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# Sangfor NGAF 8.0.6 Associate

Deployment







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# 1. Introduction

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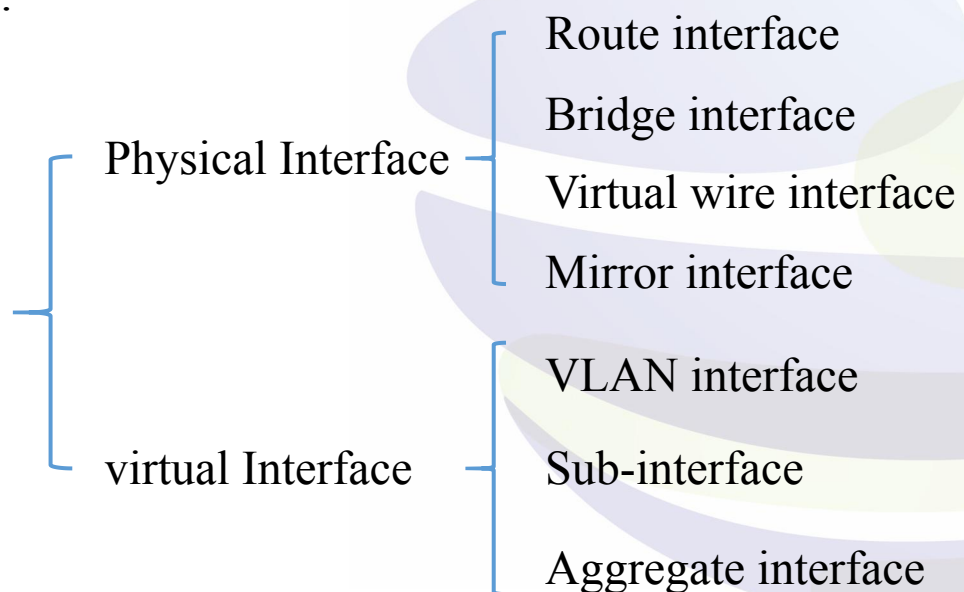
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# Deployment Introduction

In order to make NGAF adopt various scenario and improve the network expandability of NGAF, there is no definite deployment of NGAF to choose, it depends on the attributes of each network port.

Port type:





## 2. Route mode

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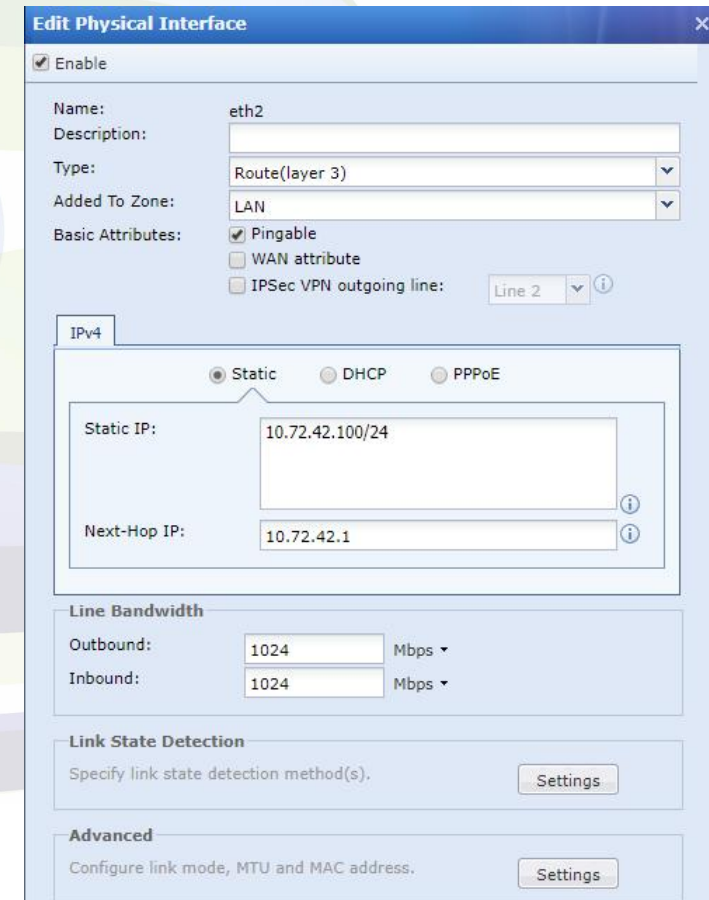
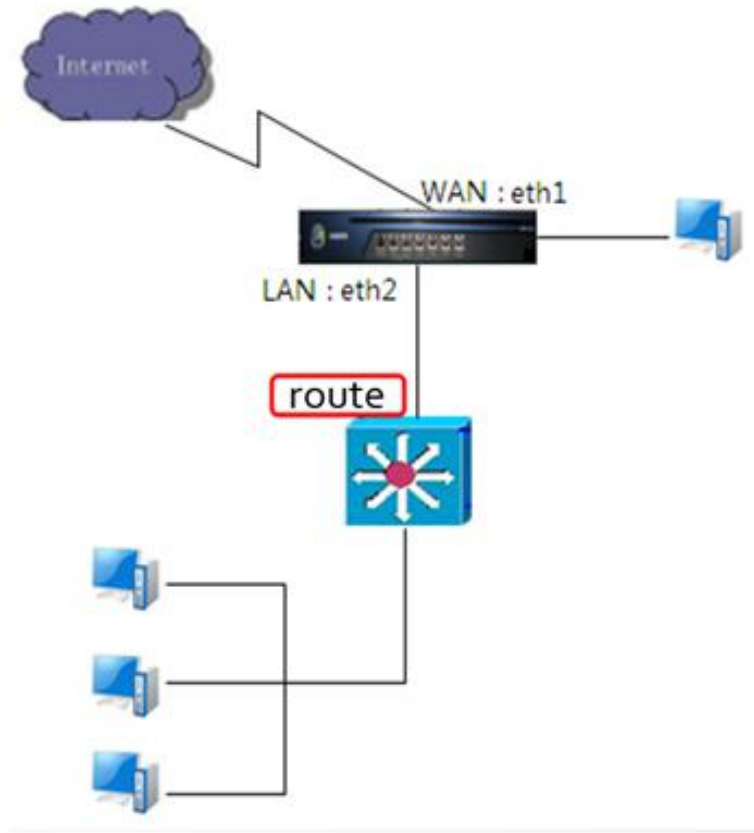
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# Route Mode

The peer interface of Lan interface is route.

