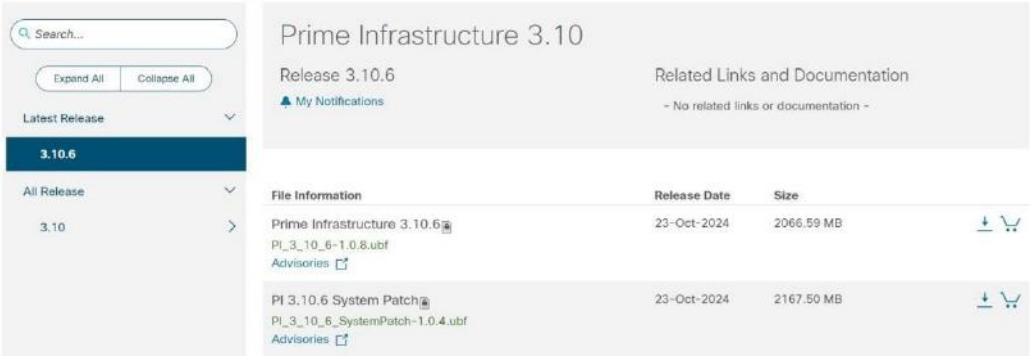
Recomendaciones

Se sugiere llevar a cabo la actualización a la versión 3.10.6 del software, siguiendo las pautas recomendadas por el fabricante. Es imperativo destacar que antes de proceder con esta tarea, se aconseja realizar una copia de seguridad de las configuraciones y de la máquina virtual. Este paso previo es fundamental para garantizar la integridad y seguridad de los datos almacenados durante el proceso de actualización. Este procedimiento se presenta como una medida preventiva, con el objetivo de resguardar cualquier configuración personalizada, datos críticos o información importante que pueda estar vinculada al funcionamiento actual de la versión instalada. La realización de un respaldo previo ofrece la posibilidad de revertir cambios en caso de que surjan problemas durante la actualización o para recuperar información en caso de algún imprevisto. Una vez completado el respaldo, se recomienda seguir las instrucciones proporcionadas porel fabricante para llevar a cabo la actualización de manera ordenada y eficiente.

.



4.2. Cisco Catalyst C4500-X

El modelo del switchs C4500X- 32SFP+ S/N JAE203904YG se encuentra en la versión IOS 03.09.10.E. Cuenta con 32 puertos SFP 100/1000/10000 y un módulo de expansión C4KX-NM-8 S/N JAE2048003K de 8 puertos. 100/100/10000

CPU MAX: 8% Estado Optimo.

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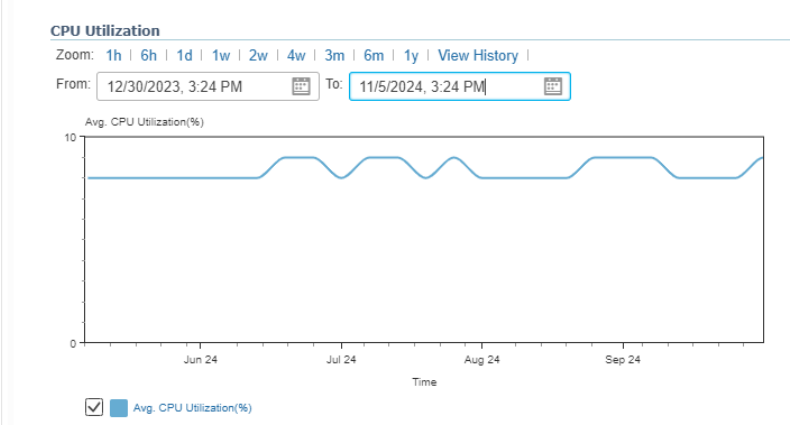

Memoria Max: 17 % (Optimo)

Features / System
Memory Pools

Type	Name	Used (MB)	Free (MB)
IO Memory	I/O	0	28
Processor Memory	Processor	276	620

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Interfaces Activa

Vlan439	192.168.139.1/24	IPv4
Vlan436	192.168.136.1/24	IPv4
Vlan445	192.168.145.1/24	IPv4
Vlan431	192.168.131.1/24	IPv4
Vlan13	192.168.4.1/24	IPv4
Vlan434	192.168.134.1/24	IPv4
Vlan446	192.168.146.1/24	IPv4
Vlan447	192.168.147.1/24	IPv4
Vlan433	192.168.133.1/24	IPv4
Vlan440	192.168.140.1/24	IPv4
Vlan423	192.168.123.1/24	IPv4
Vlan211	192.168.2.1/24	IPv4
Vlan216	192.168.8.1/24	IPv4
Vlan452	192.168.152.1/29	IPv4

Interface	IP Address	Address Type
Vlan444	192.168.144.1/24	IPv4
Vlan432	192.168.132.1/24	IPv4
Vlan441	192.168.141.1/24	IPv4
Vlan420	192.168.120.1/23	IPv4
Vlan12	192.168.3.1/24	IPv4
Vlan438	192.168.138.1/24	IPv4
Vlan15	192.168.6.1/23	IPv4
Vlan10	192.168.0.1/23	IPv4
Vlan449	192.168.149.1/24	IPv4
Vlan435	192.168.135.1/24	IPv4
Vlan430	192.168.130.1/24	IPv4
Vlan450	192.168.150.1/24	IPv4
Vlan442	192.168.142.1/24	IPv4
Vlan422	192.168.122.1/24	IPv4
Vlan14	192.168.5.1/24	IPv4
Vlan443	192.168.143.1/24	IPv4
Vlan451	192.168.151.1/29	IPv4
Vlan437	192.168.137.1/24	IPv4
Vlan448	192.168.148.1/24	IPv4

TenGigabitEthernet1/2	00:6b:f1:56:b4:01	1000	✓
TenGigabitEthernet1/1	00:6b:f1:56:b4:00	1000	✓

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Sin errores interfaces.

```
------------------ show interfaces counters errors ------------------


Port            CrcAlign-Err Dropped-Bad-Pkts Collisions   Symbol-Err
Te1/1                      0                0          0            0
Te1/2                      0                0          0            0
Te1/3                      0                0          0            0
Te1/4                      0                0          0            0
Te1/5                      0                0          0            0
Te1/6                      0                0          0            0
Te1/7                      0                0          0            0
Te1/8                      0                0          0            0
Te1/9                      0                0          0            0
Te1/10                     0                0          0            0
Te1/11                     0                0          0            0
Te1/12                     0                0          0            0
Te1/13                     0                0          0            0
Te1/14                     0                0          0            0
Te1/15                     0                0          0            0
Te1/16                     0                0          0            0
Te1/17                     0                0          0            0
Te1/18                     0                0          0            0
Te1/19                     0                0          0            0
Te1/20                     0                0          0            0
Te1/21                     0                0          0            0
Te1/22                     0                0          0            0
Te1/23                     0                0          0            0
Te1/24                     0                0          0            0
Te1/25                     0                0          0            0
Te1/26                     0                0          0            0
Te1/27                     0                0          0            0
Te1/28                     0                0          0            0
Te1/29                     0                0          0            0
Te1/30                     0                0          0            0
Te1/31                     0                0          0            0
Te1/32                     0                0          0            0
Te2/1                      0                0          0            0
Te2/2                      0                0          0            0
Te2/3                      0                0          0            0
Te2/4                      0                0          0            0
Te2/5                      0                0          0            0
Te2/6                      0                0          0            0
Te2/7                      0                0          0            0
Te2/8                      0                0          0            0
```

Sin errores en sensores de Temp/Power

```
------------------ show environment ------------------


no temperature alarms


Module Sensor                      Temperature          Status
------+--------------------------+--------------------+------------
1      XPP                         32C (85C,90C,95C)              ok
1      IFE                         34C (85C,90C,95C)              ok
1      CPU                         45C (85C,90C,95C)              ok
1      FPGA                        43C (85C,90C,95C)              ok
1      Air outlet                  30C (70C,75C,80C)              ok
1      Air inlet                   25C (60C,65C,70C)              ok
2      Air inlet                   21C (60C,65C,70C)              ok
2      Air outlet                  27C (70C,75C,80C)              ok

Power                                                  Fan      Inline
Supply  Model No          Type       Status       Sensor   Status
------  ----------------  ---------  -----------  -------  -------
PS1     PWR-C4KX-750AC-R  AC 750W    good         good     n.a.
PS2     PWR-C4KX-750AC-R  AC 750W    good         good     n.a.

Power supplies needed by system    : 1
Power supplies currently available : 2

Chassis Type : WS-C4500X-32

Power consumed by backplane : 0 Watts

Switch Bandwidth Utilization : 0%

Supervisor Led Color : Green
```

CDP

```
------------------ show cdp neighbor ------------------


Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge
                  S - Switch, H - Host, I - IGMP, r - Repeater, P - Phone,
                  D - Remote, C - CVTA, M - Two-port Mac Relay

Device ID        Local Intrfce     Holdtme    Capability  Platform  Port ID
Cisco_98:87:44   Ten 1/25          177               H    AIR-CT550 Gig 0/0/8
Cisco_98:87:44   Ten 1/3           177               H    AIR-CT550 Gig 0/0/1
SW-N5K(SSI203200G8)
                 Ten 1/32          161            R S I C N5K-C5548 Eth 1/1
MH-PB01-23.hacienda.gov.py
                 Ten 1/5           137              S I   WS-C2960X Gig 1/0/49
MH-PB01-40.hacienda.gov.py
                 Ten 1/17          153              S I   WS-C2960X Gig 1/0/25
MHDA-DC101.hacienda.gov.py
                 Ten 2/7           163              S I   WS-C3750X Gig 1/1/1
MH-EP01-28.hacienda.gov.py
                 Ten 1/7           129              S I   WS-C2960X Gig 1/0/49
CITI5-80.hacienda.gov.py
                 Ten 2/2           145             R S I  WS-C3750E Gig 1/0/49
MHDA-1P-B-30.hacienda.gov.py
                 Ten 1/9           142              S I   WS-C2960X Gig 1/0/49
MHDA-1P-A-34.hacienda.gov.py
                 Ten 1/11          164              S I   WS-C2960X Gig 1/0/49
access4.copaco.com.py
                 Ten 1/16          160             R S I  WS-C6504- Gig 2/31
Cisco_98:87:44-Standby
                 Ten 1/26          153               H    AIR-CT550 Gig 0/0/8
Cisco_98:87:44-Standby
                 Ten 1/4           153               H    AIR-CT550 Gig 0/0/1

Total cdp entries displayed : 13
```


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Configuraciones.

----------show running-config ----------

```
CORE-HACIENDA#show running-config
Building configuration...

Current configuration : 23198 bytes
!
! Last configuration change at 12:30:38 PST Wed Sep 18 2024 by admin
! NVRAM config last updated at 12:30:47 PST Wed Sep 18 2024 by admin
!
version 15.2
no service pad
service timestamps debug datetime msec localtime show-timezone
service timestamps log datetime msec localtime show-timezone
no service password-encryption
service compress-config
!
hostname CORE-HACIENDA
!
boot-start-marker
boot system bootflash:cat4500e-universalk9.SPA.03.11.10.E.152-7.E10.bin
boot-end-marker
!
!
vrf definition mgmtVrf
!
address-family ipv4
--More--                                                    exit-address-family
!
address-family ipv6
exit-address-family
!
logging monitor warnings
!
username admin privilege 15 secret 5 $1$a4js$tDCY1uo5ycYsh0hZTlMFm/
username infocadmin privilege 15 secret 5 $1$1G.m$WhjuBXpyqP5XaQWUlmo7E1
no aaa new-model
clock timezone PST -4 0
!
!
!
!
!
!
!
!
!
!
!
no ip domain-lookup
--More--                                                    ip domain-name hacienda.gov.py
ip dhcp excluded-address 192.168.130.1 192.168.130.2
ip dhcp excluded-address 192.168.131.1 192.168.131.2
ip dhcp excluded-address 192.168.149.1
!
ip dhcp pool AP1
host 192.168.150.150 255.255.255.0
client-identifier 0100.2a10.152d.0f
default-router 192.168.150.1
option 43 hex f104.c0a8.9610
!
ip dhcp pool AP2
host 192.168.150.151 255.255.255.0
client-identifier 0100.2a10.152c.24
default-router 192.168.150.1
```

```
option 43 hex f104.c0a8.9610
!
ip dhcp pool AP1_Piso1
host 192.168.150.152 255.255.255.0
client-identifier 0100.2a10.152b.2d
default-router 192.168.150.1
option 43 hex f104.c0a8.9610
!
--More--                                    ip dhcp pool AP2_Piso1
host 192.168.150.153 255.255.255.0
client-identifier 0100.2a10.152b.84
default-router 192.168.150.1
option 43 hex f104.c0a8.9610
!
ip dhcp pool AP1_PB
host 192.168.150.161 255.255.255.0
client-identifier 0100.2a10.1526.82
default-router 192.168.150.1
option 43 hex f104.c0a8.9610
!
ip dhcp pool AP2_PB
host 192.168.150.162 255.255.255.0
client-identifier 0100.2a10.152b.42
default-router 192.168.150.1
option 43 hex f104.c0a8.9610
!
ip dhcp pool AP3_PB
host 192.168.150.163 255.255.255.0
client-identifier 0100.2a10.152b.2a
default-router 192.168.150.1
option 43 hex f104.c0a8.9610
--More--                                    !
ip dhcp pool AP3_Piso1
host 192.168.150.154 255.255.255.0
client-identifier 0100.2a10.152d.32
default-router 192.168.150.1
option 43 hex f104.c0a8.9610
!
ip dhcp pool AP4_Piso1
host 192.168.150.155 255.255.255.0
client-identifier 0100.2a10.152d.37
default-router 192.168.150.1
option 43 hex f104.c0a8.9610
!
ip dhcp pool AP5_Piso1
host 192.168.150.156 255.255.255.0
client-identifier 0100.2a10.152c.cd
default-router 192.168.150.1
option 43 hex f104.c0a8.9610
!
ip dhcp pool AP1_EP
host 192.168.150.157 255.255.255.0
client-identifier 0100.2a10.152c.53
default-router 192.168.150.1
--More--                                    option 43 hex f104.c0a8.9610
!
ip dhcp pool AP2_EP
host 192.168.150.158 255.255.255.0
client-identifier 0100.2a10.1526.d9
default-router 192.168.150.1
option 43 hex f104.c0a8.9610
!
ip dhcp pool AP3_EP
host 192.168.150.159 255.255.255.0
client-identifier 0100.2a10.152b.6d
default-router 192.168.150.1
option 43 hex f104.c0a8.9610
!
```

```
ip dhcp pool AP_CITY_P5_ESTRELLA
host 192.168.150.160 255.255.255.0
client-identifier 0100.2a10.152b.9b
default-router 192.168.150.1
option 43 hex f104.c0a8.9610
dns-server 192.168.2.210 192.168.2.2
!
ip dhcp pool AP_CITY_P6_ESTRELLA
host 192.168.150.164 255.255.255.0
--More--                                  client-identifier 0100.2a10.1526.cd
default-router 192.168.150.1
option 43 hex f104.c0a8.9610
!
!
vtp domain HACIENDAVTP
vtp mode transparent
!
!
power redundancy-mode redundant
archive
log config
hidekeys
!
spanning-tree mode rapid-pvst
spanning-tree extend system-id
!
vlan internal allocation policy ascending
!
vlan 2
name TEISA(172.16.100.0
!
vlan 10,12-15
--More--                                  !
vlan 98
name TEST-VPN-
!
vlan 99
name COPACO2-GABINETE
!
vlan 111
name CCTV(10.8.3)
!
vlan 211
name server
!
vlan 216
name Management(8.0/24)
!
vlan 300
name Biometrico
!
vlan 410
name HUAWEI_INSIDE
!
vlan 411
--More--                                  name HUAWEI_OUTSIDE
!
vlan 420
name EXPO(120.0/23)
!
vlan 422
name PRENSA-OLD(122.0/24)
!
vlan 423
name SERVIDORES
!
vlan 424-429
!
```

```
vlan 430
name BECAL(130.0/24)
!
vlan 431
name MH-AI(131.0/24)
!
vlan 432
name DACHC(132.0/24)
!
vlan 433
--More--                                name CUOC(133.0/24)
!
vlan 434
name CODE(134.0/24)
!
vlan 435
name GABINETE(135.0/24)
!
vlan 436
name DA(136.0/24)
!
vlan 437
name DIRCOM(137.0/24)
!
vlan 438
name SecGralMH(138.0/24)
!
vlan 439
name CRA(139.0/24)
!
vlan 440
name CRF(140.0/24)
!
--More--                                vlan 441
name CONTRALORIA(141.0)
!
vlan 442
name INFO.CRA.DA(142.0)
!
vlan 443
name Impresoras(143.0/24)
!
vlan 444
name DMI(144.0/24)
!
vlan 445
name CONAJZAR(145.0/24)
!
vlan 446
name PROFOMAF(146.0)
!
vlan 447-448
!
vlan 449
name VISITAS(149.0/24)
!
--More--                                vlan 450
name MANAGMENT
!
vlan 451
name TO-ASA
!
vlan 452
name VPN_ASA
!
vlan 500
name VoIP
!
```

```
vlan 503
name RMSP-MHDA
!
vlan 529
name  COPACO(INTERNET-SEC)
!
vlan 600
name (I.SCSI)HYPERMETRO
!
vlan 601
name hypermetro02
--More--                                                !
vlan 700
name VLPortalCautivo
!
vlan 934
name RMSP134
lldp run
!
!
!
!
!
!
!
!
!
!
!
!
!
!
interface FastEthernet1
--More--                                                vrf forwarding mgmtVrf
no ip address
speed auto
duplex auto
!
interface TenGigabitEthernet1/1
description INSIDE ASA
switchport access vlan 451
switchport mode access
spanning-tree portfast edge
!
interface TenGigabitEthernet1/2
description MGMT FIREPOWER ASA
switchport access vlan 451
switchport mode access
spanning-tree portfast edge
!
interface TenGigabitEthernet1/3
description WLC01
switchport trunk allowed vlan 100,420,430-439,441,442,444,445,449,450
switchport mode trunk
!
interface TenGigabitEthernet1/4
--More--                                                description WLC02
switchport trunk allowed vlan 100,420,430-439,441,442,444,445,449,450
switchport mode trunk
!
interface TenGigabitEthernet1/5
description SW_PB01
switchport mode trunk
!
interface TenGigabitEthernet1/6
!
interface TenGigabitEthernet1/7
```

```
description SW_EP01
switchport mode trunk
!
interface TenGigabitEthernet1/8
!
interface TenGigabitEthernet1/9
description SW_P1
switchport mode trunk
!
interface TenGigabitEthernet1/10
!
interface TenGigabitEthernet1/11
--More--                                    description SW_P1.2
switchport mode trunk
!
interface TenGigabitEthernet1/12
description CITI6-150.39
!
interface TenGigabitEthernet1/13
!
interface TenGigabitEthernet1/14
!
interface TenGigabitEthernet1/15
description INSIDE-BORDE2
switchport access vlan 442
!
interface TenGigabitEthernet1/16
description COPACO2(201.217.22.26)
switchport access vlan 529
!
interface TenGigabitEthernet1/17
description MH.PB01.40[Gi1/0/25]
switchport mode trunk
!
interface TenGigabitEthernet1/18
--More--                                    description SW_CCTV_P1-Gi1/1/1
switchport access vlan 600
switchport trunk allowed vlan 111,450
switchport mode access
spanning-tree portfast edge
!
interface TenGigabitEthernet1/19
description EnlaceDGIC-Lambare-SW2960x
switchport mode trunk
!
interface TenGigabitEthernet1/20
switchport access vlan 601
switchport mode access
spanning-tree portfast edge
!
interface TenGigabitEthernet1/21
switchport access vlan 602
switchport mode access
spanning-tree portfast edge
!
interface TenGigabitEthernet1/22
switchport access vlan 603
switchport mode access
--More--                                    spanning-tree portfast edge
!
interface TenGigabitEthernet1/23
description A BORDE 1
switchport access vlan 411
switchport mode access
spanning-tree portfast edge
!
interface TenGigabitEthernet1/24
description A BORDE 2
```

```
switchport access vlan 411
switchport mode access
spanning-tree portfast edge
!
interface TenGigabitEthernet1/25
description WLC-Port8
switchport trunk allowed vlan 420
switchport mode trunk
!
interface TenGigabitEthernet1/26
description WLC-Port8
switchport trunk allowed vlan 420
switchport mode trunk
--More--                                                    !
interface TenGigabitEthernet1/27
!
interface TenGigabitEthernet1/28
description HUAWEI OUTSIDE
switchport access vlan 411
switchport mode access
spanning-tree portfast edge
!
interface TenGigabitEthernet1/29
description HUAWEI INSINDE
switchport access vlan 410
switchport mode access
spanning-tree portfast edge
!
interface TenGigabitEthernet1/30
description HUAWEI OUTSIDE
switchport access vlan 411
switchport mode access
spanning-tree portfast edge
!
interface TenGigabitEthernet1/31
description HUAWEI INSINDE
--More--                                                    switchport access vlan 410
switchport mode access
spanning-tree portfast edge
!
interface TenGigabitEthernet1/32
description [1/1]-N5k48(150.15)
switchport mode trunk
!
interface TenGigabitEthernet2/1
description PROFOMAF
switchport trunk allowed vlan 446,500
switchport mode trunk
!
interface TenGigabitEthernet2/2
description CITI5-150.80[G1/0/49]
switchport trunk allowed vlan 1,111,180,215,216,300,422,430-434,442-444,446
switchport trunk allowed vlan add 450,500,503
switchport mode trunk
!
interface TenGigabitEthernet2/3
description CITI5-150.83[G1/0/27]
switchport mode trunk
!
--More--                                                    interface TenGigabitEthernet2/4
!
interface TenGigabitEthernet2/5
description ASA-VPN-RMSP
switchport access vlan 934
!
interface TenGigabitEthernet2/6
description ASA VPN INSIDE
switchport access vlan 452
```

```
switchport mode access
spanning-tree portfast edge
!
interface TenGigabitEthernet2/7
description [1/1/1]DC101
switchport trunk allowed vlan 2,11,111,211,216,300,420,422,430-434,442-445
switchport trunk allowed vlan add 450-452,500,503,528,529,600-603,934
switchport mode trunk
!
interface TenGigabitEthernet2/8
description NEXUS 5K
switchport mode trunk
!
interface Vlan1
--More--                                                    no ip address
!
interface Vlan2
description Conectado a Forti
ip address 172.16.100.3 255.255.255.248
ip policy route-map A_HUAWEI
!
interface Vlan10
description --> Lan usuarios <--
ip address 192.168.0.1 255.255.254.0
!
interface Vlan12
description --> LAN DESARROLLO <--
ip address 192.168.3.1 255.255.255.0
shutdown
!
interface Vlan13
description --> LAN PROVEEDORES <--
ip address 192.168.4.1 255.255.255.0
shutdown
!
interface Vlan14
description --> LAN VISITANTES <--
--More--                                                    ip address 192.168.5.1 255.255.255.0
shutdown
!
interface Vlan15
description --> LAN WIFI <--
ip address 192.168.6.1 255.255.254.0
shutdown
!
interface Vlan211
description Servidores
ip address 192.168.2.1 255.255.255.0
shutdown
!
interface Vlan216
description ADMIN OLD
ip address 192.168.8.1 255.255.255.0
ip helper-address 192.168.2.2
!
interface Vlan410
description HUAWEI_FW_INSIDE
ip address 192.168.110.1 255.255.255.240
!
interface Vlan420
--More--                                                    description --> LAN(192.168.120.0/23) <--
ip address 192.168.120.1 255.255.254.0
ip helper-address 192.168.2.2
ip helper-address 192.168.2.210
!
interface Vlan422
description --> Prensa(192.168.122.0/24) <--
ip address 192.168.122.1 255.255.255.0
```

```
ip helper-address 192.168.2.2
ip helper-address 192.168.2.220
!
interface Vlan423
description RED SERVIDORES
ip address 192.168.123.1 255.255.255.0
shutdown
!
interface Vlan430
description Becal
ip address 192.168.130.1 255.255.255.0
ip helper-address 192.168.2.2
ip helper-address 192.168.2.220
ip helper-address 192.168.2.210
ip policy route-map A_HUAWEI
--More--                                                    !
interface Vlan431
description Auditoria
ip address 192.168.131.1 255.255.255.0
ip helper-address 192.168.2.2
ip helper-address 192.168.2.220
ip helper-address 192.168.2.210
ip policy route-map A_HUAWEI
!
interface Vlan432
description DACHC
ip address 192.168.132.1 255.255.255.0
ip helper-address 192.168.2.2
ip helper-address 192.168.2.220
ip helper-address 192.168.2.210
ip policy route-map A_HUAWEI
!
interface Vlan433
description CUOC
ip address 192.168.133.1 255.255.255.0
ip helper-address 192.168.2.2
ip helper-address 192.168.2.220
ip helper-address 192.168.2.210
--More--                                                    ip policy route-map A_HUAWEI
!
interface Vlan434
description CODE
ip address 192.168.134.1 255.255.255.0
ip helper-address 192.168.2.2
ip helper-address 192.168.2.220
ip helper-address 192.168.2.210
ip policy route-map A_HUAWEI
!
interface Vlan435
description GABINETE
ip address 192.168.135.1 255.255.255.0
ip helper-address 192.168.2.210
ip helper-address 192.168.2.2
!
interface Vlan436
description DIRECCION ADMINISTRATIVA
ip address 192.168.136.1 255.255.255.0
ip helper-address 192.168.2.210
ip helper-address 192.168.2.2
ip policy route-map A_HUAWEI
!
--More--                                                    interface Vlan437
description PRENSA
ip address 192.168.137.1 255.255.255.0
ip helper-address 192.168.2.2
ip helper-address 192.168.2.210
ip policy route-map A_HUAWEI
!
```

```
interface Vlan438
description SECRETARIA GENERAL
ip address 192.168.138.1 255.255.255.0
ip helper-address 192.168.2.210
ip helper-address 192.168.2.2
ip policy route-map A_HUAWEI
!
interface Vlan439
description CRA
ip address 192.168.139.1 255.255.255.0
ip helper-address 192.168.2.2
ip helper-address 192.168.2.220
ip helper-address 192.168.2.210
ip policy route-map A_HUAWEI
!
interface Vlan440
--More--                                                    description CRF
ip address 192.168.140.1 255.255.255.0
ip helper-address 192.168.2.2
ip helper-address 192.168.2.220
ip helper-address 192.168.2.210
ip policy route-map A_HUAWEI
!
interface Vlan441
description CONTRALORIA
ip address 192.168.141.1 255.255.255.0
ip helper-address 192.168.2.220
ip helper-address 192.168.2.210
!
interface Vlan442
description INFORMATICA
ip address 192.168.142.1 255.255.255.0
ip helper-address 192.168.2.2
ip helper-address 192.168.2.210
ip policy route-map A_HUAWEI
!
interface Vlan443
description RED IMPRESORA
ip address 192.168.143.1 255.255.255.0
--More--                                                    !
interface Vlan444
description U.M.I
ip address 192.168.144.1 255.255.255.0
ip helper-address 192.168.2.2
ip helper-address 192.168.2.220
ip helper-address 192.168.2.210
ip policy route-map A_HUAWEI
!
interface Vlan445
description CONAJZAR
ip address 192.168.145.1 255.255.255.0
ip helper-address 192.168.2.2
ip helper-address 192.168.2.220
ip helper-address 192.168.2.210
ip policy route-map A_HUAWEI
!
interface Vlan446
description PROFOMAF(146.0/24)
ip address 192.168.146.1 255.255.255.0
ip access-group Profomaf in
ip helper-address 192.168.2.2
ip helper-address 192.168.2.220
--More--                                                    ip helper-address 192.168.2.210
!
interface Vlan447
description LIBRE
ip address 192.168.147.1 255.255.255.0
!
```

```
interface Vlan448
description LIBRE
ip address 192.168.148.1 255.255.255.0
!
interface Vlan449
description Visitas
ip address 192.168.149.1 255.255.255.0
ip helper-address 192.168.2.2
ip helper-address 192.168.2.220
ip helper-address 192.168.2.210
!
interface Vlan450
description MANAGMENT
ip address 192.168.150.1 255.255.255.0
!
interface Vlan451
description TO-ASA
--More--                                   ip address 192.168.151.1 255.255.255.248
!
interface Vlan452
description ASA VPN
ip address 192.168.152.1 255.255.255.248
ip policy route-map A_HUAWEI
!
interface Vlan600
description hypermetro
ip address 192.168.153.1 255.255.255.0
!
interface Vlan601
description hypermetro02
ip address 192.168.154.1 255.255.255.0
!
interface Vlan934
no ip address
!
router ospf 199
network 192.168.0.0 0.0.1.255 area 0
network 192.168.2.0 0.0.0.255 area 0
network 192.168.3.0 0.0.0.255 area 0
network 192.168.4.0 0.0.0.255 area 0
--More--                                   network 192.168.5.0 0.0.0.255 area 0
network 192.168.6.0 0.0.1.255 area 0
network 192.168.8.0 0.0.0.255 area 0
network 192.168.15.0 0.0.0.255 area 0
network 192.168.120.0 0.0.1.255 area 0
network 192.168.122.0 0.0.0.255 area 0
network 192.168.130.0 0.0.0.255 area 0
network 192.168.131.0 0.0.0.255 area 0
network 192.168.132.0 0.0.0.255 area 0
network 192.168.133.0 0.0.0.255 area 0
network 192.168.134.0 0.0.0.255 area 0
network 192.168.135.0 0.0.0.255 area 0
network 192.168.136.0 0.0.0.255 area 0
network 192.168.137.0 0.0.0.255 area 0
network 192.168.138.0 0.0.0.255 area 0
network 192.168.139.0 0.0.0.255 area 0
network 192.168.140.0 0.0.0.255 area 0
network 192.168.141.0 0.0.0.255 area 0
network 192.168.142.0 0.0.0.255 area 0
network 192.168.143.0 0.0.0.255 area 0
network 192.168.144.0 0.0.0.255 area 0
network 192.168.145.0 0.0.0.255 area 0
network 192.168.146.0 0.0.0.255 area 0
--More--                                   network 192.168.147.0 0.0.0.255 area 0
network 192.168.148.0 0.0.0.255 area 0
network 192.168.149.0 0.0.0.255 area 0
network 192.168.150.0 0.0.0.255 area 0
network 192.168.151.0 0.0.0.7 area 0
```

```
network 192.168.152.0 0.0.0.7 area 0
!
ip forward-protocol nd
no ip http server
no ip http secure-server
ip route 10.1.90.0 255.255.255.0 172.16.100.1
ip route 192.168.0.0 255.255.255.0 172.16.100.1
ip route 192.168.4.0 255.255.255.0 172.16.100.1
ip route 192.168.5.0 255.255.255.0 172.16.100.1
ip route 192.168.6.0 255.255.255.0 172.16.100.1
ip route 192.168.13.0 255.255.255.0 172.16.100.1
ip route 192.168.14.0 255.255.255.0 172.16.100.1
ip route 192.168.15.0 255.255.255.0 172.16.100.1
ip route 192.168.17.0 255.255.255.0 172.16.100.1
ip route 192.168.18.0 255.255.255.0 172.16.100.1
ip route 192.168.54.0 255.255.255.0 172.16.100.1
ip route 192.168.137.0 255.255.255.0 192.168.111.6
ip ssh version 2
--More--                                                    !
ip access-list standard LEAK-ROUTE
permit 0.0.0.0
!
ip access-list extended A_HUAWEI
deny   ip 10.1.90.0 0.0.0.255 any
deny   ip host 192.168.136.77 any
deny   ip host 192.168.142.220 any
deny   ip host 192.168.142.160 any
deny   ip host 192.168.142.7 any
deny   ip host 192.168.142.8 any
deny   ip host 192.168.142.244 any
deny   ip host 192.168.133.23 any
deny   ip host 192.168.142.231 any
deny   ip host 192.168.142.232 any
deny   ip host 192.168.142.233 any
deny   ip host 192.168.142.250 any
permit ip 192.168.142.0 0.0.0.255 any
permit ip 192.168.131.0 0.0.0.255 any
permit ip 192.168.133.0 0.0.0.255 any
permit ip 192.168.132.0 0.0.0.255 any
permit ip 192.168.140.0 0.0.0.255 any
permit ip 192.168.139.0 0.0.0.255 any
--More--                                                    permit ip 192.168.144.0 0.0.0.255 any
permit ip 192.168.130.0 0.0.0.255 any
permit ip 192.168.138.0 0.0.0.255 any
permit ip 192.168.134.0 0.0.0.255 any
permit ip 192.168.145.0 0.0.0.255 any
permit ip 192.168.136.0 0.0.0.255 any
permit ip 192.168.137.0 0.0.0.255 any
permit ip 192.168.13.0 0.0.0.255 any
permit ip 192.168.16.0 0.0.0.255 any
permit ip 192.168.20.0 0.0.0.255 any
permit ip 192.168.18.0 0.0.0.255 any
ip access-list extended CFR_PROXY
deny   ip 192.168.0.0 0.0.255.255 10.2.0.0 0.0.255.255
deny   ip 192.168.0.0 0.0.255.255 10.8.0.0 0.0.255.255
deny   ip 192.168.0.0 0.0.255.255 10.20.0.0 0.0.255.255
deny   ip 192.168.0.0 0.0.255.255 10.30.0.0 0.0.255.255
deny   ip 192.168.0.0 0.0.255.255 192.168.49.0 0.0.0.255
deny   ip 192.168.0.0 0.0.255.255 10.5.0.0 0.0.255.255
deny   ip 192.168.0.0 0.0.255.255 10.3.3.0 0.0.0.255
permit ip host 192.168.140.14 any
permit tcp host 192.168.140.14 eq www any
permit tcp host 192.168.140.14 eq 443 any
ip access-list extended INET_RSMP
--More--                                                    ip access-list extended Info-PROXY
permit ip host 192.168.142.29 any
ip access-list extended Profomaf
permit ip 192.168.146.0 0.0.0.255 192.168.146.0 0.0.0.255
```

```
permit ip 192.168.146.0 0.0.0.255 host 192.168.2.2
permit ip 192.168.146.0 0.0.0.255 10.20.0.0 0.0.255.255
permit ip 192.168.146.0 0.0.0.255 10.2.0.0 0.0.255.255
permit ip 192.168.146.0 0.0.0.255 10.3.0.0 0.0.255.255
permit ip 192.168.146.0 0.0.0.255 192.168.49.0 0.0.0.255
permit ip 192.168.146.0 0.0.0.255 192.168.2.0 0.0.0.255
deny   ip any any
!
logging snmp-trap emergencies
logging snmp-trap alerts
logging snmp-trap critical
logging snmp-trap errors
logging snmp-trap warnings
logging snmp-trap notifications
logging snmp-trap informational
logging host 192.168.150.18
logging host 192.168.2.44
!
!
--More--                                route-map A_HUAWEI permit 10
match ip address A_HUAWEI
set ip default next-hop 192.168.110.4
!
route-map CRF-PROXY permit 10
match ip address CFR_PROXY
set ip default next-hop 192.168.2.6
!
route-map PFS_QOS permit 10
match ip address ALL-ROUTE
set ip default next-hop 192.168.151.4
!
route-map Proxy-INFO permit 10
match ip address Info-PROXY
set ip default next-hop 192.168.2.6
!
route-map LEAK-ROUTE permit 10
match ip address LEAK-ROUTE
!
snmp-server community hacienda RO
snmp-server community mhdacrainfo RO
snmp-server trap-source Vlan450
snmp-server enable traps snmp authentication linkdown linkup coldstart warmstart
--More--                                snmp-server enable traps flowmon
snmp-server enable traps transceiver all
snmp-server enable traps call-home message-send-fail server-fail
snmp-server enable traps tty
snmp-server enable traps rf
snmp-server enable traps memory
snmp-server enable traps cpu threshold
snmp-server enable traps eigrp
snmp-server enable traps ospf state-change
snmp-server enable traps ospf errors
snmp-server enable traps ospf retransmit
snmp-server enable traps ospf lsa
snmp-server enable traps ospf cisco-specific state-change nssa-trans-change
snmp-server enable traps ospf cisco-specific state-change shamlink interface
snmp-server enable traps ospf cisco-specific state-change shamlink neighbor
snmp-server enable traps ospf cisco-specific errors
snmp-server enable traps ospf cisco-specific retransmit
snmp-server enable traps ospf cisco-specific lsa
snmp-server enable traps auth-framework sec-violation
snmp-server enable traps flex-links status
snmp-server enable traps fru-ctrl
snmp-server enable traps entity
snmp-server enable traps ethernet cfm cc mep-up mep-down cross-connect loop config
--More--                                snmp-server enable traps ethernet cfm crosscheck mep-missing mep-unknown service-up
snmp-server enable traps ether-oam
snmp-server enable traps aaa_server
```

