

Procédures Techniques d'Installation
(PTI)

Pour le Sous Service
VLAN

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Résumé : Mise en place des différents VLAN également du routage intervlan, connexion à distance, ACL, lien agrégé		

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EVOLUTIONS

VERSION	DESCRIPTION
S1F0	Création et initialisation

Version + Date	S1F0 01/12/2025
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1. INTRODUCTION

1.1. CHARTE TYPOGRAPHIQUE

Le document respecte la présente charte dans l'objectif d'être la plus lisible possible.

1.1.1. Tableaux d'entête

Un tableau d'entête des paramètres spécifiques à la machine et communs à la plateforme est présenté en début de procédure d'installation :

Paramètres spécifiques de l'instance		
Paramètre	Description	Format
HOSTNAME	Nom de la machine	SWL[niveau 2 ou 3]-[Lieux]
FQDN	Nom DNS complet de la machine	hostname.domain
IP_Switch_postes	10.[N° du site (0 ou 1)].[N° du Vlan].[N° de l'hôte]	10.XX.XX.XX
Paramètres communs de la plateforme		
Paramètre	Description	Valeur
PORT_SSL	Port utilisé pour les flux HTTPS	443
SITEMINDER_ADMIN	Utilisateur administrateur des Policy Server Siteminder	siteminder
SITEMINDER_PWD	Mot de passe de l'administrateur des Policy Server Siteminder	

1.1.2. Valorisation des fichiers de configuration

Les paramètres spécifiques à une machine à modifier, présentés dans le tableau d'entête, sont mis en valeur de la manière suivante :

```
127.0.0.1 localhost localhost.localdomain localhost4 localhost4.localdomain4
<IP_SERVEUR> <HOSTNAME> <FQDN>
```

1.1.3. Passage de commande

Les commande à passer sont présentée comme ci-dessous :

```
[root@hostname ~]# iut-yumconf -l
```

1.

2.

1.1.4. Configuration en mode graphique

Les champs à enrichir avec des valeurs issues du tableau d'entête sont présentés par un cadre jaune, la variable correspondante étant précisée en commentaire :

Valoriser le champ à l'aide des variables **<IP_SERVEUR>** : **<PORT_LDAPS>** :



LDAP Policy Store

LDAP IP Address: 10.114.40.157:636

Root DN: o=orange

☒ Use SSL

Admin Username: cn=Directory

Password: *****

Confirm Password: *****

2. PRÉ-REQUIS À L'INSTALLATION

2.1. CONNECTIVITE

Schéma représentant les Vlans et le plan des interfaces du switch L2 de Caen.

[Représentation physique d'un switch L2]

Vlan 10 (RH) : ports 7 À 12

Vlan 20 (ADMIN) : ports 1 À 6

Vlan 30 (PRODUCTION) : ports 13 À 21

Port 22 et 23 pour liens agrégés

Schéma représentant les Vlans et le plan des interfaces du switch L3 de Caen.

[Représentation physique d'un switch L3]

liens agrégés → port 46 et 47 pour liens agrégés & port 48 pour le routage.

Port 45 lien promox

2.2. TABLEAU RECAPITULATIF

Paramètres de la plateforme		
Paramètre	Description	Format
VLAN 1	Vlan Natif : Vlan par défaut.	x
VLAN 10	Vlan Ressources Humaines : Postes RH.	1
VLAN 20	Vlan Administrateur : Postes pour les administrateurs.	2
VLAN 30	Vlan Production: Postes pour la production.	3
VLAN 99	Vlan Quarantaine : Vlan d'exclusions destiné à la protection.	99
FQDN	Nom DNS complet de la machine	?
IP_Switch_postes	10.[N° du site (0 ou 1)].[N° du Vlan]. [N° de l'hôte]	10.XX.XX.XX

Identifiants et mots de passe par défaut

3. CONFIGURATION

configuration des Vlan

```
interface Vlan1
```

```
no ip address
```

```
no ip route-cache
```

```
!
```

```
interface Vlan10
```

```
description RH
```

```
no ip address
```

```
no ip route-cache
```

```
!
```

```
interface Vlan20
```

```
description Admin
```

```
no ip address
```

```
no ip route-cache
```

```
!
```

```
interface Vlan30
```

```
description Prod
```

```
no ip address
```

```
no ip route-cache
```

```
interface vlan 10
```

```
    description RH
```

```
    no shutdown
```

```
interface vlan 20
```

```
    description Administration
```

```
    ip address 10.0.1.65 255.255.255.192
```

no shutdown

interface vlan 30

description Production

no shutdown

interface Fa1/0/1

switchport mode access

switchport access vlan 20

SSH :

Step 1: Set hostname

hostname SWL3-Caen

Step 2: Set domain name

ip domain-name SAE301.local

Step 3: Generate SSH key and select SSH version

crypto key generate rsa general-keys 4096 ip ssh version 2

Step 4: Set username and password

username SWL3-Caen privilege 15 secret Pouzin\$AE301.

