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Travaux pratique N°2 configurations du service DNS sur un petit réseau

1- Définition de l'adresse IP 192.168.1.0/26

Cet IP étant une adresse de type c il faut donc déterminer le masque sous réseaux pour connaitre

L'adresse de diffusion.

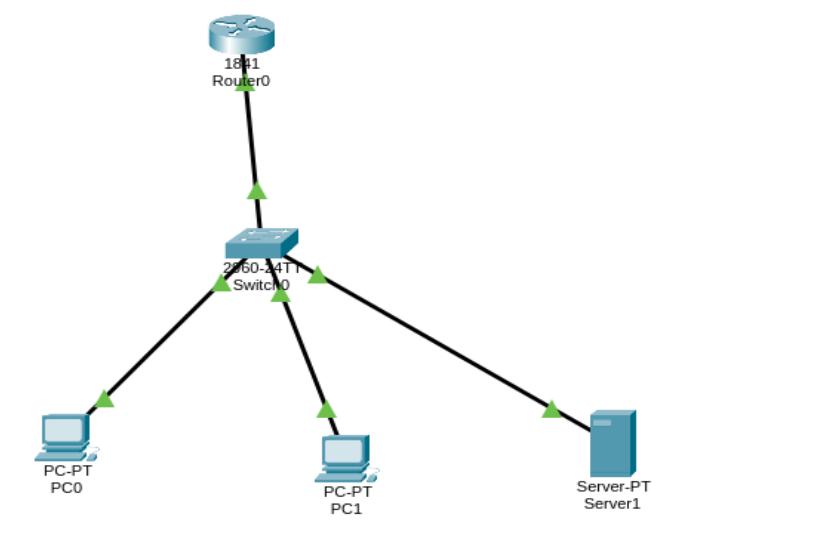
Le masque de sous réseaux est 255.255.255.192

L'adresse de diffusion est :192.168.1.63

Par conséquent la plage d'adresse pour le sous réseau est de 192.168.1.1 à 192.168.1.62

	Interface	Adresse IP	Masque	Passerelle
R1	F0/1	192.168.1.62	255.255.255.192	N/A
PC0	Carte	192.168.1.1	255.255.255.192	192.168.1.1
PC1	Carte	192.168.1.2	255.255.255.192	192.168.1.2
Serveur DNS	Carte	192.168.1.3	255.255.255.192	192.168.1.3

Topologie



Etape 1 : Configuration de l'interface

IOS Command Line Interface

```
Cisco 1841 (revision 5.0) with 114688K/16384K bytes of memory.
Processor board ID FTX0947Z18E
M860 processor: part number 0, mask 49
2 FastEthernet/IEEE 802.3 interface(s)
191K bytes of NVRAM.
63488K bytes of ATA CompactFlash (Read/Write)
Cisco IOS Software, 1841 Software (C1841-ADVIPSERVICESK9-M), Version 12.4(15)T1, RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Wed 18-Jul-07 04:52 by pt_team
```

--- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]:

Press RETURN to get started!

Router>enable

Router#configure terminal

^

% Invalid input detected at '^' marker.

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface fastEthernet0/0

Router(config-if)#ip address 192.168.1.62

% Incomplete command.

Router(config-if)#ip address 192.168.1.62 255.255.255.192

Router(config-if)#no shutdown

Router(config-if)#

%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Etape 2 : Activation du protocole http

The screenshot shows the 'Services' tab in WinBox. On the left, a sidebar lists various services: SERVICES, HTTP, DHCP, DHCPv6, TFTP, DNS, SYSLOG, AAA, NTP, EMAIL, FTP, IoT, VM Management, and Radius EAP. The 'HTTP' service is selected. The main area shows 'HTTP' and 'HTTPS' sections, both with 'On' radio buttons selected. Below these is a 'File Manager' table.

	File Name	Edit	Delete
1	copyrights.html	(edit)	(delete)
2	cscoptlogo177x111.jpg		(delete)
3	helloworld.html	(edit)	(delete)
4	image.html	(edit)	(delete)
5	index.html	(edit)	(delete)

2. Explication du rôle du protocole http

HTTP est un protocole qui **permet de récupérer des ressources telles que des documents HTML**. Il est à la base de tout échange de données sur le Web. C'est un protocole de type client-serveur, ce qui signifie que les requêtes sont initiées par le destinataire (qui est généralement un navigateur web).