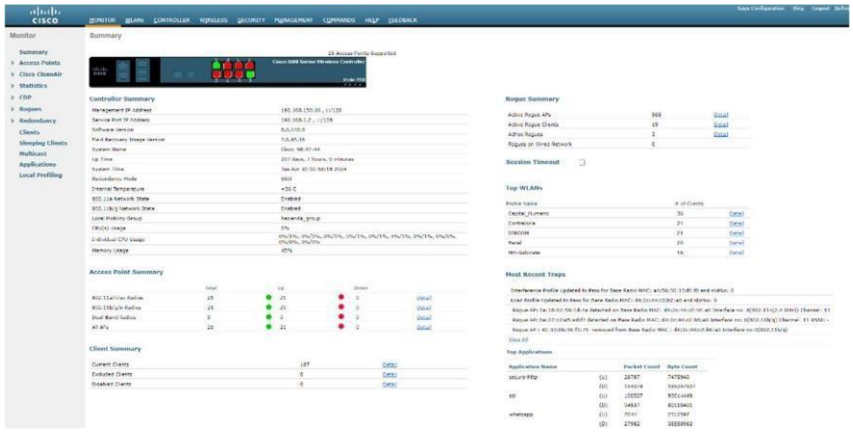
```
snmp-server enable traps flash insertion removal
snmp-server enable traps power-ethernet police
snmp-server enable traps rep
snmp-server enable traps vswitch dual-active vsl
snmp-server enable traps udld link-fail-rpt status-change
snmp-server enable traps vtp
snmp-server enable traps vlancreate
snmp-server enable traps vlandelete
snmp-server enable traps envmon fan shutdown supply temperature status
snmp-server enable traps entity-diag boot-up-fail hm-test-recover hm-thresh-reached scheduled-test-fail
snmp-server enable traps port-security
snmp-server enable traps ethernet evc status create delete
snmp-server enable traps energywise
snmp-server enable traps ipsla
snmp-server enable traps bfd
snmp-server enable traps cef resource-failure peer-state-change peer-fib-state-change inconsistency
snmp-server enable traps config-copy
--More--                                                    snmp-server enable traps config
snmp-server enable traps config-ctid
snmp-server enable traps event-manager
snmp-server enable traps hsrp
snmp-server enable traps ipmulticast
snmp-server enable traps ospfv3 state-change
snmp-server enable traps ospfv3 errors
snmp-server enable traps pim neighbor-change rp-mapping-change invalid-pim-message
snmp-server enable traps bridge newroot topologychange
snmp-server enable traps stpx inconsistency root-inconsistency loop-inconsistency
snmp-server enable traps syslog
snmp-server enable traps errdisable
snmp-server enable traps ethernet cfm alarm
snmp-server enable traps vlan-membership
snmp-server enable traps bulkstat collection transfer
snmp-server enable traps mac-notification change move threshold
snmp-server enable traps vrfmib vrf-up vrf-down vnet-trunk-up vnet-trunk-down
snmp-server host 192.168.150.18 mhdacrainfo
snmp-server host 192.168.2.44 mhdacrainfo
!
!
--More--                                                    line con 0
stopbits 1
line vty 0 4
logging synchronous
login local
transport input ssh
line vty 5 15
logging synchronous
login local
transport input ssh
!
ntp source Vlan450
ntp master 4
ntp server 192.168.2.52
ntp server 192.168.2.5
!
end
```

4.3. Cisco 5508 WController

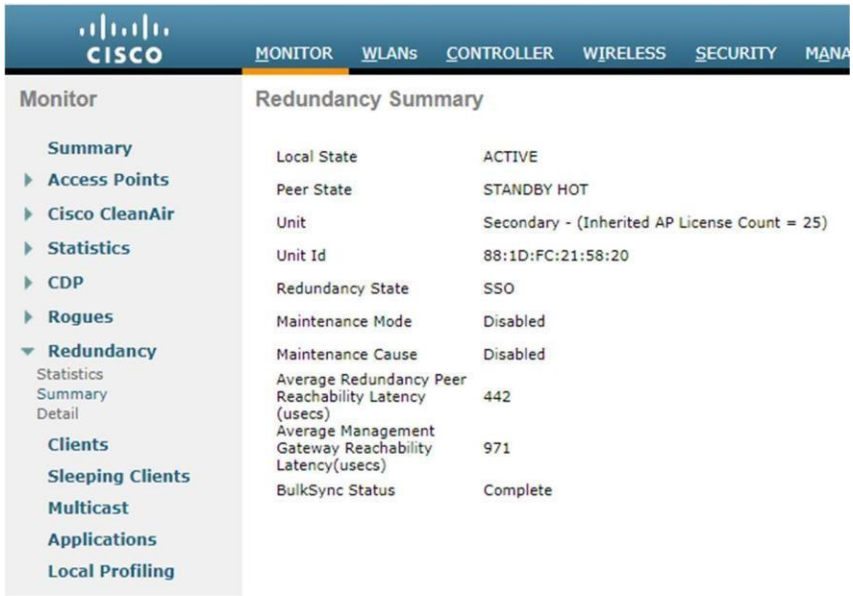
Los modelos de las Controladoras Wireless, siendo la principal AIR-CT550825-K9 con número de serie FCW2039B1TB y la secundaria AIR-CT550825-K9 con número de serie FCW1850L0HH, actualmente operan en la versión IOS 8.0.140.0. Ambas controladoras gestionan un total de 22 Puntos de Acceso (AP) y mantienen activas 15 Identificadores de Conjunto de Servicios (SSID).

Es crucial destacar que estos dispositivos están respaldados por un soporte local que facilita el reemplazo en caso de requerir un procedimiento de Autorización de Devolución de Mercancía (RMA). Sin embargo, es importante señalar que el soporte de Cisco ya no está disponible, dado que la fecha de fin de venta (EOS) fue anunciada para el 31 de julio de 2023. Este hecho implica que, a partir de esa fecha, no se ofrecerán más servicios de asistencia técnica ni actualizaciones por parte de Cisco.

Dashboard Summary.



Redundancia. Estado optimo.



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Estado CPU optimo.

```
(Cisco Controller) show>cpu
Current CPU(s) load: 0%

Individual CPU load: 0%/1%, 0%/1%, 0%/1%, 0%/1%, 0%/0%, 0%/1%, 0%/0%, 0%/0%, 0%/0%, 0%/0%
```

Estado Memoria optimo.

```
------------------------- System Memory Summary ------------------------

System Name:Cisco_98:87:44 Primary SW Ver:8.0.140.0
Current Time:Tue Apr 30 11:07:31 2024 System UP Time:207 days 7 hrs 10 mins 10 secs

NAME: "Chassis"    , DESCR: "Cisco 5500 Series Wireless LAN Controller"

PID: AIR-CT5508-K9,  VID: V04,  SN: FCW1850L0HH
Total System Memory............................. (1002996    KB) 979 MB

Total System Free Memory........................ (396424     KB) 387 MB (39 %)

Total Memory in Buffers......................... (3100       KB)

Total Memory in Cache........................... (143720     KB) 140 MB

Total Active Memory............................. (484856     KB) 473 MB

Total InActive Memory........................... (50080      KB) 48 MB

Total Memory in Anon Pages...................... (388156     KB) 379 MB

Total Memory in Slab............................ (45772      KB) 44 MB

Total Memory in Page Tables..................... (1932       KB) 1 MB
WLC Peak Memory................................. (901888     KB) 880 MB
WLC Virtual Memory Size......................... (892128     KB) 871 MB
WLC Resident Memory............................. (426472     KB) 416 MB
WLC Data Segment Memory......................... (824288     KB) 804 MB
Total Heap Including Mapped Pages............... (223828     KB) 218 MB
Total Memory in Pmalloc Pools................... (217392     KB) 212 MB
Total Used Memory in Pmalloc Pools............... (207681     KB) 202 MB
Total Free Memory in Pmalloc Pools............... (9710       KB) 9 MB
```

Wlan summary.

WLANs

Current Filter: None [Change Filter] [Clear Filter] Create New Go

WLAN ID	Type	Profile Name	WLAN SSID	Admin Status	Security Policies
1	WLAN	Becal	becal	Enabled	[WPA2][Auth(PSK)]
2	WLAN	Auditoria Interna	MH-AI	Enabled	[WPA2][Auth(PSK)]
3	WLAN	Contraloria	-MH-	Enabled	[WPA2][Auth(PSK)]
4	WLAN	DireccionAdministrativa	ADM	Enabled	[WPA2][Auth(PSK)]
5	WLAN	Capital_Humano	DACHC	Enabled	[WPA2][Auth(PSK)]
6	WLAN	CUOC	CUOC	Enabled	[WPA2][Auth(PSK)]
7	WLAN	CODE	CODE	Enabled	[WPA2][Auth(PSK)]
8	WLAN	Visitas	Visitas	Disabled	Web-Auth
9	WLAN	Informatica	Informatica	Enabled	[WPA2][Auth(PSK)]
10	WLAN	CONAJZAR	Conajzar	Enabled	[WPA2][Auth(PSK)]
11	WLAN	MH-Gabinete	DG	Enabled	[WPA2][Auth(PSK)]
12	WLAN	DIRCOM	DIRCOM	Enabled	[WPA2][Auth(PSK)]
13	WLAN	CRA	CRA	Enabled	[WPA2][Auth(PSK)]
14	WLAN	SG_MH	SG_MH	Enabled	[WPA2][Auth(PSK)]
15	WLAN	UAP	UAP	Enabled	[WPA2][Auth(PSK)]
16	WLAN	DMI	DMI	Disabled	[WPA2][Auth(PSK)]
17	WLAN	portal	portal	Disabled	[WPA2][Auth(802.1X)]

Dispositivos adoptados

AP Name	IP Address(Ipv4/Ipv6)	AP Model	AP MAC	AP Up Time	Admin Status	Operational Status	PoE Status
MH-P1-JefGABINETE	192.168.135.12	AIR-LAP1142N-A-K9	f0:f7:55:19:57:a9	206 d, 16 h 17 m 17 s	Enabled	REG	PoE/Full Power
AP-MHDACRA-DC	192.168.8.212	AIR-LAP1142N-A-K9	64:9e:f5:90:85:33	148 d, 02 h 40 m 55 s	Enabled	REG	PoE/Full Power
AP-MHC-P1_1	192.168.8.218	AIR-LAP1142N-A-K9	f0:f7:55:18:1f:c6	133 d, 23 h 49 m 24 s	Enabled	REG	PoE/Full Power
MHDA-EP-PASILLO	192.168.150.157	AIR-CAP1602I-A-K9	00:2a:10:15:2c:53	133 d, 23 h 28 m 02 s	Enabled	REG	PoE/Full Power
MHDA-P1-PASILLO-CHILE	192.168.150.156	AIR-CAP1602I-A-K9	00:2a:10:15:2c:cd	133 d, 18 h 21 m 56 s	Enabled	REG	PoE/Full Power
MHDA-P1-GABINETE	192.168.150.155	AIR-CAP1602I-A-K9	00:2a:10:15:2d:37	133 d, 03 h 31 m 19 s	Enabled	REG	PoE/Full Power
MHDA-P1-AUDITORIO-ENTRADA	192.168.150.152	AIR-CAP1602I-A-K9	00:2a:10:15:2b:2d	73 d, 00 h 58 m 54 s	Enabled	REG	PoE/Full Power
MHDA-P1-AUDITORIO-PALMA	192.168.150.153	AIR-CAP1602I-A-K9	00:2a:10:15:2b:84	73 d, 00 h 58 m 53 s	Enabled	REG	PoE/Full Power
MHDA-P1-PASILLO-PTE-FRANCO	192.168.150.154	AIR-CAP1602I-A-K9	00:2a:10:15:2d:32	66 d, 12 h 37 m 27 s	Enabled	REG	PoE/Full Power
CONAJZAR3	192.168.16.242	AIR-CAP1602I-A-K9	00:2a:10:15:26:82	31 d, 22 h 18 m 48 s	Enabled	REG	Power injector / formal mode
4TO_CITI_1	192.168.8.214	AIR-LAP1142N-A-K9	f0:f7:55:19:58:6b	15 d, 02 h 36 m 31 s	Enabled	REG	PoE/Full Power
4TO_CITI_2	192.168.8.215	AIR-LAP1142N-A-K9	f0:f7:55:19:57:7f	15 d, 02 h 36 m 35 s	Enabled	REG	PoE/Full Power
CITY_Pso5_ESTRELLA	192.168.150.160	AIR-CAP1602I-A-K9	00:2a:10:15:2b:9b	15 d, 02 h 36 m 43 s	Enabled	REG	PoE/Full Power
CITY_Pso5_Oliva	192.168.150.161	AIR-CAP1602I-A-K9	00:2a:10:15:2c:24	15 d, 02 h 36 m 43 s	Enabled	REG	PoE/Full Power
CITY_Pso4_Oliva	192.168.150.163	AIR-CAP1602I-A-K9	00:2a:10:15:2b:2a	15 d, 02 h 36 m 44 s	Enabled	REG	PoE/Full Power
AP002a.1015.2b6d	192.168.150.159	AIR-CAP1602I-A-K9	00:2a:10:15:2b:6d	15 d, 02 h 36 m 43 s	Enabled	REG	PoE/Full Power
CITY_Pso6_ESTRELLA	192.168.150.164	AIR-CAP1602I-A-K9	00:2a:10:15:26:cd	15 d, 02 h 36 m 43 s	Enabled	REG	PoE/Full Power
CITY_Pso6_Oliva	192.168.150.150	AIR-CAP1602I-A-K9	00:2a:10:15:2d:0f	15 d, 02 h 36 m 41 s	Enabled	REG	PoE/Full Power
BECAL-estrella	192.168.130.171	AIR-LAP1142N-A-K9	f0:f7:55:60:27:2f	15 d, 02 h 36 m 29 s	Enabled	REG	PoE/Full Power
MHDA-PATRIMONIO	192.168.150.158	AIR-CAP1602I-A-K9	00:2a:10:15:26:d9	5 d, 01 h 26 m 31 s	Enabled	REG	PoE/Full Power
MHDA-PB-PTE-FRANCO	192.168.150.162	AIR-CAP1602I-A-K9	00:2a:10:15:2b:42	128 d, 04 h 26 m 37 s	Enabled	REG	PoE/Full Power

Equipos vecinos.