Step 5: Allow SSH on CLI

line vty 0 4 transport input ssh login local exit

Pour se connecter à partir d'une machine (Linux) :

SW L2:

ssh -oHostKeyAlgorithms=+ssh-rsa -oKexAlgorithms=+diffie-hellman-group14-sha1 username@IP_ADDRESS

SW L2-L3:


```
ssh -oHostKeyAlgorithms+=ssh-rsa -oKexAlgorithms+=diffie-hellman-group1-sha1 -o Ciphers+=aes128-cbc,3des-cbc,aes192-cbc,aes256-cbc username@IP_ADDRESS
```

Sinon la commande qui donne fonctionne pour tout (L2, L2-L3, Routeur):

```
ssh -oHostKeyAlgorithms+=ssh-rsa -oKexAlgorithms+=diffie-hellman-group-exchange-sha1,diffie-hellman-group14-sha1,diffie-hellman-group1-sha1 -o Ciphers+=aes128-cbc,3des-cbc,aes256-cbc username@IP_ADDRESS
```

ACL Setup :

```
ip access-list standard ACCESS_SSH
    10 permit 10.0.2.0 0.255.0.255
    20 deny any
ip access-list extended RH_PROD
    10 permit ip 10.0.2.0 0.255.0.255 any
    20 deny ip 10.0.1.0 0.255.0.255 10.0.3.0 0.255.0.255
    30 deny ip 10.0.3.0 0.255.0.255 10.0.1.0 0.255.0.255
    100 permit ip any any
```

Application des ACLs:

```
interface vlan (sur la 10,20 et 30)
    ip access-group RH_PROD in
line vty 0 4
    access-class ACCESS_SSH in
```

Switch L2 Caen :

```
no service pad
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname SWL2-Caen
!
boot-start-marker
boot-end-marker
!
!
username SWL2-Caen privilege 15 secret 5 $1$esnP$cFfPSBcsraI5aqRx/Rr1H/
no aaa new-model
```

```

system mtu routing 1500
!
!
ip domain-name SAE301.local
!
!
crypto pki trustpoint TP-self-signed-1564340224
  enrollment selfsigned
  subject-name cn=IOS-Self-Signed-Certificate-1564340224
  revocation-check none
  rsakeypair TP-self-signed-1564340224
!
!
crypto pki certificate chain TP-self-signed-1564340224
certificate self-signed 01
  3082022B 30820194 A0030201 02020101 300D0609 2A864886 F70D0101 05050030
  31312F30 2D060355 04031326 494F532D 53656C66 2D536967 6E65642D 43657274
  69666963 6174652D 31353634 33343032 3234301E 170D3933 30333031 30303030
  35355A17 0D323030 31303130 30303030 305A3031 312F302D 06035504 03132649
  4F532D53 656C662D 5369676E 65642D43 65727469 66696361 74652D31 35363433
  34303232 3430819F 300D0609 2A864886 F70D0101 01050003 818D0030 81890281
  8100CAE9 A29D765A CCB3A330 EC9F93F9 9C349004 27420017 1DEC2FDB 5231787F
  5019EAF8 2B3900AE 8849D50D 1D8A5D3B B0F9B935 6ADA8E7E 9AD0E015 78CE7975
  B7AE1CCB 76186A92 78FC95BE B590FEBF 6001D007 50381C84 215934EA 5A552F46
  874AA6F0 7EB981A0 66032EFE D3B8B30C D98F590A 41BEF090 9CD8EA6E 2BAA7232
  A7670203 010001A3 53305130 0F060355 1D130101 FF040530 030101FF 301F0603
  551D2304 18301680 14B61804 12DEE7DA 3DF429C3 584AEA54 494A7CA4 35301D06
  03551D0E 04160414 B6180412 DEE7DA3D F429C358 4AEA5449 4A7CA435 300D0609
  2A864886 F70D0101 05050003 81810008 E76DAC29 C92C1B51 E61482ED B0B7E10D
  B3AAAC25 F6A85EEB 41A166CB 89879C3C 49545CDD 602A5B49 346DC0D9 4AFB9246
  86960588 CA8D8963 22D8E460 CDD80522 CF9E4213 316F19D2 F6DBD0DD 0D40FAB3
  8D16E88F D039A89A ECE9055D E1DE23BE D95446D0 1A25FD1B A564DAA6 42D0CBF1
  E809EB2D A58E331D 6CF252A1 B6D010
quit
!
!
!
!
!
!
!
spanning-tree mode rapid-pvst
spanning-tree extend system-id
!
vlan internal allocation policy ascending
!
ip ssh version 2
!
!
!
!
!
!
interface Port-channel1
  switchport trunk allowed vlan 10,20,30
  switchport mode trunk
!
interface FastEthernet0/1
  switchport access vlan 20
  switchport mode access
  spanning-tree portfast
!