Etape 3 Configuration du service DNS

The screenshot shows the 'DNS' configuration page in WinBox. The left sidebar is the same as in the previous image, with 'DNS' selected. The main area shows the 'DNS Service' with 'On' selected. Below is the 'Resource Records' section. It has a 'Name' field, a 'Type' dropdown set to 'A Record', and an 'Address' field. At the bottom, there are 'Add', 'Save', and 'Remove' buttons. Below these buttons is a table showing the configured record.

No.	Name	Type	Detail
0	servicedns1.ed	A Record	192.168.1.3

2 Explication du rôle du service DNS

Les serveurs **DNS** traduisent des demandes de noms en adresses IP, en contrôlant à **quel** serveur un utilisateur final va se connecter quand il tapera un nom de domaine dans son navigateur.

Etape 4 configuration des PC

PC 0

The screenshot displays the WinBox configuration interface for PC 0, specifically the 'Desktop' tab. The 'IP Configuration' window is open, showing the following settings:

- Interface:** FastEthernet0
- IP Configuration:**
 - ☐ DHCP
 - ☒ Static
 - IPv4 Address: 192.168.1.1
 - Subnet Mask: 255.255.255.192
 - Default Gateway: 192.168.1.62
 - DNS Server: 192.168.1.3
- IPv6 Configuration:**
 - ☐ Automatic
 - ☒ Static
 - IPv6 Address: (empty field)
 - Link Local Address: FE80::2E0:8FFF:FE70:1732
 - Default Gateway: (empty field)
 - DNS Server: (empty field)
- 802.1X:**
 - ☐ Use 802.1X Security
 - Authentication: MD5
 - Username: (empty field)
 - Password: (empty field)

PC 1

Physical

Config

Desktop

Programming

Attributes

IP Configuration

InterfaceFastEthernet0

IP Configuration

☐ DHCP

IPv4 Address

Subnet Mask

Default Gateway

DNS Server

☒ Static

192.168.1.2

255.255.255.192

192.168.1.62

192.168.1.3

IPv6 Configuration

☐ Automatic

IPv6 Address

Link Local Address

Default Gateway

DNS Server

☒ Static

/

FE80::2E0:F9FF:FEA8:D63E

802.1X

☐ Use 802.1X Security

Authentication

Username

Password

MD5

Etape 5 configuration du serveur

The screenshot shows a network configuration window titled "IP Configuration" with a blue header bar and a close button (X). The "Interface" dropdown menu is set to "FastEthernet0". The "IP Configuration" section has two radio buttons: "DHCP" (unselected) and "Static" (selected). Below these are four text input fields: "IPv4 Address" (192.168.1.1), "Subnet Mask" (255.255.255.192), "Default Gateway" (192.168.1.62), and "DNS Server" (192.168.1.3). The "IPv6 Configuration" section also has two radio buttons: "Automatic" (unselected) and "Static" (selected). Below these are four text input fields: "IPv6 Address" (empty), "Link Local Address" (FE80::2E0:8FFF:FE70:1732), "Default Gateway" (empty), and "DNS Server" (empty). The "802.1X" section has a checkbox "Use 802.1X Security" (unchecked). Below it are three text input fields: "Authentication" (MD5), "Username" (empty), and "Password" (empty).

Field	Value
Interface	FastEthernet0
IP Configuration	
DHCP	<input type="radio"/>
Static	<input checked="" type="radio"/>
IPv4 Address	192.168.1.1
Subnet Mask	255.255.255.192
Default Gateway	192.168.1.62
DNS Server	192.168.1.3
IPv6 Configuration	
Automatic	<input type="radio"/>
Static	<input checked="" type="radio"/>
IPv6 Address	
Link Local Address	FE80::2E0:8FFF:FE70:1732
Default Gateway	
DNS Server	
802.1X	
Use 802.1X Security	<input type="checkbox"/>
Authentication	MD5
Username	
Password	