CDP > Interface Neighbors

Items 1 to 2 of 2

Local Interface	Neighbor Name	Neighbor Address	Neighbor Port	TTL	Capability*	Platform
GigabitEthernet0/0/1	CORE-MHCENDA.hacienda.gov.ev	192.168.120.1	TenGigabitEthernet1/4	160	R S I	cisco WS-C4500X-32
GigabitEthernet0/0/8	CORE-MHCENDA.hacienda.gov.ev	192.168.120.1	TenGigabitEthernet1/26	140	R S I	cisco WS-C4500X-32

Configuracion.

```
redundancy mode SSO
 802.11a 11nSupport a-mpdu tx scheduler enable
 802.11a 11nSupport a-mpdu tx scheduler timeout rt 10
 802.11a 11nSupport mcs tx 24 disable
 802.11a 11nSupport mcs tx 25 disable
 802.11a 11nSupport mcs tx 26 disable
 802.11a 11nSupport mcs tx 27 disable
 802.11a 11nSupport mcs tx 28 disable
 802.11a 11nSupport mcs tx 29 disable
 802.11a 11nSupport mcs tx 30 disable
 802.11a 11nSupport mcs tx 31 disable
 802.11a beacon range 0
 802.11a rx-sop threshold auto default
 802.11a cca threshold 0 default
 802.11a multicast buffer 0x|
 802.11a multicast data-rate 0 default
 802.11a cac video cac-method static
 802.11a max-clients 200
```

```
 802.11a rate mandatory 54
 802.11a l2roam rf-params custom -50 3 -72 5
 802.11a cleanair enable network
 802.11a dfs-peakdetect enable
 802.11b 11nSupport a-mpdu tx scheduler enable
 802.11b 11nSupport a-mpdu tx scheduler timeout rt 10
 802.11b 11nSupport mcs tx 24 disable
 802.11b 11nSupport mcs tx 25 disable
 802.11b 11nSupport mcs tx 26 disable
--More-- or (q)uit
 802.11b 11nSupport mcs tx 27 disable
 802.11b 11nSupport mcs tx 28 disable
 802.11b 11nSupport mcs tx 29 disable
 802.11b 11nSupport mcs tx 30 disable
 802.11b 11nSupport mcs tx 31 disable
 802.11b beacon range 0
 802.11b rx-sop threshold auto default
 802.11b cca threshold 0 default
 802.11b multicast buffer 0
 802.11b multicast data-rate 0 default
 802.11b cac video cac-method static
--More-- or (q)uit
802.11b max-clients 200
 802.11b rate supported 1
 802.11b rate supported 2
 802.11b rate supported 5.5
 802.11b rate mandatory 54
 802.11b txPower global min 10
 802.11b l2roam rf-params custom -50 3 -72 5
 802.11b cleanair enable network
 802.11h channelswitch enable loud
 aaa auth mgmt local radius
 flexconnect fallback-radio-shut disable
 acl create ACL01
--More-- or (q)uit
 acl  apply  ACL01
 acl apply ACL01
 advanced 802.11a channel dca interval 0
 advanced 802.11a channel dca anchor-time 0
 advanced 802.11a channel dca chan-width-11n 20
 advanced 802.11a channel dca sensitivity 5
 advanced 802.11a channel dca min-metric -95
 advanced 802.11a channel delete 20
 advanced 802.11a channel delete 26
 advanced 802.11a reporting neighbor 180
 advanced 802.11a reporting interference 120
 advanced 802.11b channel dca interval 1
--More-- or (q)uit
 advanced 802.11b channel dca anchor-time 0
 advanced 802.11b channel dca sensitivity 10
 advanced 802.11b channel dca min-metric -95
 advanced 802.11b reporting neighbor 180
 advanced 802.11b reporting interference 120
 advanced 802.11b channel foreign disable
 advanced 802.11b tpcv1-thresh -67
 advanced 802.11b optimized-roaming enable
 location info rogue extended
 location rssi-half-life tags 0
 location rssi-half-life client 0
 -More-- or (q)uit
 location rssi-half-life rogue-aps 0
 location expiry tags 5
 location expiry client 5
 location expiry calibrating-client 5
 location expiry rogue-aps 5
 advanced backup-controller primary
 advanced backup-controller secondary
 advanced backup-controller
```

```
 advanced   backup-controller
 advanced sip-snooping-ports 0 0
 advanced eap bcast-key-interval 3600
 advanced 802.11-abgn pak-rssi-location threshold -100
--More-- or (q)uit
 advanced 802.11-abgn pak-rssi-location trigger-threshold 10
 advanced 802.11-abgn pak-rssi-location reset-threshold 8
 advanced 802.11-abgn pak-rssi-location ntp 192.168.2.52
 advanced 802.11-abgn  pak-rssi-location timeout  3
 advanced hotspot cmbk-delay 50
 ap cert-expiry-ignore mic enable
 ap syslog host global ::
 ap dtls-cipher-suite RSA-AES128-SHA
 ap dtls-wlc-mic sha2
 cdp advertise-v2 enable
 cts sxp disable
 cts sxp connection default password ****
 cts sxp retry period 120
 cts sxp sxpversion 2
 custom-web redirectUrl www.hacienda.gov.py
 custom-web weblogo disable
 custom-web webauth-type customized
 database size 2048
 dhcp opt-82 remote-id ap-mac
 local-auth method fast server-key ****
interface create 420 420
interface create auditoria interna 431
interface create becal 430
interface create capital_humano 432
interface create code 434
interface create conajzar 445
interface create contraloria 441
interface create cra 439
interface create cuoc 433
interface create dircom 437
interface create direccion administrativa 436
interface create dmi 444
interface create gabinete 435
Interface create informatica 442
interface create prueba 100
interface create visitas 449
interface create vlan438 438
interface address dynamic-interface 420 192.168.120.10 255.255.254.0 192.168.120.1
interface address dynamic-interface auditoria interna 192.168.131.2 255.255.255.0
192.168.131.1
interface address dynamic-interface becal 192.168.130.2 255.255.255.0 192.168.130.1
interface address dynamic-interface capital_humano 192.168.132.2 255.255.255.0
192.168.132.1

interface address dynamic-interface code 192.168.134.2 255.255.255.0 192.168.134.1
interface address dynamic-interface conajzar 192.168.145.2 255.255.255.0 192.168.145.1
interface address dynamic-interface contraloria 192.168.141.2 255.255.255.0 192.168.141.1
interface address dynamic-interface cra 192.168.139.2 255.255.255.0 192.168.139.1
interface address dynamic-interface cuoc 192.168.133.2 255.255.255.0 192.168.133.1
interface address dynamic-interface dircom 192.168.137.2 255.255.255.0 192.168.137.1
interface address dynamic-interface direccion administrativa 192.168.136.2 255.255.255.0
192.168.136.1
interface address dynamic-interface dmi 192.168.144.5 255.255.255.0 192.168.144.1
interface address dynamic-interface gabinete 192.168.135.5 255.255.255.0 192.168.135.1
interface address dynamic-interface informatica 192.168.142.2 255.255.255.0 192.168.142.1
interface address management 192.168.150.16 255.255.255.0 192.168.150.1
interface address service-port 192.168.1.1 255.255.255.252
interface address virtual 1.1.2.1
interface address dynamic-interface visitas 192.168.149.2 255.255.255.0 192.168.149.1
interface address dynamic-interface vlan438 192.168.138.5 255.255.255.0 192.168.138.1
interface address redundancy-management 192.168.150.13 (null) (null)
--More-- or (q)uit
redundancy interface address peer-redundancy-management 192.168.150.12
```

```
interface dhcp dynamic-interface 420 primary 192.168.2.210 secondary 192.168.2.2
interface dhcp dynamic-interface auditoria interna primary 192.168.2.210 secondary
192.168.2.2
interface dhcp dynamic-interface becal primary 192.168.2.210 secondary 192.168.2.2
interface dhcp dynamic-interface capital_humano primary 192.168.2.210 secondary
192.168.2.2
interface dhcp dynamic-interface code primary 192.168.2.210 secondary 192.168.2.2
interface dhcp dynamic-interface conajzar primary 192.168.2.210 secondary 192.168.2.2
interface dhcp dynamic-interface contraloria primary 192.168.2.210 secondary 192.168.2.2
interface dhcp dynamic-interface cra primary 192.168.2.210 secondary 192.168.2.2
interface dhcp dynamic-interface cuoc primary 192.168.2.210 secondary 192.168.2.2
interface dhcp dynamic-interface dircom primary 192.168.2.210 secondary 192.168.2.2
interface dhcp dynamic-interface direccion administrativa primary 192.168.2.210 secondary
192.168.2.2
interface dhcp dynamic-interface dmi primary 192.168.2.210 secondary 192.168.2.2
interface dhcp dynamic-interface gabinete primary 192.168.2.210 secondary 192.168.2.2
interface dhcp dynamic-interface informatica primary 192.168.2.210 secondary 192.168.2.2
interface dhcp  management primary 1.1.1.3
interface dhcp dynamic-interface visitas primary 192.168.2.2 secondary 192.168.2.230
interface dhcp dynamic-interface vlan438 primary 192.168.2.210 secondary 192.168.2.2
interface vlan 420 420
interface vlan auditoria interna 431
interface vlan becal 430
interface vlan capital_humano 432
interface vlan code 434
interface vlan conajzar 445
interface vlan contraloria 441
interface vlan cra 439
interface vlan cuoc 433
interface vlan dircom 437
interface vlan direccion administrativa 436
interface vlan dmi 444
interface vlan gabinete 435
interface vlan informatica 442
interface vlan management 450
interface vlan prueba 100
interface vlan visitas 449
interface vlan vlan438 438
interface nasid none 420
interface nasid none auditoria interna
interface nasid none becal
interface nasid none capital_humano
interface nasid none code
interface nasid none conajzar
interface nasid none contraloria
interface nasid none cra
interface nasid none cuoc
interface nasid none dircom
interface nasid none direccion administrativa
interface nasid none dmi
interface nasid none gabinete
interface nasid none informatica
interface nasid none prueba
interface nasid none visitas
interface nasid none vlan438
nasid apgroup BECAL
 nasid apgroup  DG
 nasid apgroup DI-DESA
 nasid apgroup MEF
 nasid apgroup  citi
 nasid apgroup conajzar
 nasid apgroup default-group
 wlan nasid none 1
 wlan nasid none 2
 wlan nasid none 3
 wlan nasid none 4
 wlan nasid none 5
 wlan nasid none 6
```

```
wlan nasid none 7
wlan nasid none 8
wlan nasid none 9
wlan nasid none 10
wlan nasid none 11
wlan nasid none 12
wlan nasid none 13
wlan nasid none 14
wlan nasid none 15
wlan nasid none 16
wlan nasid none 18
interface port 420 8
interface port auditoria interna 1
interface port becal 1
interface port capital_humano 1
interface port code 1
interface port conajzar 1
interface port contraloria 1
interface port cra 1
interface port cuoc 1
interface port dircom 1
interface port direccion administrativa 1
interface port dmi 1
interface port gabinete 1
interface port informatica 1
interface port management 1
interface port prueba 1
interface port visitas 1
interface port vlan438 1
mdns snooping disable
mdns policy service-group create default-mdns-policy default-mdns-policy
mdns policy service-group user-role add default-mdns-policy admin
mdns profile create default-mdns-profile
mdns service create AirTunes _raop._tcp.local. origin All LSS disable query disable
mdns service create Airplay _airplay._tcp.local. origin All LSS disable query disable
mdns service create HP_Photosmart_Printer_1 _universal._sub._ipp._tcp.local. origin All LSS
disable query enable
mdns service create HP_Photosmart_Printer_2 _cups._sub._ipp._tcp.local. origin All LSS
disable query enable
mdns service create HomeSharing _home-sharing._tcp.local. origin All LSS disable query
enable
mdns service create Printer-IPP _ipp._tcp.local. origin All LSS disable query disable
mdns service create Printer-IPPS _ipps._tcp.local. origin All LSS disable query disable
mdns service create Printer-LPD _printer._tcp.local. origin All LSS disable query disable
mdns service create Printer-SOCKET _pdl-datastream._tcp.local. origin All LSS disable query
disable
mdns profile service add default-mdns-profile AirTunes
mdns profile service add default-mdns-profile Airplay

mdns profile service add default-mdns-profile HP_Photosmart_Printer_1
mdns profile service add default-mdns-profile HP_Photosmart_Printer_2
mdns profile service add default-mdns-profile HomeSharing
mdns profile service add default-mdns-profile Printer-IPP
mdns profile service add default-mdns-profile Printer-IPPS
mdns profile service add default-mdns-profile Printer-LPD
mdns profile service add default-mdns-profile Printer-SOCKET
mdns query interval 15
wlan mdns enable 1
wlan mdns enable 2
wlan mdns enable 3
wlan mdns enable 4
wlan mdns enable 5
wlan mdns enable 6
wlan mdns enable 7
wlan mdns enable 8
wlan mdns enable 9
wlan mdns disable 10
wlan mdns enable 11
```

```
wlan mdns enable 12
wlan mdns enable 13
wlan mdns enable 14
wlan mdns enable 15
wlan mdns enable 16
wlan mdns enable 18
wlan mdns profile 1 default-mdns-profile
wlan mdns profile 2 default-mdns-profile
wlan mdns profile 3 default-mdns-profile
wlan mdns profile 4 default-mdns-profile
wlan mdns profile 5 default-mdns-profile
wlan mdns profile 6 default-mdns-profile
wlan mdns profile 7 default-mdns-profile
wlan mdns profile 8 default-mdns-profile
wlan mdns profile 9 default-mdns-profile
wlan mdns profile 11 default-mdns-profile
wlan mdns profile 12 default-mdns-profile
wlan mdns profile 13 default-mdns-profile
wlan mdns profile 14 default-mdns-profile
wlan mdns profile 15 default-mdns-profile
wlan mdns profile 16 default-mdns-profile
wlan mdns profile 18 default-mdns-profile
ipv6 ra-guard ap enable
ipv6 capwap udplite enable all
ipv6 multicast mode unicast
load-balancing aggressive enable
load-balancing window 5
wlan apgroup add BECAL "CITI 1"

wlan apgroup add DG GABINETE

wlan apgroup add DI-DESA
wlan apgroup add MEF Edf.Central
wlan apgroup add citi Edif.CITI
wlan apgroup add conajzar CONAJZAR
wlan apgroup add default-group
wlan apgroup qinq tagging eap-sim-aka BECAL enable
wlan apgroup qinq tagging eap-sim-aka DG enable
wlan apgroup qinq tagging eap-sim-aka DI-DESA enable
wlan apgroup qinq tagging eap-sim-aka MEF enable
wlan apgroup qinq tagging eap-sim-aka citi enable
wlan apgroup qinq tagging eap-sim-aka conajzar enable
wlan apgroup qinq tagging eap-sim-aka default-group enable
wlan apgroup interface-mapping add BECAL 1 becal
wlan apgroup interface-mapping add BECAL 9 informatica
wlan apgroup interface-mapping add DG 11 gabinete
wlan apgroup interface-mapping add DG 15 gabinete
wlan apgroup interface-mapping add DI-DESA 9 informatica

wlan apgroup interface-mapping add MEF 4 direccion administrativa
wlan apgroup interface-mapping add citi 5 capital_humano
wlan apgroup interface-mapping add citi 2 auditoria interna
wlan apgroup interface-mapping add citi 6 cuoc
wlan apgroup interface-mapping add citi 16 dmi
wlan apgroup interface-mapping add citi 7 code
wlan apgroup interface-mapping add citi 9 informatica
wlan apgroup interface-mapping add citi 18 420
wlan apgroup interface-mapping add citi 13 cra
wlan apgroup interface-mapping add conajzar 10 conajzar
wlan apgroup interface-mapping add conajzar 9 informatica
wlan apgroup interface-mapping add conajzar 18 420
wlan apgroup interface-mapping add default-group 1 becal
wlan apgroup interface-mapping add default-group 2 auditoria interna
wlan apgroup interface-mapping add default-group 3 420
wlan apgroup interface-mapping add default-group 4 direccion administrativa
wlan apgroup interface-mapping add default-group 5 capital_humano
wlan apgroup interface-mapping add default-group 6 cuoc
wlan apgroup interface-mapping add default-group 7 code
```

```
wlan apgroup interface-mapping add default-group 8 visitas
 wlan apgroup interface-mapping add default-group 9 informatica
 wlan apgroup interface-mapping add default-group 10 conajzar
 wlan apgroup interface-mapping add default-group 11 gabinete
 wlan apgroup interface-mapping add default-group 12 dircom
 wlan apgroup interface-mapping add default-group 13 cra
 wlan apgroup interface-mapping add default-group 14 vlan438
 wlan apgroup interface-mapping add default-group 15 gabinete
 wlan apgroup interface-mapping add default-group 16 dmi
 wlan apgroup nac-snmp disable BECAL 1
 wlan apgroup nac-snmp disable BECAL 9
wlan  apgroup  nac-snmp disable DG 11
wlan apgroup nac-snmp disable  DG  15
wlan apgroup nac-snmp disable DI-DESA 9
wlan apgroup  nac-snmp  disable MEF 4
wlan apgroup nac-snmp disable citi 5
 wlan apgroup nac-snmp disable citi 2
 wlan apgroup nac-snmp disable citi 6
 wlan apgroup nac-snmp disable citi 16
 wlan apgroup nac-snmp disable citi 7
 wlan apgroup nac-snmp disable citi 9
 wlan apgroup nac-snmp disable citi 18
 wlan apgroup nac-snmp disable citi 13
wlan apgroup nac-snmp disable conajzar 10
 wlan apgroup nac-snmp disable conajzar 9
 wlan apgroup nac-snmp disable conajzar 18
 wlan apgroup nac-snmp disable default-group 1
 wlan apgroup nac-snmp disable default-group 2
 wlan apgroup nac-snmp disable default-group 3
 wlan apgroup nac-snmp disable default-group 4
 wlan apgroup nac-snmp disable default-group 5
 wlan apgroup nac-snmp disable default-group 6
 wlan apgroup nac-snmp disable default-group 7
 wlan apgroup nac-snmp disable default-group 8
 wlan apgroup nac-snmp disable default-group 9
wlan apgroup nac-snmp disable default-group 10
 wlan apgroup nac-snmp disable default-group 11
 wlan apgroup nac-snmp disable default-group 12
 wlan apgroup nac-snmp disable default-group 13
 wlan apgroup nac-snmp disable default-group 14
 wlan apgroup nac-snmp disable default-group 15
 wlan apgroup nac-snmp disable default-group 16
 logging syslog host 192.168.2.44
memory monitor errors enable
 memory monitor leak thresholds 10000 30000
Outdoor Mesh Ext.UNII B Domain channels: Disable
mesh security rad-mac-filter disable
mesh security rad-mac-filter disable
 mesh security eap
mesh background-scanning disable
mesh lsc advanced ap-provision open-window enable
 mgmtuser add admin **** read-write
 mgmtuser add cisco **** read-write
mgmtuser add infocadmin **** read-write
mgmtuser add javier_vega **** read-write
mgmtuser add lobyadmin **** lobby-admin
mgmtuser telnet lobyadmin disable
mobility group domain hacienda_group
mobility dscp 0
 netuser add becal **** wlan 8 userType guest lifetime 0 description BECAL
 netuser add cinthia.lara **** wlan 8 userType guest lifetime 0 description SecretariaDIRCOM
netuser add consultores **** wlan 8 userType guest lifetime 0 description Consultores
netuser add cynthia.ortiz **** wlan 8 userType guest lifetime 0 description AuditoriaFinanciera
netuser add eva.lopez **** wlan 8 userType guest lifetime 0 description Pasante Dircom -
Sime53267/2018
 netuser add felix.lugo **** wlan 8 userType permanent description Encargado Despacho
DIRCOM
```

```
 netuser add fernando.molinas **** wlan 8 userType guest lifetime 0 description
AuditoriaFinanciera
 netuser add ingrid.silguero **** wlan 8 userType guest lifetime 0 description Pasante Dircom -
Sime53267/2018
 netuser add jesus.barrios **** wlan 8 userType guest lifetime 0 description Pasante Dircom -
Sime53267/2018
 netuser add jorge.gonzalez **** wlan 8 userType guest lifetime 0 description servGrales-
Pasante
 netuser add juan.fernandez **** wlan 8 userType guest lifetime 0 description
AuditoriaFinanciera
 netuser add justo.godoy **** wlan 8 userType guest lifetime 0 description AuditoriaFinanciera
netuser add lobygab **** wlan 8 userType guest lifetime 0 description Acceso Gabinete Visitas
netuser add lourdes.gayoso **** wlan 8 userType guest lifetime 0 description Pasante Dircom -
Sime53267/2018
 netuser add marcos.peralta **** wlan 8 userType guest lifetime 0 description user-Konecta
netuser add marena.diaz **** wlan 8 userType guest lifetime 0 description Pasante Dircom -
Sime53267/2018
 netuser add natalia.alfonso **** wlan 8 userType guest lifetime 0 description Pasante Dircom -
Sime53267/2018
 netuser add noely.ortiz **** wlan 8 userType guest lifetime 0 description AuditoriaFinanciera
 netuser add patricia.galeano **** wlan 8 userType guest lifetime 0 description Pasante Dircom
- Sime53267/2018
 netuser add provisorio **** wlan 8 userType permanent description eterno001

 netuser add reunion **** wlan 8 userType guest lifetime 0 description

 netuser add sonia.rivas **** wlan 8 userType guest lifetime 0 description ServGrales

 netuser lifetime becal 0

 netuser lifetime cinthia.lara 0

--More-- or (q)uit

 netuser lifetime consultores 0

 netuser lifetime cynthia.ortiz 0

 netuser lifetime eva.lopez 0

 netuser lifetime fernando.molinas 0

 netuser lifetime ingrid.silguero 0

 netuser lifetime jesus.barrios 0

 netuser lifetime jorge.gonzalez 0

 netuser lifetime juan.fernandez 0

 netuser lifetime justo.godoy 0

 netuser lifetime lobygab 0

 netuser lifetime lourdes.gayoso 0


--More-- or (q)uit
 netuser lifetime marcos.peralta 0

 netuser lifetime marena.diaz 0

 netuser lifetime natalia.alfonso 0

 netuser lifetime noely.ortiz 0

 netuser lifetime patricia.galeano 0
```

```
netuser lifetime reunion 0

netuser lifetime sonia.rivas 0

netuser wlan-id becal 8

netuser wlan-id cinthia.lara 8

netuser wlan-id consultores 8

netuser wlan-id cynthia.ortiz 8

netuser wlan-id eva.lopez 8

--More-- or (q)uit

netuser wlan-id felix.lugo 8

netuser wlan-id fernando.molinas 8

netuser wlan-id ingrid.silguero 8

netuser wlan-id jesus.barrios 8

netuser wlan-id jorge.gonzalez 8

netuser wlan-id juan.fernandez 8

netuser wlan-id justo.godoy 8

netuser wlan-id lobygab 8

netuser wlan-id lourdes.gayoso 8

netuser wlan-id marcos.peralta 8

netuser wlan-id marena.diaz 8

--More-- or (q)uit
netuser wlan-id natalia.alfonso 8

netuser wlan-id noely.ortiz 8

netuser wlan-id patricia.galeano 8

netuser wlan-id provisorio 8

netuser wlan-id reunion 8

netuser wlan-id sonia.rivas 8

network webmode enable
network broadcast enable

network multicast global enable

network multicast igmp snooping enable

network multicast mld snooping enable

network mgmt-via-wireless enable

--More-- or (q)uit
network ap-priority disabled

network rf-network-name hacienda_group
```

```
network secureweb cipher-option rc4-preference disable

network client-ip-conflict-detection disable


port adminmode 2 disable

port adminmode 3 disable

port adminmode 4 disable

port adminmode 5 disable

port adminmode 6 disable

port adminmode 7 disable

qos priority bronze background background background


--More-- or (q)uit
qos priority gold video video video

qos priority platinum voice voice voice

qos priority silver besteffort besteffort besteffort

radius auth add 1 192.168.120.108 1812 ascii ****

radius callStationIdType macaddr

radius auth callStationIdType ap-macaddr-ssid

radius fallback-test mode off

radius fallback-test username cisco-probe

radius fallback-test interval 300

radius dns disable
radius dns auth network enable

radius dns auth management enable


--More-- or (q)uit
radius dns acct network enable

radius dns auth rfc3576 disable

tacacs dns disable
rogue detection report-interval 10
rogue detection min-rssi -128
rogue detection transient-rogue-interval 0
rogue detection client-threshold 0
rogue detection security-level custom
rogue ap classify unclassified state contain 00:24:6c:f6:3c:6a 2

rogue ap classify unclassified state contain 00:24:6c:f6:43:17 1

rogue ap ssid alarm

rogue ap valid-client alarm

rogue adhoc enable

rogue adhoc alert
```

```
rogue adhoc alert 2c:76:8a:03:3a:ff

--More-- or (q)uit

rogue adhoc alert 68:b5:99:44:e4:c4

rogue ap rldp disable

rogue rule add ap priority 1 classify friendly notify all state internal RougeFriendly

rogue rule disable RougeFriendly

rogue rule match any RougeFriendly

rogue rule add ap priority 2 classify malicious notify all state alert RuleRouge

rogue rule enable RuleRouge

rogue rule match any RuleRouge

rogue rule condition ap set ssid AAWDLTE RuleRouge

rogue rule condition ap set ssid Anggy RuleRouge

rogue rule condition ap set ssid COPACO-LTE-4G-55AC RuleRouge

--More-- or (q)uit
rogue rule condition ap set ssid Carito RuleRouge

rogue rule condition ap set ssid HUAWEI Y360-U235315 RuleRouge

rogue rule condition ap set ssid HUAWEI_LUA-L03_7074 RuleRouge

rogue rule condition ap set ssid Sandra RuleRouge

rogue rule condition ap set ssid Segovia RuleRouge

rogue rule condition ap set ssid Ver▒ni@ RuleRouge

rogue auto-contain level 1

rogue containment flex-connect disable
rogue containment auto-rate disable
snmp version v2c enable

snmp version v3 enable

snmp community create mhdacrainfo

snmp trapreceiver create mhdacrainfo 192.168.2.44

--More-- or (q)uit

snmp community accessmode ro mhdacrainfo

snmp trapreceiver mode enable mhdacrainfo

snmp  snmpEngineId  00003763000087400278a8c0

snmp community ipsec ike auth-mode pre-shared-key ****

switchconfig strong-pwd case-check enabled

switchconfig strong-pwd consecutive-check enabled

switchconfig strong-pwd default-check enabled
```

```
switchconfig strong-pwd username-check enabled

switchconfig strong-pwd position-check disabled

switchconfig strong-pwd case-digit-check disabled

switchconfig strong-pwd minimum upper-case 0

--More-- or (q)uit
switchconfig strong-pwd minimum lower-case 0

switchconfig strong-pwd minimum digits-chars 0

switchconfig strong-pwd minimum special-chars 0

switchconfig strong-pwd min-length 3

sysname Cisco_98:87:44

stats-timer realtime 5

stats-timer normal 180

time ntp server 1 192.168.2.5

time ntp server 2 192.168.2.52

rf-profile create 802.11b RF1

--More-- or (q)uit

rf-profile data-rates 802.11b mandatory 1 RF1

rf-profile data-rates 802.11b mandatory 2 RF1

rf-profile data-rates 802.11b mandatory 5.5 RF1

rf-profile data-rates 802.11b mandatory 11 RF1

rf-profile data-rates 802.11b supported 6 RF1

rf-profile data-rates 802.11b supported 9 RF1

rf-profile data-rates 802.11b supported 12 RF1

rf-profile data-rates 802.11b supported 18 RF1

rf-profile data-rates 802.11b supported 24 RF1

--More-- or (q)uit
rf-profile data-rates 802.11b supported 36 RF1

rf-profile data-rates 802.11b supported 48 RF1

trapflags client nac-alert enable

trapflags client 802.11-authfail enable
```

```
trapflags mfp disable

trapflags adjchannel-rogueap disable

trapflags mesh excessive hop count disable

trapflags mesh sec backhaul change disable

trapflags mesh psk auth failure disable

--More-- or (q)uit
wlan create 1 Becal becal

wlan create 2 "Auditoria Interna" MH-AI

wlan create 3 Contraloria -MH-

wlan create 4 DireccionAdministrativa ADM

wlan create 5 Capital_Humano DACHC

wlan create 6 CUOC CUOC

wlan create 7 CODE CODE

wlan create 8 Visitas Visitas

wlan create 9 Informatica Informatica

wlan create 10 CONAJZAR Conajzar

wlan create 11 MH-Gabinete DG

wlan create 12 DIRCOM DIRCOM

--More-- or (q)uit

wlan create 13 CRA CRA

wlan create 14 SG_MH SG_MH

wlan create 15 UAP UAP

wlan create 16 DMI DMI

wlan create 18 Coop3 Coop3

wlan nac snmp disable 1

wlan nac snmp disable 2

wlan nac snmp disable 3

wlan nac snmp disable 4

wlan nac snmp disable 5

wlan nac snmp disable 6

--More-- or (q)uit
wlan nac snmp disable 7

wlan nac snmp disable 8

wlan nac snmp disable 9
```

```
wlan nac snmp disable 10

wlan nac snmp disable 11

wlan nac snmp disable 12

wlan nac snmp disable 13

wlan nac snmp disable 14

wlan nac snmp disable 15

wlan nac snmp disable 16

wlan nac snmp disable 18


--More-- or (q)uit
wlan nac radius disable 1

wlan nac radius disable 2

wlan nac radius disable 3

wlan nac radius disable 4

wlan nac radius disable 5

wlan nac radius disable 6

wlan nac radius disable 7

wlan nac radius disable 8

wlan nac radius disable 9

wlan nac radius disable 10

wlan nac radius disable 11

wlan nac radius disable 12

--More-- or (q)uit

wlan nac radius disable 13

wlan nac radius disable 14

wlan nac radius disable 15

wlan nac radius disable 16

wlan nac radius disable 18

wlan interface 1 becal

wlan interface 2 auditoria interna

wlan interface 3 420

wlan interface 4 direccion administrativa

wlan interface 5 capital_humano

wlan interface 6 cuoc
```

```
--More-- or (q)uit
 wlan interface 7 code

 wlan interface 8 visitas

 wlan interface 9 informatica

 wlan interface 10 conajzar

 wlan interface 11 gabinete

 wlan interface 12 dircom

 wlan interface 13 cra

 wlan interface 14 vlan438

 wlan interface 15 gabinete

 wlan interface 16 dmi

 wlan interface 18 420

 wlan multicast interface 1 disable

--More-- or (q)uit

 wlan multicast interface 2 disable

 wlan multicast interface 3 disable

 wlan multicast interface 4 disable

 wlan multicast interface 5 disable

 wlan multicast interface 6 disable

 wlan multicast interface 7 disable

 wlan multicast interface 8 disable

 wlan multicast interface 9 disable

 wlan multicast interface 10 disable

 wlan multicast interface 11 disable

 wlan multicast interface 12 disable

--More-- or (q)uit
 wlan multicast interface 13 disable

 wlan multicast interface 14 disable

 wlan multicast interface 15 disable

 wlan multicast interface 16 disable

 wlan multicast interface 18 disable

 wlan broadcast-ssid disable  3

 wlan broadcast-ssid disable 18

 wlan band-select allow disable 1
```

```
wlan band-select allow disable 2

wlan band-select allow disable 3

wlan band-select allow disable 4

wlan band-select allow disable 5

--More-- or (q)uit

wlan band-select allow disable 6

wlan band-select allow disable 7

wlan band-select allow disable 8

wlan band-select allow disable 9

wlan band-select allow disable 10

wlan band-select allow disable 11

wlan band-select allow disable 12

wlan band-select allow disable 13

wlan band-select allow disable 14

wlan band-select allow disable 15

wlan band-select allow disable 16

--More-- or (q)uit
wlan band-select allow disable 18

wlan custom-web global enable 8

wlan custom-web sleep-client timeout 8 720

wlan exclusionlist 8 disabled

wlan exclusionlist 8 0

wlan exclusionlist 11 disabled

wlan exclusionlist 11 0

wlan load-balance allow disable 1

wlan load-balance allow disable 2

wlan load-balance allow disable 3

wlan load-balance allow disable 4

wlan load-balance allow disable 5

--More-- or (q)uit

wlan load-balance allow disable 6

wlan load-balance allow disable 7

wlan load-balance allow disable 8

wlan load-balance allow disable 9
```

```
wlan load-balance allow disable 10

wlan load-balance allow disable 11

wlan load-balance allow disable 12

wlan load-balance allow disable 13

wlan load-balance allow disable 14

wlan load-balance allow disable 15

wlan load-balance allow disable 16

--More-- or (q)uit
wlan load-balance allow disable 18

wlan multicast buffer disable 0 1

wlan multicast buffer disable 0 2

wlan multicast buffer disable 0 3

wlan multicast buffer disable 0 4

wlan multicast buffer disable 0 5

wlan multicast buffer disable 0 6

wlan multicast buffer disable 0 7

wlan multicast buffer disable 0 8

wlan multicast buffer disable 0 9

wlan multicast buffer disable 0 10

wlan multicast buffer disable 0 11

--More-- or (q)uit

wlan multicast buffer disable 0 12

wlan multicast buffer disable 0 13

wlan multicast buffer disable 0 14

wlan multicast buffer disable 0 15

wlan multicast buffer disable 0 16

wlan multicast buffer disable 0 18

wlan qos 1 platinum

wlan qos 3 gold

wlan qos 4 gold

wlan qos 5 bronze

wlan qos 6 platinum

--More-- or (q)uit
wlan qos 7 gold
```

```
wlan qos 9 platinum
wlan qos 10 platinum
wlan qos 11 platinum
wlan qos 12 platinum
wlan qos 13 platinum
wlan qos 15 platinum
wlan qos 16 bronze
wlan qos 18 platinum
wlan radio 5 802.11ag
wlan radio 7 802.11a-only
wlan session-timeout 1 disable
--More-- or (q)uit
wlan session-timeout 2 disable
wlan session-timeout 3 disable
wlan session-timeout 4 disable
wlan session-timeout 5 disable
wlan session-timeout 6 disable
wlan session-timeout 7 disable
wlan session-timeout 8 disable
wlan session-timeout 9 disable
wlan session-timeout 10 disable
wlan session-timeout 11 disable
wlan session-timeout 12 disable

--More-- or (q)uit
wlan session-timeout 13 disable
wlan session-timeout 14 disable
wlan session-timeout 15 1800
wlan session-timeout 16 disable
wlan session-timeout 18 disable
wlan flexconnect local-switching 1 disable
wlan flexconnect local-switching 2 disable
wlan flexconnect local-switching 3 disable
wlan flexconnect local-switching 4 disable
wlan flexconnect local-switching 5 disable
```

```
wlan flexconnect local-switching 6 disable

wlan flexconnect local-switching 7 disable

--More-- or (q)uit

wlan flexconnect local-switching 8 disable

wlan flexconnect local-switching 9 disable

wlan flexconnect local-switching 10 enable

wlan flexconnect local-switching 11 disable

wlan flexconnect local-switching 12 disable

wlan flexconnect local-switching 13 disable

wlan flexconnect local-switching 14 disable

wlan flexconnect local-switching 15 disable

wlan flexconnect local-switching 16 disable

wlan flexconnect local-switching 18 disable

wlan flexconnect learn-ipaddr 1 enable

--More-- or (q)uit
wlan flexconnect learn-ipaddr 2 enable

wlan flexconnect learn-ipaddr 3 enable

wlan flexconnect learn-ipaddr 4 enable

wlan flexconnect learn-ipaddr 5 enable

wlan flexconnect learn-ipaddr 6 enable

wlan flexconnect learn-ipaddr 7 enable

wlan flexconnect learn-ipaddr 8 enable

wlan flexconnect learn-ipaddr 9 enable

wlan flexconnect learn-ipaddr 10 enable

wlan flexconnect learn-ipaddr 11 enable

wlan flexconnect learn-ipaddr 12 enable

wlan flexconnect learn-ipaddr 13 enable

--More-- or (q)uit

wlan flexconnect learn-ipaddr 14 enable

wlan flexconnect learn-ipaddr 15 enable

wlan flexconnect learn-ipaddr 16 enable

wlan flexconnect learn-ipaddr 18 enable

wlan wmm disable 3

wlan wmm disable 11
```

```
wlan avc 1 visibility enable

wlan avc 2 visibility enable

wlan avc 3 visibility enable

wlan avc 4 visibility enable

wlan avc 5 visibility enable

--More-- or (q)uit
wlan avc 6 visibility enable

wlan avc 7 visibility enable

wlan avc 8 visibility enable

wlan avc 9 visibility enable

wlan avc 10 visibility enable

wlan avc 11 visibility enable

wlan avc 12 visibility enable

wlan avc 13 visibility enable

wlan avc 15 visibility enable

wlan avc 16 visibility enable

wlan avc 18 visibility enable

wlan security wpa disable 8

--More-- or (q)uit

wlan security splash-page-web-redir disable 1

wlan security splash-page-web-redir disable 2

wlan security splash-page-web-redir disable 3

wlan security splash-page-web-redir disable 4

wlan security splash-page-web-redir disable 5

wlan security splash-page-web-redir disable 6

wlan security splash-page-web-redir disable 7

wlan security splash-page-web-redir disable 8

wlan security splash-page-web-redir disable 9

wlan security splash-page-web-redir disable 10

wlan security splash-page-web-redir disable 11

--More-- or (q)uit
wlan security splash-page-web-redir disable 12

wlan security splash-page-web-redir disable 13

wlan security splash-page-web-redir disable 14
```

```
wlan security splash-page-web-redir disable 15

wlan security splash-page-web-redir disable 16

wlan security splash-page-web-redir disable 18

wlan security web-auth enable 8

wlan security wpa akm psk enable 1

wlan security wpa akm psk enable 2

wlan security wpa akm psk enable 3

wlan security wpa akm psk enable 4

wlan security wpa akm psk enable 5

--More-- or (q)uit

wlan security wpa akm psk enable 6

wlan security wpa akm psk enable 7

wlan security wpa akm psk enable 9

wlan security wpa akm psk enable 10

wlan security wpa akm psk enable 11

wlan security wpa akm psk enable 12

wlan security wpa akm psk enable 13

wlan security wpa akm psk enable 14

wlan security wpa akm psk enable 15

wlan security wpa akm psk enable 16

wlan security wpa akm psk enable 18

--More-- or (q)uit
wlan security wpa akm cckm timestamp-tolerance 1000 1

wlan security wpa akm cckm timestamp-tolerance 1000 2

wlan security wpa akm cckm timestamp-tolerance 1000 3

wlan security wpa akm cckm timestamp-tolerance 1000 4

wlan security wpa akm cckm timestamp-tolerance 1000 5

wlan security wpa akm cckm timestamp-tolerance 1000 6

wlan security wpa akm cckm timestamp-tolerance 1000 7

wlan security wpa akm cckm timestamp-tolerance 1000 8

wlan security wpa akm cckm timestamp-tolerance 1000 9

wlan security wpa akm cckm timestamp-tolerance 1000 10

wlan security wpa akm cckm timestamp-tolerance 1000 11

wlan security wpa akm cckm timestamp-tolerance  1000 12
```

```
--More-- or (q)uit
 wlan security wpa akm cckm timestamp-tolerance 1000 13
 wlan security wpa akm cckm timestamp-tolerance 1000 14
 wlan security wpa akm cckm timestamp-tolerance 1000 15
 wlan security wpa akm cckm timestamp-tolerance 1000 16
 wlan security wpa akm cckm timestamp-tolerance 1000 18
 wlan security ft over-the-ds disable 8
 wlan security ft reassociation-timeout 10 11
 wlan security ft over-the-ds disable 11

 wlan security wpa gtk-random disable 1
 wlan security wpa gtk-random disable 2
 wlan security wpa gtk-random disable 3
--More-- or (q)uit
 wlan security wpa gtk-random disable 4
 wlan security wpa gtk-random disable 5
 wlan security wpa gtk-random disable 6
 wlan security wpa gtk-random disable 7
 wlan security wpa gtk-random disable 8
 wlan security wpa gtk-random disable 9
 wlan security wpa gtk-random disable 10
 wlan security wpa gtk-random disable 11
 wlan security wpa gtk-random disable 12
 wlan security wpa gtk-random disable 13
 wlan security wpa gtk-random disable 14

--More-- or (q)uit
 wlan security wpa gtk-random disable 15
 wlan security wpa gtk-random disable 16
 wlan security wpa gtk-random disable 18
 wlan security pmf association-comeback 1 1
 wlan security pmf association-comeback 1 2
 wlan security pmf association-comeback 1 3
 wlan security pmf association-comeback 1 4
 wlan security pmf association-comeback 1 5
 wlan security pmf association-comeback 1 6
```

```
 wlan security pmf association-comeback 1 7

 wlan security pmf association-comeback 1 8

 wlan security pmf association-comeback 1 9

--More-- or (q)uit

 wlan security pmf association-comeback 1 10

 wlan security pmf association-comeback 1 11

 wlan security pmf association-comeback 1 12

 wlan security pmf association-comeback 1 13

 wlan security pmf association-comeback 1 14

 wlan security pmf association-comeback 1 15

 wlan security pmf association-comeback 1 16

 wlan security pmf association-comeback 1 18

 wlan security pmf saquery-retrytimeout 200 1

 wlan security pmf saquery-retrytimeout 200 2

 wlan security pmf saquery-retrytimeout 200 3

--More-- or (q)uit
 wlan security pmf saquery-retrytimeout 200 4

 wlan security pmf saquery-retrytimeout 200 5

 wlan security pmf saquery-retrytimeout 200 6

 wlan security pmf saquery-retrytimeout 200 7

 wlan security pmf saquery-retrytimeout 200 8

 wlan security pmf saquery-retrytimeout 200 9

 wlan security pmf saquery-retrytimeout 200 10

 wlan security pmf saquery-retrytimeout 200 11

 wlan security pmf saquery-retrytimeout 200 12

 wlan security pmf saquery-retrytimeout 200 13

 wlan security pmf saquery-retrytimeout 200 14

 wlan security pmf saquery-retrytimeout 200 15

--More-- or (q)uit

 wlan security pmf saquery-retrytimeout 200 16

 wlan security pmf saquery-retrytimeout 200 18

 wlan exclusionlist 8 disabled

 wlan exclusionlist 8 0

 wlan exclusionlist 11 disabled
```

```
wlan exclusionlist 11 0


wlan profiling radius dhcp disable 1

wlan profiling radius http disable 1

wlan profiling radius dhcp disable 2

wlan profiling radius http disable 2

--More-- or (q)uit
wlan profiling radius dhcp disable 3

wlan profiling radius http disable 3

wlan profiling radius dhcp disable 4

wlan profiling radius http disable 4

wlan profiling radius dhcp disable 5

wlan profiling radius http disable 5

wlan profiling radius dhcp disable 6

wlan profiling radius http disable 6

wlan profiling radius dhcp disable 7

wlan profiling radius http disable 7

wlan profiling radius dhcp disable 8

wlan profiling radius http disable 8

--More-- or (q)uit

wlan profiling radius dhcp disable 9

wlan profiling radius http disable 9

wlan profiling radius dhcp disable 10

wlan profiling radius http disable 10

wlan profiling radius dhcp disable 11

wlan profiling radius http disable 11

wlan profiling radius dhcp disable 12

wlan profiling radius http disable 12

wlan profiling radius dhcp disable 13

wlan profiling radius http disable 13

wlan profiling radius dhcp disable 14

--More-- or (q)uit
wlan profiling radius http disable 14

wlan profiling radius dhcp disable 15
```

```
wlan profiling radius http disable 15

wlan profiling radius dhcp disable 16

wlan profiling radius http disable 16

wlan profiling radius dhcp disable 18

wlan profiling radius http disable 18

wlan apgroup hotspot venue type BECAL 0 0

wlan apgroup hotspot venue type DG 0 0

wlan apgroup hotspot venue type DI-DESA 0 0

wlan apgroup hotspot venue type MEF 0 0

wlan apgroup hotspot venue type citi 0 0

--More-- or (q)uit

wlan apgroup hotspot venue type conajzar 0 0

wlan enable 1

wlan enable 2

wlan enable 3

wlan enable 4

wlan enable 5

wlan enable 6

wlan enable 7

wlan enable 9

wlan enable 10

wlan enable 11

--More-- or (q)uit
wlan enable 12

wlan enable 13

wlan enable 14

wlan enable 15

wlan enable 16

license boot base

WMM-AC disable
coredump disable
media-stream multicast-direct disable
media-stream message url
media-stream message email
media-stream message phone
media-stream message note denial
media-stream message state disable
802.11a media-stream multicast-direct enable
```