Tip: You can set Lan interface as a route mode

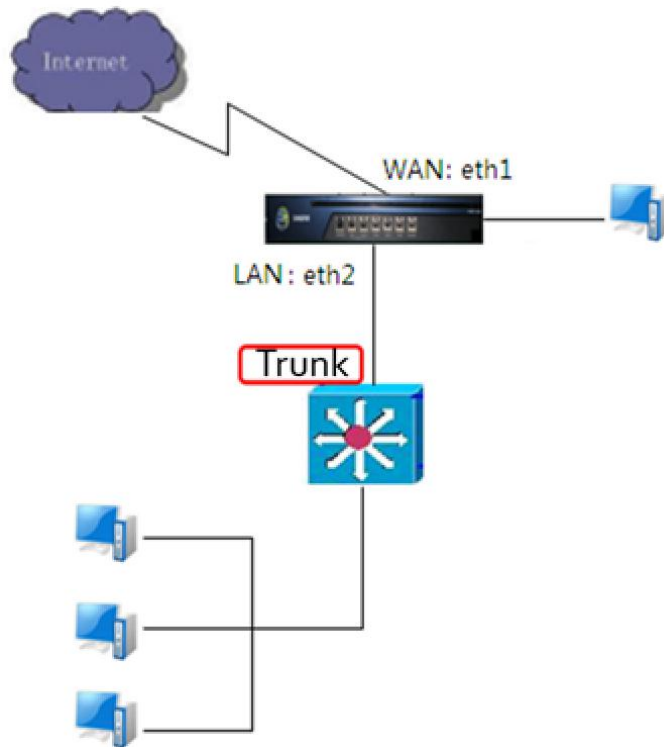


The screenshot shows the 'Edit Physical Interface' configuration window for interface eth2. The 'Enable' checkbox is checked. The 'Name' is eth2, and the 'Type' is set to 'Route(layer 3)'. The 'Added To Zone' is LAN. Under 'Basic Attributes', 'Pingable' is checked, while 'WAN attribute' and 'IPSec VPN outgoing line' are unchecked. The 'IPv4' tab is selected, showing 'Static' as the IP configuration method. The 'Static IP' is 10.72.42.100/24, and the 'Next-Hop IP' is 10.72.42.1. The 'Line Bandwidth' section shows 'Outbound' and 'Inbound' both set to 1024 Mbps. The 'Link State Detection' section has a 'Settings' button. The 'Advanced' section also has a 'Settings' button.

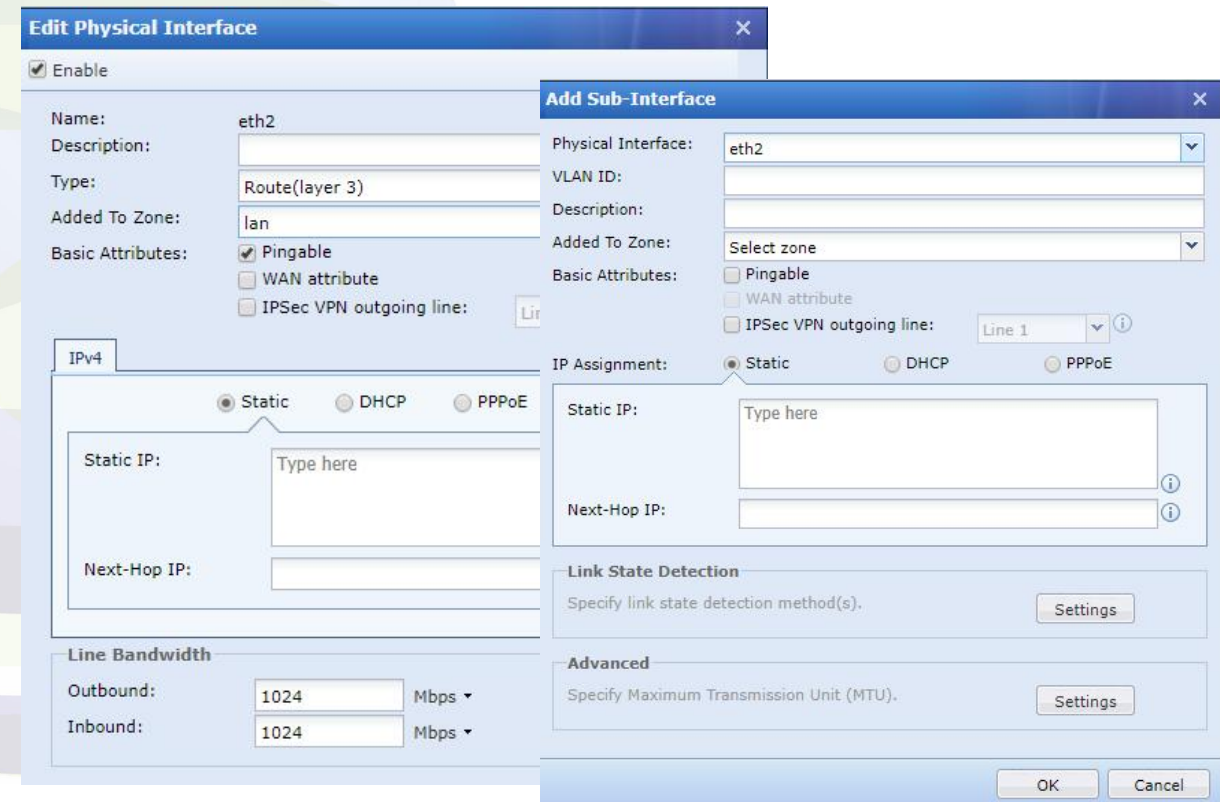


# Route Mode (trunk)

The opposite interface of Lan interface is trunk.



Tip 1: You can set Lan interface as a route, and then set the corresponding sub-interface.



The screenshot shows two configuration windows. The 'Edit Physical Interface' window is for interface 'eth2', configured as a 'Route(layer 3)' interface, added to the 'lan' zone. It has basic attributes like 'Pingable' checked. The 'Add Sub-Interface' window is for adding a sub-interface to 'eth2', with options for 'VLAN ID', 'Description', and 'Added To Zone'. It also shows 'IP Assignment' (Static, DHCP, PPPoE) and 'Link State Detection' settings.



### 3. Bridge mode

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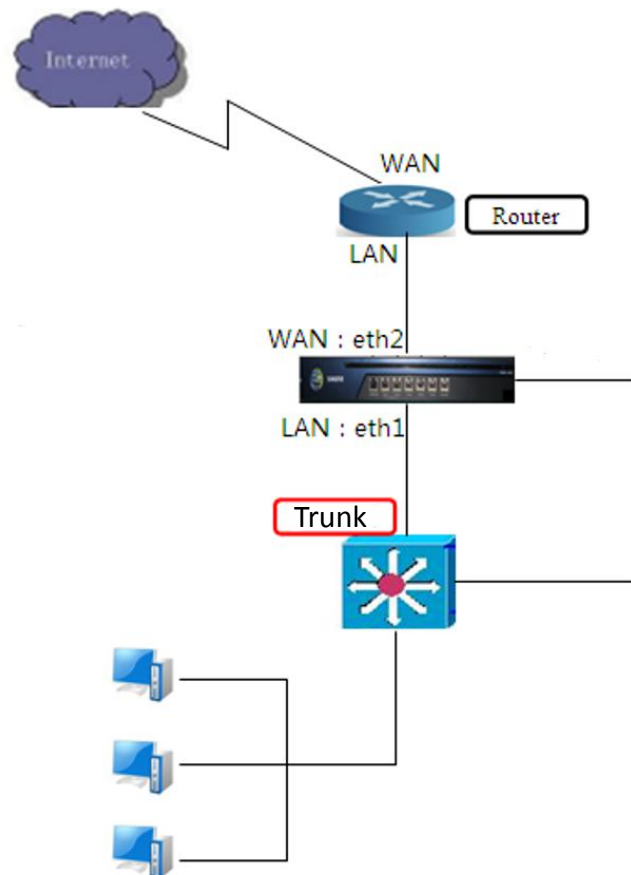