Etape 6: Test de connectivité et Service

PC0

```
Physical  Config  Desktop  Programming  Attributes
Command Prompt

Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time=1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

PC1

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.3

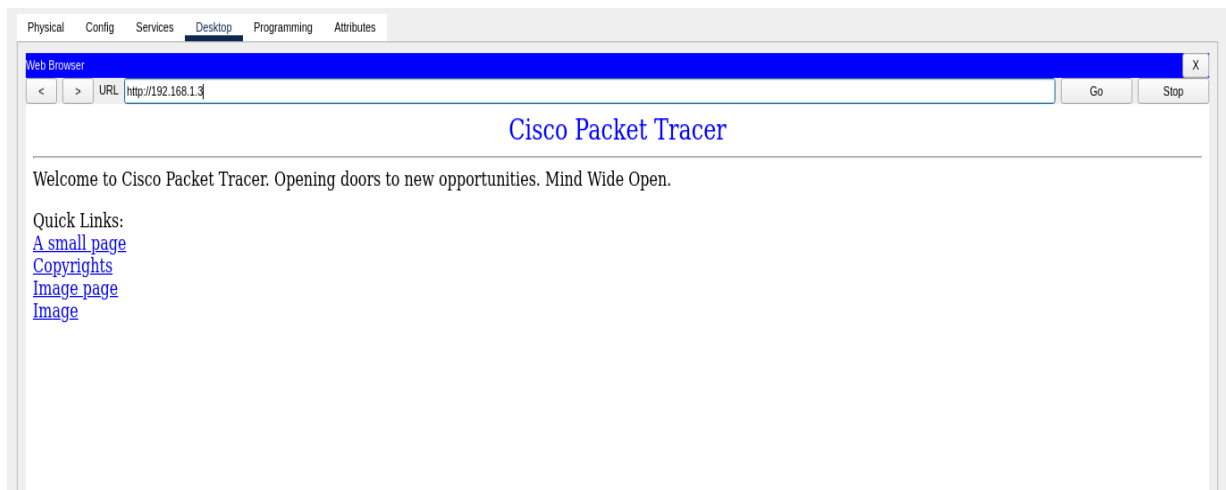
Pinging 192.168.1.3 with 32 bytes of data:

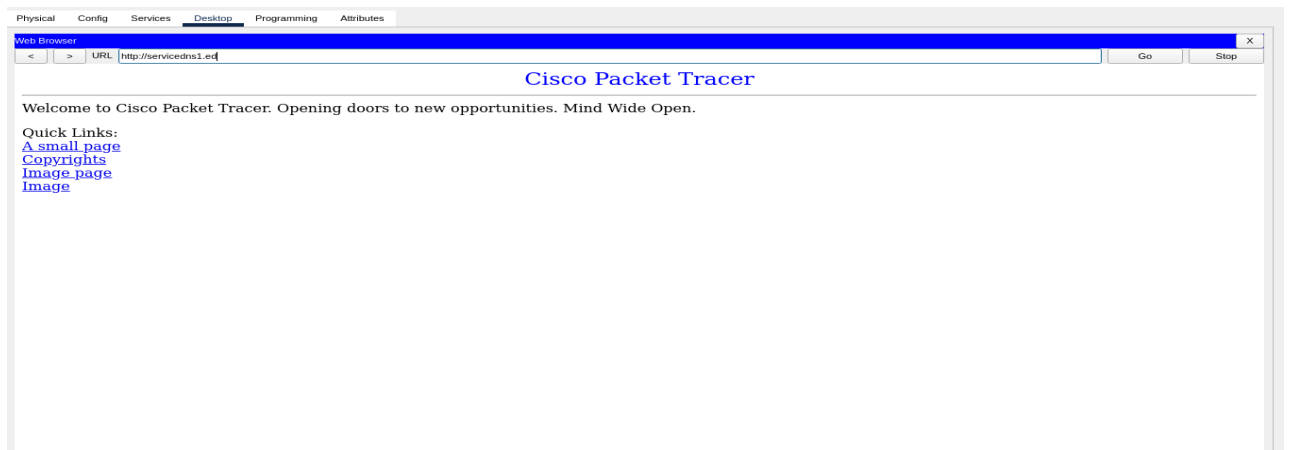
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>|
```

TEST DE FONCTIONNEMENT DU DNS





Explication : En utilisant l'adresse ip du server DNS ou son nom de domaine dans les navigateurs du PC, on se rend compte que les deux renvoient la même chose

Partie 2 Wireshark

