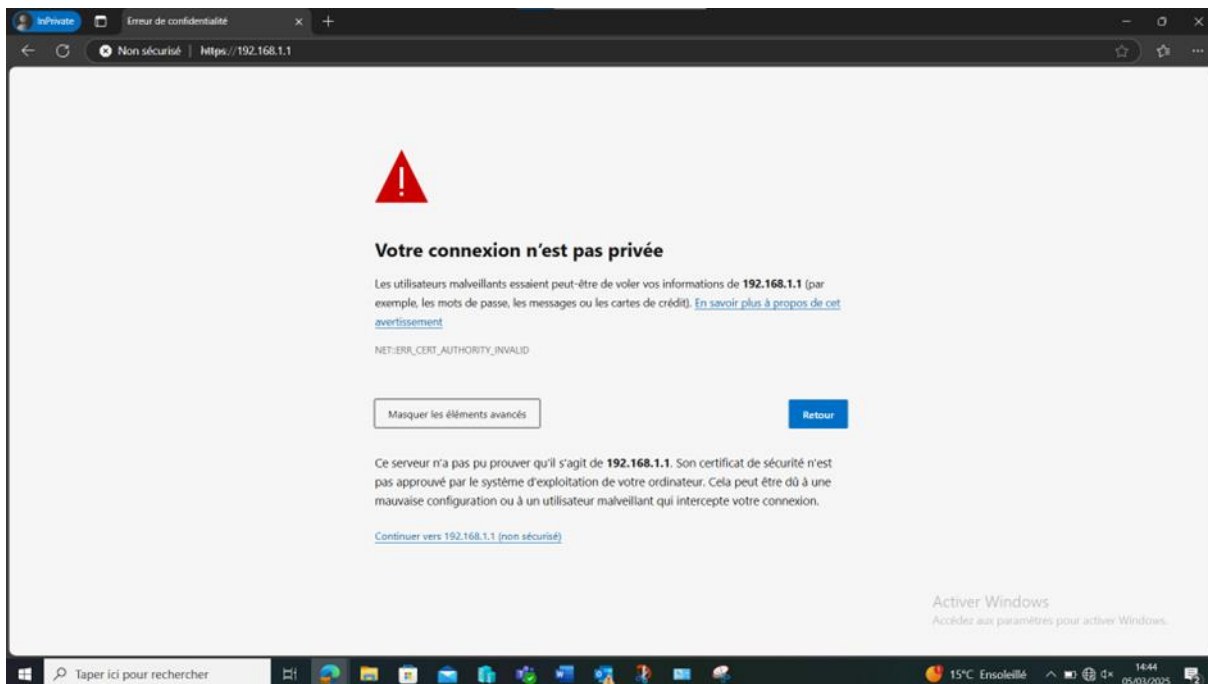


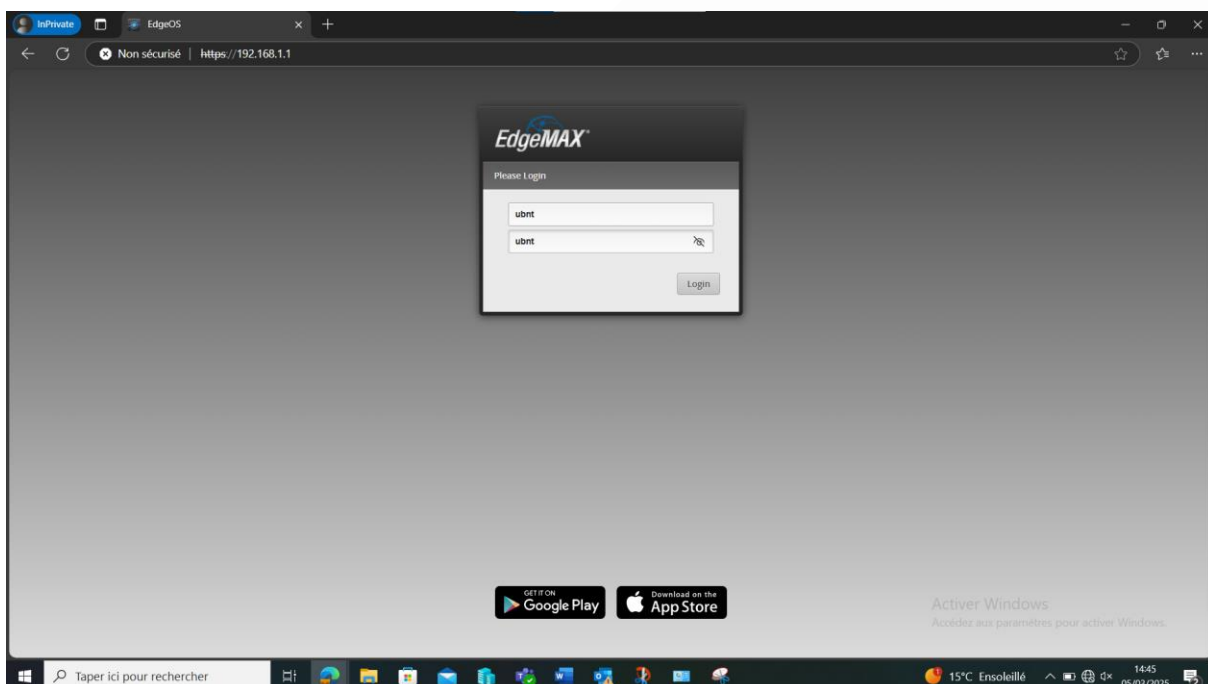
CONFIGURATION MATERIELLE BAIE

Routeur Ubiquiti

J'ai configuré l'adresse IP de mon ordinateur sur le réseau 192.168.1.0/24 afin d'attendre l'adresse par défaut du routeur : **192.168.1.1** .



Je me suis ensuite connectée avec les identifiants par défaut qui sont : **ubnt ubnt**



J'ai changé les identifiants du routeur pour plus de sécurité, ainsi que son adresse IP. Ceux-ci sont désormais :

Configuration de mon routeur et de mes switches

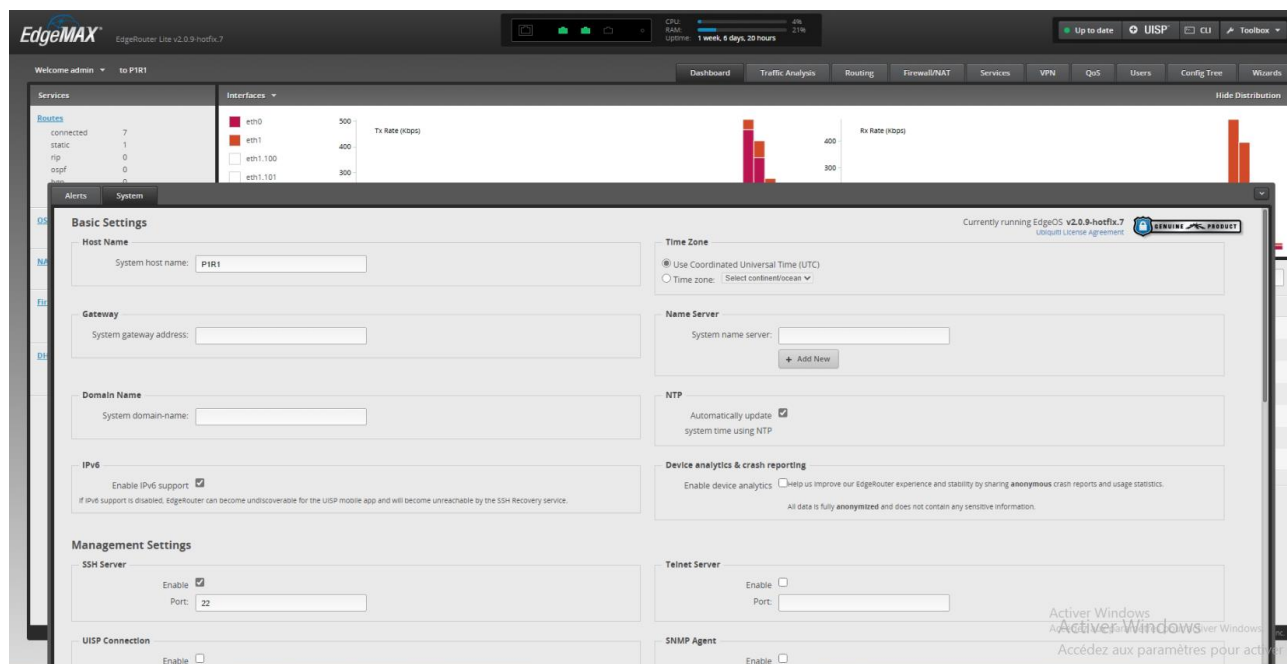
ID : admin

MDP : P@ssw0rd

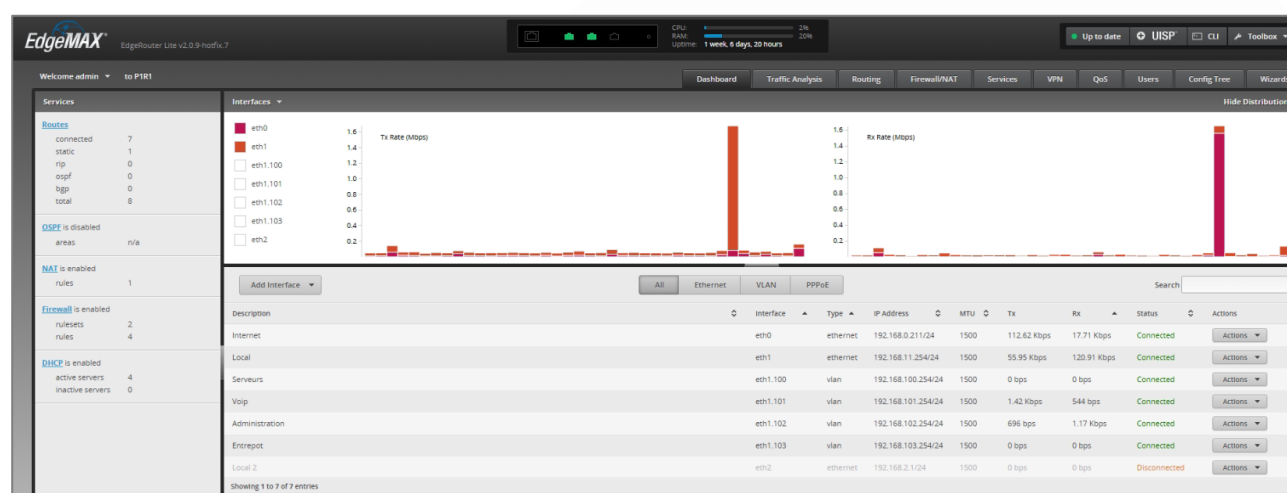
IP : 192.168.11.254

Voici la **configuration** appliquée à mon routeur :

J'ai débord nommé mon routeur **P1R1**.