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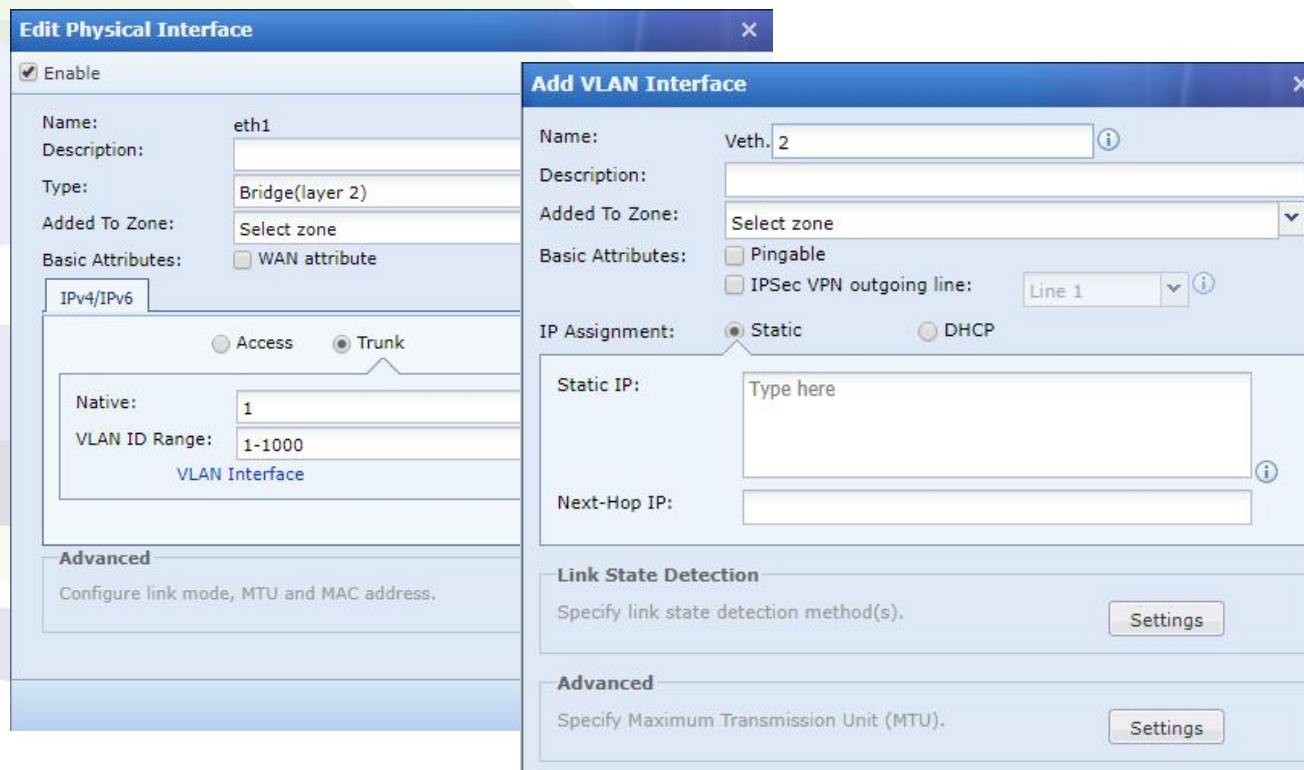


# Bridge Mode (Trunk)

More than one VLAN on a link.



Tip: If there are more than one vlan at the link, the interface of NGAF can set as a trunk, and allow the corresponding vlan. You can set more than one vlan IP address on NGAF for Internet accessing or NGAF management.



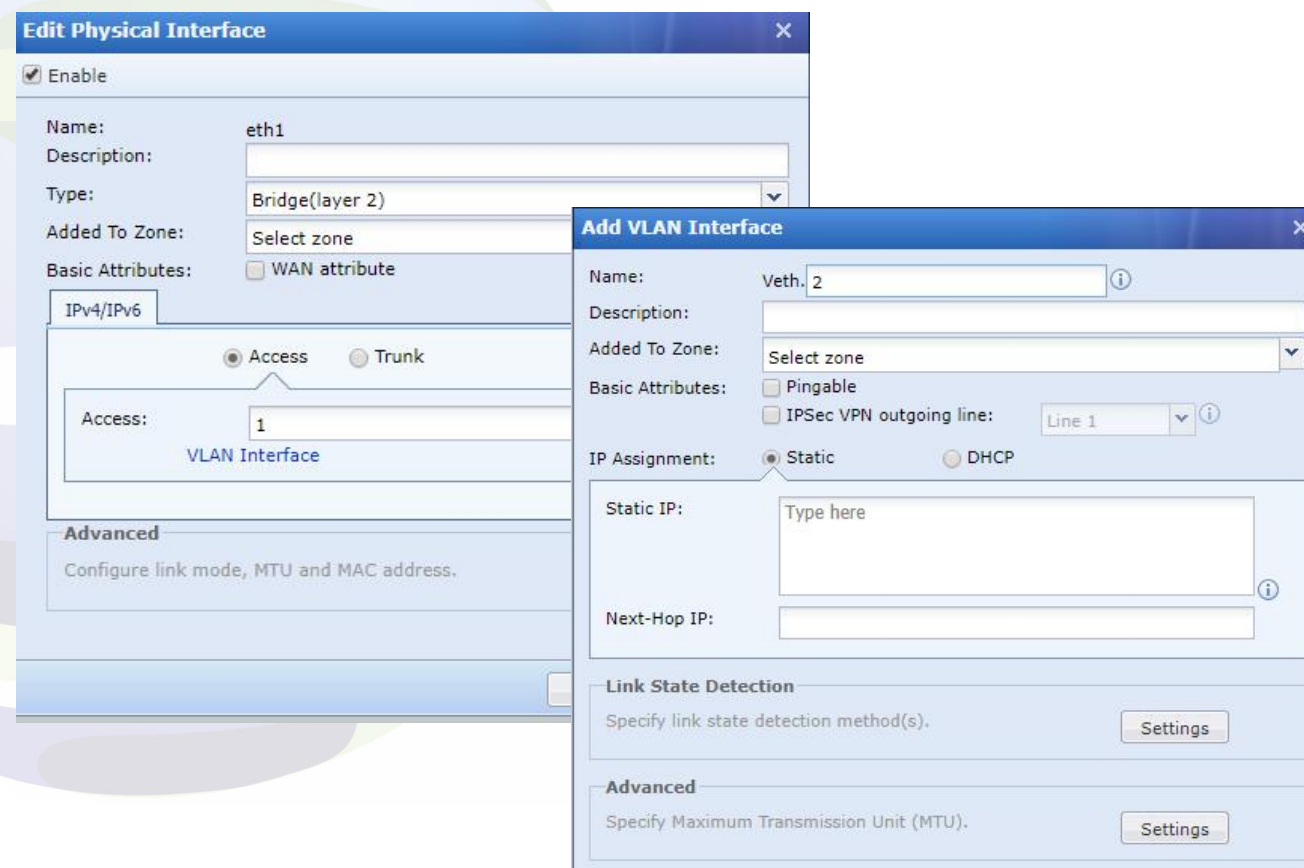
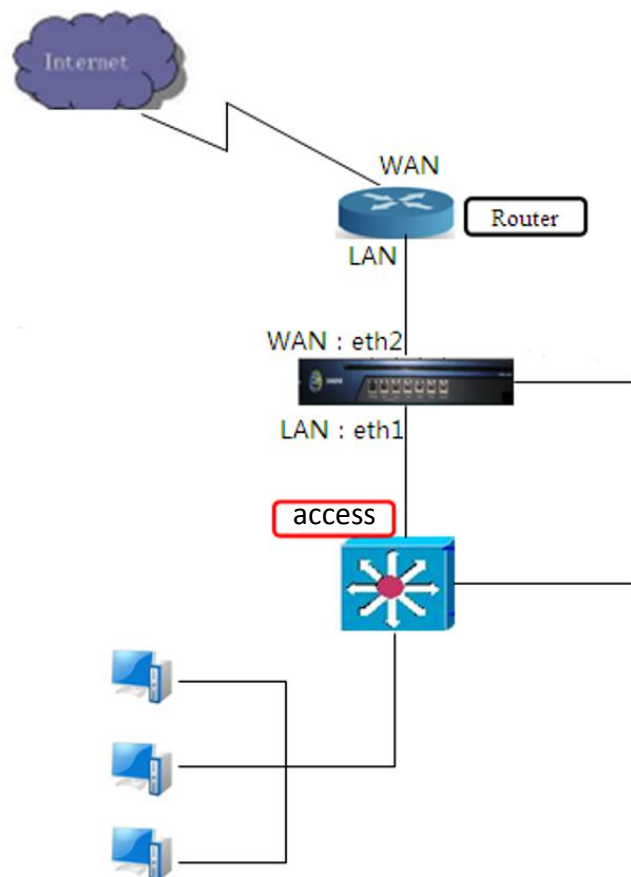
The screenshot displays the NGAF configuration interface. The 'Edit Physical Interface' window is open, showing the configuration for the 'eth1' interface. The 'Name' is 'eth1', 'Description' is empty, 'Type' is 'Bridge(layer 2)', and 'Added To Zone' is 'Select zone'. The 'Basic Attributes' section shows 'WAN attribute' is unchecked. The 'IPv4/IPv6' tab is selected, and the 'Trunk' radio button is chosen. The 'Native' VLAN is set to '1', and the 'VLAN ID Range' is '1-1000'. The 'Advanced' section is collapsed, showing 'Configure link mode, MTU and MAC address.' The 'Add VLAN Interface' window is also open, showing the configuration for the 'Veth. 2' interface. The 'Name' is 'Veth. 2', 'Description' is empty, 'Added To Zone' is 'Select zone', and 'Basic Attributes' are 'Pingable' and 'IPSec VPN outgoing line' (Line 1). The 'IP Assignment' is set to 'Static', and the 'Static IP' field is 'Type here'. The 'Next-Hop IP' field is empty. The 'Link State Detection' section is collapsed, showing 'Specify link state detection method(s)'. The 'Advanced' section is collapsed, showing 'Specify Maximum Transmission Unit (MTU)'.