802.11b media-stream multicast-direct enable
802.11a media-stream multicast-direct radio-maximum 0
802.11b media-stream multicast-direct radio-maximum 0
802.11a media-stream multicast-direct client-maximum 0
802.11b media-stream multicast-direct client-maximum 0
802.11a media-stream multicast-direct admission-besteffort disable
802.11b media-stream multicast-direct admission-besteffort disable
802.11a media-stream video-redirect enable
802.11b media-stream video-redirect enable
ipv6 neighbor-binding timers reachable-lifetime 300
ipv6 neighbor-binding timers stale-lifetime 86400
ipv6 neighbor-binding timers down-lifetime 30
ipv6 neighbor-binding ra-throttle disable
ipv6 neighbor-binding ra-throttle allow at-least 1 at-most 1
ipv6 neighbor-binding ra-throttle max-through 10
ipv6 neighbor-binding ra-throttle throttle-period 600
ipv6 neighbor-binding ra-throttle interval-option passthrough
ipv6 ns-mcast-fwd disable
ipv6 na-mcast-fwd enable
ipv6 enable
nmheartbeat disable
ipv6 slaac service-port disable
sys-nas
WLAN Express Setup – False

Recomendación.

Se aconseja conservar la versión actual del dispositivo, dado que ha llegado al período de fin de vida (EOS, por sus siglas en inglés). Este anuncio implica que el fabricante dejará de ofrecer soporte y actualizaciones para dicha versión, lo cual podría afectar la estabilidad y seguridad del sistema. Al mantener la versión existente, se busca evitar posibles inconvenientes asociados con la transición a nuevas versiones, permitiendo una continuidad operativa mientras se evalúan estrategias a largo plazo en consonancia con las necesidades y requerimientos específicos de la organización.

4.4. Cisco ASR 1000 series

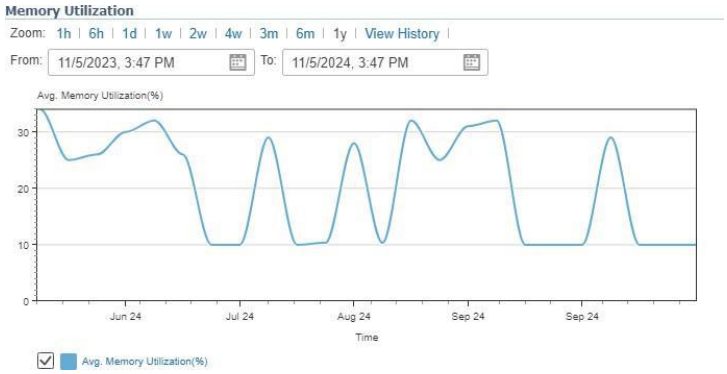
En la instalaciones, se cuenta con dos routers Cisco ASR1002-X, identificados como BORDE-HACIENDA con número de serie FOX2026GC1Y, y BORDE2-HACIENDA con número de serie FOX1906GH2A. Ambos dispositivos actualmente operan en la versión IOS 17.9.5 (Cupertino) y han sido anunciados con fecha de fin de venta (EOS) para el 31 de julio de 2027. El router principal, BORDE- HACIENDA, está equipado con un módulo SPA-8X1GE-V2 que ofrece 8 puertos SFP+ de 100/1000. Hasta el momento, no se han registrado alarmas ni errores en su funcionamiento, lo que indica un estado operativo óptimo.

Por otro lado, el router secundario, BORDE2-HACIENDA, se encuentra actualmente desconectado pero encendido. Es importante señalar que se ha identificado un error en la fuente de alimentación (P0). Este inconveniente debe ser abordado para asegurar la integridad y confiabilidad del equipo en caso de requerir su activación.

BORDE-HACIENDA

CPU- Max 2 %. Optimo

Memoria- ASR 1000 BORDE 1- Max 3 %. Optimo



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Módulos.

Product Name	Board Serial Num...	Description	Physical Location	Equipment Type	Operation Status	Number of Ports	Inline Pow
6XGE-BUILT-IN		6-port Built-in GE SPA	module 0	Module	enabled	0	false
SPA-8X1GE-V2	SAL1643QTYU	8-port Gigabit Ethernet Shared Port Adapter	subslot 0/1	Module	okenabled	0	false
ASR1002-X		Cisco ASR1002-X Embedded Services Processor	Chassis	Module	enabled	0	false
ASR1002-X	JAE204103Z0	Cisco ASR1002-X Route Processor	Chassis	Module	enabled	1	false
ASR1002-X		Cisco ASR1002-X SPA Interface Processor	Chassis	Module	enabled	0	false
GLC-SX-MMD	FNS19290J8W	GE SX	subslot 0/0 transceiver container 3	Module	enabled	1	false
GLC-SX-MMD	FNS19290J96	GE SX	subslot 0/0 transceiver container 2	Module	enabled	1	false
GLC-SX-MMD	FNS19290TU8	GE SX	subslot 0/0 transceiver container 4	Module	enabled	1	false
GLC-SX-MMD	A361160174	GE SX	subslot 0/0 transceiver container 0	Module	enabled	1	false
OEM GLC-SX-MM	TC1302260424	GE SX	subslot 0/0 transceiver container 1	Module	enabled	1	false

Descripción y estado de Interfaces

```
BORDE-HACIENDA#show inter description
Interface                      Status         Protocol Description
Gi0/0/0                        up             up       TO-ASA HSRP
Gi0/0/1                        up             up       Copaco - Internet
Gi0/0/2                        up             up       COPACO-SECUNDARIO
Gi0/0/3                        up             up
Gi0/0/3.434                    up             up       SENATICS
Gi0/0/3.934                    up             up       RSMP NUEVO
Gi0/0/4                        up             up
Gi0/0/5                        up             up       BORDE_A_HUWEI_FW
Gi0/1/0                        down           down
Gi0/1/1                        down           down
Gi0/1/2                        admin down     down
Gi0/1/3                        admin down     down
Gi0/1/4                        admin down     down
Gi0/1/5                        admin down     down
Gi0/1/6                        admin down     down
Gi0/1/7                        admin down     down
Gi0                            up             up
Di1                            admin down     down
Tu11                           up             down
```

Sin errores en las interfaces.