J'ai configuré mon EdgeRouter avec l'interface eth0 connectée à Internet et eth1 utilisée pour le réseau local. Sur eth1, j'ai créé plusieurs VLANs : eth1.100 pour les serveurs, eth1.101 pour la VoIP, eth1.102 pour l'administration et eth1.103 pour l'entrepôt.



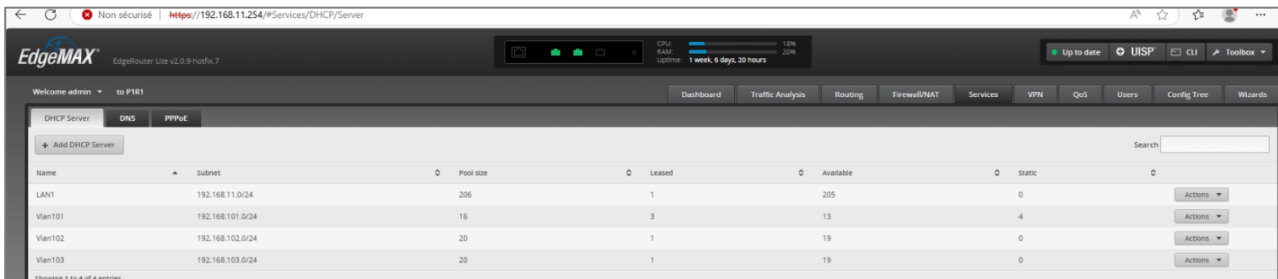
J'ai configuré quatre serveurs DHCP sur mon routeur, chacun associé à un sous-réseau différent :

- **LAN1** : 192.168.1.0/24, avec une plage de 256 adresses IP disponibles.
- **Vlan101** : 192.168.101.0/24, avec une plage de 16 adresses (+4 réservées).

Configuration de mon routeur et de mes switches

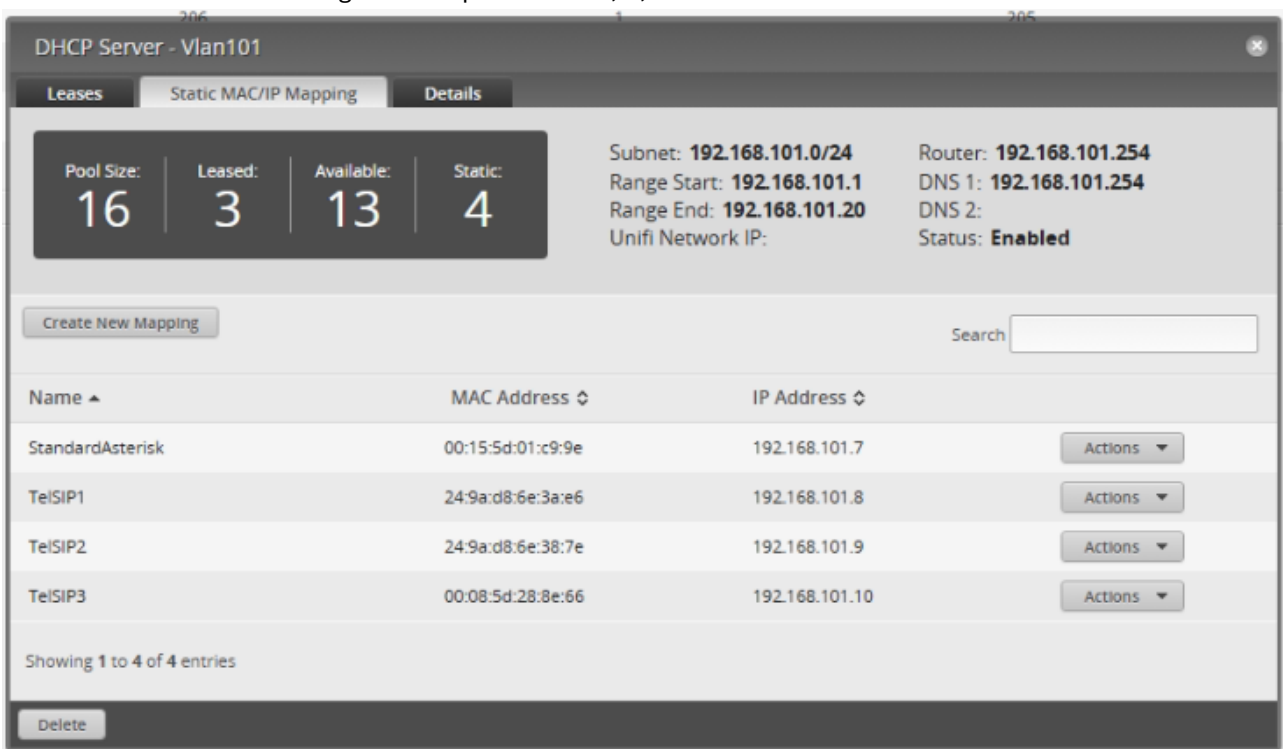
- **Vlan102** : 192.168.102.0/24, avec une plage de 20 adresses.
- **Vlan103** : 192.168.103.0/24, également avec une plage de 20 adresses.

Le serveur DHCP est actif sur chacun de ces réseaux pour attribuer automatiquement les adresses IP aux appareils connectés. Je peux aussi voir combien d'adresses sont actuellement louées ou encore disponibles.



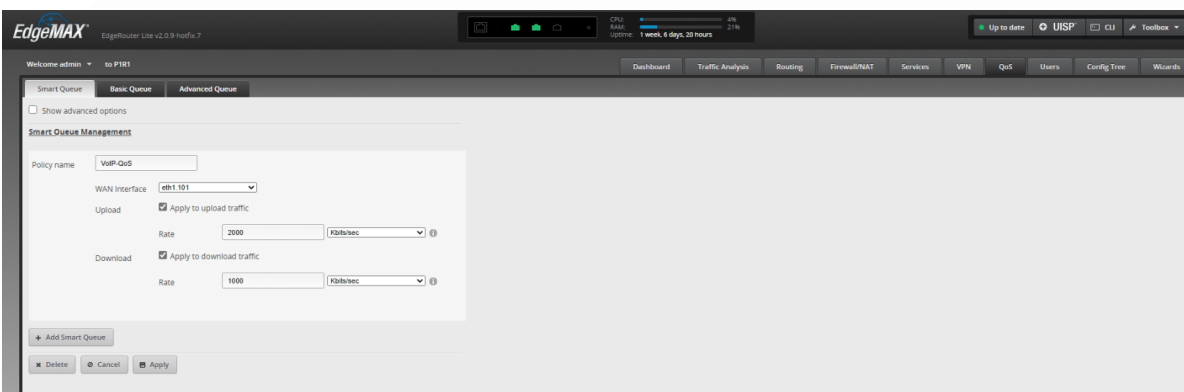
Name	Subnet	Pool size	Leased	Available	Static	Actions
LAN1	192.168.11.0/24	206	1	205	0	Actions
Vlan101	192.168.101.0/24	16	3	13	4	Actions
Vlan102	192.168.102.0/24	20	1	19	0	Actions
Vlan103	192.168.103.0/24	20	1	19	0	Actions

Sur le DHCP de mon Vlan 101, celui de la VOIP, j'ai réalisé une réservation pour 4 appareils afin que leur adresse IP demeure fixe. Il s'agit des téléphones SIP 1, 2, 3 et du standard Asterisk.



Name	MAC Address	IP Address	Actions
StandardAsterisk	00:15:5d:01:c9:9e	192.168.101.7	Actions
TeISIP1	24:9a:d8:6e:3a:e6	192.168.101.8	Actions
TeISIP2	24:9a:d8:6e:38:7e	192.168.101.9	Actions
TeISIP3	00:08:5d:28:8e:66	192.168.101.10	Actions

J'ai mis en place une file intelligente (Smart Queue) nommée VoIP-QoS sur l'interface eth1.101, qui correspond au VLAN dédié à la VoIP. Cette configuration fait partie de la gestion de la qualité de service (QoS) afin de prioriser le trafic vocal. J'ai défini une limite de 2000 Kbit/s en upload et 1000 Kbit/s en download, appliquée aux flux montants et descendants, pour assurer une bande passante stable et suffisante aux communications VoIP.