# Bridge Mode (access)

Deploy NGAF without change their network.

Tip: Set the interface as access and then configure the corresponding vlan and IP address.



The screenshot displays two configuration windows from a network management interface.

**Edit Physical Interface**

- ☒ Enable
- Name: eth1
- Description: [Empty field]
- Type: Bridge(layer 2)
- Added To Zone: Select zone
- Basic Attributes: ☐ WAN attribute
- IPv4/IPv6: [Empty field]
- Access: ☒ Access ☐ Trunk
- Access: 1 (VLAN Interface)
- Advanced: Configure link mode, MTU and MAC address.

**Add VLAN Interface**

- Name: Veth. 2
- Description: [Empty field]
- Added To Zone: Select zone
- Basic Attributes: ☐ Pingable ☐ IPsec VPN outgoing line: Line 1
- IP Assignment: ☒ Static ☐ DHCP
- Static IP: Type here
- Next-Hop IP: [Empty field]
- Link State Detection: Specify link state detection method(s). [Settings]
- Advanced: Specify Maximum Transmission Unit (MTU). [Settings]



## 4. Virtual wire mode

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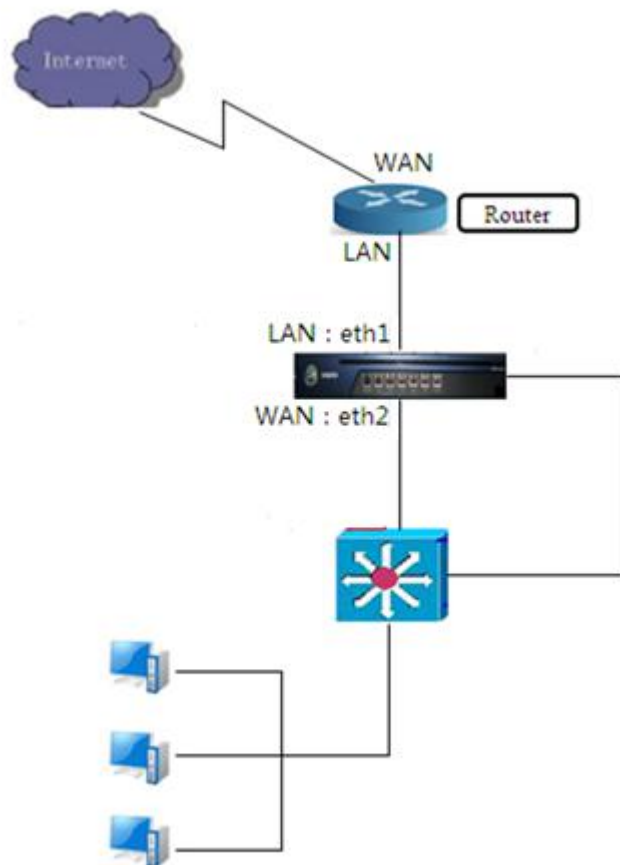


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# Virtual Wire Mode

Deploy NGAF without change their network.



We don't need to consider about the opposite interface when we deploy NGAF as a virtual wire mode, but we need configure more than one port as a route mode to manage NGAF or access the internet for database updating.

### Edit Physical Interface

☒ Enable

Name: eth1

Description:

Type: Virtual wire(layer 1)

Added To Zone: WAN-virtual

Interface 1: eth1

Interface 2: eth2

Basic Attributes: ☐ WAN attribute

**Advanced**

Configure link mode, MTU and MAC address.

### Edit Physical Interface

☒ Enable

Name: eth2

Description:

Type: Virtual wire(layer 1)

Added To Zone: LAN-virtual

Interface 1: eth2

Interface 2: eth1

Basic Attributes: ☐ WAN attribute

**Advanced**

Configure link mode, MTU and MAC address.