GigabitEthernet0/0/0 is up, line protocol is up

Hardware is 6XGE-BUILT-IN, address is a03d.6f64.0300 (bia a03d.6f64.0300)

```
Description: TO-ASA HSRP

Internet address is 192.168.151.10/29

MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,

    reliability 255/255, txload 4/255, rxload 1/255

Encapsulation ARPA, loopback not set

Keepalive not supported

Full Duplex, 1000Mbps, link type is auto, media type is SX

  output flow-control is on, input flow-control is on

ARP type: ARPA, ARP Timeout 04:00:00

Last input 00:00:00, output 00:00:00, output hang never

  Last clearing of "show interface" counters never

Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0

Queueing strategy: fifo

Output queue: 0/40 (size/max)

5 minute input rate 1480000 bits/sec, 657 packets/sec

5 minute output rate 16038000 bits/sec, 1694 packets/sec

   7522918414 packets input, 1861028216529 bytes, 0 no buffer

   Received 296313 broadcasts (0 IP multicasts)

   0 runts, 0 giants, 0 throttles

   0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored

   0 watchdog, 10887626 multicast, 0 pause input

   13281770052 packets output, 12357296304718 bytes, 0 underruns

   0 output errors, 0 collisions, 2 interface resets

   0 unknown protocol drops

   0 babbles, 0 late collision, 0 deferred

   0 lost carrier, 0 no carrier, 0 pause output
```

```
    0 output buffer failures, 0 output buffers swapped out
    1 carrier transitions
GigabitEthernet0/0/1 is up, line protocol is up
  Hardware is 6XGE-BUILT-IN, address is a03d.6f64.0301 (bia a03d.6f64.0301)
  Description: Copaco - Internet
  Internet address is 201.217.49.194/30
  MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
     reliability 255/255, txload 1/255, rxload 22/255
  Encapsulation ARPA, loopback not set
  Keepalive not supported
  Full Duplex, 1000Mbps, link type is auto, media type is SX
  output flow-control is on, input flow-control is on
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:00, output 00:00:15, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 89606000 bits/sec, 9993 packets/sec
  5 minute output rate 7541000 bits/sec, 4243 packets/sec
     54001269098 packets input, 63560744385087 bytes, 0 no buffer
     Received 43 broadcasts (0 IP multicasts)
     0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 watchdog, 9228760 multicast, 0 pause input
     24632127799 packets output, 6587942738176 bytes, 0 underruns
```

```
     0 output errors, 0 collisions, 2 interface resets

     0 unknown protocol drops

     0 babbles, 0 late collision, 0 deferred

     0 lost carrier, 0 no carrier, 0 pause output

     0 output buffer failures, 0 output buffers swapped out

     5 carrier transitions

GigabitEthernet0/0/2 is up, line protocol is up

  Hardware is 6XGE-BUILT-IN, address is a03d.6f64.0302 (bia a03d.6f64.0302)

 --More--Description:   COPACO-SECUNDARIO

  MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,

     reliability 255/255, txload 1/255, rxload 1/255

  Encapsulation ARPA, loopback not set

  Keepalive not supported

  Full Duplex, 1000Mbps, link type is auto, media type is SX

  output flow-control is on, input flow-control is on

  ARP type: ARPA, ARP Timeout 04:00:00

  Last input 00:00:00, output 00:00:24, output hang never

  Last clearing of "show interface" counters never

  Input  queue:  0/375/0/0  (size/max/drops/flushes);  Total  output  drops:  0

  Queueing strategy: fifo

  Output queue: 0/40 (size/max)

  5 minute input rate 0 bits/sec, 0 packets/sec

  5 minute output rate 0 bits/sec, 0 packets/sec

     10306364 packets input, 728619354 bytes, 0 no buffer

     Received 2246820 broadcasts (0 IP multicasts)

     0 runts, 0 giants, 0 throttles
```

```
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 watchdog, 8056354 multicast, 0 pause input
     315273 packets output, 119858945 bytes, 0 underruns
     0 output errors, 0 collisions, 5 interface resets
     0 unknown protocol drops
     0 babbles, 0 late collision, 0 deferred
     0 lost carrier, 0 no carrier, 0 pause output
     0 output buffer failures, 0 output buffers swapped out
     4 carrier transitions
GigabitEthernet0/0/3 is up, line protocol is up
  Hardware is 6XGE-BUILT-IN, address is a03d.6f64.0303 (bia a03d.6f64.0303)
  MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
     reliability 255/255, txload 1/255, rxload 2/255
  Encapsulation 802.1Q Virtual LAN, Vlan ID  1., loopback not set
  Keepalive not supported
  Full Duplex, 1000Mbps, link type is auto, media type is SX
  output flow-control is on, input flow-control is on
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:01, output 00:00:57, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 9682000 bits/sec, 1331 packets/sec
  5 minute output rate 4438000 bits/sec, 895 packets/sec
     6179885317 packets input, 5686299324663 bytes, 0 no buffer
```

```
     Received 190708 broadcasts (0 IP multicasts)
     0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 watchdog, 18808625 multicast, 0 pause input
     2981063592 packets output, 620377330630 bytes, 0 underruns
     0 output errors, 0 collisions, 2 interface resets
     297864 unknown protocol drops
     0 babbles, 0 late collision, 0 deferred
     0 lost carrier, 0 no carrier, 0 pause output
     0 output buffer failures, 0 output buffers swapped out
     3 carrier transitions
GigabitEthernet0/0/3.434 is up, line protocol is up
  Hardware is 6XGE-BUILT-IN, address is a03d.6f64.0303 (bia a03d.6f64.0303)
  Description:  SENATICS
  Internet address is 10.1.134.2/29
  MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
     reliability 255/255, txload 1/255, rxload 2/255
  Encapsulation 802.1Q Virtual LAN, Vlan ID  434.
 --More--ARP type: ARPA, ARP Timeout 04:00:00
  Keepalive not supported
  Last clearing of "show interface" counters never
GigabitEthernet0/0/3.934 is up, line protocol is up
  Hardware is 6XGE-BUILT-IN, address is a03d.6f64.0303 (bia a03d.6f64.0303)
  Description: RSMP NUEVO
  Internet address is 10.2.134.2/27
  MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
```

```
     reliability 255/255, txload 1/255, rxload 2/255
   Encapsulation 802.1Q Virtual LAN, Vlan ID  934.
  ARP type: ARPA, ARP Timeout 04:00:00
  Keepalive not supported
  Last clearing of "show interface" counters never
GigabitEthernet0/0/4 is up, line protocol is up
  Hardware is 6XGE-BUILT-IN, address is a03d.6f64.0304 (bia a03d.6f64.0304)
  MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive not supported
  Full Duplex, 1000Mbps, link type is auto, media type is SX
  output flow-control is on, input flow-control is on
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:01, output 00:08:32, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    9228939 packets input, 679732191 bytes, 0 no buffer
    Received 23 broadcasts (0 IP multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 9228916 multicast, 0 pause input
```

```
    29814 packets output, 2295678 bytes, 0 underruns
    0 output errors, 0 collisions, 2 interface resets
    297863 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 pause output
    0 output buffer failures, 0 output buffers swapped out
    3 carrier transitions
GigabitEthernet0/0/5 is up, line protocol is up
  Hardware is 6XGE-BUILT-IN, address is a03d.6f64.0305 (bia a03d.6f64.0305)
  Description: BORDE_A_HUWEI_FW
  Internet address is 192.168.111.2/28
  MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
     reliability 255/255, txload 21/255, rxload 2/255
  Encapsulation ARPA, loopback not set
  Keepalive not supported
  Full Duplex, 1000Mbps, link type is auto, media type is LX
  output flow-control is on, input flow-control is on
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:01, output 00:00:00, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 10493000 bits/sec, 4491 packets/sec
  5 minute output rate 83243000 bits/sec, 9628 packets/sec
    21394277957 packets input, 5498200543476 bytes, 0 no buffer
```

```
     Received 149231 broadcasts (0 IP multicasts)
     0 runts, 0 giants, 0 throttles
 --More--   0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 watchdog, 10184383 multicast, 0 pause input
     48144848488 packets output, 57014850355497 bytes, 0 underruns
     0 output errors, 0 collisions, 2 interface resets
     931722 unknown protocol drops
     0 babbles, 0 late collision, 0 deferred
     0 lost carrier, 0 no carrier, 0 pause output
     0 output buffer failures, 0 output buffers swapped out
     1 carrier transitions
GigabitEthernet0/1/0 is down, line protocol is down
  Hardware is SPA-8X1GE-V2, address is a03d.6f64.0310 (bia a03d.6f64.0310)
  MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive not supported
  Full Duplex, 1000Mbps, link type is auto, media type is unknown media type
  output flow-control is on, input flow-control is on
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
```

```
  5 minute output rate 0 bits/sec, 0 packets/sec
     0 packets input, 0 bytes, 0 no buffer
     Received 0 broadcasts (0 IP multicasts)
     0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 watchdog, 0 multicast, 0 pause input
     0 packets output, 0 bytes, 0 underruns
     0 output errors, 0 collisions, 1 interface resets
     0 unknown protocol drops
     0 babbles, 0 late collision, 0 deferred
     0 lost carrier, 0 no carrier, 0 pause output
     0 output buffer failures, 0 output buffers swapped out
     0 carrier transitions
GigabitEthernet0/1/1 is down, line protocol is down
  Hardware is SPA-8X1GE-V2, address is a03d.6f64.0311 (bia a03d.6f64.0311)
  MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive not supported
  Full Duplex, 1000Mbps, link type is auto, media type is unknown media type
  output flow-control is on, input flow-control is on
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
```

```
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts (0 IP multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 0 multicast, 0 pause input
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
 --More--  0 lost carrier, 0 no carrier, 0 pause output
    0 output buffer failures, 0 output buffers swapped out
    0 carrier transitions
GigabitEthernet0/1/2 is administratively down, line protocol is down
  Hardware is SPA-8X1GE-V2, address is a03d.6f64.0312 (bia a03d.6f64.0312)
  MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive not supported
  Full Duplex, 1000Mbps, link type is auto, media type is unknown media type
  output flow-control is unsupported, input flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
```

```
  Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts (0 IP multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 0 multicast, 0 pause input
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 pause output
    0 output buffer failures, 0 output buffers swapped out
    0 carrier transitions
GigabitEthernet0/1/3 is administratively down, line protocol is down
  Hardware is SPA-8X1GE-V2, address is a03d.6f64.0313 (bia a03d.6f64.0313)
  MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive not supported
  Full Duplex, 1000Mbps, link type is auto, media type is unknown media type
  output flow-control is unsupported, input flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
```

```
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts (0 IP multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 0 multicast, 0 pause input
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 pause output
    0 output buffer failures, 0 output buffers swapped out
    0 carrier transitions
GigabitEthernet0/1/4 is administratively down, line protocol is down
  Hardware is SPA-8X1GE-V2, address is a03d.6f64.0314 (bia a03d.6f64.0314)
  MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
 --More--  reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive not supported
  Full Duplex, 1000Mbps, link type is auto, media type is unknown media type
```

```
  output flow-control is unsupported, input flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts (0 IP multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 0 multicast, 0 pause input
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 pause output
    0 output buffer failures, 0 output buffers swapped out
    0 carrier transitions
GigabitEthernet0/1/5 is administratively down, line protocol is down
  Hardware is SPA-8X1GE-V2, address is a03d.6f64.0315 (bia a03d.6f64.0315)
  MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
```

```
  Keepalive not supported
  Full Duplex, 1000Mbps, link type is auto, media type is unknown media type
  output flow-control is unsupported, input flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts (0 IP multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 0 multicast, 0 pause input
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 pause output
    0 output buffer failures, 0 output buffers swapped out
    0 carrier transitions
GigabitEthernet0/1/6 is administratively down, line protocol is down
  Hardware is SPA-8X1GE-V2, address is a03d.6f64.0316 (bia a03d.6f64.0316)
  MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
```

```
  reliability 255/255, txload 1/255, rxload 1/255
 Encapsulation ARPA, loopback not set
 Keepalive not supported
 Full Duplex, 1000Mbps, link type is auto, media type is unknown media type
 output flow-control is unsupported, input flow-control is unsupported
 ARP type: ARPA, ARP Timeout 04:00:00
--More--Last input never, output never, output hang never
 Last clearing of "show interface" counters never
 Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
 Queueing strategy: fifo
 Output queue: 0/40 (size/max)
 5 minute input rate 0 bits/sec, 0 packets/sec
 5 minute output rate 0 bits/sec, 0 packets/sec
   0 packets input, 0 bytes, 0 no buffer
   Received 0 broadcasts (0 IP multicasts)
   0 runts, 0 giants, 0 throttles
   0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
   0 watchdog, 0 multicast, 0 pause input
   0 packets output, 0 bytes, 0 underruns
   0 output errors, 0 collisions, 1 interface resets
   0 unknown protocol drops
   0 babbles, 0 late collision, 0 deferred
   0 lost carrier, 0 no carrier, 0 pause output
   0 output buffer failures, 0 output buffers swapped out
   0 carrier transitions
GigabitEthernet0/1/7 is administratively down, line protocol is down
```

```
Hardware is SPA-8X1GE-V2, address is a03d.6f64.0317 (bia a03d.6f64.0317)
MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
   reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive not supported
Full Duplex, 1000Mbps, link type is auto, media type is unknown media type
output flow-control is unsupported, input flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
 Last input never, output never, output hang never
 Last clearing of "show interface" counters never
Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
   0 packets input, 0 bytes, 0 no buffer
   Received 0 broadcasts (0 IP multicasts)
   0 runts, 0 giants, 0 throttles
   0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
   0 watchdog, 0 multicast, 0 pause input
   0 packets output, 0 bytes, 0 underruns
   0 output errors, 0 collisions, 1 interface resets
   0 unknown protocol drops
   0 babbles, 0 late collision, 0 deferred
   0 lost carrier, 0 no carrier, 0 pause output
   0 output buffer failures, 0 output buffers swapped out
```

```
    0 carrier transitions
GigabitEthernet0 is up, line protocol is up
  Hardware is RP management port, address is a03d.6f64.0340 (bia a03d.6f64.0340)
  MTU 1500 bytes, BW 100000 Kbit/sec, DLY 100 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full Duplex, 100Mbps, link type is auto, media type is RJ45
  output flow-control is unsupported, input flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:20, output 00:08:33, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
 --More--5 minute output rate 0 bits/sec, 0 packets/sec
     12421304 packets input, 937636556 bytes, 0 no buffer
     Received 218377 broadcasts (0 IP multicasts)
     0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 watchdog, 0 multicast, 0 pause input
     29831 packets output, 2416375 bytes, 0 underruns
     0 output errors, 0 collisions, 0 interface resets
     298485 unknown protocol drops
     0 babbles, 0 late collision, 0 deferred
```

```
     0 lost carrier, 0 no carrier, 0 pause output
     0 output buffer failures, 0 output buffers swapped out
     0 carrier transitions
Dialer1 is administratively down, line protocol is down
  Hardware is Unknown
  MTU 1492 bytes, BW 56 Kbit/sec, DLY 20000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation HDLC, loopback not set
  Keepalive set (10 sec)
  DTR is pulsed for 1 seconds on reset
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: weighted fair
  Output queue: 0/1000/64/0 (size/max total/threshold/drops)
     Conversations 0/0/16 (active/max active/max total)
     Reserved Conversations 0/0 (allocated/max allocated)
     Available Bandwidth 42 kilobits/sec
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
     0 packets input, 0 bytes
     0 packets output, 0 bytes
Tunnel11 is up, line protocol is down
  Hardware is Tunnel
  Internet address is 169.254.0.1/32
  MTU 10000 bytes, BW 100 Kbit/sec, DLY 50000 usec,
```

```
  reliability 255/255, txload 1/255, rxload 1/255
Encapsulation TUNNEL, loopback not set
Keepalive not set
Tunnel linestate evaluation down - linestate protection reg down
Tunnel source 201.217.49.194, destination 52.249.184.176
Tunnel protocol/transport IPSEC/IP
Tunnel TTL 255
Tunnel transport MTU 1500 bytes
Tunnel transmit bandwidth 8000 (kbps)
Tunnel receive bandwidth 8000 (kbps)
Tunnel protection via IPSec (profile "Azure-IPsecProfile")
Last input never, output never, output hang never
Last clearing of "show interface" counters 29w4d
Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/0 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
  Received 0 broadcasts (0 IP multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
  0 packets output, 0 bytes, 0 underruns
  0 output errors, 0 collisions, 0 interface resets
  0 unknown protocol drops
  0 output buffer failures, 0 output buffers swapped out
```


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Dispositivos Vecinos.

```
Device ID        Local Intrfce     Holdtme    Capability  Platform  Port ID
MHDA-DC101.hacienda.gov.py
                 Gig 0/0/2         157              S I   WS-C3750X Gig 1/0/2
MHDA-DC101.hacienda.gov.py
                 Gig 0/0/1         157              S I   WS-C3750X Gig 1/0/1

Total cdp entries displayed : 2
```

Estado sensores. Normal

```
BORDE-HACIENDA#show environment all
Sensor List:  Environmental Monitoring
 Sensor           Location          State             Reading
 PEM Iout         P0                Normal            6 A
 PEM Vout         P0                Normal            12 V DC
 PEM Vin          P0                Normal            228 V AC
 Temp: PEM        P0                Normal            17 Celsius
 Temp: FC         P0                Fan Speed 65%     18 Celsius
 PEM Iout         P1                Normal            5 A
 PEM Vout         P1                Normal            12 V DC
 PEM Vin          P1                Normal            228 V AC
 Temp: PEM        P1                Normal            23 Celsius
 Temp: FC         P1                Fan Speed 65%     18 Celsius
 VCP 1: VX1       R0                Normal            1488 mV
 VCP 1: VX2       R0                Normal            743 mV
 VCP 1: VX3       R0                Normal            1196 mV
 VCP 1: VP1       R0                Normal            5011 mV
 VCP 1: VP2       R0                Normal            3279 mV
 VCP 1: VP3       R0                Normal            2490 mV
 VCP 1: VP4       R0                Normal            1791 mV
 VCP 1: VH        R0                Normal            11919 mV
 VCP 2: VX2       R0                Normal            1049 mV
 VCP 2: VX4       R0                Normal            899 mV
 VCP 2: VX5       R0                Normal            1100 mV
 VCP 2: VP1       R0                Normal            1491 mV
 VCP 2: VP2       R0                Normal            949 mV
 VCP 2: VP3       R0                Normal            1102 mV
 VCP 2: VP4       R0                Normal            1097 mV
 VCP 2: VH        R0                Normal            11914 mV
 Temp: Inlet 1    R0                Normal            18 Celsius
 Temp: Outlet 1   R0                Normal            20 Celsius
 Temp: Octeon     R0                Normal            27 Celsius
 Temp: Outlet 2   R0                Normal            18 Celsius
 Temp: CPU Die    R0                Normal            19 Celsius
 VDP 1: VX1       R0                Normal            1494 mV
 VDP 1: VX4       R0                Normal            977 mV
 VDP 1: VP1       R0                Normal            993 mV
 VDP 1: VP2       R0                Normal            3272 mV
 VDP 1: VP3       R0                Normal            991 mV
 VDP 1: VP4       R0                Normal            1784 mV
 VDP 1: VH        R0                Normal            11998 mV
 VDP 2: VX2       R0                Normal            4995 mV
 VDP 2: VP1       R0                Normal            1488 mV
 VDP 2: VP2       R0                Normal            842 mV
 VDP 2: VP3       R0                Normal            2480 mV
 VDP 2: VP4       R0                Normal            1196 mV
 VDP 2: VH        R0                Normal            12008 mV
 Temp: DPOutlet   R0                Normal            24 Celsius
 Temp: DP Inlet   R0                Normal            23 Celsius
 Temp: WOLV Die   R0                Normal            30 Celsius
 Temp: YODA Die   R0                Normal            38 Celsius
```


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Configuraciones.