```

```
interface FastEthernet0/2
  switchport access vlan 20
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/3
  switchport access vlan 20
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/4
  switchport access vlan 20
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/5
  switchport access vlan 20
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/6
  switchport access vlan 20
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/7
  switchport access vlan 10
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/8
  switchport access vlan 10
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/9
  switchport access vlan 10
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/10
  switchport access vlan 10
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/11
  switchport access vlan 10
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/12
  switchport access vlan 10
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/13
  switchport access vlan 30
  switchport mode access
  spanning-tree portfast
!
```

```
interface FastEthernet0/14
  switchport access vlan 30
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/15
  switchport access vlan 30
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/16
  switchport access vlan 30
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/17
  switchport access vlan 30
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/18
  switchport access vlan 30
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/19
  switchport access vlan 30
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/20
  switchport access vlan 30
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/21
  switchport access vlan 30
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/22
  switchport trunk allowed vlan 10,20,30
  switchport mode trunk
  channel-group 1 mode on
!
interface FastEthernet0/23
  switchport trunk allowed vlan 10,20,30
  switchport mode trunk
  channel-group 1 mode on
!
interface FastEthernet0/24
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface GigabitEthernet0/1
  switchport access vlan 99
  switchport mode access
  shutdown
!
```

```

interface GigabitEthernet0/2
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface Vlan1
  no ip address
  shutdown
!
interface Vlan10
  description RH
  no ip address
!
interface Vlan20
  description Administrateur
  ip address 10.0.2.2 255.255.255.0
!
interface Vlan30
  description Production
  no ip address
!
interface Vlan99
  description Natif
  no ip address
!
ip default-gateway 10.0.2.1
ip http server
ip http secure-server
!
ip access-list standard ACCESS_SSH
  permit 10.0.2.0 0.255.0.255
!
!
line con 0
line vty 0 4
  access-class ACCESS_SSH in
  login local
  transport input ssh
line vty 5 15
  login
!
end

```

Switch L3 Caen :

```

no service pad
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname SWL3-Caen
!
boot-start-marker
boot-end-marker
!
!
username SWL3-Caen privilege 15 secret 5 $1$QPcP$vpKJDA2FFkeV0n6WPkojQ/
!
!
no aaa new-model

```

```
switch 2 provision ws-c3750v2-48ps
system mtu routing 1500
ip routing
ip domain-name SAE301.local
!
!
!
!
crypto pki trustpoint TP-self-signed-2301296384
  enrollment selfsigned
  subject-name cn=IOS-Self-Signed-Certificate-2301296384
  revocation-check none
  rsakeypair TP-self-signed-2301296384
!
!
crypto pki certificate chain TP-self-signed-2301296384
certificate self-signed 01
  3082024E 308201B7 A0030201 02020101 300D0609 2A864886 F70D0101 04050030
  31312F30 2D060355 04031326 494F532D 53656C66 2D536967 6E65642D 43657274
  69666963 6174652D 32333031 32393633 3834301E 170D3933 30333031 30303032
  34305A17 0D323030 31303130 30303030 305A3031 312F302D 06035504 03132649
  4F532D53 656C662D 5369676E 65642D43 65727469 66696361 74652D32 33303132
  39363338 3430819F 300D0609 2A864886 F70D0101 01050003 818D0030 81890281
  8100C03B B25CAD58 DE41C166 6FCBC519 C084AC3C 2BD00F45 434479B8 FEB08730
  81DAA053 855ACA69 09E52F3C 2E790A35 31FEAA44 5D359C31 F015BC3D A20779EE
  BEDB37E9 E75628CB 7BCC9219 151F7DAF D0900493 2EBE0C18 A1CA730A 4D6737C5
  9441F39F 7FB5F4A7 7064DCD5 57E6E8C5 4F275C64 DE390295 37ACC32F DB1B7CB8
  FBCF0203 010001A3 76307430 0F060355 1D130101 FF040530 030101FF 30210603
  551D1104 1A301882 1653574C 332D4361 656E2E53 41453330 312E6C6F 63616C30
  1F060355 1D230418 30168014 78C1A5C7 004CBE37 06AA0EAA 3748B5B1 62E27AE6
  301D0603 551D0E04 16041478 C1A5C700 4CBE3706 AA0EAA37 48B5B162 E27AE630
  0D06092A 864886F7 0D010104 05000381 81000A60 0A88CE5E B8EB8C6A 423D9D7C
  C82EAD14 834E938B 223CB05E BB09423C DE911B0B 0E8F8E86 F9FDBA72 44D8AFEF
  04D9381E 2B0E7F00 6EC35EB5 FB8C4979 5EC36449 C336CB8A 631C3A7A 6A923310
  8D3AD1EE CFC70E96 4FA6799D 9C0C6677 1680F6EA 75E4ECF0 1B82E687 E0E56635
  FBA36ECF A2A90068 CA12F6D8 358DB083 3E12
quit
!
!
!
!
spanning-tree mode rapid-pvst
spanning-tree extend system-id
!
vlan internal allocation policy ascending
!
ip ssh version 2
!
!
!
!
interface Port-channel1
  switchport trunk encapsulation dot1q
  switchport trunk allowed vlan 10,20,30
  switchport mode trunk
!
interface FastEthernet2/0/1
  switchport access vlan 99
  switchport mode access
  shutdown
!
```

```
interface FastEthernet2/0/2
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/3
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/4
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/5
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/6
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/7
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/8
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/9
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/10
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/11
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/12
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/13
  switchport access vlan 99
  switchport mode access
  shutdown
!
```

```
interface FastEthernet2/0/14
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/15
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/16
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/17
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/18
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/19
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/20
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/21
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/22
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/23
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/24
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/25
  switchport access vlan 99
  switchport mode access
  shutdown
!
```



```
interface FastEthernet2/0/26
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/27
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/28
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/29
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/30
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/31
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/32
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/33
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/34
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/35
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/36
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/37
  switchport access vlan 99
  switchport mode access
  shutdown
!
```

```
interface FastEthernet2/0/38
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/39
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/40
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/41
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/42
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/43
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/44
  switchport access vlan 99
  switchport mode access
  shutdown
!
interface FastEthernet2/0/45
  switchport access vlan 20
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet2/0/46
  switchport trunk encapsulation dot1q
  switchport trunk allowed vlan 10,20,30
  switchport mode trunk
  channel-group 1 mode on
!
interface FastEthernet2/0/47
  switchport trunk encapsulation dot1q
  switchport trunk allowed vlan 10,20,30
  switchport mode trunk
  channel-group 1 mode on
!
interface FastEthernet2/0/48
  no switchport
  ip address 10.0.0.3 255.255.255.254
!
interface GigabitEthernet2/0/1
  switchport access vlan 99
  switchport mode access
  shutdown
```

```
!  
interface GigabitEthernet2/0/2  
  switchport access vlan 99  
  switchport mode access  
  shutdown  
!  
interface GigabitEthernet2/0/3  
  switchport access vlan 99  
  switchport mode access  
  shutdown  
!  
interface GigabitEthernet2/0/4  
  switchport access vlan 99  
  switchport mode access  
  shutdown  
!  
interface Vlan1  
  description Natif  
  no ip address  
!  
interface Vlan10  
  description RH  
  ip address 10.0.1.1 255.255.255.0  
  ip access-group RH_PROD in  
  ip helper-address 10.0.2.80  
!  
interface Vlan20  
  description Administration  
  ip address 10.0.2.1 255.255.255.0  
  ip access-group RH_PROD in  
!  
interface Vlan30  
  description Production  
  ip address 10.0.3.1 255.255.255.0  
  ip access-group RH_PROD in  
  ip helper-address 10.0.2.80  
!  
interface Vlan99  
  description Quarantaine  
  no ip address  
!  
ip classless  
ip route 0.0.0.0 0.0.0.0 FastEthernet2/0/48  
ip http server  
ip http secure-server  
!  
!  
ip access-list standard ACCESS_SSH  
  permit 10.0.2.0 0.255.0.255  
!  
ip access-list extended RH_PROD  
  permit ip 10.0.2.0 0.255.0.255 any  
  deny ip 10.0.1.0 0.255.0.255 10.0.3.0 0.255.0.255  
  deny ip 10.0.3.0 0.255.0.255 10.0.1.0 0.255.0.255  
  permit ip any any  
!  
!  
!  
vstack  
!
```

```
line con 0
line vty 0 4
    access-class ACCESS_SSH in
    login local
    transport input ssh
line vty 5 15
    login
!
end
```