Settings

Virtual Wire

+ Add - Delete Refresh

Interface Pair 1	Interface Pair 2
<input type="checkbox"/> eth2	eth1



## 5. Mirror mode

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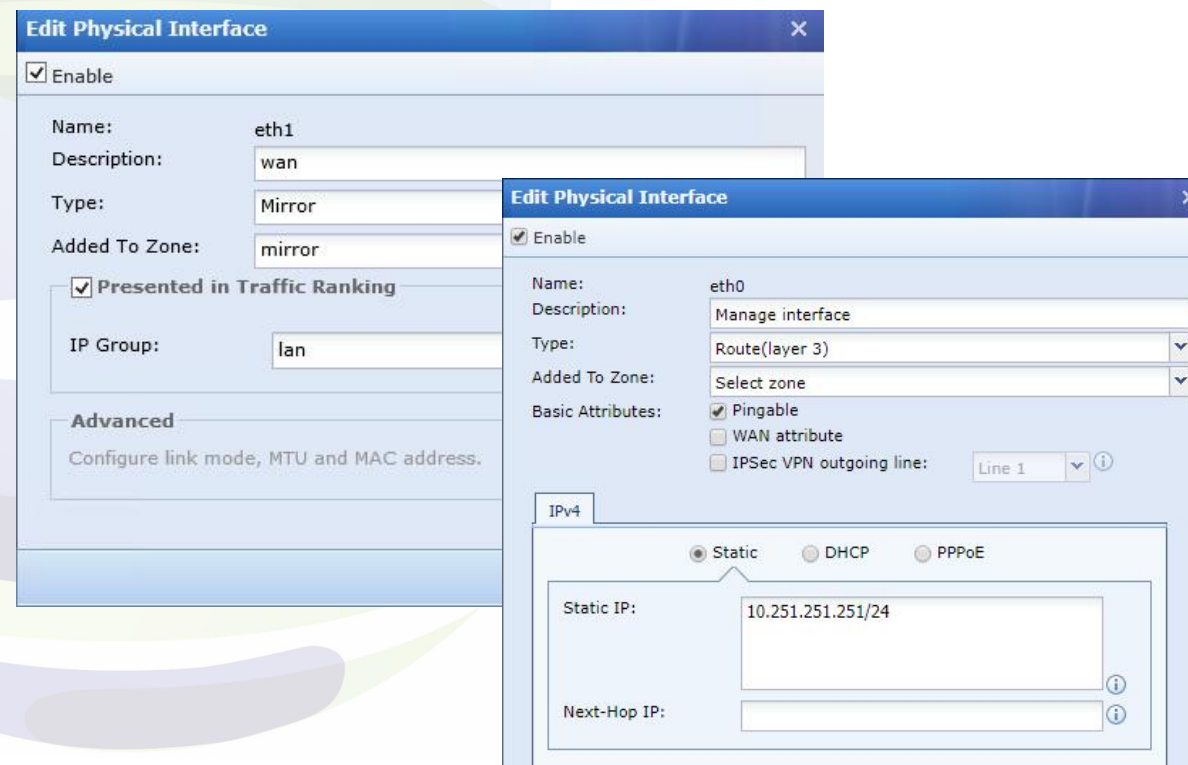
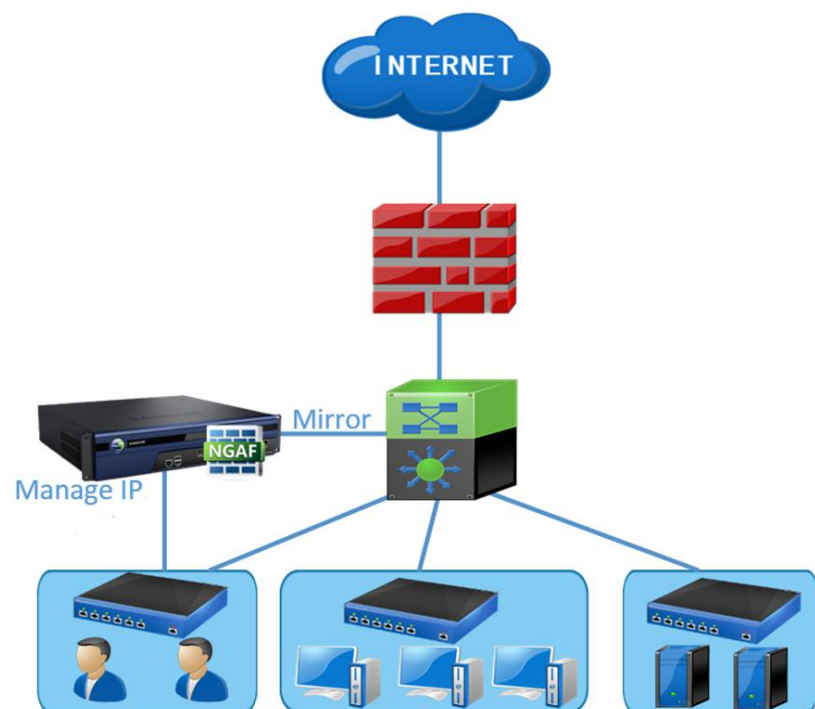


# Mirror mode

## Requirements:

Detect the network risk but don't interrupt the network.

Tip: Link the mirror mode to core switch and configure another route port to manage NGAF or access the internet for database updating.





## 6. Configuration Wizard

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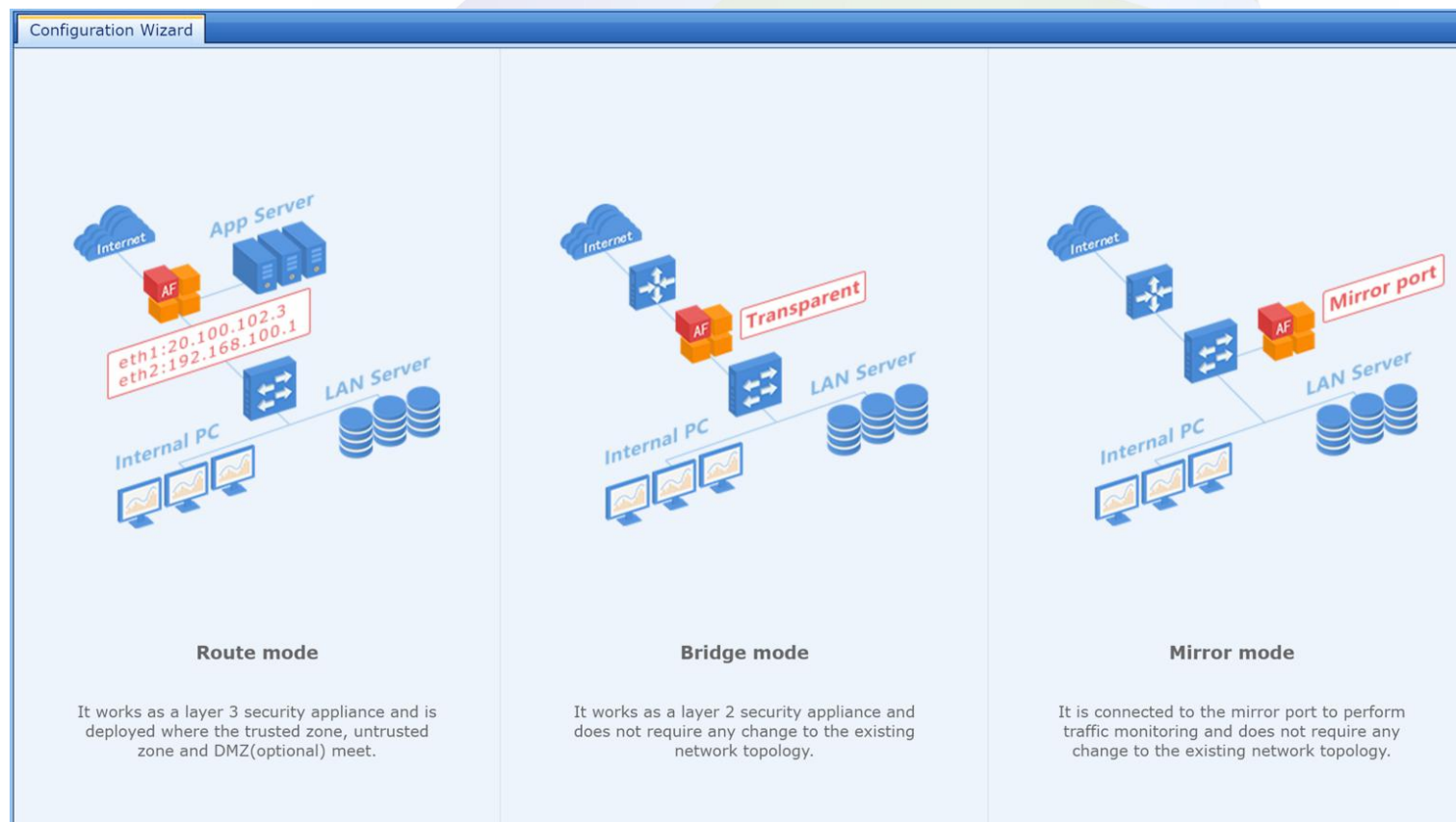