Policy name: VoIP-QoS

WAN Interface: eth1.101

Upload: ☒ Apply to upload traffic

Rate: 2000 Kbit/s

Download: ☒ Apply to download traffic

Rate: 1000 Kbit/s

Switches Cisco

Dans le cadre de mon projet, j'ai mis en place une infrastructure réseau composée de plusieurs switches interconnectés entre eux, avec une agrégation de liens entre eux. J'ai également activé le protocole Spanning Tree (STP) afin de gérer la redondance et la tolérance aux pannes.

Agrégation de liens entre switches

L'agrégation de liens (souvent appelée LACP – Link Aggregation Control Protocol lorsqu'elle est dynamique) permet de combiner plusieurs ports physiques entre deux switches pour créer un lien logique unique. Cela présente plusieurs avantages :

- ➔ **Amélioration de la bande passante** : les données peuvent circuler sur plusieurs liaisons en parallèle, ce qui augmente la capacité totale entre les switches.
- ➔ **Équilibrage de charge** : le trafic réseau est réparti entre les liens agrégés, évitant les saturations sur un seul lien.
- ➔ **Continuité de service** : si un câble ou un port tombe en panne, le trafic passe automatiquement par les autres liens du groupe agrégé.

Spanning Tree Protocol (STP)

Le STP est activé pour éviter les boucles réseau, qui peuvent rendre le réseau instable. Il détecte les chemins redondants et désactive temporairement ceux qui ne sont pas nécessaires, tout en gardant une alternative prête si un lien principal échoue.

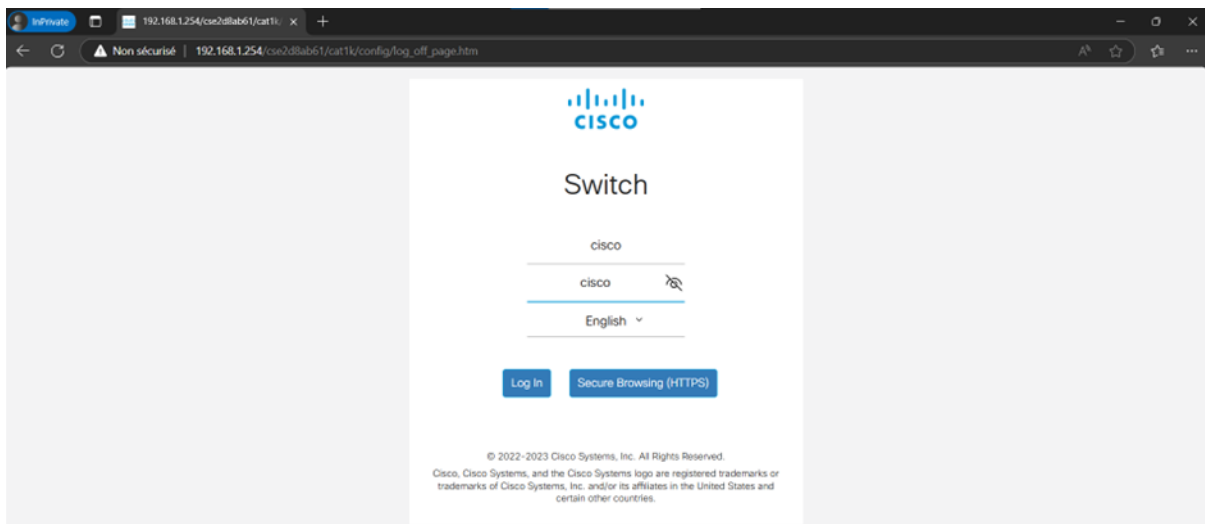
Avantages de cette architecture

Redondance et tolérance aux pannes :

- ➔ Grâce à l'agrégation et au STP, le réseau peut continuer à fonctionner même en cas de défaillance d'un lien ou d'un switch.
- ➔ Performance accrue : L'agrégation permet de mieux gérer les flux importants entre switches.
- ➔ Fiabilité : Le réseau est protégé contre les boucles qui pourraient le faire crasher.

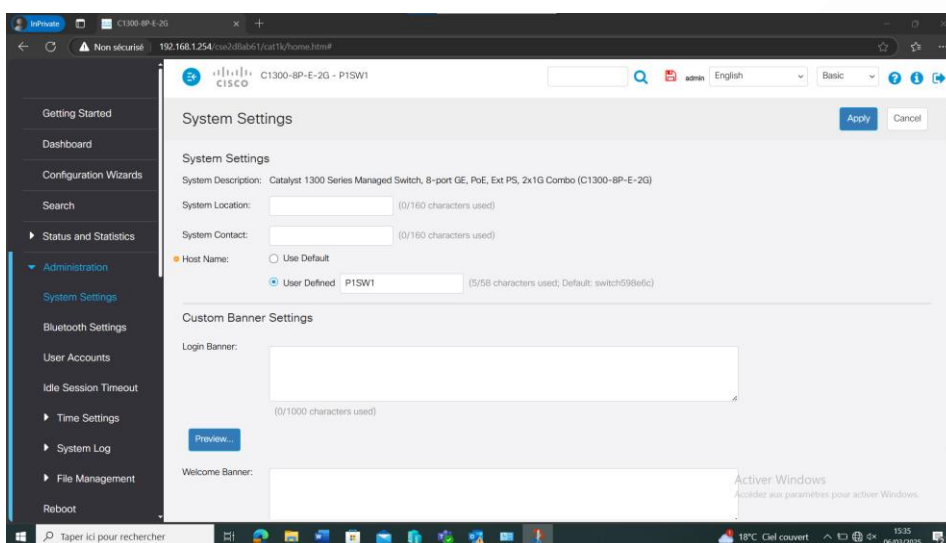
Pour chacun de mes switches, j'ai commencé par les connecter à l'adresse IP par défaut 192.168.1.254 en ayant pris soin d'attribuer une adresse ip sur le même réseau à mon ordinateur, et ai utilisé les identifiants par défaut : cisco cisco.

Configuration de mon routeur et de mes switches



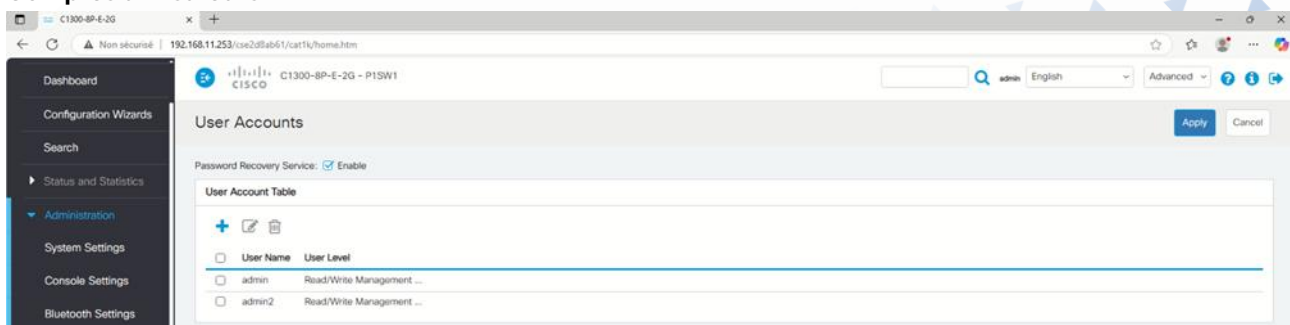
J'ai ensuite changé les identifiants et mots de passe pour chacun de mes switches. C'est la première étape proposée lors de la première connexion.

Ensuite, j'ai changé le nom de mes appareils. Respectivement : P1SW1, P1SW2 et P1SW3, comme étiqueté dans ma baie.



Configuration de mon switch SW1

Comptes utilisateurs



Configuration de mon routeur et de mes switches

Ports actifs

The screenshot shows the 'Port Settings' configuration page for a Cisco switch. The left sidebar contains a navigation menu with options like Port Management, Error Recovery Settings, Loopback Detection Settings, Link Aggregation, UDLD, PoE, Green Ethernet, Smartport, VLAN Management, Spanning Tree, MAC Address Tables, Multicast, and IPv4 Configuration. The main content area is titled 'Port Settings' and includes a 'Port Settings Table' with columns for Entry No., Port, Port Type, Operational Status, Link Status, SNMP Traps, Time Range, Port Speed, Duplex Mode, LAG, and Protection State. The table lists 10 ports, all of which are 1000M-Copper and are currently Up.

Entry No.	Port	Port Type	Operational Status	Link Status	SNMP Traps	Time Range	Port Speed	Duplex Mode	LAG	Protection State
1	GE1 (P1-SW2)	1000M-Copper	Up	Enabled			1000M	Full	1	Unprotected
2	GE2 (P1-SW2)	1000M-Copper	Up	Enabled			1000M	Full	1	Unprotected
3	GE3 (P1-SW2)	1000M-Copper	Up	Enabled			1000M	Full	1	Unprotected
4	GE4 (P1-SW3)	1000M-Copper	Up	Enabled			1000M	Full		Unprotected
5	GE5 (Hyper-V)	1000M-Copper	Up	Enabled			1000M	Full		Unprotected
6	GE6 (P1-AD1)	1000M-Copper	Up	Enabled			1000M	Full		Unprotected
7	GE7	1000M-Copper	Up	Enabled			1000M	Full		Unprotected
8	GE8 (P1-R1)	1000M-Copper	Up	Enabled			1000M	Full		Unprotected
9	GE9	1000M-ComboC	Down	Enabled						Unprotected
10	GE10	1000M-ComboC	Down	Enabled						Unprotected

LAG Management

The screenshot shows the 'LAG Management' configuration page. The left sidebar is the same as the previous page. The main content area is titled 'LAG Management' and includes a 'LAG Management Table' with columns for LAG, Name, LACP, Link State, Active Member, and Standby Member. The table lists 8 LAGs, all of which are currently Disabled.