Routeur Caen :

```
! Last configuration change at 08:56:42 UTC Wed Dec 3 2025  
!  
version 15.7  
service timestamps debug datetime msec  
service timestamps log datetime msec  
no service password-encryption  
!  
hostname R-Caen  
!  
boot-start-marker  
boot-end-marker  
!  
!  
enable secret 5 $1$cU/n$lOEy/qbGl9h3./ltpT541.  
!  
no aaa new-model  
memory-size iomem 15  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
  
!  
!  
!  
!  
!  
  
ip domain name SAE301.local  
ip cef  
no ipv6 cef  
!  
multilink bundle-name authenticated  
!  
!  
domain SAE301.local
```

```
!  
!  
!  
!  
!  
!  
voice-card 0  
!  
!  
!  
!  
!  
!  
!  
vxml logging-tag  
license udi pid CISC02911/K9 sn FCZ20246068  
license accept end user agreement  
license boot module c2900 technology-package securityk9  
license boot module c2900 technology-package uck9  
license boot module c2900 technology-package datak9  
!  
!  
vtp version 2  
username Caen secret 5 $1$gHfW$qqGMjCx40kk.AwUtsJsf91  
!  
redundancy  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
interface Embedded-Service-Engine0/0  
no ip address  
shutdown  
!  
interface GigabitEthernet0/0  
ip address 24.8.5.1 255.255.255.254  
duplex auto  
speed auto  
!  
interface GigabitEthernet0/1  
ip address 10.0.0.2 255.255.255.254  
ip nat inside  
ip virtual-reassembly in  
duplex auto  
speed auto  
!  
interface GigabitEthernet0/2  
no ip address
```

```
shutdown
duplex auto
speed auto
!
interface GigabitEthernet0/0/0
no ip address
no negotiation auto
!
interface FastEthernet0/1/0
no ip address
shutdown
duplex auto
speed auto
!
interface FastEthernet0/1/1
no ip address
shutdown
duplex auto
speed auto
!
!
ip forward-protocol nd
!
no ip http server
no ip http secure-server
!
ip nat source list NAT_Caen interface GigabitEthernet0/0/0 overload
ip route 0.0.0.0 0.0.0.0 24.8.5.0
ip route 10.0.0.0 255.255.0.0 10.0.0.3
ip ssh version 2
!
ip access-list standard ACCESS_SSH
permit 10.0.2.0 0.255.0.255
ip access-list standard NAT_Caen
permit 10.0.0.0 0.0.255.255
!
ipv6 ioam timestamp
!
!
!
control-plane
!
!
!
!
!
!
mgcp behavior rsip-range tgcp-only
mgcp behavior comedia-role none
mgcp behavior comedia-check-media-src disable
mgcp behavior comedia-sdp-force disable
!
mgcp profile default
!
!
!
!
!
!
```

```

gatekeeper
 shutdown
!
!
line con 0
line aux 0
line 2
 no activation-character
 no exec
 transport preferred none
 transport output lat pad telnet rlogin lapb-ta mop udptn v120 ssh
 stopbits 1
line vty 0 4
 access-class ACCESS_SSH in
 login local
 transport input ssh
!
scheduler allocate 20000 1000
!
end