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# Configuration Wizard

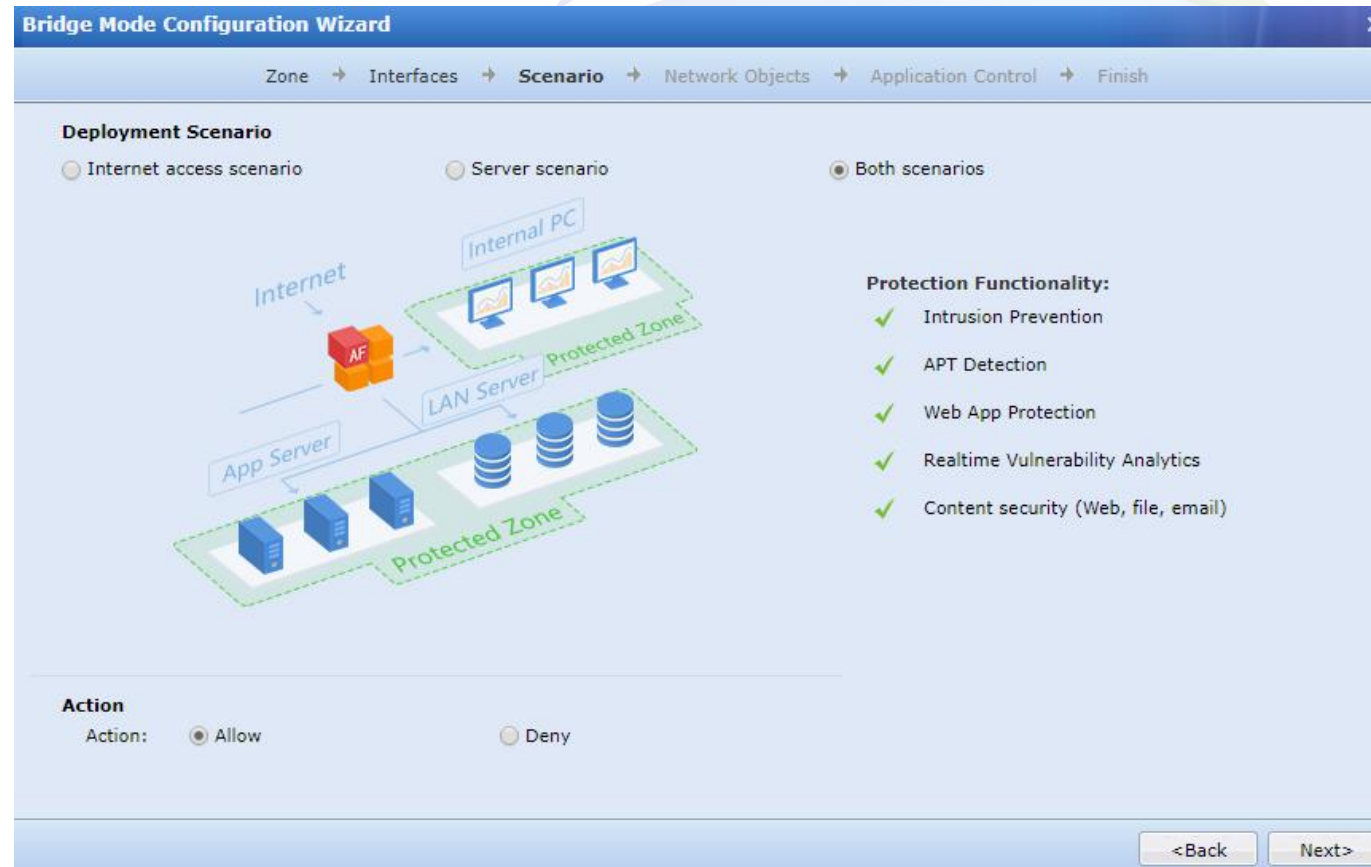
When NGAF is installed in a new network at first time, Configuration Wizard can help us deploy easily. Configuration wizard will pop up automatically after we first time login the NGAF. It provide route mode, bridge mode, mirror mode quick installation.





# Configuration Wizard

Configuration wizard not only configure the network part, but also can generate the policy automatically with a few settings.



About security policy, we will introduce it in later slide.



## 7. Hybrid mode

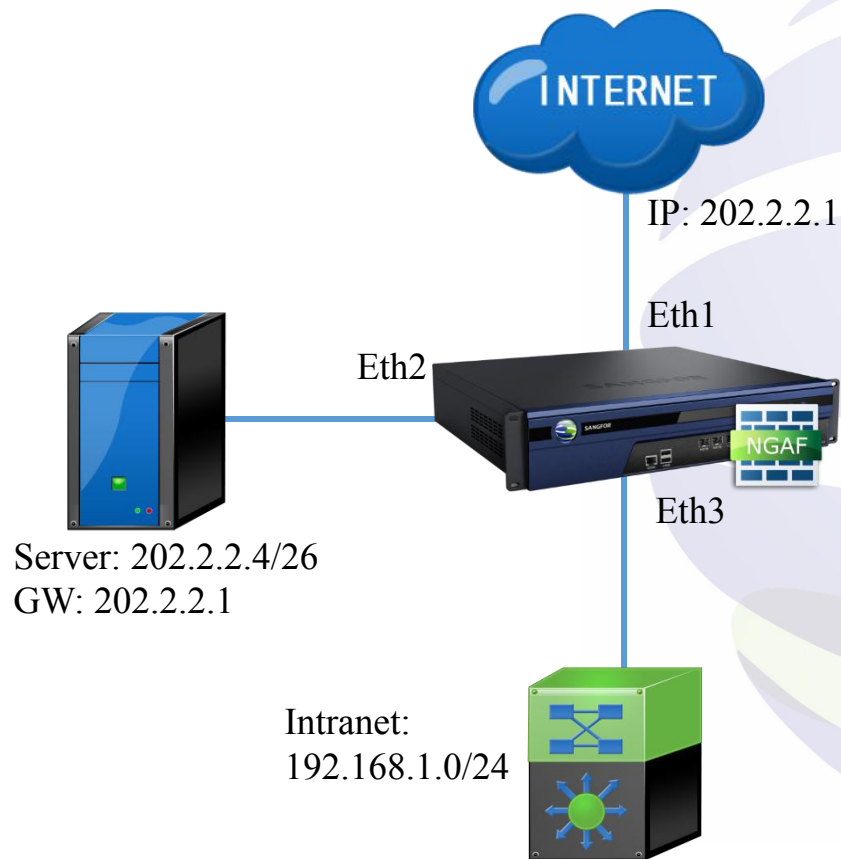
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# Hybrid Mode