.....show running-config .....

```
BORDE1#show running-config
Building configuration...

Current configuration : 42501 bytes
!
! Last configuration change at 09:56:36 PST Wed Sep 18 2024 by admin
! NVRAM config last updated at 09:56:45 PST Wed Sep 18 2024 by admin
!
version 17.9
service timestamps debug datetime msec
service timestamps log datetime msec localtime show-timezone
! Call-home is enabled by Smart-Licensing.
service call-home
platform qfp utilization monitor load 80
no platform punt-keepalive disable-kernel-core
!
hostname BORDE1
!
boot-start-marker
boot system bootflash:asr1002x-universalk9.17.09.05a.SPA.bin
boot-end-marker
!
!
vrf definition Mgmt-intf
!
--More--                                                address-family ipv4
exit-address-family
!
address-family ipv6
exit-address-family
!
logging buffered 326000
no aaa new-model
clock timezone PST -4 0
!
ip vrf COPACO2
rd 1:20
route-target export 100:1000
route-target import 100:1000
!
ip vrf RED
rd 1:1
route-target export 100:1000
route-target import 100:1000
!
!
!
!
--More--                                                !
!
!
no ip domain lookup
ip domain name hacienda.gov.py
!
!
!
login on-success log
```

```
!
!
!
!
!
!
!
subscriber templating
!
!
!
!
!
!
--More-- multilink bundle-name authenticated
!
!
!
!
!
!
!
!
crypto pki trustpoint TP-self-signed-3042880063
enrollment selfsigned
subject-name cn=IOS-Self-Signed-Certificate-3042880063
revocation-check none
rsakeypair  TP-self-signed-3042880063
!
crypto pki trustpoint SLA-TrustPoint
enrollment pkcs12
revocation-check crl
!
!
crypto pki certificate chain TP-self-signed-3042880063
certificate self-signed 01
30820330 30820218 A0030201 02020101 300D0609 2A864886 F70D0101 05050030
--More-- 31312F30 2D060355 04031326 494F532D 53656C66 2D536967 6E65642D 43657274
69666963 6174652D 33303432 38383030 3633301E 170D3234 30353039 31383339
35325A17 0D333030 31303130 30303030 305A3031 312F302D 06035504 03132649
4F532D53 656C662D 5369676E 65642D43 65727469 66696361 74652D33 30343238
38303036 33308201 22300D06 092A8648 86F70D01 01010500 0382010F 00308201
0A028201 0100B6E2 52954680 A5C54B55 7483CC5A 798AA963 1020BCDF E01C1767
936E93C8 F4285CCF E44F94DB D94DDBD3 CF5BA148 399F4B6B 6E1F2FEF C1BEC66D
667763AC 15B9A0FF A30DD509 9B90B27C 4217216B 1D88A9AA 6D2EAA55 CFE4F95A
B4F556AD C2B3907F 76E354D2 80B85AA0 7D0403CA 66D3AA03 A1EB7CD0 B59F2FB4
5457F956 03533260 1191E13F 0EFC768C A34E8DA4 4D2622AE 58FA53CF 163CC7FB
D3854453 B55C0C78 E906EE36 0CD3D4DA 77C97CB5 E258D494 39B205FE 78651B92
0D06E4FA 4A10E572 26234A82 09FB0BD2 5D6D3DD0 BC27C7C7 1AF8CBA7 63A3B626
D3B27D8B 257B1420 921C7140 899CBE0F AE5A2201 65CFF2BB C83FA834 A529C72C
FAAFBC4A 51EF0203 010001A3 53305130 0F060355 1D130101 FF040530 030101FF
301F0603 551D2304 18301680 14869788 A30202A1 B48FCA50 6399D8EE 79DFF3A0
53301D06 03551D0E 04160414 869788A3 0202A1B4 8FCA5063 99D8EE79 DFF3A053
300D0609 2A864886 F70D0101 05050003 82010100 1A12E1CA 5F9D5B25 0B2A529C
A4D81D45 D96792C3 427F0A6B 9312E226 07E73AA7 2BCD997A 2E267D89 5C7DF0E1
2EE5AAE1 E6E7B0FC CFBD4845 66C2BCCC 32474C4D 0906DEEC 3FBF7E65 6DA8996A
D479423B BA974267 F1865802 083E6571 16EB5A58 B06787CB 80E5175A 7D84E55D
B61C6CC9 4EC87B87 9C96ABAF 0967A7FC 1DE0AD74 4041EF81 6E4B891A 714B79A9
2D7610C8 E16B98FB 512D70C1 6791C4CA A36C72E3 25B9D844 7B7FEB2B 8E74D8DD
2127EF02 98AD5A7A 6A8C89BE B1793C34 136C95EA 63AC1395 8153B404 CFFA9869
--More-- 96E930EA 4D279837 905982A1 38DE963D 1E2AB607 C4401165 0C77A57C 8475A45D
843C1E69 D5354D31 2C2F8772 18E411E6 A44CED48
quit
crypto pki certificate chain SLA-TrustPoint
certificate ca 01
30820321 30820209 A0030201 02020101 300D0609 2A864886 F70D0101 0B050030
32310E30 0C060355 040A1305 43697363 6F312030 1E060355 04031317 43697363
6F204C69 63656E73 696E6720 526F6F74 20434130 1E170D31 33303533 30313934
```

```
3834375A 170D3338 30353330 31393438 34375A30 32310E30 0C060355 040A1305
43697363 6F312030 1E060355 04031317 43697363 6F204C69 63656E73 696E6720
526F6F74 20434130 82012230 0D06092A 864886F7 0D010101 05000382 010F0030
82010A02 82010100 A6BCBD96 131E05F7 145EA72C 2CD686E6 17222EA1 F1EFF64D
CBB4C798 212AA147 C655D8D7 9471380D 8711441E 1AAF071A 9CAE6388 8A38E520
1C394D78 462EF239 C659F715 B98C0A59 5BBB5CBD 0CFEBEA3 700A8BF7 D8F256EE
4AA4E80D DB6FD1C9 60B1FD18 FFC69C96 6FA68957 A2617DE7 104FDC5F EA2956AC
7390A3EB 2B5436AD C847A2C5 DAB553EB 69A9A535 58E9F3E3 C0BD23CF 58BD7188
68E69491 20F320E7 948E71D7 AE3BCC84 F10684C7 4BC8E00F 539BA42B 42C68BB7
C7479096 B4CB2D62 EA2F505D C7B062A4 6811D95B E8250FC4 5D5D5FB8 8F27D191
C55F0D76 61F9A4CD 3D992327 A8BB03BD 4E6D7069 7CBADF8B DF5F4368 95135E44
DFC7C6CF 04DD7FD1 02030100 01A34230 40300E06 03551D0F 0101FF04 04030201
06300F06 03551D13 0101FF04 05300301 01FF301D 0603551D 0E041604 1449DC85
4B3D31E5 1B3E6A17 606AF333 3D3B4C73 E8300D06 092A8648 86F70D01 010B0500
03820101 00507F24 D3932A66 86025D9F E838AE5C 6D4DF6B0 49631C78 240DA905
--More-- 604EDCDE FF4FED2B 77FC460E CD636FDB DD44681E 3A5673AB 9093D3B1 6C9E3D8B
D98987BF E40CBD9E 1AECA0C2 2189BB5C 8FA85686 CD98B646 5575B146 8DFC66A8
467A3DF4 4D565700 6ADF0F0D CF835015 3C04FF7C 21E878AC 11BA9CD2 55A9232C
7CA7B7E6 C1AF74F6 152E99B7 B1FCF9BB E973DE7F 5BDDEB86 C71E3B49 1765308B
5FB0DA06 B92AFE7F 494E8A9E 07B85737 F3A58BE1 1A48A229 C37C1E69 39F08678
80DDCD16 D6BACECA EEBC7CF9 8428787B 35202CDC 60E4616A B623CDBD 230E3AFB
418616A9 4093E049 4D10AB75 27E86F73 932E35B5 8862FDAE 0275156F 719BB2F0
D697DF7F 28
quit
!
!
license udi pid ASR1002-X sn JAE204103Z0
memory free low-watermark processor 103779
!
!
spanning-tree extend system-id
diagnostic bootup level minimal
!
enable secret 9 $14$VTA0$HJUzPhlyKNrrME$heC4L9KR90AizcZov7Gr3R9ePR6v949DAoVzqFPzMOs
!
username admin privilege 15 secret 9 $14$Ngnj$g71kWoLEzifcc.$UXtqohP8xV0V.cs9yhXqNq5IuxP337UZ5iS65YQYINA
--More-- username infocadmin privilege 15 secret 9
$14$nUaw$Abfk.hTJAxx6cE$kmT9cSeNveK0xFAR28LwsAVIFhZVbJoe/cNLxd/w6hE
!
redundancy
mode none
!
!
!
!
!
cdp run
!
track 1 ip sla 1 state
!
!
!
!
!
!
!
!
!
!
--More- !
!
!
!
!
!
!
!
interface Tunnel11
```

```
ip address 169.254.0.1 255.255.255.255
ip tcp adjust-mss 1350
tunnel source 201.217.49.194
tunnel destination 52.249.184.176
!
interface GigabitEthernet0/0/0
description TO-ASA HSRP
ip address 192.168.151.10 255.255.255.248
ip nat inside
standby 1 ip 192.168.151.12
standby 1 priority 200
standby 1 preempt
ip policy route-map LEAK
negotiation auto
--More--                                                    cdp enable
!
interface GigabitEthernet0/0/1
description Copaco - Internet
ip address 201.217.49.194 255.255.255.252
ip nat outside
negotiation auto
cdp enable
!
interface GigabitEthernet0/0/2
description COPACO-SECUNDARIO
no ip address
ip nat outside
shutdown
negotiation auto
cdp enable
!
interface GigabitEthernet0/0/3
no ip address
negotiation auto
!
interface GigabitEthernet0/0/3.434
description SENATICS
--More--                                                    encapsulation dot1Q 434
ip address 10.1.134.2 255.255.255.248
cdp enable
!
interface GigabitEthernet0/0/3.934
description RSMP NUEVO
encapsulation dot1Q 934
ip vrf forwarding RED
ip address 10.2.134.2 255.255.255.224
ip nat outside
cdp enable
!
interface GigabitEthernet0/0/4
no ip address
negotiation auto
!
interface GigabitEthernet0/0/5
description BORDE_A_HUWEI_FW
ip address 192.168.111.2 255.255.255.240
ip nat inside
standby 2 ip 192.168.111.1
standby 2 priority 200
standby 2 preempt
--More--                                                    ip policy route-map LEAK
negotiation auto
!
interface GigabitEthernet0/1/0
no ip address
negotiation auto
!
interface GigabitEthernet0/1/1
```

```
no ip address
negotiation auto
!
interface GigabitEthernet0/1/2
no ip address
shutdown
negotiation auto
!
interface GigabitEthernet0/1/3
no ip address
shutdown
negotiation auto
!
interface GigabitEthernet0/1/4
no ip address
--More--                                                    shutdown
negotiation auto
!
interface GigabitEthernet0/1/5
no ip address
shutdown
negotiation auto
!
interface GigabitEthernet0/1/6
no ip address
shutdown
negotiation auto
!
interface GigabitEthernet0/1/7
no ip address
shutdown
negotiation auto
!
interface GigabitEthernet0
vrf forwarding Mgmt-intf
ip address 192.168.8.7 255.255.255.0
negotiation auto
!
--More--                                                    interface Dialer1
shutdown
!
!
router eigrp 199
network 192.168.151.8 0.0.0.7
redistribute static
!
router ospf 199
network 192.168.151.8 0.0.0.7 area 0
default-information originate
!
no ip http server
no ip http secure-server
ip forward-protocol nd
!
ip tftp source-interface GigabitEthernet0/0/5
ip nat translation tcp-timeout 1000
ip nat translation udp-timeout 30
ip nat pool INET_RSMP 10.2.134.3 10.2.134.3 netmask 255.255.255.252
ip nat pool PRENSA_RMSP 10.2.134.4 10.2.134.4 netmask 255.255.255.252
ip nat pool GESTIONES-RRHH 10.2.134.8 10.2.134.8 netmask 255.255.255.252
ip nat pool SISTEMAS-DAMH 10.2.134.5 10.2.134.5 netmask 255.255.255.252
--More--                                                    ip nat pool CODE-SG 10.2.134.6 10.2.134.6 netmask 255.255.255.252
ip nat pool UMI-SIMPLE 10.2.134.9 10.2.134.9 netmask 255.255.255.252
ip nat pool TRAMITES-DA 10.2.134.10 10.2.134.10 netmask 255.255.255.252
ip nat pool CODE-SG-TEST 10.2.134.11 10.2.134.11 netmask 255.255.255.252
ip nat pool PROFOMAF-TstSrvr 10.2.134.14 10.2.134.14 netmask 255.255.255.252
ip nat pool DA-SIMPLE 10.2.134.15 10.2.134.15 netmask 255.255.255.252
ip nat pool DNS-RMSP 10.2.134.16 10.2.134.16 netmask 255.255.255.252
```

```
ip nat pool CODE-WEB-2 201.217.49.194 201.217.49.194 netmask 255.255.255.252
ip nat pool DNS-INTERNET 201.217.49.194 201.217.49.194 netmask 255.255.255.252
ip nat pool MAILGW 201.217.49.194 201.217.49.194 netmask 255.255.255.252
ip nat pool PROXYWebRMSP 10.2.134.16 10.2.134.16 netmask 255.255.255.252
ip nat pool MECIP 10.2.134.19 10.2.134.19 netmask 255.255.255.252
ip nat pool VPNHUAWEI 201.217.49.194 201.217.49.194 netmask 255.255.255.252
ip nat pool SIPEN 10.2.134.20 10.2.134.20 netmask 255.255.255.252
ip nat pool UNIFLOW 10.2.134.12 10.2.134.12 netmask 255.255.255.252
ip nat pool COPACO2 201.217.22.26 201.217.22.26 netmask 255.255.255.252
ip nat inside source static tcp 192.168.2.14 8080 10.2.134.5 8080 vrf RED extendable
ip nat inside source static tcp 192.168.2.22 80 10.2.134.8 81 vrf RED extendable
ip nat inside source static tcp 192.168.2.24 8080 10.2.134.8 8080 vrf RED extendable
ip nat inside source static tcp 192.168.2.17 80 10.2.134.9 80 vrf RED extendable
ip nat inside source static 192.168.2.140 10.2.134.12 vrf RED extendable
--More--  ip nat inside source static tcp 192.168.2.101 80 10.2.134.15 80 vrf RED extendable
ip nat inside source static tcp 192.168.2.71 53 10.2.134.16 53 vrf RED extendable
ip nat inside source static udp 192.168.2.71 53 10.2.134.16 53 vrf RED extendable
ip nat inside source static tcp 192.168.2.65 80 10.2.134.16 80 vrf RED extendable
ip nat inside source static udp 192.168.2.65 80 10.2.134.16 80 vrf RED extendable
ip nat inside source static tcp 192.168.2.65 443 10.2.134.16 443 vrf RED extendable
ip nat inside source static udp 192.168.2.65 443 10.2.134.16 443 vrf RED extendable
ip nat inside source static udp 192.168.151.9 500 10.2.134.16 500 vrf RED extendable
ip nat inside source static 192.168.2.250 10.2.134.19 vrf RED extendable
ip nat inside source static tcp 192.168.2.83 8080 10.2.134.20 8080 vrf RED extendable
ip nat inside source static tcp 192.168.2.150 22 10.2.134.20 15022 vrf RED extendable
ip nat inside source static tcp 192.168.2.150 5432 10.2.134.20 15432 vrf RED extendable
--More--  ip nat inside source static tcp 192.168.2.83 22 10.2.134.20 20022 vrf RED extendable
ip nat inside source static tcp 192.168.2.83 80 10.2.134.20 20080 vrf RED extendable
ip nat inside source static tcp 192.168.2.83 9990 10.2.134.20 29990 vrf RED extendable
ip nat inside source static tcp 192.168.2.148 25 201.217.49.194 25 extendable
ip nat inside source static tcp 192.168.2.70 53 201.217.49.194 53 extendable
ip nat inside source static udp 192.168.2.70 53 201.217.49.194 53 extendable
ip nat inside source static tcp 192.168.2.46 80 201.217.49.194 80 extendable
ip nat inside source static tcp 192.168.2.46 443 201.217.49.194 443 extendable
ip nat inside source static udp 192.168.2.46 443 201.217.49.194 443 extendable
ip nat inside source static tcp 192.168.2.105 8180 201.217.49.194 888 extendable
ip nat inside source static tcp 192.168.2.125 443 201.217.49.194 1443 extendable
ip nat inside source static udp 192.168.2.125 443 201.217.49.194 1443 extendable
ip nat inside source static tcp 192.168.2.127 22 201.217.49.194 2222 extendable
ip nat inside source static tcp 192.168.2.125 4172 201.217.49.194 4172 extendable
ip nat inside source static udp 192.168.2.125 4172 201.217.49.194 4172 extendable
ip nat inside source static tcp 192.168.151.9 443 201.217.49.194 4443 extendable
ip nat inside source static tcp 192.168.2.125 8443 201.217.49.194 8443 extendable
--More--  ip nat inside source static udp 192.168.2.125 8443 201.217.49.194 8443 extendable
ip nat inside source static tcp 192.168.2.125 10443 201.217.49.194 10443 extendable
ip nat inside source static udp 192.168.2.125 10443 201.217.49.194 10443 extendable
ip nat inside source static tcp 192.168.111.6 13443 201.217.49.194 13443 extendable
ip nat inside source static tcp 192.168.2.105 56100 201.217.49.194 56100 extendable
ip nat inside source route-map CODE-WEB-2 pool CODE-WEB-2
ip nat inside source route-map DNS-INTERNET pool DNS-INTERNET
ip nat inside source route-map Internet interface GigabitEthernet0/0/1 overload
ip nat inside source route-map MAILGW pool MAILGW
ip nat inside source route-map SENATICS interface GigabitEthernet0/0/3.434 overload
ip nat inside source route-map VPNHUAWEI pool VPNHUAWEI
ip nat inside source route-map CODE-SG pool CODE-SG vrf RED overload
ip nat inside source route-map CODE-SG-TEST pool CODE-SG-TEST vrf RED overload
ip nat inside source route-map DA-SIMPLE pool DA-SIMPLE vrf RED overload
ip nat inside source route-map DNS-RMSP pool DNS-RMSP vrf RED overload
ip nat inside source route-map GESTIONES-RRHH pool GESTIONES-RRHH vrf RED overload
--More--  ip nat inside source route-map INET pool INET_RSMP vrf RED overload
ip nat inside source route-map MECIP pool MECIP vrf RED overload
ip nat inside source route-map PRENSA_RMSP pool PRENSA_RMSP vrf RED overload
ip nat inside source route-map PROFOMAF-TstSrvr pool PROFOMAF-TstSrvr vrf RED overload
ip nat inside source route-map PROXYWebRMSP pool PROXYWebRMSP vrf RED overload
ip nat inside source route-map RMSP2 interface GigabitEthernet0/0/3.934 vrf RED overload
ip nat inside source route-map SIPEN pool SIPEN vrf RED overload
ip nat inside source route-map SISTEMAS-DAMH pool SISTEMAS-DAMH vrf RED overload
ip nat inside source route-map TRAMITES-DA pool TRAMITES-DA vrf RED overload
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ip nat inside source route-map UMI-SIMPLE pool UMI-SIMPLE vrf RED overload
ip nat inside source route-map UNIFLOW pool UNIFLOW vrf RED overload
ip route 0.0.0.0 0.0.0.0 201.217.49.193
ip route 10.1.79.2 255.255.255.255 10.1.134.1 name SERVIDOR_SENATICS
ip route 10.1.90.0 255.255.255.0 192.168.151.9
ip route 10.2.79.0 255.255.255.0 10.2.134.1 name SENATICS
ip route 10.2.102.0 255.255.255.0 10.2.134.1 name APRO
ip route 172.16.100.0 255.255.255.248 192.168.151.9
ip route 172.31.0.0 255.255.0.0 Tunnel11
ip route 192.168.13.0 255.255.255.0 192.168.111.6
ip route 192.168.15.0 255.255.255.0 192.168.151.9
ip route 192.168.16.0 255.255.255.0 192.168.111.6
--More--
ip route 192.168.18.0 255.255.255.0 192.168.111.6
ip route 192.168.20.0 255.255.255.0 192.168.111.6
ip route 192.168.54.0 255.255.255.0 192.168.151.9
ip route 192.168.119.0 255.255.255.0 192.168.111.6
ip route 192.168.130.0 255.255.255.0 192.168.111.6
ip route 192.168.131.0 255.255.255.0 192.168.111.6
ip route 192.168.132.0 255.255.255.0 192.168.111.6
ip route 192.168.133.0 255.255.255.0 192.168.111.6
ip route 192.168.133.23 255.255.255.255 192.168.151.9
ip route 192.168.134.0 255.255.255.0 192.168.111.6
ip route 192.168.135.45 255.255.255.255 192.168.151.9
ip route 192.168.136.0 255.255.255.0 192.168.111.6
ip route 192.168.136.77 255.255.255.255 192.168.151.9
ip route 192.168.137.0 255.255.255.0 192.168.111.6
ip route 192.168.138.0 255.255.255.0 192.168.111.6
ip route 192.168.139.0 255.255.255.0 192.168.111.6
ip route 192.168.140.0 255.255.255.0 192.168.111.6
ip route 192.168.142.0 255.255.255.0 192.168.111.6
ip route 192.168.142.7 255.255.255.255 192.168.151.9
ip route 192.168.142.8 255.255.255.255 192.168.151.9
ip route 192.168.142.160 255.255.255.255 192.168.151.9
ip route 192.168.142.220 255.255.255.255 192.168.151.9
ip route 192.168.142.231 255.255.255.255 192.168.151.9
--More--
ip route 192.168.142.232 255.255.255.255 192.168.151.9
ip route 192.168.142.233 255.255.255.255 192.168.151.9
ip route 192.168.142.244 255.255.255.255 192.168.151.9
ip route 192.168.142.250 255.255.255.255 192.168.151.9
ip route 192.168.144.0 255.255.255.0 192.168.111.6
ip route 192.168.145.0 255.255.255.0 192.168.111.6
ip route vrf Mgmt-intf 0.0.0.0 0.0.0.0 192.168.8.1
ip route vrf RED 0.0.0.0 0.0.0.0 10.2.134.1
ip route vrf RED 10.1.90.0 255.255.255.0 192.168.151.9 global
ip route vrf RED 10.2.0.0 255.255.0.0 10.2.134.1
ip route vrf RED 10.3.0.0 255.255.0.0 10.2.134.1
ip route vrf RED 10.5.0.0 255.255.0.0 10.2.134.1
ip route vrf RED 172.16.100.0 255.255.255.248 192.168.151.9 global
ip route vrf RED 192.168.2.0 255.255.255.0 192.168.151.9 global
ip route vrf RED 192.168.2.2 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.2.14 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.2.17 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.2.22 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.2.24 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.2.53 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.2.65 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.2.71 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.2.83 255.255.255.255 192.168.151.9 global
--More--
ip route vrf RED 192.168.2.100 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.2.101 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.2.140 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.2.150 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.2.250 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.13.0 255.255.255.0 192.168.111.6 global
ip route vrf RED 192.168.15.0 255.255.255.0 192.168.151.9 global
ip route vrf RED 192.168.16.0 255.255.255.0 192.168.111.6 global
ip route vrf RED 192.168.18.0 255.255.255.0 192.168.111.6 global
ip route vrf RED 192.168.20.0 255.255.255.0 192.168.111.6 global
```


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ip route vrf RED 192.168.54.0 255.255.255.0 192.168.151.9 global
ip route vrf RED 192.168.119.0 255.255.255.0 192.168.111.6 global
ip route vrf RED 192.168.120.0 255.255.255.0 192.168.151.9 global
ip route vrf RED 192.168.130.0 255.255.255.0 192.168.111.6 global
ip route vrf RED 192.168.131.0 255.255.255.0 192.168.111.6 global
ip route vrf RED 192.168.132.0 255.255.255.0 192.168.111.6 global
ip route vrf RED 192.168.133.0 255.255.255.0 192.168.111.6 global
ip route vrf RED 192.168.133.23 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.134.0 255.255.255.0 192.168.111.6 global
ip route vrf RED 192.168.135.0 255.255.255.0 192.168.151.9 global
ip route vrf RED 192.168.136.0 255.255.255.0 192.168.111.6 global
ip route vrf RED 192.168.136.77 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.137.0 255.255.255.0 192.168.111.6 global
--More--                                ip route vrf RED 192.168.138.0 255.255.255.0 192.168.111.6 global
ip route vrf RED 192.168.139.0 255.255.255.0 192.168.111.6 global
ip route vrf RED 192.168.140.0 255.255.255.0 192.168.111.6 global
ip route vrf RED 192.168.141.0 255.255.255.0 192.168.151.9 global
ip route vrf RED 192.168.142.0 255.255.255.0 192.168.111.6 global
ip route vrf RED 192.168.142.7 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.142.8 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.142.160 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.142.220 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.142.231 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.142.232 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.142.233 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.142.244 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.142.250 255.255.255.255 192.168.151.9 global
ip route vrf RED 192.168.143.0 255.255.255.0 192.168.151.9 global
ip route vrf RED 192.168.144.0 255.255.255.0 192.168.111.6 global
ip route vrf RED 192.168.145.0 255.255.255.0 192.168.111.6 global
ip route vrf RED 192.168.146.0 255.255.255.0 192.168.151.9 global
ip route vrf RED 192.168.150.0 255.255.255.0 192.168.151.9 global
ip route vrf RED 192.168.160.0 255.255.255.0 192.168.151.9 global
ip ssh time-out 60
ip ssh logging events
!
--More--                                ip access-list standard admin
10 permit 192.168.0.0 0.0.255.255
!
ip access-list extended A_HUAWEI
ip access-list extended CODE-SG
10 permit ip host 192.168.2.48 any
20 permit ip host 192.168.2.116 any
30 permit ip host 192.168.2.117 any
ip access-list extended CODE-SG-TEST
10 permit ip host 192.168.2.56 any
ip access-list extended CODE-WEB-2
10 deny ip host 192.168.2.46 192.168.0.0 0.0.255.255
20 deny ip any host 10.1.79.2
30 permit ip host 192.168.2.46 any
ip access-list extended DA-SIMPLE
10 deny ip host 192.168.2.101 host 168.90.176.24
20 permit ip host 192.168.2.101 10.2.0.0 0.0.255.255
30 permit ip host 192.168.2.101 10.3.0.0 0.0.255.255
40 permit ip host 192.168.2.101 10.20.0.0 0.0.255.255
ip access-list extended DNS-INTERNET
10 deny ip host 192.168.2.70 192.168.0.0 0.0.255.255
20 deny ip host 192.168.2.70 172.16.0.0 0.15.255.255
30 deny ip host 192.168.2.70 10.0.0.0 0.255.255.255
--More--                                40 deny ip any host 10.1.79.2
50 permit ip host 192.168.2.70 any
ip access-list extended DNS-RMSP
10 permit ip host 192.168.2.71 any
ip access-list extended GESTIONES-RRHH
10 deny ip 192.168.119.0 0.0.0.255 any
20 permit ip host 192.168.2.22 any
30 deny ip host 192.168.2.24 host 168.90.176.24
40 permit ip host 192.168.2.24 any
```

```
50 permit ip host 1.1.1.1 any
ip access-list extended INET_RSMP
10 deny ip 10.1.90.0 0.0.0.255 any
20 deny ip host 192.168.135.147 any
30 deny ip host 192.168.135.45 any
40 deny ip 192.168.137.0 0.0.0.255 host 192.168.49.15
50 deny ip 192.168.137.0 0.0.0.255 host 192.168.49.18
60 deny ip host 192.168.2.70 any
70 deny ip host 192.168.2.148 any
80 deny ip host 172.16.100.6 any
90 deny ip 192.168.137.0 0.0.0.255 host 10.20.27.134
100 deny ip host 192.168.2.65 any
110 permit ip host 192.168.2.100 host 168.90.176.24
120 permit ip host 192.168.2.101 host 168.90.176.24
--More--  130 deny ip host 192.168.2.101 any
140 deny ip host 192.168.2.71 any
150 permit ip host 192.168.2.24 host 168.90.176.24
160 permit ip host 192.168.2.14 host 168.90.176.24
170 deny ip host 192.168.2.17 any
180 deny ip host 192.168.2.53 any
190 deny ip host 192.168.2.56 any
200 deny ip host 192.168.2.22 any
210 deny ip host 192.168.2.250 any
220 deny ip host 192.168.2.150 any
230 deny ip host 192.168.2.83 any
240 deny ip host 192.168.2.140 any
250 deny ip host 192.168.2.14 any
260 deny ip host 192.168.2.2 any
270 deny ip host 192.168.2.40 any
280 deny ip 192.168.137.0 0.0.0.255 host 192.168.49.10
290 deny ip 192.168.0.0 0.0.255.255 10.3.0.0 0.0.255.255
300 deny ip 192.168.0.0 0.0.255.255 10.2.0.0 0.0.255.255
310 deny ip 192.168.0.0 0.0.255.255 10.8.0.0 0.0.255.255
320 deny ip 192.168.0.0 0.0.255.255 10.20.0.0 0.0.255.255
330 deny ip 192.168.0.0 0.0.255.255 10.30.0.0 0.0.255.255
340 deny ip 192.168.0.0 0.0.255.255 192.168.49.0 0.0.0.255
350 deny ip 192.168.0.0 0.0.255.255 10.5.0.0 0.0.255.255
--More--  360 deny ip 192.168.0.0 0.0.255.255 10.3.3.0 0.0.0.255
370 deny ip 192.168.16.0 0.0.0.255 any
380 deny ip 192.168.18.0 0.0.0.255 any
390 deny ip 192.168.132.0 0.0.0.255 any
400 deny ip 192.168.119.0 0.0.0.255 any
410 deny ip 192.168.140.0 0.0.0.255 any
420 deny ip 192.168.139.0 0.0.0.255 any
430 deny ip 192.168.138.0 0.0.0.255 any
440 deny ip host 192.168.134.16 any
450 deny ip 192.168.133.0 0.0.0.255 any
460 deny ip 192.168.131.0 0.0.0.255 any
470 permit ip 192.168.0.0 0.0.255.255 any log
ip access-list extended Internet
10 deny ip 10.1.90.0 0.0.0.255 any
20 deny ip any host 10.1.79.2
30 deny ip host 192.168.142.8 any
40 permit ip host 192.168.2.150 any
50 permit ip host 192.168.2.83 any
60 permit ip host 192.168.2.154 any
70 permit ip host 192.168.2.70 any
80 permit ip host 192.168.2.148 any
90 permit ip host 192.168.2.46 any
100 deny ip 192.168.2.0 0.0.0.255 192.168.0.0 0.0.255.255
--More--  110 deny ip 192.168.0.0 0.0.255.255 10.2.0.0 0.0.255.255
120 deny ip 192.168.0.0 0.0.255.255 10.8.0.0 0.0.255.255
130 deny ip 192.168.0.0 0.0.255.255 10.20.0.0 0.0.255.255
140 deny ip 192.168.0.0 0.0.255.255 10.30.0.0 0.0.255.255
150 deny ip 192.168.0.0 0.0.255.255 192.168.49.0 0.0.0.255
160 deny ip 192.168.0.0 0.0.255.255 10.5.0.0 0.0.255.255
170 deny ip host 172.16.100.6 any
180 deny ip 192.168.0.0 0.0.255.255 10.3.3.0 0.0.0.255
```


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190 deny ip host 192.168.2.17 any
200 deny ip host 192.168.2.101 any
210 deny ip host 192.168.2.71 any
220 deny ip host 192.168.2.53 any
230 deny ip host 192.168.2.56 any
240 deny ip host 192.168.2.14 any
250 deny ip host 192.168.2.22 any
260 deny ip host 192.168.2.250 any
270 deny ip host 192.168.2.140 any
280 deny ip host 192.168.2.65 any
290 permit ip host 192.168.130.31 any log
300 permit ip 192.168.139.0 0.0.0.255 any
310 deny ip 192.168.141.0 0.0.0.255 any
320 deny ip 192.168.119.0 0.0.0.255 any
330 permit ip 192.168.16.0 0.0.0.255 any
--More--                    340 permit ip 192.168.18.0 0.0.0.255 any
350 permit ip 192.168.132.0 0.0.0.255 any
360 permit ip 192.168.140.0 0.0.0.255 any
370 permit ip 192.168.0.0 0.0.255.255 any
380 permit ip host 172.16.100.4 any
390 permit ip host 172.16.100.5 any
400 permit ip host 192.168.134.16 any
410 permit ip 192.168.133.0 0.0.0.255 any
420 permit ip 192.168.131.0 0.0.0.255 any
430 permit ip 192.168.138.0 0.0.0.255 any
ip access-list extended MAILGW
10 deny ip host 192.168.2.148 192.168.0.0 0.0.255.255
20 deny ip host 192.168.2.148 172.16.0.0 0.15.255.255
30 deny ip host 192.168.2.148 10.0.0.0 0.255.255.255
40 permit ip host 192.168.2.148 any
ip access-list extended MECIP
10 permit ip host 192.168.2.250 any
ip access-list extended PRENSA_RMSP
10 permit ip 192.168.137.0 0.0.0.255 host 192.168.49.15
20 permit ip 192.168.137.0 0.0.0.255 host 192.168.49.18
30 permit ip 192.168.137.0 0.0.0.255 host 192.168.49.10
40 permit ip 192.168.137.0 0.0.0.255 host 10.20.2.203
ip access-list extended PROFOMAF-TstSrvr
--More--                    10 permit ip 192.168.146.0 0.0.0.255 host 10.20.27.134
ip access-list extended PROXYWebRMSP
10 permit ip host 192.168.2.65 any
ip access-list extended RSMP2
10 permit ip 10.1.90.0 0.0.0.255 10.2.0.0 0.0.255.255
20 permit ip 10.1.90.0 0.0.0.255 10.8.0.0 0.0.255.255
30 permit ip 10.1.90.0 0.0.0.255 10.20.0.0 0.0.255.255
40 permit ip 10.1.90.0 0.0.0.255 192.168.49.0 0.0.0.255
50 permit ip 10.1.90.0 0.0.0.255 10.5.0.0 0.0.255.255
60 permit ip 10.1.90.0 0.0.0.255 10.30.1.0 0.0.0.255
70 deny ip any host 10.20.0.3
80 deny ip 192.168.137.0 0.0.0.255 host 192.168.49.15
90 deny ip 192.168.137.0 0.0.0.255 host 192.168.49.18
100 deny ip host 192.168.2.70 any
110 deny ip host 192.168.2.65 any
120 deny ip host 192.168.2.148 any
130 deny ip 192.168.137.0 0.0.0.255 host 10.20.2.203
140 deny ip host 172.16.100.6 any
150 deny ip 192.168.146.0 0.0.0.255 host 10.20.27.134
160 deny ip host 192.168.2.100 any
170 deny ip host 192.168.2.101 any
180 deny ip host 192.168.2.71 any
190 deny ip host 192.168.2.24 any
--More--                    200 deny ip host 192.168.2.22 any
210 deny ip host 192.168.2.250 any
220 deny ip host 192.168.2.150 any
230 deny ip host 192.168.2.83 any
240 deny ip host 192.168.2.140 any
250 deny ip host 192.168.2.17 any
260 deny ip host 192.168.2.53 any
```