```

Switch L2 Lyon :

```

!
! Last configuration change at 03:02:11 UTC Mon Mar 1 1993
!
version 15.0
no service pad
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname SWL2-Lyon
!
boot-start-marker
boot-end-marker
!
!
username SWL2-Lyon privilege 15 secret 5 $1$07C4$g7zFF9n3GH7dLXMUDjhan.
no aaa new-model
system mtu routing 1500
!
!
ip domain-name SAE301.local
!
!
crypto pki trustpoint TP-self-signed-3200819840
 enrollment selfsigned
 subject-name cn=IOS-Self-Signed-Certificate-3200819840
 revocation-check none
 rsakeypair TP-self-signed-3200819840
!
!
crypto pki certificate chain TP-self-signed-3200819840
 certificate self-signed 01
 3082022B 30820194 A0030201 02020101 300D0609 2A864886 F70D0101 05050030
 31312F30 2D060355 04031326 494F532D 53656C66 2D536967 6E65642D 43657274
 69666963 6174652D 33323030 38313938 3430301E 170D3933 30333031 30303030
 35355A17 0D323030 31303130 30303030 305A3031 312F302D 06035504 03132649

```

Interne IUT

```

4F532D53 656C662D 5369676E 65642D43 65727469 66696361 74652D33 32303038
31393834 3030819F 300D0609 2A864886 F70D0101 01050003 818D0030 81890281
8100EE97 A8E76B13 C3CD4593 18F32462 44D90A3E 1E609275 7EAA0B8A F05EF83D
B9E30F1D 9A1DAB11 294435AC D0460F76 8085F67E 9C93C1C6 FED79370 A24EFC4C
99908852 F1A919FF 7F4C1AA9 E75F965D E3E20146 EB77DFBA 2B8C1F23 7FBA1D8B
856C55F4 881195FC 3C05E464 F6F305C9 C978B943 B3526B1E 2AB56A1B 8A0279ED
C2010203 010001A3 53305130 0F060355 1D130101 FF040530 030101FF 301F0603
551D2304 18301680 14EA63E7 59247C1E 44460209 59D8971E C8D4C526 B0301D06
03551D0E 04160414 EA63E759 247C1E44 46020959 D8971EC8 D4C526B0 300D0609
2A864886 F70D0101 05050003 818100CB 4669CB87 2F479645 DF064819 06C4BB88
0F89F914 ACF44A68 DD818201 BD25006D 7DA7F0FB 636A4D13 66CC859A 09DEBAA2
DB678C91 A9B55EBB 5A8B55BD F9CBE4E9 BA2FD0DC 4DF1B5B7 A2CBE83A 98B6B482
F60880D8 489B84A5 E0BFE51D A783BB49 7F1DD99D 17B60D13 72DDA321 A4A78C32
949482ED 314A50C0 F050DECE 6DA684