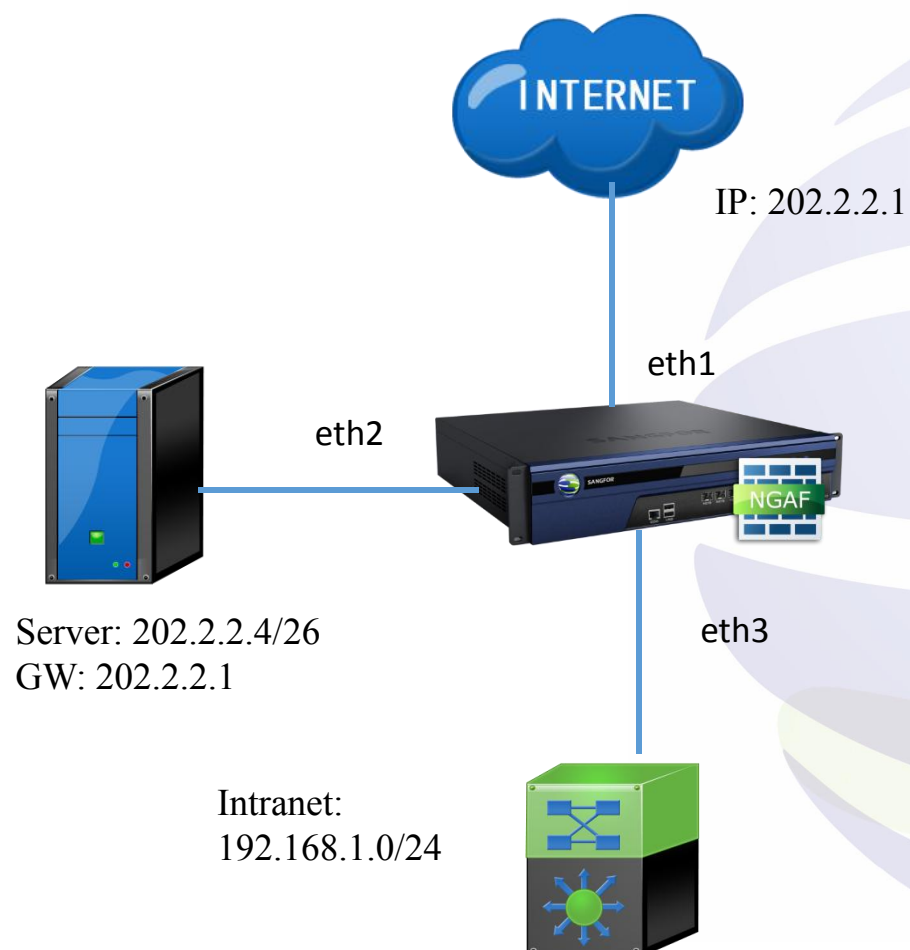
Hybrid mode means there are not only layer 2 network interfaces, but also layer 3 network interfaces, especially when the DMZ server set as the public IPs.

## Configuration steps:

1. Set the eth1 and eth2 as bridge interface with layer 2 zone.
2. Set the eth3 as route interface port with 3 zone.
3. Establish a VLAN interface corresponded the eth2 and eth3, and fill in the public IP address for it.
4. Set the source NAT policy, route and application policy.



# Hybrid Mode Case Study



## Requirement:

Customer have a server farm and all server configure Public IP as IP address. Internal user configure as Private IP address and through NAT to access internet. NGAF need to deploy as a internet Gateway to protect Server and internal user.

## Recommendations :

Deploy as Hybrid mode(gateway mode + bridge mode). NGAF connect internet and server by bridge interface , internal user connect to route interface.



# Hybrid Mode Case Study

## NGAF deployment:

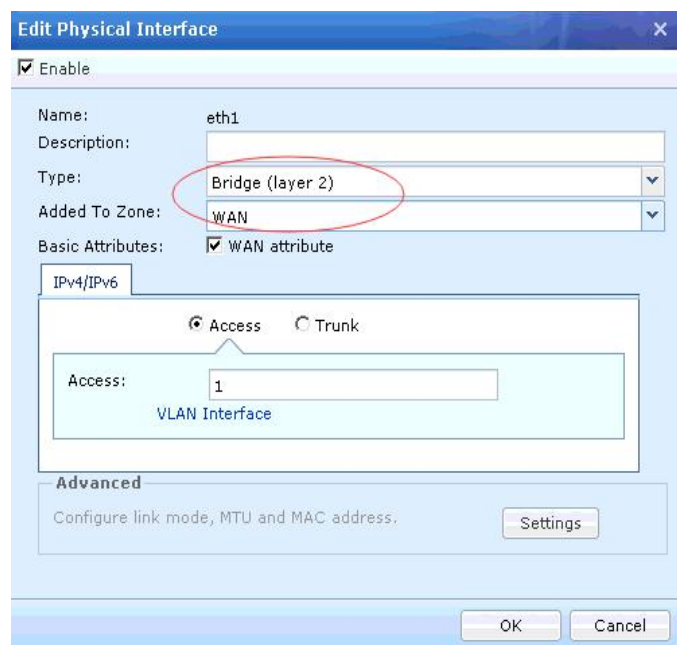
1. Because server hosting a Public IP address and all user want to access server via public IP , therefore NGAF will connect eth1 to internet and eth2 to server farm and both interface will configure as bridge + access interface and same VLAN ID.
2. Base on the requirement, define eth1 and eth2 as layer 2 zone , define eth3 as layer 3 zone , “LAN zone” select eth3 , “WAN zone” select VLAN interface.
3. Add in a new VLAN11 interface , configure a public IP address.
4. Internal interface will be configure as route interface , configure internal IP address and configure static route for communication between server and internal users.
5. Internal user access internet by translating Lan IP range to the VLAN11 IP address.
6. Set the Application control policy to allow the traffic. (Configuration omitted)



# Hybrid Mode Case Study

## Configuration Step:

1. Configure interface eth1, eth2 and eth3:



**Edit Physical Interface**

☒ Enable

Name: eth1

Description:

Type: Bridge (layer 2)

Added To Zone: WAN

Basic Attributes: ☒ WAN attribute

IPv4/IPv6

☒ Access ☐ Trunk

Access: 1

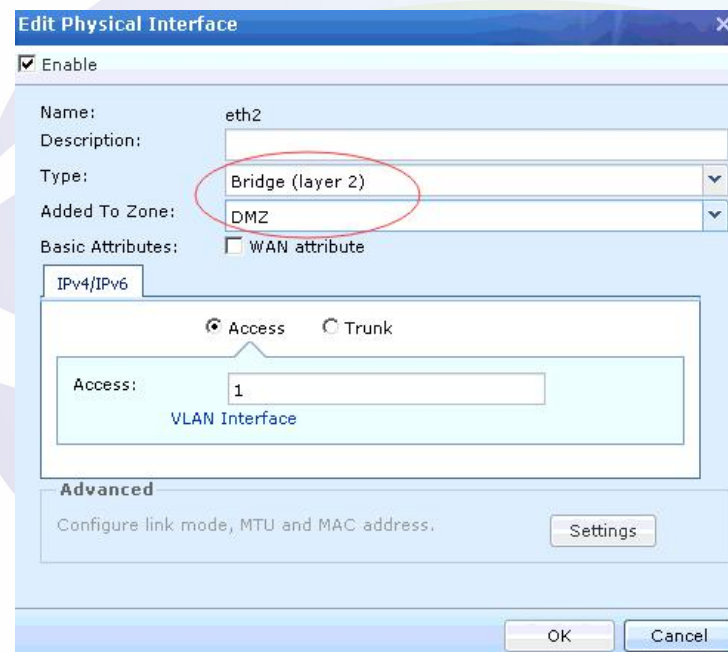
VLAN Interface

Advanced

Configure link mode, MTU and MAC address.