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270 deny ip host 192.168.2.56 any
280 deny ip host 192.168.2.14 any
290 deny ip 192.168.13.0 0.0.0.255 10.8.0.0 0.0.255.255
300 deny ip 192.168.14.0 0.0.0.255 10.8.0.0 0.0.255.255
310 deny ip 192.168.15.0 0.0.0.255 10.8.0.0 0.0.255.255
320 deny ip 192.168.16.0 0.0.0.255 10.8.0.0 0.0.255.255
330 deny ip 192.168.17.0 0.0.0.255 10.8.0.0 0.0.255.255
340 deny ip 192.168.18.0 0.0.0.255 10.8.0.0 0.0.255.255
350 permit ip 192.168.0.0 0.0.255.255 10.2.0.0 0.0.255.255
360 permit ip 192.168.0.0 0.0.255.255 10.3.0.0 0.0.255.255
370 permit ip 192.168.0.0 0.0.255.255 10.8.0.0 0.0.255.255
380 permit ip 192.168.0.0 0.0.255.255 10.20.0.0 0.0.255.255
390 permit ip 192.168.0.0 0.0.255.255 192.168.49.0 0.0.0.255
400 permit ip 192.168.0.0 0.0.255.255 10.5.0.0 0.0.255.255
410 permit ip 192.168.142.0 0.0.0.255 10.30.1.0 0.0.0.255
420 permit ip 192.168.0.0 0.0.255.255 10.30.1.0 0.0.0.255
--More--                                                    ip access-list extended SENATICS
10 deny ip any any
ip access-list extended SIPEN
10 permit ip host 192.168.2.150 10.2.0.0 0.0.255.255
20 deny ip any any
ip access-list extended SISTEMAS-DAMH
10 deny ip host 192.168.2.14 host 168.90.176.24
20 permit ip host 192.168.2.14 any
ip access-list extended SSH
ip access-list extended TEST
ip access-list extended TRAMITES-DA
10 deny ip host 192.168.2.100 host 168.90.176.24
20 permit ip host 192.168.2.100 any
ip access-list extended UMI-SIMPLE
10 permit ip host 192.168.2.17 any
ip access-list extended UNIFLOW
10 permit ip host 192.168.2.140 any
ip access-list extended VPNHUAWEI
10 permit ip host 192.168.111.6 any
ip access-list extended VRF_COPACO2
10 permit ip host 192.168.142.8 any log
ip access-list extended VRF_RMSP
10 permit ip 10.1.90.0 0.0.0.255 10.2.0.0 0.0.255.255
--More--                                                    20 permit ip 10.1.90.0 0.0.0.255 10.8.0.0 0.0.255.255
30 permit ip 10.1.90.0 0.0.0.255 10.20.0.0 0.0.255.255
40 permit ip 10.1.90.0 0.0.0.255 192.168.49.0 0.0.0.255
50 permit ip 10.1.90.0 0.0.0.255 10.5.0.0 0.0.255.255
60 permit ip 10.1.90.0 0.0.0.255 10.30.1.0 0.0.0.255
70 permit ip host 192.168.2.56 host 10.20.0.3
80 permit ip host 192.168.2.48 host 10.20.0.3
90 deny ip any host 10.1.79.2
100 deny ip host 192.168.2.70 any
110 deny ip host 192.168.2.148 any
120 deny ip 192.168.2.0 0.0.0.255 192.168.0.0 0.0.0.255
130 deny ip 192.168.0.0 0.0.255.255 192.168.8.0 0.0.0.255
140 permit ip host 192.168.139.33 10.8.3.0 0.0.0.255
150 permit ip host 192.168.139.35 10.8.3.0 0.0.0.255
160 permit ip host 192.168.2.5 10.8.3.0 0.0.0.255
170 permit ip 192.168.135.0 0.0.0.255 10.8.3.0 0.0.0.255
180 deny ip 192.168.0.0 0.0.255.255 192.168.151.0 0.0.0.255
190 deny ip 192.168.0.0 0.0.255.255 172.16.100.0 0.0.0.7
200 deny ip 192.168.18.0 0.0.0.255 10.8.0.0 0.0.255.255
210 deny ip 192.168.142.0 0.0.0.255 192.168.13.0 0.0.0.255
220 deny ip 192.168.13.0 0.0.0.255 192.168.2.0 0.0.0.255
230 deny ip 192.168.14.0 0.0.0.255 192.168.2.0 0.0.0.255
240 deny ip 192.168.15.0 0.0.0.255 192.168.2.0 0.0.0.255
--More--                                                    250 deny ip 192.168.16.0 0.0.0.255 192.168.2.0 0.0.0.255
260 deny ip 192.168.17.0 0.0.0.255 192.168.2.0 0.0.0.255
270 deny ip 192.168.18.0 0.0.0.255 192.168.2.0 0.0.0.255
280 deny ip 192.168.119.0 0.0.0.255 192.168.2.0 0.0.0.255
290 deny ip host 192.168.2.2 192.168.8.0 0.0.0.255
300 deny ip 192.168.2.0 0.0.0.255 192.168.13.0 0.0.0.255
```


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310 deny ip 192.168.2.0 0.0.0.255 192.168.14.0 0.0.0.255
320 deny ip 192.168.2.0 0.0.0.255 192.168.15.0 0.0.0.255
330 deny ip 192.168.2.0 0.0.0.255 192.168.16.0 0.0.0.255
340 deny ip 192.168.2.0 0.0.0.255 192.168.17.0 0.0.0.255
350 deny ip 192.168.2.0 0.0.0.255 192.168.18.0 0.0.0.255
360 deny ip 192.168.2.0 0.0.0.255 192.168.119.0 0.0.0.255
370 deny ip 192.168.137.0 0.0.0.255 192.168.8.0 0.0.0.255
380 deny ip 192.168.13.0 0.0.0.255 10.8.0.0 0.0.255.255
390 deny ip 192.168.14.0 0.0.0.255 10.8.0.0 0.0.255.255
400 deny ip 192.168.15.0 0.0.0.255 10.8.0.0 0.0.255.255
410 deny ip 192.168.16.0 0.0.0.255 10.8.0.0 0.0.255.255
420 deny ip 192.168.17.0 0.0.0.255 10.8.0.0 0.0.255.255
430 permit ip host 192.168.2.65 any
440 permit ip host 192.168.2.2 host 10.20.2.6
450 permit ip host 192.168.2.17 any
460 permit ip host 192.168.2.53 any
470 permit ip host 192.168.2.56 any
--More--                                    480 permit ip host 192.168.2.14 any
490 permit ip host 192.168.2.22 any
500 permit ip host 192.168.2.250 any
510 permit ip host 192.168.2.150 10.2.0.0 0.0.255.255
520 permit ip host 192.168.2.83 10.2.0.0 0.0.255.255
530 deny ip host 192.168.2.150 any
540 deny ip host 192.168.2.83 any
550 permit ip host 192.168.2.140 10.2.0.0 0.0.255.255
560 deny ip host 192.168.2.140 any
570 permit ip host 192.168.2.24 any
580 permit ip host 172.16.100.6 any
590 permit ip host 192.168.2.100 any
600 permit ip host 192.168.2.101 any
610 permit ip host 192.168.2.71 any
620 permit ip 192.168.141.0 0.0.0.255 any
630 permit ip 192.168.142.0 0.0.0.255 10.30.1.0 0.0.0.255
640 permit ip 192.168.0.0 0.0.255.255 10.2.0.0 0.0.255.255
650 permit ip 192.168.0.0 0.0.255.255 10.3.0.0 0.0.255.255
660 permit ip 192.168.0.0 0.0.255.255 10.8.0.0 0.0.255.255
670 permit ip 192.168.0.0 0.0.255.255 10.20.0.0 0.0.255.255
680 permit ip 192.168.0.0 0.0.255.255 192.168.49.0 0.0.0.255
690 permit ip 192.168.0.0 0.0.255.255 10.5.0.0 0.0.255.255
700 permit ip 192.168.0.0 0.0.255.255 10.30.1.0 0.0.0.255
--More--                                    ip access-list extended camara
10 permit ip host 192.168.142.17 10.8.3.0 0.0.0.255
20 permit ip host 192.168.142.25 10.8.3.0 0.0.0.255
30 permit ip host 192.168.135.16 10.8.3.0 0.0.0.255
40 permit ip host 192.168.2.38 10.8.3.0 0.0.0.255
50 permit ip host 192.168.2.5 10.8.3.0 0.0.0.255
60 permit ip host 192.168.139.35 10.8.3.0 0.0.0.255
70 permit ip host 192.168.139.33 10.8.3.0 0.0.0.255
!
ip sla 1
icmp-echo 192.168.151.11 source-ip 192.168.151.10
threshold 2000
timeout 2000
frequency 2
ip sla schedule 1 life forever start-time now
logging snmp-trap emergencies
logging snmp-trap alerts
logging snmp-trap critical
logging snmp-trap errors
logging snmp-trap warnings
logging snmp-trap notifications
logging snmp-trap informational
logging host 192.168.150.18
--More--                                    logging host 192.168.2.44
dialer-list 1 protocol ip permit
arp vrf RED 10.2.134.8 a03d.6f64.0303 ARPA alias
arp vrf RED 10.2.134.15 a03d.6f64.0303 ARPA alias
arp vrf RED 10.2.134.19 a03d.6f64.0303 ARPA alias
```

```
arp vrf RED 10.2.134.16 a03d.6f64.0303 ARPA alias
arp vrf RED 10.2.134.5 a03d.6f64.0303 ARPA alias
arp vrf RED 10.2.134.20 a03d.6f64.0303 ARPA alias
arp vrf RED 10.2.134.12 a03d.6f64.0303 ARPA alias
!
route-map PROXYWebRMSP permit 10
match ip address PROXYWebRMSP
!
route-map LEAK permit 10
match ip address VRF_RMSP
set ip vrf RED next-hop 10.2.134.1
!
route-map CODE-SG-TEST permit 10
match ip address CODE-SG-TEST
!
route-map INET permit 10
match ip address INET_RSMP
!
--More--                                route-map MAILGW permit 10
match ip address MAILGW
!
route-map COPACO2 permit 10
match ip address VRF_COPACO2
!
route-map DA-SIMPLE permit 10
match ip address DA-SIMPLE
!
route-map TRAMITES-DA permit 10
match ip address TRAMITES-DA
!
route-map SISTEMAS-DAMH permit 10
match ip address SISTEMAS-DAMH
!
route-map RMSP2 permit 10
match ip address RSMP2
!
route-map CODE-SG permit 10
match ip address CODE-SG
!
route-map Internet permit 10
match ip address Internet
--More--                                !
route-map UNIFLOW permit 10
match ip address UNIFLOW
!
route-map SIPEN permit 10
match ip address SIPEN
!
route-map VPNHUAWEI permit 10
match ip address VPNHUAWEI
!
route-map MECIP permit 10
match ip address MECIP
!
route-map PROFOMAF-TstSrvr permit 10
match ip address PROFOMAF-TstSrvr
!
route-map SENTICS permit 10
match ip address SENATICS
!
route-map PRENSA_RMSP permit 10
match ip address PRENSA_RMSP
!
route-map DNS-RMSP permit 10
--More--                                match ip address DNS-RMSP
!
route-map CODE-WEB-2 permit 10
match ip address CODE-WEB-2
```

```
!
route-map DNS-INTERNET permit 10
match ip address DNS-INTERNET
!
route-map UMI-SIMPLE permit 10
match ip address UMI-SIMPLE
!
route-map GESTIONES-RRHH permit 10
match ip address GESTIONES-RRHH
!
snmp-server community mhdacrainfo RO
snmp-server trap-source GigabitEthernet0/0/0
snmp-server enable traps snmp authentication linkdown linkup coldstart warmstart
snmp-server enable traps vrrp
snmp-server enable traps pfr
snmp-server enable traps flowmon
snmp-server enable traps ds1
snmp-server enable traps entity-perf throughput-notif
snmp-server enable traps call-home message-send-fail server-fail
--More--                                                    snmp-server enable traps tty
snmp-server enable traps eigrp
snmp-server enable traps ospf state-change
snmp-server enable traps ospf errors
snmp-server enable traps ospf retransmit
snmp-server enable traps ospf lsa
snmp-server enable traps ospf cisco-specific state-change nssa-trans-change
snmp-server enable traps ospf cisco-specific state-change shamlink interface
snmp-server enable traps ospf cisco-specific state-change shamlink neighbor
snmp-server enable traps ospf cisco-specific errors
snmp-server enable traps ospf cisco-specific retransmit
snmp-server enable traps ospf cisco-specific lsa
snmp-server enable traps casa
snmp-server enable traps license
snmp-server enable traps aaa_server
snmp-server enable traps atm subif
snmp-server enable traps bfd
snmp-server enable traps bgp cbgp2
snmp-server enable traps memory bufferpeak
snmp-server enable traps config-copy
snmp-server enable traps config
snmp-server enable traps config-ctid
snmp-server enable traps dhcp
--More--                                                    snmp-server enable traps dial
snmp-server enable traps dlsw
snmp-server enable traps dsp card-status
snmp-server enable traps dsp oper-state
snmp-server enable traps dsp video-usage
snmp-server enable traps dsp video-out-of-resource
snmp-server enable traps fru-ctrl
snmp-server enable traps entity
snmp-server enable traps event-manager
snmp-server enable traps frame-relay multilink bundle-mismatch
snmp-server enable traps frame-relay
snmp-server enable traps frame-relay subif
snmp-server enable traps hsrp
snmp-server enable traps pimstdmib neighbor-loss invalid-register invalid-join-prune rp-mapping-change interface-election
snmp-server enable traps ipmulticast
snmp-server enable traps msdp
snmp-server enable traps mvpn
snmp-server enable traps ospfv3 state-change
snmp-server enable traps ospfv3 errors
snmp-server enable traps pim neighbor-change rp-mapping-change invalid-pim-message
snmp-server enable traps pppoe
--More--                                                    snmp-server enable traps cpu threshold
snmp-server enable traps pw vc
snmp-server enable traps rsvp
snmp-server enable traps ipsla
snmp-server enable traps syslog
```

```
snmp-server enable traps l2tun session
snmp-server enable traps l2tun pseudowire status
snmp-server enable traps pki
snmp-server enable traps adslline
snmp-server enable traps vdsl2line
snmp-server enable traps ethernet evc status create delete
snmp-server enable traps ether-oam
snmp-server enable traps ethernet cfm cc mep-up mep-down cross-connect loop config
snmp-server enable traps ethernet cfm crosscheck mep-missing mep-unknown service-up
snmp-server enable traps entity-qfp mem-res-thresh throughput-notif
snmp-server enable traps entity-state
snmp-server enable traps lisp
snmp-server enable traps flash insertion
snmp-server enable traps flash removal
snmp-server enable traps firewall serverstatus
snmp-server enable traps netsync
--More--                                    snmp-server enable traps sbc adj-status
snmp-server enable traps sbc blacklist
snmp-server enable traps sbc congestion-alarm
snmp-server enable traps sbc h248-ctrlr-status
snmp-server enable traps sbc media-source
snmp-server enable traps sbc radius-conn-status
snmp-server enable traps sbc sla-violation
snmp-server enable traps sbc sla-violation-rev1
snmp-server enable traps sbc svc-state
snmp-server enable traps sbc qos-statistics
snmp-server enable traps srp
snmp-server enable traps isdn call-information
snmp-server enable traps isdn layer2
snmp-server enable traps isdn chan-not-avail
snmp-server enable traps isdn ietf
snmp-server enable traps cnpd
snmp-server enable traps entity-diag boot-up-fail hm-test-recover hm-thresh-reached scheduled-test-fail
snmp-server enable traps cef resource-failure peer-state-change peer-fib-state-change inconsistency
snmp-server enable traps sonet
snmp-server enable traps resource-policy
snmp-server enable traps nhrp nhs
--More--                                    snmp-server enable traps nhrp nhc
snmp-server enable traps nhrp nhp
snmp-server enable traps nhrp quota-exceeded
snmp-server enable traps isis
snmp-server enable traps ip local pool
snmp-server enable traps mpls rfc ldp
snmp-server enable traps mpls ldp
snmp-server enable traps mpls rfc traffic-eng
snmp-server enable traps mpls traffic-eng
snmp-server enable traps mpls fast-reroute protected
snmp-server enable traps bulkstat collection transfer
snmp-server enable traps alarms informational
snmp-server enable traps voice
snmp-server enable traps vrfmib vrf-up vrf-down vnet-trunk-up vnet-trunk-down
snmp-server enable traps ethernet cfm alarm
snmp-server enable traps rf
snmp-server enable traps transceiver all
snmp-server enable traps mpls vpn
snmp-server enable traps mpls rfc vpn
snmp-server host 192.168.2.44 version 2c mhdacrainfo
!
tftp-server  bootflash:asr1002x-universalk9.16.09.04.SPA.bin
!
--More--                                    !
control-plane
!
!
!
!
!
!
```

```
line con 0
login local
stopbits 1
line aux 0
line vty 0 4
access-class admin in
logging synchronous
login local
transport input ssh
!
call-home
! If contact email address in call-home is configured as sch-smart-licensing@cisco.com
! the email address configured in Cisco Smart License Portal will be used as contact email address to send SCH notifications.
--More--                                contact-email-addr sch-smart-licensing@cisco.com
profile "CiscoTAC-1"
active
destination transport-method http
ntp source GigabitEthernet0/0/0
ntp server 192.168.2.52
ntp server vrf Mgmt-intf 192.168.2.5 prefer
!
!
!
!
!
!
event manager applet HA-ACTIVE
event track 1 state down
action 1.1 cli command "enable"
action 1.2 cli command "config termi"
action 1.3 cli command "interface GigabitEthernet0/0/1"
action 1.4 cli command "shut"
action 1.5 cli command "interface GigabitEthernet0/0/2"
action 1.6 cli command "shut"
action 1.7 cli command "interface GigabitEthernet0/0/3"
action 1.8 cli command "shut"
--More--                                action 2   cli command "interface GigabitEthernet0/0/4"
action 2.1 cli command "shut"
action 2.2 cli command "interface GigabitEthernet0/0/5"
action 2.3 cli command "shut"
action 2.4 cli command "do wr mem"
event manager applet HA-DISABLE
event track 1 state up
action 1.1 cli command "enable"
action 1.2 cli command "config termi"
action 1.3 cli command "interface GigabitEthernet0/0/1"
action 1.4 cli command "no shut"
action 1.5 cli command "interface GigabitEthernet0/0/2"
action 1.6 cli command "no shut"
action 1.7 cli command "interface GigabitEthernet0/0/3"
action 1.8 cli command "no shut"
action 2   cli command "interface GigabitEthernet0/0/4"
action 2.1 cli command "no shut"
action 2.2 cli command "interface GigabitEthernet0/0/5"
action 2.3 cli command "no shut"
action 2.4 cli command "do wr mem"
!
end
```

BORDE-HACIENDA2

CPU- Max 1 %. Optimo

```
------------------ show process cpu sorted ------------------


CPU utilization for five seconds: 1%/0%; one minute: 1%; five minutes: 1%
```

Memoria Optimo.

```
------------------ show memory statistics ------------------


Tracekey : 1#27f6cfb5fbeeeb545374d181f82b5eb9

                Head    Total(b)     Used(b)     Free(b)   Lowest(b)  Largest(b)
Processor  7FDA060F5010   3945447984   413933240   3531514744   3530768592   3530908988
 lsmpi_io  7FDA053E61A8     6295128     6294304          824          824          412
```

Interfaces desconectados.

Estado sensores. (P0 VIN error)

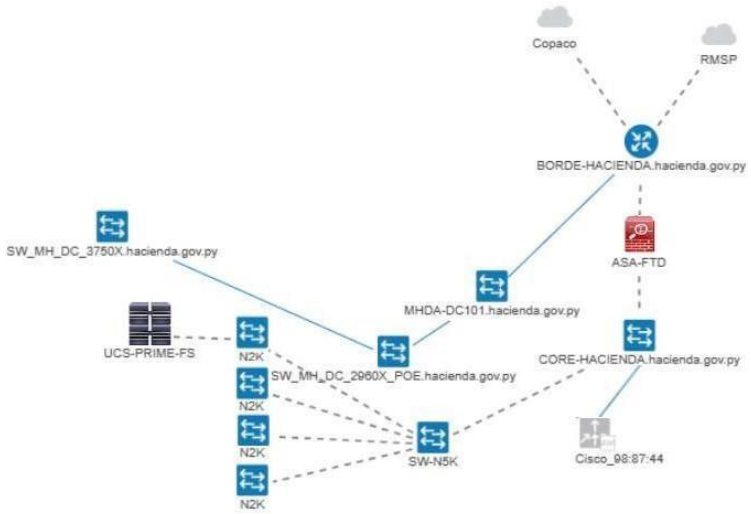
```
----------------- show environment all -----------------


Sensor List:  Environmental Monitoring
 Sensor           Location          State             Reading
 PEM Iout         P0                Normal            0 A
 PEM Vout         P0                Normal            0 V DC
 PEM Vin          P0                Normal            2008 V AC
 Temp: PEM        P0                Normal            21 Celsius
 Temp: FC         P0                Fan Speed 65%     18 Celsius
 PEM Iout         P1                Normal            15 A
 PEM Vout         P1                Normal            12 V DC
 PEM Vin          P1                Normal            232 V AC
 Temp: PEM        P1                Normal            24 Celsius
 Temp: FC         P1                Fan Speed 65%     18 Celsius
 VCP 1: VX1       R0                Normal            1490 mV
 VCP 1: VX2       R0                Normal            744 mV
 VCP 1: VX3       R0                Normal            1199 mV
 VCP 1: VP1       R0                Normal            5003 mV
 VCP 1: VP2       R0                Normal            3272 mV
 VCP 1: VP3       R0                Normal            2481 mV
 VCP 1: VP4       R0                Normal            1791 mV
 VCP 1: VH        R0                Normal            11930 mV
 VCP 2: VX2       R0                Normal            1045 mV
 VCP 2: VX4       R0                Normal            899 mV
 VCP 2: VX5       R0                Normal            1104 mV
 VCP 2: VP1       R0                Normal            1494 mV
 VCP 2: VP2       R0                Normal            1013 mV
 VCP 2: VP3       R0                Normal            1104 mV
 VCP 2: VP4       R0                Normal            1096 mV
 VCP 2: VH        R0                Normal            11935 mV
 Temp: Inlet 1    R0                Normal            18 Celsius
 Temp: Outlet 1   R0                Normal            23 Celsius
 Temp: Octeon     R0                Normal            27 Celsius
 Temp: Outlet 2   R0                Normal            17 Celsius
 Temp: CPU Die    R0                Normal            22 Celsius
 VDP 1: VX1       R0                Normal            1486 mV
 VDP 1: VX4       R0                Normal            1039 mV
 VDP 1: VP1       R0                Normal            989 mV
 VDP 1: VP2       R0                Normal            3264 mV
 VDP 1: VP3       R0                Normal            989 mV
 VDP 1: VP4       R0                Normal            1787 mV
 VDP 1: VH        R0                Normal            12019 mV
 VDP 2: VX2       R0                Normal            5000 mV
 VDP 2: VP1       R0                Normal            1487 mV
 VDP 2: VP2       R0                Normal            844 mV
 VDP 2: VP3       R0                Normal            2493 mV
 VDP 2: VP4       R0                Normal            1199 mV
 VDP 2: VH        R0                Normal            12013 mV
 Temp: DPOutlet   R0                Normal            26 Celsius
 Temp: DP Inlet   R0                Normal            23 Celsius
 Temp: WOLV Die   R0                Normal            31 Celsius
 Temp: YODA Die   R0                Normal            39 Celsius
```

Sección 5. Diagrama Físico de la solución

En la siguiente sección, se expone la topología recolectada y se ofrece un análisis detallado, así como otros datos pertinentes obtenidos durante la recopilación

5.1. Topología de red.



5.2. Relevamientos Físicos.

- No se evidencian señales de deterioro o insuficiente refrigeración en los racks. La sala recibe un mantenimiento adecuado.
- Los equipos exhiben una instalación apropiada y cuentan con una eficaz refrigeración proporcionada por tres unidades de aire de precisión.
- No se detectan faltantes ni impactos en los racks que puedan generar inconvenientes para los equipos alojados o afectar su funcionamiento.
- La temperatura, tanto en el rack como en la sala, se mantiene en niveles adecuados.