```

```
quit
```

```
!
```

```
!
```

```
!
```

```
!
```

```
!
```

```
!
```

```
spanning-tree mode rapid-pvst
```

```
spanning-tree extend system-id
```

```
!
```

```
vlan internal allocation policy ascending
```

```
!
```

```
ip ssh version 2
```

```
!
```

```
!
```

```
!
```

```
!
```

```
!
```

```
interface Port-channel1
```

```
switchport trunk allowed vlan 10,20,30
```

```
switchport mode trunk
```

```
!
```

```
interface FastEthernet0/1
```

```
switchport access vlan 20
```

```
switchport mode access
```

```
spanning-tree portfast
```

```
!
```

```
interface FastEthernet0/2
```

```
switchport access vlan 20
```

```
switchport mode access
```

```
spanning-tree portfast
```

```
!
```

```
interface FastEthernet0/3
```

```
switchport access vlan 20
```

```
switchport mode access
```

```
spanning-tree portfast
```

```
!
```

```
interface FastEthernet0/4
```

```
switchport access vlan 20
```

```
switchport mode access
```

```
spanning-tree portfast
```

```
!
```

```
interface FastEthernet0/5
```

```
switchport access vlan 20
```

```
switchport mode access
```

```
spanning-tree portfast
```



```
!  
interface FastEthernet0/6  
switchport access vlan 20  
switchport mode access  
spanning-tree portfast  
!  
interface FastEthernet0/7  
switchport access vlan 10  
switchport mode access  
spanning-tree portfast  
!  
interface FastEthernet0/8  
switchport access vlan 10  
switchport mode access  
spanning-tree portfast  
!  
interface FastEthernet0/9  
switchport access vlan 10  
switchport mode access  
spanning-tree portfast  
!  
interface FastEthernet0/10  
switchport access vlan 10  
switchport mode access  
spanning-tree portfast  
!  
interface FastEthernet0/11  
switchport access vlan 10  
switchport mode access  
spanning-tree portfast  
!  
interface FastEthernet0/12  
switchport access vlan 10  
switchport mode access  
spanning-tree portfast  
!  
interface FastEthernet0/13  
switchport access vlan 30  
switchport mode access  
spanning-tree portfast  
!  
interface FastEthernet0/14  
switchport access vlan 30  
switchport mode access  
spanning-tree portfast  
!  
interface FastEthernet0/15  
switchport access vlan 30  
switchport mode access  
spanning-tree portfast  
!  
interface FastEthernet0/16  
switchport access vlan 30  
switchport mode access  
spanning-tree portfast  
!  
interface FastEthernet0/17  
switchport access vlan 30  
switchport mode access  
spanning-tree portfast
```

```
!  
interface FastEthernet0/18  
switchport access vlan 30  
switchport mode access  
spanning-tree portfast  
!  
interface FastEthernet0/19  
switchport access vlan 30  
switchport mode access  
spanning-tree portfast  
!  
interface FastEthernet0/20  
switchport access vlan 30  
switchport mode access  
spanning-tree portfast  
!  
interface FastEthernet0/21  
switchport access vlan 30  
switchport mode access  
spanning-tree portfast  
!  
interface FastEthernet0/22  
switchport trunk allowed vlan 10,20,30  
switchport mode trunk  
channel-group 1 mode on  
!  
interface FastEthernet0/23  
switchport trunk allowed vlan 10,20,30  
switchport mode trunk  
channel-group 1 mode on  
!  
interface FastEthernet0/24  
switchport access vlan 99  
switchport mode access  
spanning-tree portfast  
!  
interface GigabitEthernet0/1  
switchport access vlan 99  
switchport mode access  
spanning-tree portfast  
!  
interface GigabitEthernet0/2  
switchport access vlan 99  
switchport mode access  
spanning-tree portfast  
!  
interface Vlan1  
no ip address  
!  
interface Vlan10  
description RH  
no ip address  
!  
interface Vlan20  
description Admin  
ip address 10.1.2.2 255.255.255.0  
!  
interface Vlan30  
description Production  
no ip address
```

```

!
interface Vlan99
description Quarantaine
no ip address
!
ip default-gateway 10.1.2.1
ip http server
ip http secure-server
!
ip access-list standard ACCESS_SSH
permit 10.0.2.0 0.255.0.255
deny any
!
!
line con 0
line vty 0 4
access-class ACCESS_SSH in
login local
transport input ssh
line vty 5 15
login
!

```

Switch L3 Lyon :

```

no service pad
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname SWL3-Lyon
!
boot-start-marker
boot-end-marker
!
!
username SWL3-Lyon privilege 15 secret 5 $1$Elcp$ugbTLZlDC60vVhaqT.mUB0
!
!
no aaa new-model
switch 1 provision ws-c3750v2-48ps
system mtu routing 1500
ip routing
ip domain-name SAE301.local
!
!
!
!
crypto pki trustpoint TP-self-signed-2301293440
enrollment selfsigned
subject-name cn=IOS-Self-Signed-Certificate-2301293440
revocation-check none
rsa-keypair TP-self-signed-2301293440
!
!
crypto pki certificate chain TP-self-signed-2301293440
certificate self-signed 01
3082024E 308201B7 A0030201 02020101 300D0609 2A864886 F70D0101 04050030
31312F30 2D060355 04031326 494F532D 53656C66 2D536967 6E65642D 43657274
69666963 6174652D 32333031 32393334 3430301E 170D3933 30333031 30303032

```

Interne IUT

```

34305A17 0D323030 31303130 30303030 305A3031 312F302D 06035504 03132649
4F532D53 656C662D 5369676E 65642D43 65727469 66696361 74652D32 33303132
39333434 3030819F 300D0609 2A864886 F70D0101 01050003 818D0030 81890281
8100CA0E E3AA5CC5 E1EB6FC5 2FB2E67E 725D8578 4A8E1847 28F7EA3A 7089898A
19776E92 5F36A0EC 2D098998 2A2A8C8F C4B4E022 5BD41CC6 2CF018A0 91318220
E44E397E 6FA08FA2 4DAAE995 CB5D138B 24AC4711 D0CDD7A9 16BB9413 70719275
F009F153 2E53984B F6FEF083 EB2B2F6E 1F3170D5 D0809A88 C654BED5 6B0ADA2C
20250203 010001A3 76307430 0F060355 1D130101 FF040530 030101FF 30210603
551D1104 1A301882 1653574C 332D4C79 6F6E2E53 41453330 312E6C6F 63616C30
1F060355 1D230418 30168014 2A045F91 D446789E FFF453D6 E5563373 CCEA36C7
301D0603 551D0E04 1604142A 045F91D4 46789EFF F453D6E5 563373CC EA36C730
0D06092A 864886F7 0D010104 05000381 81000F88 BE29A015 F6E0F140 0D4DDBFB
532EECDE 4EFC7EDC 86DFC6AB 9C894455 749AAC88 6770CA42 BD614420 560F04F5
DC510B76 29FEF323 F9627498 3A727455 8D1BEBB9 7E9F2528 A62AD0C6 B1C47944
E7F87A72 9FC348CC 07249BE0 113E3973 F2065A42 A1697A6A EA144016 95A60B24
6E134307 A0D97397 D98D10E2 7B446F5A A69A