LAG	Name	LACP	Link State	Active Member	Standby Member
LAG 1		Disabled	Link Up	GE1, GE2, GE3	
LAG 2			Link Not Present		
LAG 3			Link Not Present		
LAG 4			Link Not Present		
LAG 5			Link Not Present		
LAG 6			Link Not Present		
LAG 7			Link Not Present		
LAG 8			Link Not Present		

LAG Settings

The screenshot shows the 'LAG Settings' configuration page. The left sidebar is the same as the previous pages. The main content area is titled 'LAG Settings' and includes a 'LAG Settings Table' with columns for Entry No., LAG, Type, Status, Link Status, SNMP Traps, Time Range, Auto Negotiation, Speed, Flow Control, and Protection State. The table lists 8 LAGs, all of which are currently Enabled.

Entry No.	LAG	Type	Status	Link Status	SNMP Traps	Time Range	Auto Negotiation	Speed	Flow Control	Protection State
1	LAG 1	1000M	Up	Enabled			Enabled	1000M	Disabled	Unprotected
2	LAG 2			Enabled						Unprotected
3	LAG 3			Enabled						Unprotected
4	LAG 4			Enabled						Unprotected
5	LAG 5			Enabled						Unprotected
6	LAG 6			Enabled						Unprotected
7	LAG 7			Enabled						Unprotected
8	LAG 8			Enabled						Unprotected

VLAN Membership

The screenshot shows the 'VLAN Settings' configuration page. The left sidebar is the same as the previous pages. The main content area is titled 'VLAN Settings' and includes a 'VLAN Table' with columns for VLAN ID, VLAN Name, Originators, VLAN Interface State, and Link Status. The table lists 5 VLANs, all of which are currently Enabled.

VLAN ID	VLAN Name	Originators	VLAN Interface State	Link Status
1	Administration	Default	Enabled	Enabled
100		Static	Enabled	Enabled
101		Static	Enabled	Enabled
102		Static	Enabled	Enabled
103		Static	Enabled	Enabled

Configuration de mon routeur et de mes switches

VLAN GE5

The screenshot shows the 'Port VLAN Membership' configuration page for a Cisco switch. The left sidebar contains navigation options: Search, Status and Statistics, Administration, Port Management, Smartport, VLAN Management (selected), VLAN Settings, Interface Settings, Port to VLAN, Port VLAN Membership (selected), VLAN Translation, Private VLAN Settings, GVRP Settings, VLAN Groups, Voice VLAN, Auto-Surveillance VLAN, and Access Port Multicast. The main content area displays the 'Port VLAN Membership Table' with a filter bar and a table of interface configurations.

Port VLAN Membership Table

Filter: Interface Type equals to Port Go

Interface	Mode	Administrative VLANs	Operational VLANs	LAG
<input type="radio"/> GE1 (P1-SW2)	Access	1U		1
<input type="radio"/> GE2 (P1-SW2)	Access	1U		1
<input type="radio"/> GE3 (P1-SW2)	Access	1U		1
<input type="radio"/> GE4 (P1-SW3)	Access	1U	1U	
<input checked="" type="radio"/> GE5 (Hyper-V)	Trunk	1U, 2-99, 100-103T, 10...	1U, 100-103T	
<input type="radio"/> GE6 (P1-AD1)	Access	1U	1U	
<input type="radio"/> GE7	Access	1U	1U	
<input type="radio"/> GE8 (P1-R1)	Trunk	1U, 2-99, 100-103T, 10...	1U, 100-103T	
<input type="radio"/> GE9	Access	1U	1U	
<input type="radio"/> GE10	Access	1U	1U	

Legend: F - Forbidden member, T - Tagged member, U - Untagged member, I - Inactive VLAN, P - PVID, M - Multicast TV VLAN, In - Internally used VLAN, G - Guest VLAN, Pp - Private VLAN Primary, Ps - Private VLAN Secondary

STP Settings

The screenshot shows the 'STP Interface Settings' configuration page. The left sidebar includes: Administration, Port Management, Smartport, VLAN Management, Spanning Tree (selected), STP Status & Global Settings, STP Interface Settings (selected), RSTP Interface Settings, MSTP, PVST, MAC Address Tables, Multicast, IPv4 Configuration, and IPv6 Configuration. The main content area displays the 'STP Interface Setting Table' with a filter bar and a table of interface configurations.

STP Interface Setting Table

Filter: Interface Type equals to Port Go

Entry No.	Interface	STP	Edge Port	Root Guard	BPDU Guard	BPDU Handling	Port Role	Path Cost	Priority	Port State	Designated Bridge ID	Designated Port ID	Designated Cost	Forward Tra
<input type="radio"/> 1	GE1 (P1-SW2)	Enabled	Disabled	Disabled	Disabled	STP	Disable	2000000	128	N/A	N/A	N/A	N/A	N/A
<input type="radio"/> 2	GE2 (P1-SW2)	Enabled	Disabled	Disabled	Disabled	STP	Disable	2000000	128	N/A	N/A	N/A	N/A	N/A
<input type="radio"/> 3	GE3 (P1-SW2)	Enabled	Disabled	Disabled	Disabled	STP	Disable	2000000	128	N/A	N/A	N/A	N/A	N/A
<input type="radio"/> 4	GE4 (P1-SW3)	Enabled	Disabled	Disabled	Disabled	STP	Designated	20000	128	Forwarding	32768-e4-a4:1c:59:8e:6c	128-4	10000	4
<input type="radio"/> 5	GE5 (Hyper-V)	Enabled	Enabled	Disabled	Disabled	STP	Designated	20000	128	Forwarding	32768-e4-a4:1c:59:8e:6c	128-5	10000	1
<input type="radio"/> 6	GE6 (P1-AD1)	Enabled	Enabled	Disabled	Disabled	STP	Designated	20000	128	Forwarding	32768-e4-a4:1c:59:8e:6c	128-6	10000	1
<input type="radio"/> 7	GE7	Enabled	Enabled	Disabled	Disabled	STP	Designated	20000	128	Forwarding	32768-e4-a4:1c:59:8e:6c	128-7	10000	1
<input type="radio"/> 8	GE8 (P1-R1)	Enabled	Enabled	Disabled	Disabled	STP	Designated	20000	128	Forwarding	32768-e4-a4:1c:59:8e:6c	128-8	10000	1
<input type="radio"/> 9	GE9	Enabled	Disabled	Disabled	Disabled	STP	Disable	2000000	128	Disabled	N/A	N/A	N/A	N/A
<input type="radio"/> 10	GE10	Enabled	Disabled	Disabled	Disabled	STP	Disable	2000000	128	Disabled	N/A	N/A	N/A	N/A

The screenshot shows the 'STP Status & Global Settings' configuration page. The left sidebar includes: Administration, Port Management, Smartport, VLAN Management, Spanning Tree (selected), STP Status & Global Settings (selected), STP Interface Settings, RSTP Interface Settings, MSTP, PVST, MAC Address Tables, Multicast, IPv4 Configuration, IPv6 Configuration, General IP Configuration, Security, Access Control, Quality of Service, and SNMP. The main content area displays global settings for Spanning Tree.

STP Status & Global Settings

Global Settings

Spanning Tree State: ☒ Enable

STP Loopback Guard: ☐ Enable

STP Operation Mode: ☒ Classic STP, ☒ Rapid STP, ☐ Multiple STP, ☐ Per VLAN STP, ☐ Rapid Per VLAN STP

Buttons: Apply, Cancel

The screenshot shows the 'Bridge Settings' configuration page. The left sidebar includes: MSTP, PVST, MAC Address Tables, Multicast, IPv4 Configuration, IPv6 Configuration, General IP Configuration, Security, Access Control, Quality of Service, and SNMP. The main content area displays bridge settings.

Bridge Settings

Priority: 32768 (Range: 0 - 61440, Default: 32768)

Hello Time: 2 sec (Range: 1 - 10, Default: 2)

Max Age: 20 sec (Range: 6 - 40, Default: 20)

Forward Delay: 15 sec (Range: 4 - 30, Default: 15)