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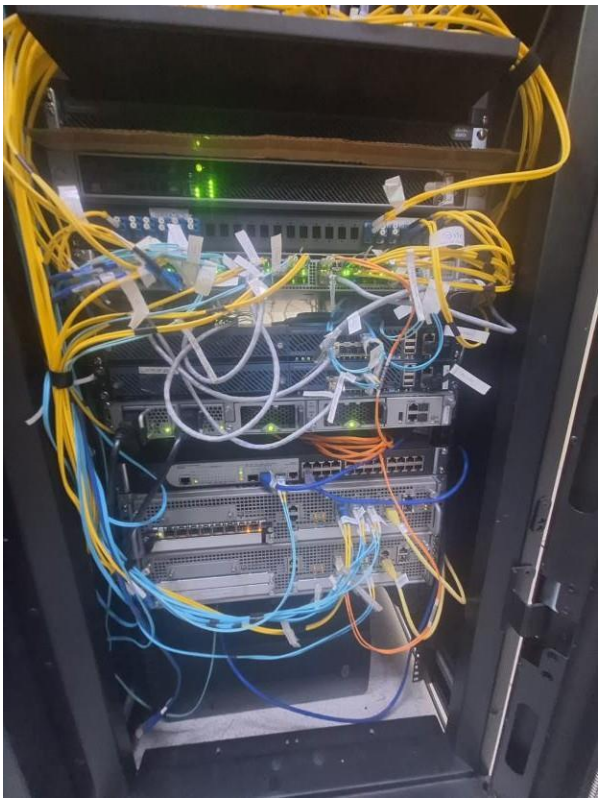
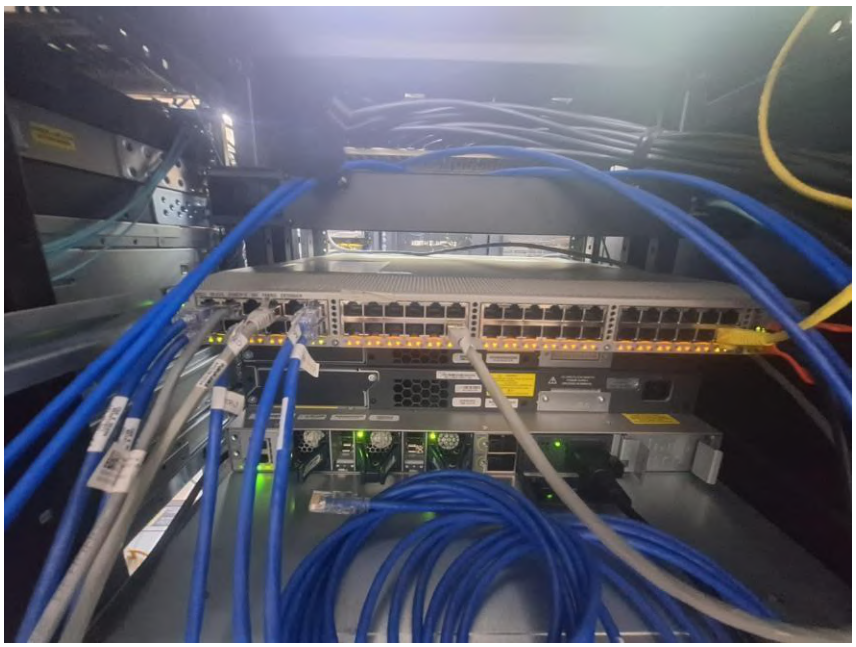
5.3. Fotografías tomadas.





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5.4. Etiquetados Cables.

Se observan en su mayoría los cables se encuentran etiquetados.

5.5. Mantenimiento preventivo HW.

Se realizó el mantenimiento de hardware en la mayoría de los equipos, eliminando por completo el polvo de sus componentes, evitando así posibles fallos.

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Sección 6. Conclusiones Finales

Contenidos

Basándonos en los puntos previamente examinados, concluimos que los equipos de acceso están operando adecuadamente y están actualizados según las recomendaciones.

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Sección 7. Contactos

Información General - Contactos

En la presente sección complete proporcionando una síntesis de la información complementaria o adicional que se desee insertar en el suplemento y que debe estar relacionado a los sistemas y la solución que fueron proporcionadas al cliente.

Sitio 1	Datacenter D.A.	
Dirección	Chile 252, Asunción	
Contacto	José Luis CABRERA PORTILLO - jose_cabrera@hacienda.gov.py	N/A
Acceso Remoto	SI ☐ NO ☒	

Personal Propio	Personal del Cliente
Ing. Jesus Piñanez Field Engineer +595986197477 jesus.pinanez@la.logicalis.com	**José Luis CABRERA PORTILLO** Jefe de Dpto de Informática - jose_cabrera@hacienda.gov.py
Belen CALCENA Project Administrator +595 981 345 767 belen.calcena@la.logicalis.com	

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Informe de Infraestructura

Servicios Logicalis

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SNPR91009
Noviembre 2024

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MINISTERIO DE HACIENDA

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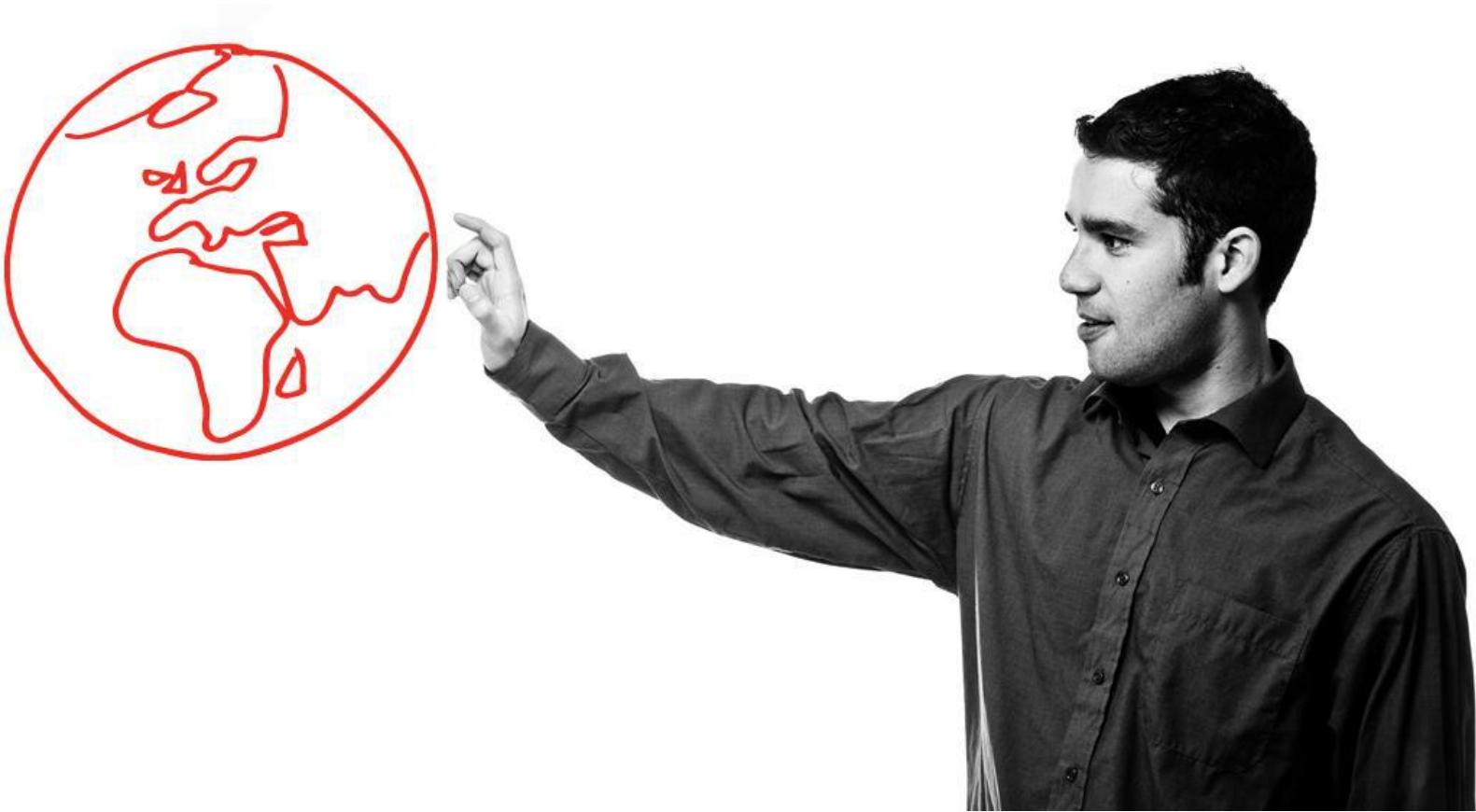

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Sección 1. Control de Cambios

Cambios del Documento

Ultima Elaboración Rodrigo Sotto

Autorizado para modificar el presente documento: Logicalis Latam

Historia

Versión No.	Fecha	Estado	Razón del Cambio
01-00	15 de Noviembre de 2024	Versión Inicial	Inicio de Documento

Revisión

Detalle de la Revisión	Revisión No.	Versión No.	Fecha
Inicio de Documento	00-01	01-00	15 de Noviembre de 2024

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Sección 2. Introducción

Resumen de Contenidos

En este documento se provee un análisis sobre la infraestructura de un equipo Firewall Cisco ASA5545-X (S/N FTX2047Y0NJ).

2.1. Detalle de los Requisitos del Cliente

El proyecto comprende relevar, analizar y proveer un informe al cliente sobre su infraestructura de red de Cisco ASA5545-X.

2.2. Visión General de la Solución

La plataforma ASA5545-X es un firewall de próxima generación (NGFW) de Cisco que ofrece una protección integral contra amenazas conocidas y avanzadas. Está equipado con el software Cisco Firepower Threat Defense (FTD), que proporciona un conjunto completo de funciones de seguridad, incluyendo:

- **Inspección de tráfico de aplicaciones:** protege contra ataques dirigidos a aplicaciones específicas, como los ataques de ransomware y malware.
- **Protección contra amenazas avanzadas:** detecta y bloquea las amenazas más sofisticadas, como los ataques de día cero y las amenazas persistentes.
- **Inspección de contenido:** protege contra el contenido malicioso, como el spam, el phishing y el malware.
- **Control de acceso:** permite a las organizaciones controlar quién puede acceder a los recursos de la red.

El ASA 5545-X también está equipado con el software Cisco Firepower Management Center (FMC), que proporciona una interfaz de gestión centralizada para los dispositivos FTD. El FMC permite a las organizaciones gestionar de forma sencilla y eficiente sus políticas de seguridad, así como supervisar y analizar el tráfico de la red.

2.3. Descripción de Equipamiento

En esta sección se detalla el equipamiento físico de la solución.

2.3.1. Cisco ASA 5545-X

Descripción Cisco: FW ASA 5545-X

Puertos de datos: 8 puertos de cobre 1GE + 1 Slot de expansión de 6 puertos

Puertos de gestión: Un puerto de management de 1GE y un puerto serial de consola RS-232

Dimensiones (Alto, Ancho, Prof.): 4.24 x 42.9 x 48.4 cm

Espacio Rack: 1 RU

2.4. Nomenclatura y IDs de equipos

Para el equipo se utilizará la siguiente nomenclatura:

- ftd-hacienda

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Sección 3. Relevamiento Físico de la Solución

Contenidos

3.1. Alta Disponibilidad

No se tiene alta disponibilidad (High Availability) ya que el cliente solamente cuenta con un FW Cisco ASA 5545-X.

3.2. Relevamiento Físico

- El equipo ASA 5545-X se observa con una instalación adecuada y con buena refrigeración.
- La temperatura de la sala es la correcta.
- No se observan alarmas de temperatura en el equipo FW, todos los ventiladores (coolers) están en funcionamiento, ambas fuentes de poder (power supply) se encuentran conectadas y funcionando correctamente.

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Sección 4. Esquema Direcciones

Contenidos

Tabla 1 | Direccionamiento IP Cisco FW ASA 5545-X

Interfaz	Zona	IP	Máscara
GigabitEthernet0/0	inside	192.168.151.2	255.255.255.248
GigabitEthernet0/1	outside	192.168.151.9	255.255.255.248
GigabitEthernet0/2	server	192.168.2.1	255.255.255.0
Management0/0	management	No tiene IP	N/A

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Sección 5. Servicio de la Solución

Contenidos

En la siguiente sección se trabajará sobre el análisis de los comandos tomados para ver estado del switch Cisco ASA 5545-X dentro de la infraestructura de red.

5.1. Inventario

El equipo para analizar es un Cisco ASA 5545-X de 8 puertos de cobre, más 1 placa de expansión de puertos.

5.1.1. Cisco ASA 5545-X

```
------------------ show inventory ------------------


Name: "Chassis", DESCR: "ASA 5545-X with SW, 8 GE Data, 1 GE Mgmt"

PID: ASA5545           , VID: V04     , SN: FTX2047Y0NJ


Name: "module 1", DESCR: "ASA 5545-X/5555-X Interface Card 6-port GE SFP,
SX/LX"

PID: ASA-IC-6GE-SFP-C  , VID: N/A     , SN: N/A


Name: "power supply 0", DESCR: "ASA 5545-X/5555-X AC Power Supply"

PID: ASA-PWR-AC        , VID: N/A     , SN: 6B71BC


Name: "power supply 1", DESCR: "ASA 5545-X/5555-X AC Power Supply"

PID: ASA-PWR-AC        , VID: N/A     , SN: 6A61D5
```


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```
Name: "Storage Device 1", DESCR: "Model Number: Micron_M600_MTFDDAK128MBF"

PID: N/A                , VID: N/A     , SN: MSA204100MH


Name: "Storage Device 2", DESCR: "Model Number: Micron_M600_MTFDDAK128MBF"

PID: N/A                , VID: N/A     , SN: MSA204100DJ



------------------ show module 0 detail ------------------


Card Type:          ASA 5545-X with SW, 8 GE Data, 1 GE Mgmt

Model:              ASA5545

Hardware version:   3.0

Serial Number:      FCH20437T9H

Firmware version:   2.1(9)8

Software version:   9.12(4)68

MAC Address Range:  a0e0.afa2.ccc6 to a0e0.afa2.cccf

Data Plane Status:  Not Applicable

Console session:    Not ready

Status:             Up Sys
```

Recomendación: De acuerdo con el link de End of Life proporcionado por Cisco para estos equipos es necesario realizar de forma inmediata un reemplazo del equipo ASA 5545-X, ya que el mismo ha llegado al estado **final** de **vida útil** como producto.

https://www.cisco.com/c/en/us/products/collateral/security/asa-firepower-services/asa5525-5545-5555-series-3-yr-subscrip-eol.html

Los puntos relevantes del documento:

End of SW Maintenance Releases Date: App SW	The last date that Cisco Engineering may release any final software maintenance releases or bug fixes. After this date, Cisco Engineering will no longer develop, repair, maintain, or test the product software.	September 2, 2023
End of New Service Attachment Date: App SW	For equipment and software that is not covered by a service-and-support contract, this is the last date to order a new service-and-support contract or add the equipment and/or software to an existing service-and-support contract.	September 2, 2023
End of Signature Release Date: APP SW	The date after which there will be no more signature update release for Cisco ASA5525-X, ASA5545-X and ASA5555-X products going end of life	September 30, 2025

El último día que Cisco publicó la versión final de mantenimiento de software o corrección de errores fue el pasado **2 de Septiembre del 2023**. Después de esta fecha, Cisco no desarrollará, reparará, mantendrá ni probará el software del producto.

Como este equipo cumple una labor fundamental, el de ser el Firewall de la red además de un punto concentrador de ingreso de acceso remoto (servicio AnyConnect), desde Logicalis no recomendamos mantener en su red un equipo obsoleto (a nivel Sistema Operativo), esto sumado a desde este equipo se expone a Internet el puerto/servicio AnyConnect, en dicho servicio se han presentado varios casos de vulnerabilidades, como son las siguientes:

CVE-2022-20713: A vulnerability in the VPN web client services component of Cisco Adaptive Security Appliance (ASA) Software and Cisco Firepower Threat Defense (FTD) Software could allow an unauthenticated, remote attacker to conduct browser-based attacks against users of an affected device.

Link de referencia:
https://sec.cloudapps.cisco.com/security/center/content/CiscoSecurityAdvisory/cisco-sa-asa-webvpn-LOeKsNmO

CVE-2023-20269: A vulnerability in the remote access VPN feature of Cisco Adaptive Security Appliance (ASA) Software and Cisco Firepower Threat Defense (FTD) Software could allow an unauthenticated, remote attacker to conduct a brute force attack in an attempt to identify valid username and password combinations or an authenticated, remote attacker to establish a clientless SSL VPN session with an unauthorized user.

Link de referencia:
https://sec.cloudapps.cisco.com/security/center/content/CiscoSecurityAdvisory/cisco-sa-asaftd-ravpn-auth-8LyfCkeC

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Estas vulnerabilidades están siendo explotadas activamente como punto de acceso inicial a redes de gobierno y/o redes corporativas.

Product migration options

The migration solution for the ASA5525, ASA5545 & ASA5555 is the Cisco Firepower 2100 Series Appliances. See the following link for more information: https://www.cisco.com/c/en/us/products/collateral/security/firepower-2100-series/datasheet-c78-742473.html.

El reemplazo natural de los ASA-5500-X sería la nueva línea de hardware Firepower 2100 series, o inclusive la serie 1100 o 3100.

5.2. Versión de FTD y firmas de protección

----------[ftd-hacienda]----------

Model : Cisco ASA5545-X Threat Defense (75) Version 6.4.0.18 (Build 24)

UUID : 14379bd0-ed3b-11e6-a3da-f7e2372663ad

Rules update version : 2024-09-11-001-vrt

VDB version : 309

El equipo cuenta con la versión de sistema operativo FTD 6.4.0.18 (Build 24), en este caso vemos como correcto este punto, ya que es una versión reciente de la rama 6.4.0.X.

Vemos que las firmas de Intrusion rules (SRU) se encuentran con la versión 2024-09-11, recomendamos actualizar esta versión a la última disponible por Cisco.

5.3. Alta Disponibilidad

No existe alta disponibilidad debido a que la topología está compuesta por solo un equipo ASA 5545-X.

Recomendación: Si existe la necesidad de proveer redundancia sobre la infrastructura es conveniente armar un esquema de Alta Disponibilidad (HA). Como el modelo actual se encuentra obsoleto se debería pensar en adquirir un par de equipos nuevos como reemplazo del actual, esto permitiría tener un esquema de alta disponibilidad activo/pasivo.

5.4. Recursos del sistema

Los recursos que se analizan son el de almacenamiento, memoria y CPU.

5.4.1. ASA 5545-X

De los comandos ejecutados se obtienen los siguientes datos:

5.4.1.1. Almacenamiento

```
Flash Model: ATA Micron_M600_MTFD


------------------ dir all-filesystems ------------------

Directory of disk0:/


93      -rwx  146276352    20:23:32 Sep 12 2024  os.img

94      -rwx  151350       13:39:10 Feb 07 2017  install.log

11      drwx  4096         23:15:36 Sep 21 2019  log

18      drwx  4096         06:57:14 Oct 10 2024  crypto_archive

20      drwx  4096         13:49:04 Feb 07 2017  coredumpinfo

96      -rwx  57359        20:16:10 Sep 12 2024  backup-config.cfg

97      -rwx  57359        20:16:12 Sep 12 2024  startup-config
```

```
98     -rwx  51826        20:16:14 Sep 12 2024  modified-config.cfg
99     -rwx  423265       16:47:12 Jan 30 2018  crashinfo_20180130_164708_UTC
73     drwx  4096         20:51:58 Sep 12 2024  csm
100    -rwx  0            20:51:40 Sep 12 2024  hitcnt_del_ruleid_list
101    -rwx  466          17:13:00 Nov 11 2024  troubleshoot_file

8 file(s) total size: 147017977 bytes
8237236224 bytes total (7955337216 bytes free/96% free)
```

5.4.1.2. Memoria

```
------------------ show memory ------------------

Free memory:        6265004644 bytes (78%)
Used memory:        1786369600 bytes (22%)
-------------     ------------------
Total memory:       8051374244 bytes (100%)
```

5.4.1.3. CPU

```
------------------ show cpu usage ------------------

CPU utilization for 5 seconds = 22%; 1 minute: 25%; 5 minutes: 25%

------------------ show cpu detailed ------------------

Break down of per-core data path versus control point cpu usage:
Core         5 sec              1 min              5 min
Core 0       22.4 (17.0 + 5.4)  24.0 (18.3 + 5.7)  24.1 (18.5 + 5.7)
Current control plane usage versus the control plane cores elapsed for:
      5 seconds = 5.4%; 1 minute: 5.7%; 5 minutes: 5.7%
CPU utilization of external processes for:
      5 seconds = 0.0%; 1 minute: 0.7%; 5 minutes: 0.5%
Total CPU utilization for:
      5 seconds = 22.4%; 1 minute: 24.8%; 5 minutes: 24.7%
```

Recomendación: El equipo se ve con poca carga en la utilización de recursos de disco, memoria y cpu. No vemos necesario ningún tipo de cambio en este punto.

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5.5. FANs y Power Supply Units

En la siguiente sección se analizan el estado de los componentes físicos del equipo.

5.5.1. ASA 5545-X

De los comandos ejecutados se obtienen los siguientes datos:

```
------------------ show environment ------------------


Cooling Fans:
-----------------------------------

   Chassis Fans:
   --------------------------------
   Cooling Fan 1: 4864 RPM - OK
   Cooling Fan 2: 4864 RPM - OK
   Cooling Fan 3: 4864 RPM - OK

   Power Supplies:
   --------------------------------
   Left Slot (PS0): 8448 RPM - OK
   Right Slot (PS1): 8704 RPM - OK

Power Supplies:
-----------------------------------

   Left Slot (PS0): Present
   Right Slot (PS1): Present

   Power Input:
   --------------------------------
   Left Slot (PS0): OK
   Right Slot (PS1): OK

   Temperature:
   --------------------------------
   Left Slot (PS0): 25 C - OK
   Right Slot (PS1): 23 C - OK

   Cooling Fans:
   --------------------------------
   Left Slot (PS0): 8448 RPM - OK
   Right Slot (PS1): 8704 RPM - OK

Temperature:
-----------------------------------

   Processors:
   --------------------------------
   Processor 1: 62.0 C - OK

   Chassis:
   --------------------------------
   Ambient 1: 38.0 C - OK  (Chassis Back Temperature)
   Ambient 2: 27.0 C - OK  (Chassis Front Temperature)
   Ambient 3: 43.0 C - OK  (Chassis Back Left Temperature)

   Power Supplies:
   --------------------------------
   Left Slot (PS0): 25 C - OK
   Right Slot (PS1): 23 C - OK
```

Recomendación: El equipo no presenta alertas de temperatura. Los ventiladores (FAN) y fuentes de poder (power supply) se encuentran funcionando correctamente. No es necesario ningún tipo de cambio.

Sección 6. Conclusiones Finales

Contenidos

De acuerdo con los puntos expuestos anteriormente, se concluye que el equipo NGFW ASA 5545-X es un equipo que se encuentra obsoleto (End of Life) a nivel de SO por el fabricante. Dicho esto, el equipo actual ya no puede ofrecer las protecciones necesarias a la red ante amenazas conocidas o avanzadas, además de que el equipo como tal podría estar expuesto a vulnerabilidades de software que no serán reparadas por el fabricante Cisco para esta línea de equipos.

Por tanto, nuestra recomendación final sería que puedan iniciar un proceso de reemplazo para este equipo ASA por otro hardware NGFW más actualizado.

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Sección 7. Contactos

Información General - Contactos

En la presente sección complete proporcionando una síntesis de la información complementaria o adicional que se desee insertar en el suplemento y que debe estar relacionado a los sistemas y la solución que fueron proporcionadas al cliente.

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