```

```
quit
```

```
!
!
!
!
```

```
spanning-tree mode rapid-pvst
spanning-tree extend system-id
```

```
!
```

```
vlan internal allocation policy ascending
```

```
!
```

```
ip ssh version 2
```

```
!
!
!
```

```
interface Port-channel1
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 10,20,30
```

```
!
```

```
interface FastEthernet1/0/1
shutdown
```

```
!
```

```
interface FastEthernet1/0/2
shutdown
```

```
!
```

```
interface FastEthernet1/0/3
shutdown
```

```
!
```

```
interface FastEthernet1/0/4
shutdown
```

```
!
```

```
interface FastEthernet1/0/5
shutdown
```

```
!
```

```
interface FastEthernet1/0/6
shutdown
```

```
!
```

```
interface FastEthernet1/0/7
shutdown
```

```
!
```

```
interface FastEthernet1/0/8
shutdown
```

```
!
```

```
interface FastEthernet1/0/9
shutdown
```

Interne IUT

```
!  
interface FastEthernet1/0/10  
shutdown  
!  
interface FastEthernet1/0/11  
shutdown  
!  
interface FastEthernet1/0/12  
shutdown  
!  
interface FastEthernet1/0/13  
shutdown  
!  
interface FastEthernet1/0/14  
shutdown  
!  
interface FastEthernet1/0/15  
shutdown  
!  
interface FastEthernet1/0/16  
shutdown  
!  
interface FastEthernet1/0/17  
shutdown  
!  
interface FastEthernet1/0/18  
shutdown  
!  
interface FastEthernet1/0/19  
shutdown  
!  
interface FastEthernet1/0/20  
shutdown  
!  
interface FastEthernet1/0/21  
shutdown  
!  
interface FastEthernet1/0/22  
shutdown  
!  
interface FastEthernet1/0/23  
shutdown  
!  
interface FastEthernet1/0/24  
shutdown  
!  
interface FastEthernet1/0/25  
shutdown  
!  
interface FastEthernet1/0/26  
shutdown  
!  
interface FastEthernet1/0/27  
shutdown  
!  
interface FastEthernet1/0/28  
shutdown  
!  
interface FastEthernet1/0/29  
shutdown
```

```
!  
interface FastEthernet1/0/30  
shutdown  
!  
interface FastEthernet1/0/31  
shutdown  
!  
interface FastEthernet1/0/32  
shutdown  
!  
interface FastEthernet1/0/33  
shutdown  
!  
interface FastEthernet1/0/34  
shutdown  
!  
interface FastEthernet1/0/35  
shutdown  
!  
interface FastEthernet1/0/36  
shutdown  
!  
interface FastEthernet1/0/37  
shutdown  
!  
interface FastEthernet1/0/38  
shutdown  
!  
interface FastEthernet1/0/39  
shutdown  
!  
interface FastEthernet1/0/40  
shutdown  
!  
interface FastEthernet1/0/41  
shutdown  
!  
interface FastEthernet1/0/42  
shutdown  
!  
interface FastEthernet1/0/43  
shutdown  
!  
interface FastEthernet1/0/44  
shutdown  
!  
interface FastEthernet1/0/45  
shutdown  
!  
interface FastEthernet1/0/46  
switchport trunk encapsulation dot1q  
switchport trunk allowed vlan 10,20,30  
channel-group 1 mode on  
!  
interface FastEthernet1/0/47  
switchport trunk encapsulation dot1q  
switchport trunk allowed vlan 10,20,30  
channel-group 1 mode on  
!  
interface FastEthernet1/0/48
```

```
no switchport
ip address 10.1.0.3 255.255.255.254
!
interface GigabitEthernet1/0/1
switchport mode access
switchport access vlan 99
shutdown
!
interface GigabitEthernet1/0/2
switchport mode access
switchport access vlan 99
shutdown
!
interface GigabitEthernet1/0/3
switchport mode access
switchport access vlan 99
shutdown
!
interface GigabitEthernet1/0/4
switchport mode access
switchport access vlan 99
shutdown
!
interface Vlan1
no ip address
!
interface Vlan10
description RH
ip address 10.1.1.1 255.255.255.0
ip access-group RH_PROD in
ip helper-address 10.1.0.2
!
interface Vlan20
description administration
ip address 10.1.2.1 255.255.255.0
ip access-group RH_PROD in
!
interface Vlan30
description Production
ip address 10.1.3.1 255.255.255.0
ip access-group RH_PROD in
ip helper-address 10.1.0.2
!
interface Vlan99
description QUARANTINE
no ip address
!
ip classless
ip route 0.0.0.0 0.0.0.0 10.1.0.2
ip http server
ip http secure-server
!
!
ip access-list standard ACCESS_SSH
permit 10.0.2.0 0.255.0.255
!
ip access-list extended RH_PROD
permit ip 10.0.2.0 0.255.0.255 any
deny ip 10.0.1.0 0.255.0.255 10.0.3.0 0.255.0.255
deny ip 10.0.3.0 0.255.0.255 10.0.1.0 0.255.0.255
```

```

permit ip any any
!
!
!
vstack
!
line con 0
line vty 0 4
access-class ACCESS_SSH in
login local
transport input ssh
line vty 5 15
login
!
end