Designated Root

Bridge ID: 32768-e4-a4:1c:59:8e:6c

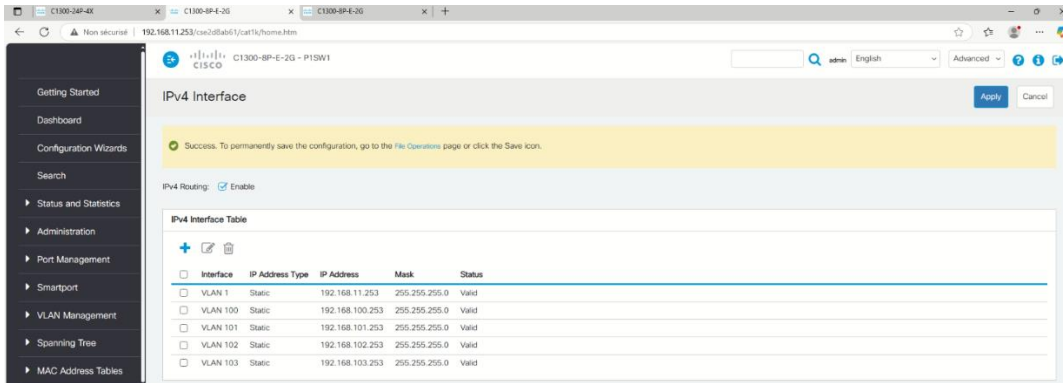
Root Bridge ID: 32768-58:8b:1c:64:ba:7c

Root Port: LAG1

Buttons: Apply, Cancel

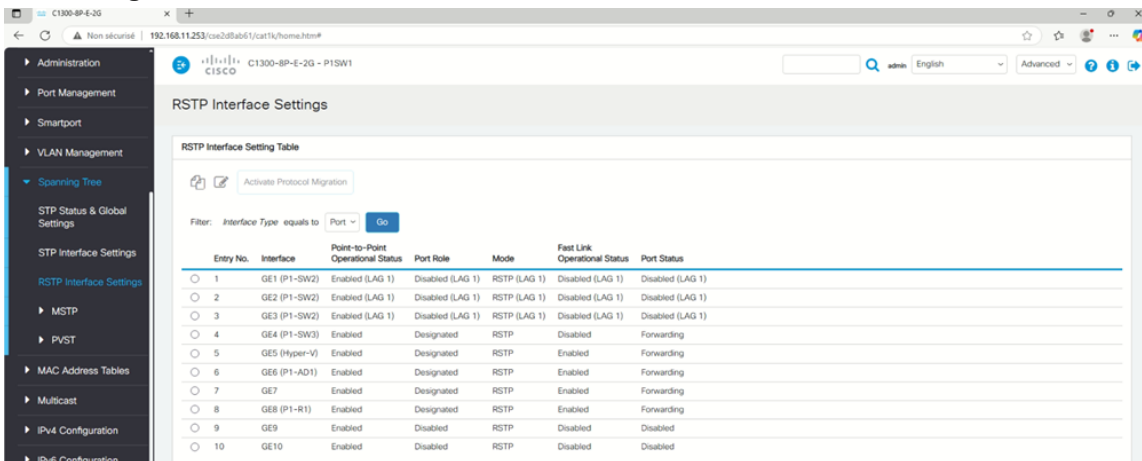
Configuration de mon routeur et de mes switches

IPv4 Interface



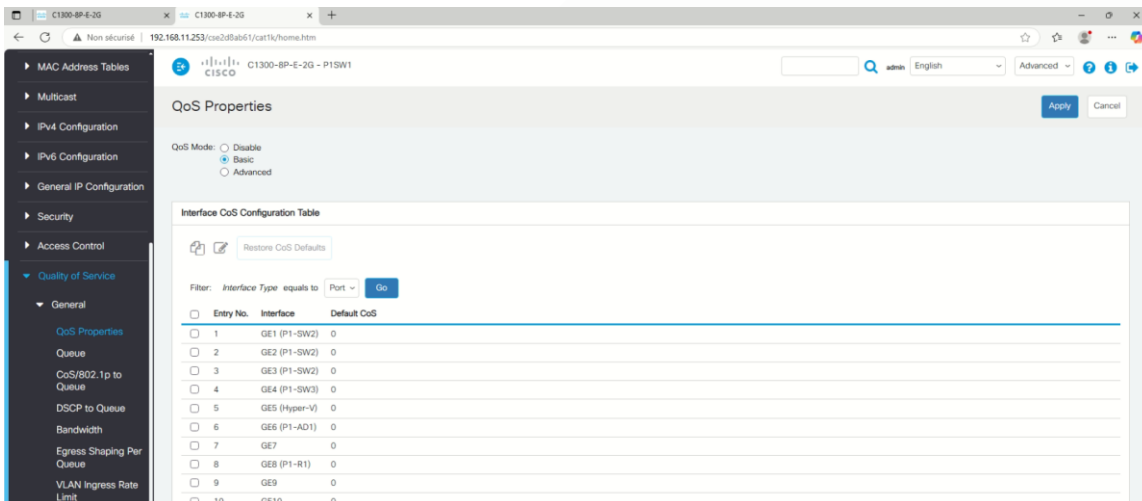
Interface	IP Address Type	IP Address	Mask	Status
VLAN 1	Static	192.168.11.253	255.255.255.0	Valid
VLAN 100	Static	192.168.100.253	255.255.255.0	Valid
VLAN 101	Static	192.168.101.253	255.255.255.0	Valid
VLAN 102	Static	192.168.102.253	255.255.255.0	Valid
VLAN 103	Static	192.168.103.253	255.255.255.0	Valid

STP Settings



Entry No.	Interface	Point-to-Point Operational Status	Port Role	Mode	Fast Link Operational Status	Port Status
1	GE1 (P1-SW2)	Enabled (LAG 1)	Disabled (LAG 1)	RSTP (LAG 1)	Disabled (LAG 1)	Disabled (LAG 1)
2	GE2 (P1-SW2)	Enabled (LAG 1)	Disabled (LAG 1)	RSTP (LAG 1)	Disabled (LAG 1)	Disabled (LAG 1)
3	GE3 (P1-SW2)	Enabled (LAG 1)	Disabled (LAG 1)	RSTP (LAG 1)	Disabled (LAG 1)	Disabled (LAG 1)
4	GE4 (P1-SW3)	Enabled	Designated	RSTP	Disabled	Forwarding
5	GE5 (Hyper-V)	Enabled	Designated	RSTP	Enabled	Forwarding
6	GE6 (P1-AD1)	Enabled	Designated	RSTP	Enabled	Forwarding
7	GE7	Enabled	Designated	RSTP	Enabled	Forwarding
8	GE8 (P1-R1)	Enabled	Designated	RSTP	Enabled	Forwarding
9	GE9	Enabled	Disabled	RSTP	Disabled	Disabled
10	GE10	Enabled	Disabled	RSTP	Disabled	Disabled

QoS Properties



Entry No.	Interface	Default CoS
1	GE1 (P1-SW2)	0
2	GE2 (P1-SW2)	0
3	GE3 (P1-SW2)	0
4	GE4 (P1-SW3)	0
5	GE5 (Hyper-V)	0
6	GE6 (P1-AD1)	0
7	GE7	0
8	GE8 (P1-R1)	0
9	GE9	0
10	GE10	0

QoS Interface Settings



Trust Mode:

- ☐ CoS/802.1p
- ☒ DSCP
- ☐ CoS/802.1p-DSCP

Override Ingress DSCP: ☐ Enable

Configuration de mon switch SW2

Comptes utilisateurs

The screenshot shows the 'User Accounts' configuration page for a Cisco switch. The left sidebar contains navigation links: Bluetooth Settings, User Accounts, Idle Session Timeout, Time Settings, System Log, File Management, and Reboot. The main content area is titled 'User Accounts' and features a 'User Account Table' with a table icon and a plus icon. The table has two columns: 'User Name' and 'User Level'. It lists two users: 'admin' and 'admin2', both with the level 'Read/Write Management ...'.

User Name	User Level
admin	Read/Write Management ...
admin2	Read/Write Management ...

Ports actifs

The screenshot shows the 'Port Settings' configuration page for a Cisco switch. The left sidebar contains navigation links: Search, Status and Statistics, Administration, Port Management, Port Settings, Error Recovery Settings, Link Aggregation, PoE, Green Ethernet, Smartport, VLAN Management, Spanning Tree, MAC Address Tables, and Multicast. The main content area is titled 'Port Settings' and features a 'Port Settings Table' with a table icon and a plus icon. The table has columns: Entry No., Port, Port Type, Operational Status, Port Speed, Duplex Mode, LAG, and Protection State. It lists 10 ports (GE1 to GE10) with their respective configurations.

Entry No.	Port	Port Type	Operational Status	Port Speed	Duplex Mode	LAG	Protection State
1	GE1 (P1-SW1)	1000M-Copper	Up	1000M	Full	1	Unprotected
2	GE2 (P1-SW1)	1000M-Copper	Up	1000M	Full	1	Unprotected
3	GE3 (P1-SW1)	1000M-Copper	Up	1000M	Full	1	Unprotected
4	GE4 (P1-SW3)	1000M-Copper	Up	1000M	Full		Unprotected
5	GE5 (Hyper-V)	1000M-Copper	Up	1000M	Full		Unprotected
6	GE6 (P1-AD2)	1000M-Copper	Up	1000M	Full		Unprotected
7	GE7	1000M-Copper	Down				Unprotected
8	GE8 (P1-R1)	1000M-Copper	Down				Unprotected
9	GE9	1000M-ComboC	Down				Unprotected
10	GE10	1000M-ComboC	Down				Unprotected

LAG Management

The screenshot shows the 'LAG Management' configuration page for a Cisco switch. The left sidebar contains navigation links: Status and Statistics, Administration, Port Management, Port Settings, Error Recovery Settings, Link Aggregation, LAG Management, LAG Settings, PoE, Green Ethernet, Smartport, VLAN Management, and Spanning Tree. The main content area is titled 'LAG Management' and features a 'LAG Management Table' with a table icon and a plus icon. The table has columns: LAG, Name, LACP, Link State, Active Member, and Standby Member. It lists 8 LAGs (LAG 1 to LAG 8) with their respective configurations.

LAG	Name	LACP	Link State	Active Member	Standby Member
LAG 1		Disabled	Link Up	GE1, GE2, GE3	
LAG 2			Link Not Present		
LAG 3			Link Not Present		
LAG 4			Link Not Present		
LAG 5			Link Not Present		
LAG 6			Link Not Present		
LAG 7			Link Not Present		
LAG 8			Link Not Present		

LAG Settings

The screenshot shows the 'LAG Settings' configuration page for a Cisco switch. The left sidebar contains navigation links: Status and Statistics, Administration, Port Management, Port Settings, Error Recovery Settings, Link Aggregation, LAG Management, LAG Settings, PoE, Green Ethernet, Smartport, and VLAN Management. The main content area is titled 'LAG Settings' and features a 'LAG Settings Table' with a table icon and a plus icon. The table has columns: Entry No., LAG, Type, Status, Auto Negotiation, Speed, Flow Control, and Protection State. It lists 8 LAGs (LAG 1 to LAG 8) with their respective configurations.