```

Routeur Lyon

version 15.7

```
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R-Lyon
!
boot-start-marker
boot-end-marker
!
!
enable secret 5 $1$BH4U$6PDMY9xv90JrP6dFyX7ed.
!
no aaa new-model
memory-size iomem 15
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
ip dhcp excluded-address 10.1.1.1
ip dhcp excluded-address 10.1.3.1
ip dhcp excluded-address 10.1.2.1
ip dhcp excluded-address 10.1.2.2
ip dhcp excluded-address 10.1.3.2
ip dhcp excluded-address 10.1.1.2
!
```


Interne IUT

```
ip dhcp pool Lyon_Prod
  network 10.1.3.0 255.255.255.0
  default-router 10.1.3.1
!
ip dhcp pool Lyon_RH
  network 10.1.1.0 255.255.255.0
  default-router 10.1.1.1
!
ip dhcp pool Lyon_Admin
  network 10.1.2.0 255.255.255.0
  default-router 10.1.2.1
!
!
!
ip domain name SAE301.local
ip cef
no ipv6 cef
!
multilink bundle-name authenticated
!
!
!
!
!
!
!
voice-card 0
!
!
!
!
!
!
!
vxml logging-tag
license udi pid CISC02911/K9 sn FCZ2024705T
license accept end user agreement
license boot module c2900 technology-package securityk9
license boot module c2900 technology-package uck9
license boot module c2900 technology-package datak9
!
!
username R-Lyon privilege 15 secret 5 $1$DrSp$dARLAjmlPUd9ky3FH3Nu60
!
redundancy
!
!
!
!
!
!
!
!
!
!
```

```

!
!
interface Embedded-Service-Engine0/0
  no ip address
  shutdown
!
interface GigabitEthernet0/0
  no ip address
  shutdown
  duplex auto
  speed auto
!
interface GigabitEthernet0/1
  description Vers LAN Lyon
  ip address 10.1.0.2 255.255.255.254
  ip nat inside
  ip virtual-reassembly in
  duplex auto
  speed auto
!
interface GigabitEthernet0/2
  no ip address
  shutdown
  duplex auto
  speed auto
!
interface GigabitEthernet0/0/0
  description Vers WAN GNS3
  ip address 24.8.5.3 255.255.255.254
  ip nat outside
  ip virtual-reassembly in
  negotiation auto
!
!
ip forward-protocol nd
!
no ip http server
no ip http secure-server
!
ip nat inside source list NAT_Lyon interface GigabitEthernet0/0/0 overload
ip route 0.0.0.0 0.0.0.0 24.8.5.2
ip route 10.1.0.0 255.255.0.0 10.1.0.3
ip route 24.8.5.2 255.255.255.254 GigabitEthernet0/0/0
ip ssh version 2
!
ip access-list standard Acces_ssh_admin
  permit 10.1.2.0 0.0.0.255
  permit 10.0.2.0 0.0.0.255
ip access-list standard NAT_Lyon
  permit 10.1.0.0 0.0.255.255
!
ipv6 ioam timestamp
!
!
!
control-plane
!
!
!

```

```
!  
!  
mgcp behavior rsip-range tgcp-only  
mgcp behavior comedia-role none  
mgcp behavior comedia-check-media-src disable  
mgcp behavior comedia-sdp-force disable  
!  
mgcp profile default  
!  
!  
!  
!  
!  
!  
!  
gatekeeper  
  shutdown  
!  
!  
line con 0  
line aux 0  
line 2  
  no activation-character  
  no exec  
  transport preferred none  
  transport output lat pad telnet rlogin lapb-ta mop udptn v120 ssh  
  stopbits 1  
line vty 0 4  
  access-class Acces_ssh_admin in  
  login local  
  transport input ssh  
!  
scheduler allocate 20000 1000  
!  
end
```

LES PORTS SUR LES SW À QUEL VLAN:

Fa2/0/1 - 2 : Natif

Fa2/0/3 - 12 : Admin

Fa2/0/13 - 24 : RH

Fa2/0/25 - 48 : Production

4. VERIFICATION DU BON FONCTIONNEMENT

5. ANNEXE