Entry No.	LAG	Type	Status	Auto Negotiation	Speed	Flow Control	Protection State
1	LAG 1	1000M	Up	Enabled	1000M	Disabled	Unprotected
2	LAG 2						Unprotected
3	LAG 3						Unprotected
4	LAG 4						Unprotected
5	LAG 5						Unprotected
6	LAG 6						Unprotected
7	LAG 7						Unprotected
8	LAG 8						Unprotected

Configuration de mon routeur et de mes switches

VLAN SETTINGS

VLAN Settings

VLAN Table

VLAN ID	VLAN Name	Originators	VLAN Interface State	Link Status
1	Default	Static	Enabled	Enabled
100	Serveurs	Static	Enabled	Enabled
101	Voip	Static	Enabled	Enabled
102	Administration	Static	Enabled	Enabled
103	Entrepot	Static	Enabled	Enabled

VLAN PORTS MEMBERSHIP

Port VLAN Membership

Port VLAN Membership Table

Interface	Mode	Administrative VLANs	Operational VLANs	LAG
GE1 (P1-SW1)	Access	1U	1	
GE2 (P1-SW1)	Access	1U	1	
GE3 (P1-SW1)	Access	1U	1	
GE4 (P1-SW3)	Trunk	1U, 100-103T	1U, 100-103T	
GE5 (Hyper-V)	Trunk	1U, 100-103T	1U, 100-103T	
GE6 (P1-AD2)	Access	1U	1U	
GE7	Access	1U	1U	
GE8 (P1-R1)	Trunk	1U, 100-103T	1U, 100-103T	
GE9	Access	1U	1U	
GE10	Access	1U	1U	

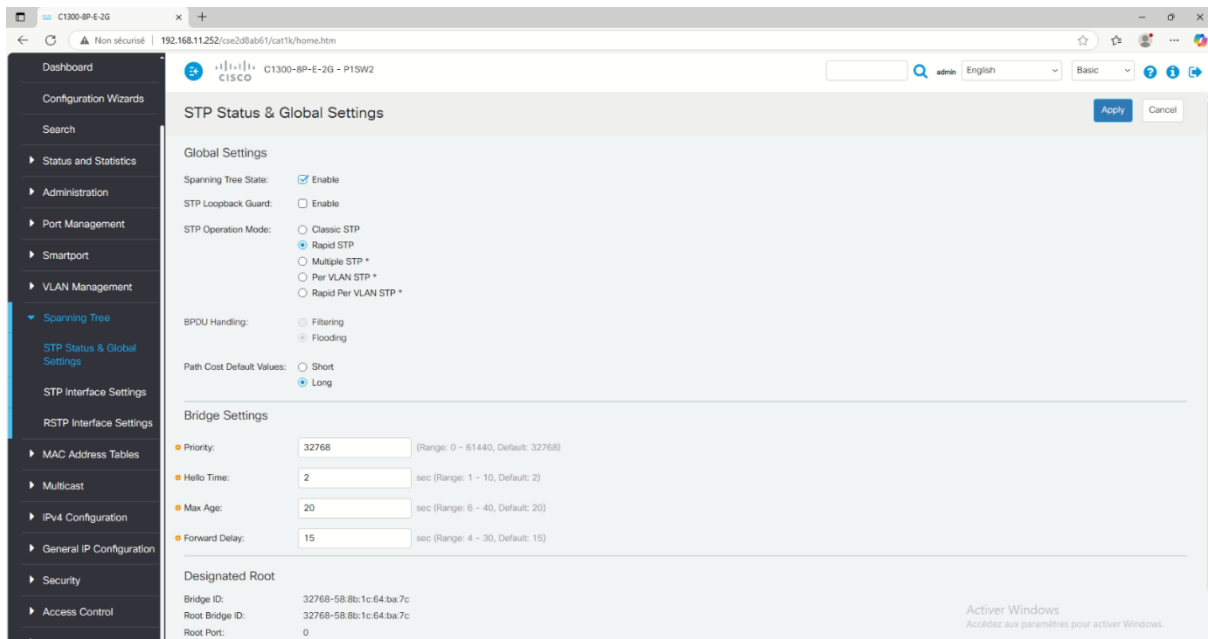
STP Settings

STP Interface Settings

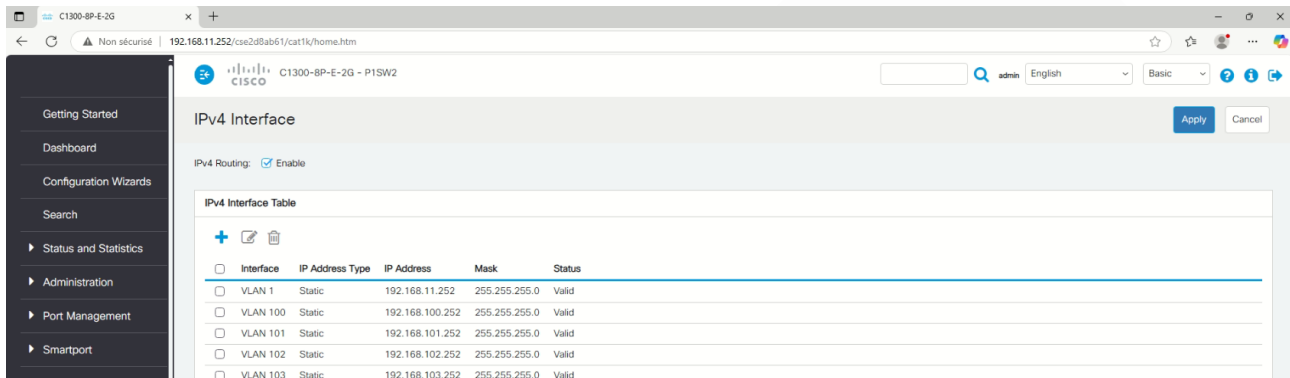
STP Interface Setting Table

Entry No.	Interface	STP	Edge Port	Port Role	Priority	Port State	Designated Bridge ID	Designated Port ID	Designated Cost	Forward Transitions	LAG
1	GE1 (P1-SW1)	Enabled	Disabled	Disable	128	N/A	N/A	N/A	N/A	N/A	1
2	GE2 (P1-SW1)	Enabled	Disabled	Disable	128	N/A	N/A	N/A	N/A	N/A	1
3	GE3 (P1-SW1)	Enabled	Disabled	Disable	128	N/A	N/A	N/A	N/A	N/A	1
4	GE4 (P1-SW3)	Enabled	Designated	128	Forwarding	32768-58.8b.1c.64 ba.7c	128-4	G	1		
5	GE5 (Hyper-V)	Enabled	Designated	128	Forwarding	32768-58.8b.1c.64 ba.7c	128-5	G	1		
6	GE6 (P1-AD2)	Enabled	Designated	128	Forwarding	32768-58.8b.1c.64 ba.7c	128-6	G	1		
7	GE7	Enabled	Disabled	Disable	128	Disabled	N/A	N/A	N/A	N/A	
8	GE8 (P1-R1)	Enabled	Disabled	Disable	128	Disabled	N/A	N/A	N/A	N/A	
9	GE9	Enabled	Disabled	Disable	128	Disabled	N/A	N/A	N/A	N/A	
10	GE10	Enabled	Designated	128	Disabled	N/A	N/A	N/A	N/A	N/A	

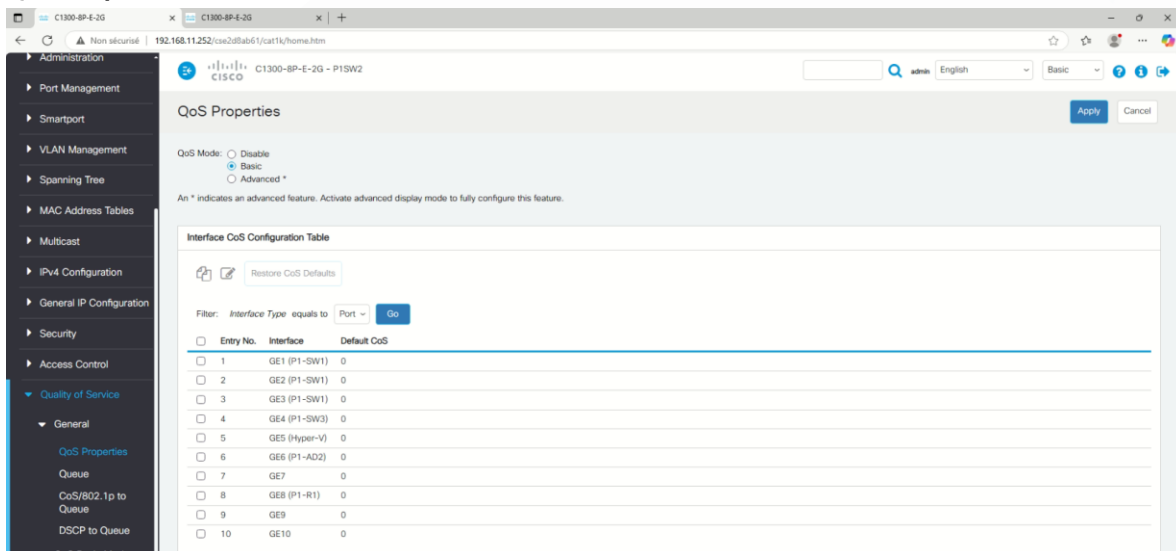
Configuration de mon routeur et de mes switches



IPv4 Interface



QoS Properties

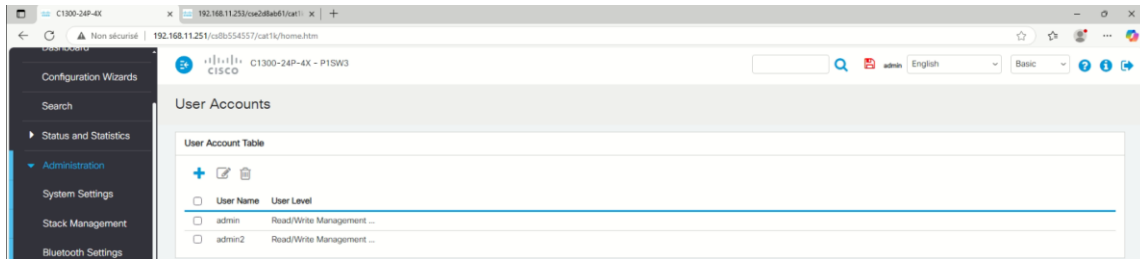


QoS Interface Settings

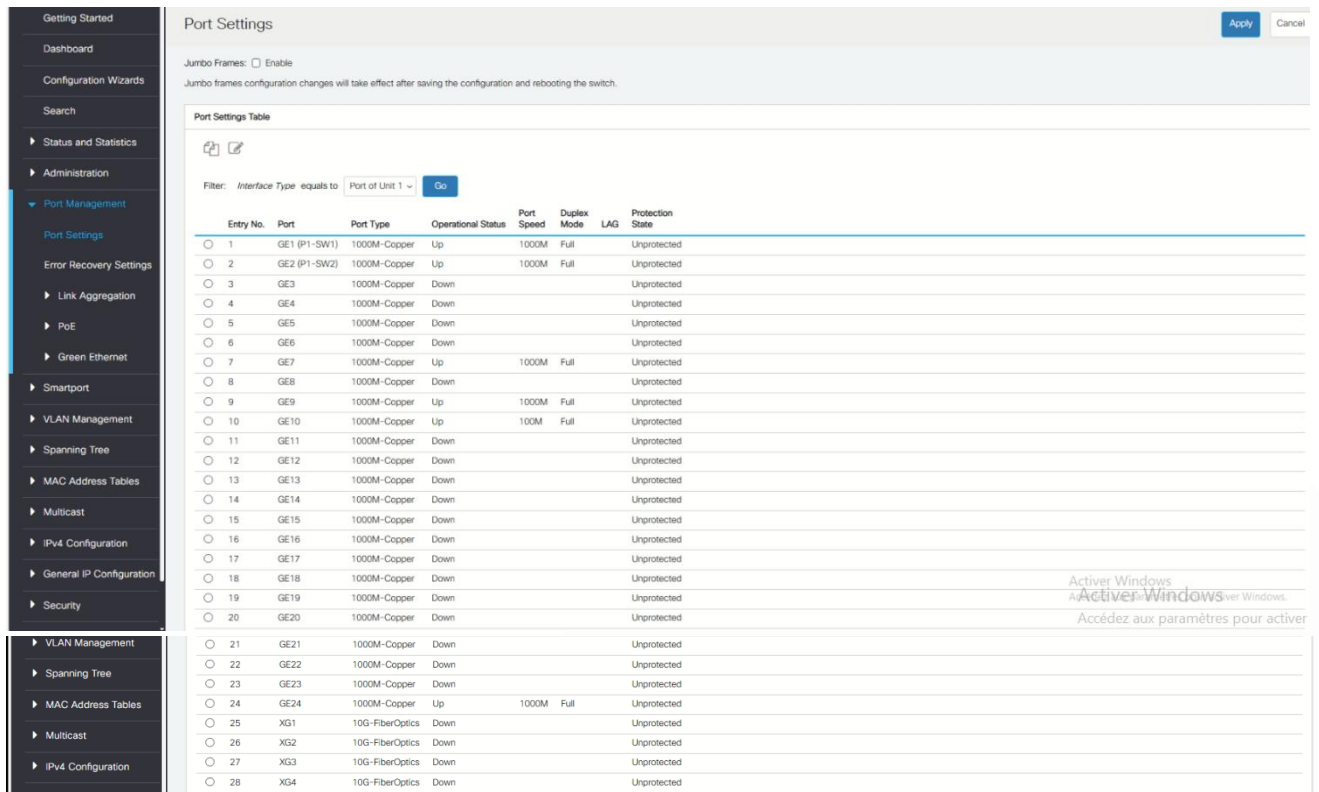


Configuration de mon switch SW3

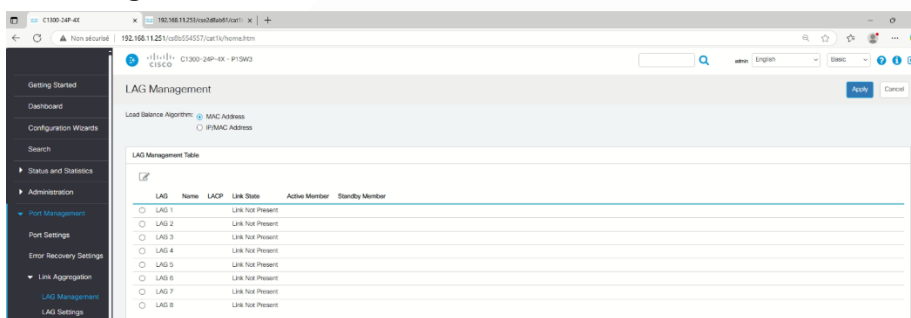
Comptes utilisateurs



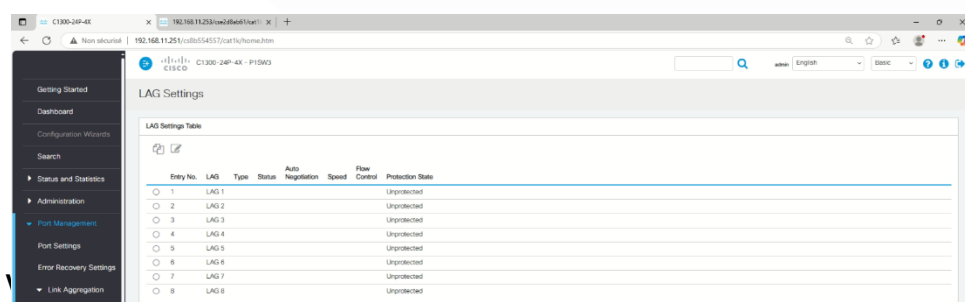
Ports actifs



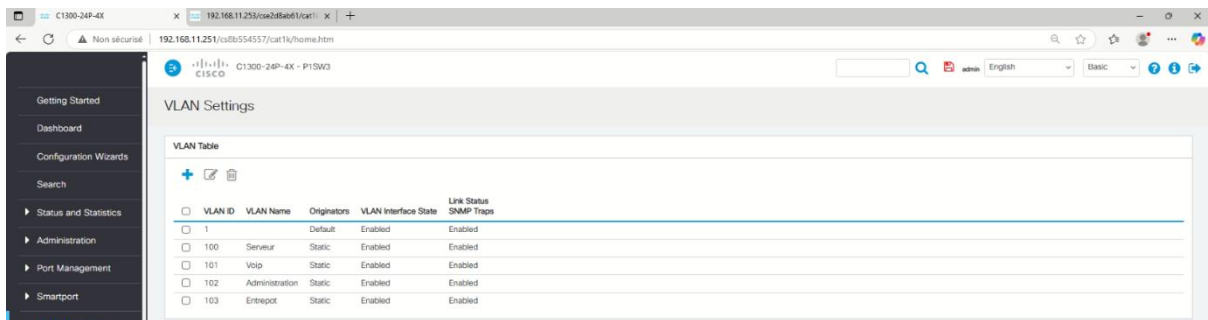
LAG Management



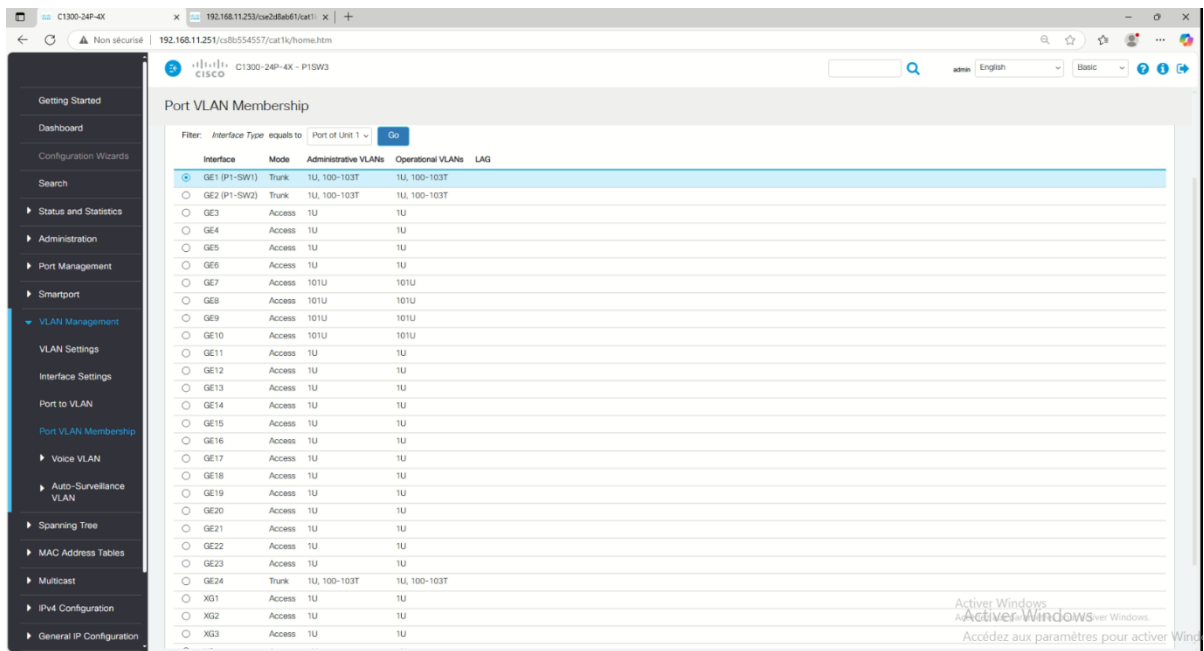
LAG Settings



Configuration de mon routeur et de mes switches



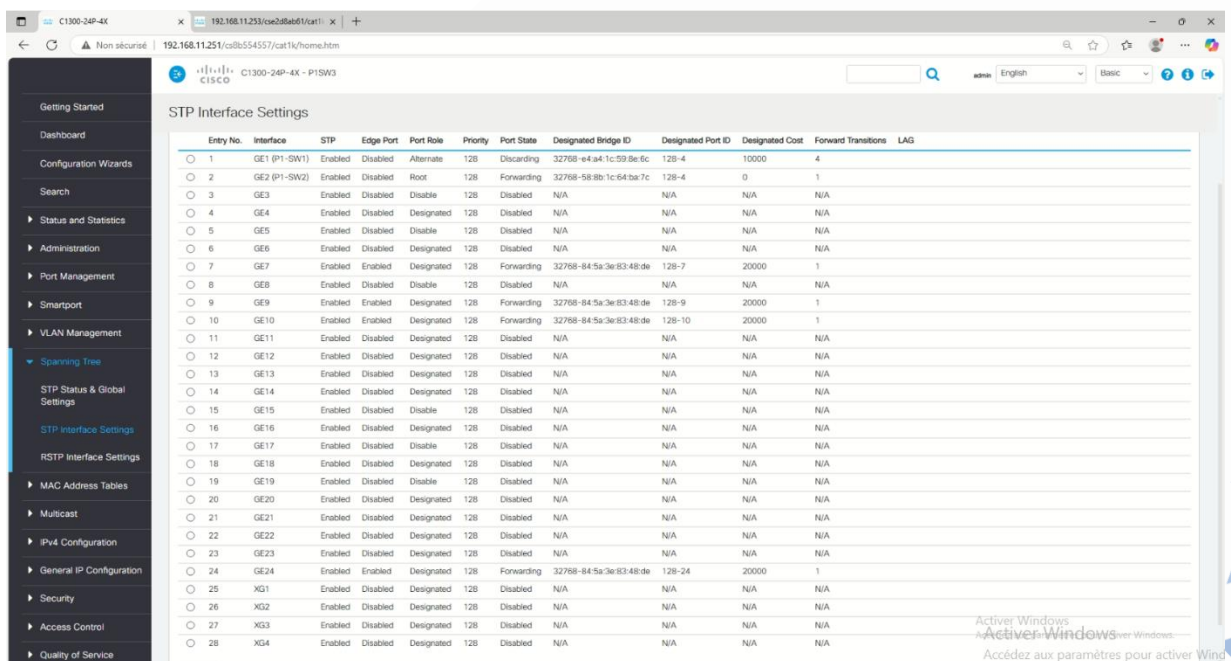
VLAN PORTS MEMBERSHIP



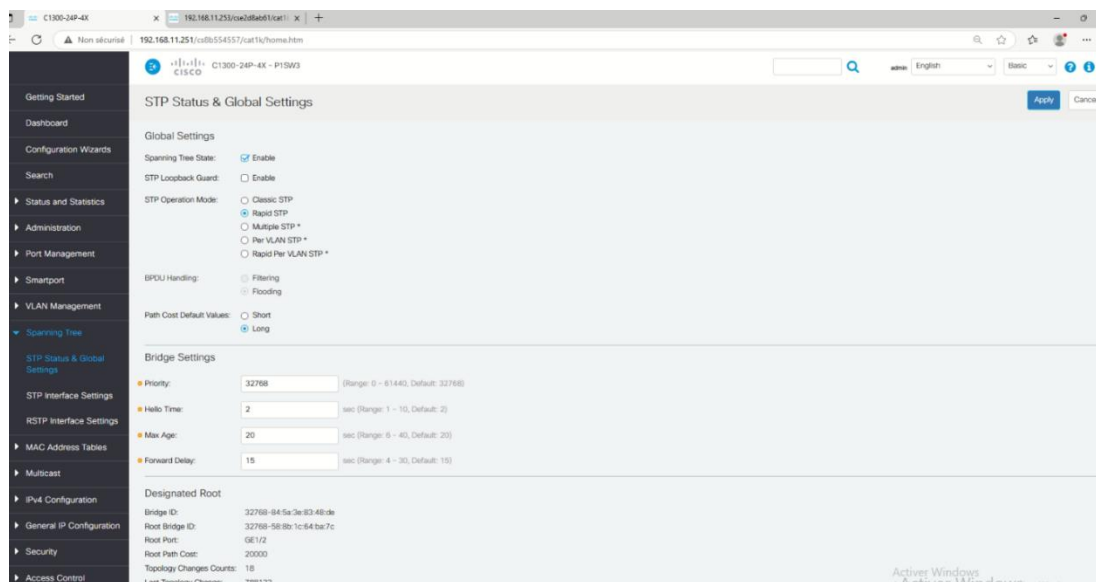
Port 24 = Borne Wifi

Port 7, 8, 9, 10 = Téléphones SIP

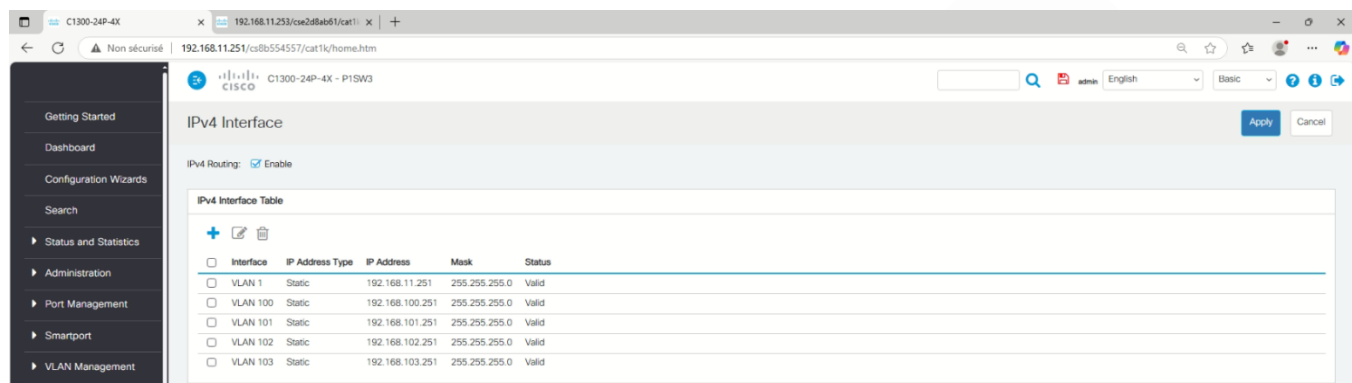
STP Settings



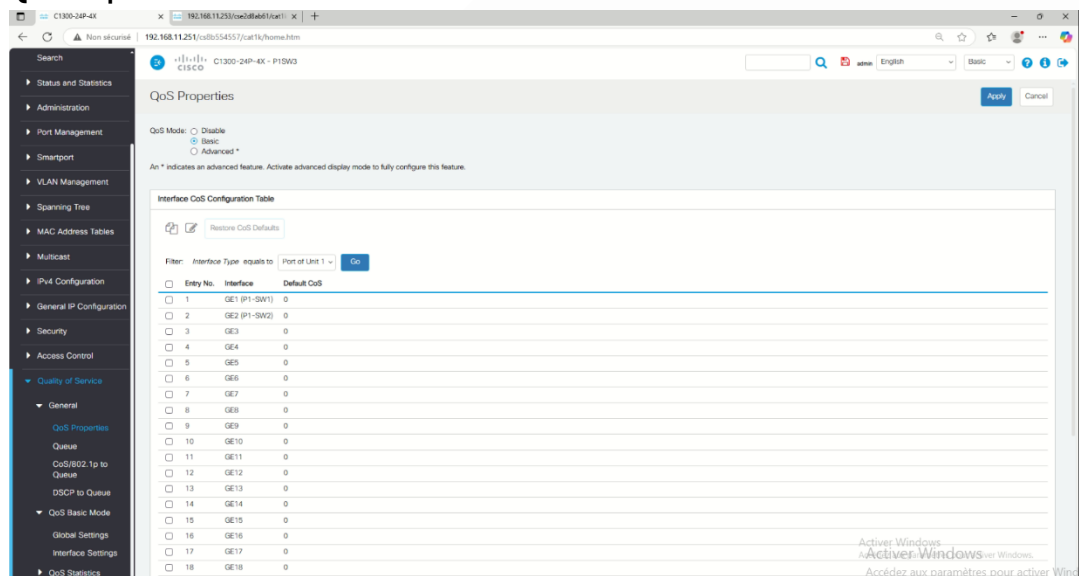
Configuration de mon routeur et de mes switches



IPv4 Interface



QoS Properties



QoS Interface Settings