Settings

OK Cancel



**Edit Physical Interface**

☒ Enable

Name: eth2

Description:

Type: Bridge (layer 2)

Added To Zone: DMZ

Basic Attributes: ☐ WAN attribute

IPv4/IPv6

☒ Access ☐ Trunk

Access: 1

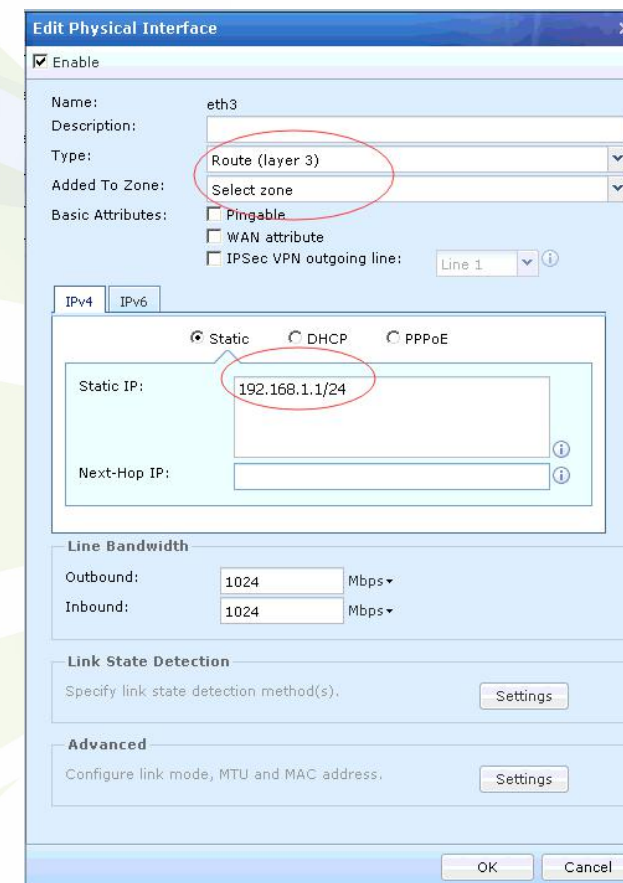
VLAN Interface

Advanced

Configure link mode, MTU and MAC address.

Settings

OK Cancel



**Edit Physical Interface**

☒ Enable

Name: eth3

Description:

Type: Route (layer 3)

Added To Zone: Select zone

Basic Attributes: ☐ Pingable  
☐ WAN attribute  
☐ IPsec VPN outgoing line: Line 1

IPv4 IPv6

☒ Static ☐ DHCP ☐ PPPoE

Static IP: 192.168.1.1/24

Next-Hop IP:

Line Bandwidth

Outbound: 1024 Mbps

Inbound: 1024 Mbps

Link State Detection

Specify link state detection method(s).

Settings

Advanced

Configure link mode, MTU and MAC address.

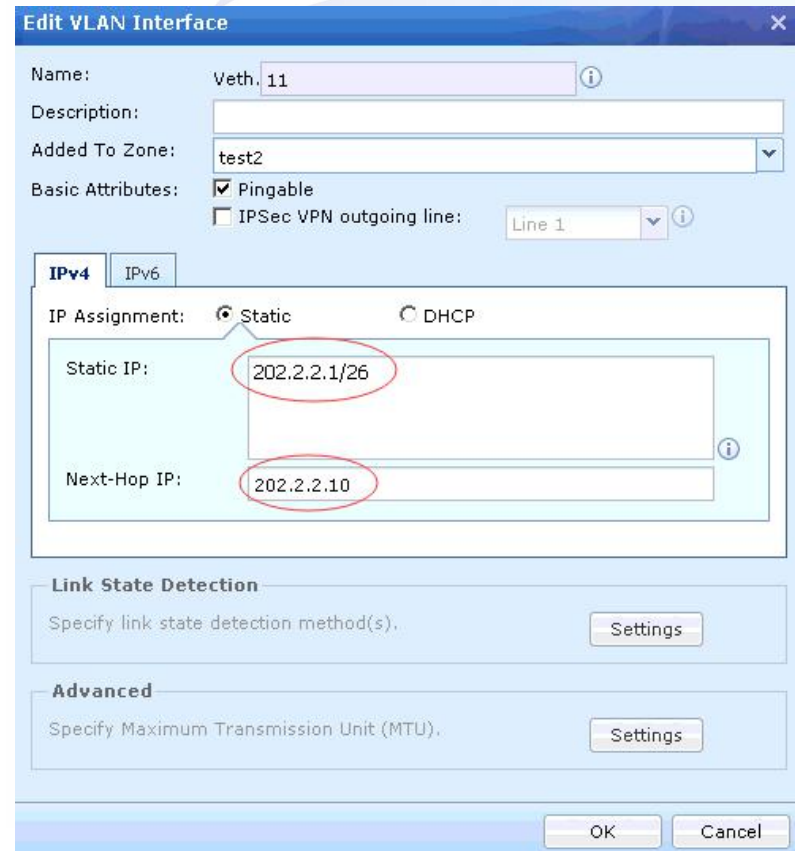
Settings

OK Cancel



# Hybrid Mode Case Study

## 2. VLAN interface:



**Edit VLAN Interface**

Name: Veth. 11

Description:

Added To Zone: test2

Basic Attributes:

- ☒ Pingable
- ☐ IPSec VPN outgoing line: Line 1

**IPv4** | IPv6

IP Assignment: ☒ Static ☐ DHCP

Static IP: 202.2.2.1/26

Next-Hop IP: 202.2.2.10

**Link State Detection**

Specify link state detection method(s). [Settings](#)

**Advanced**

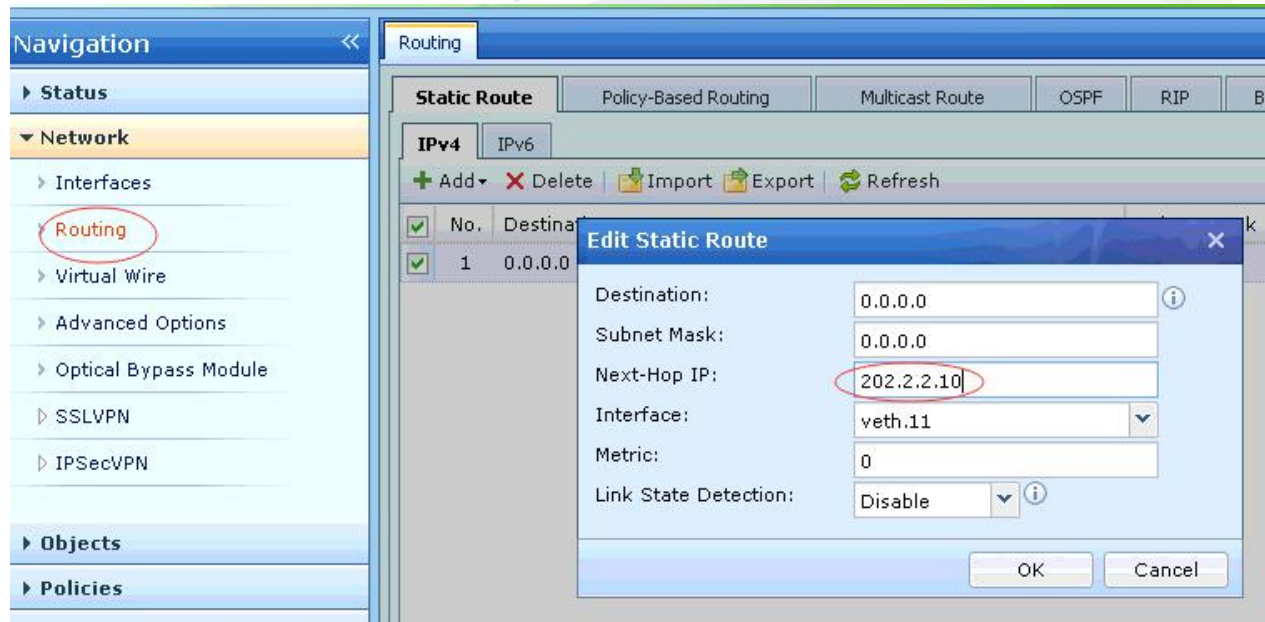
Specify Maximum Transmission Unit (MTU). [Settings](#)

OK Cancel



# Hybrid Mode Case Study

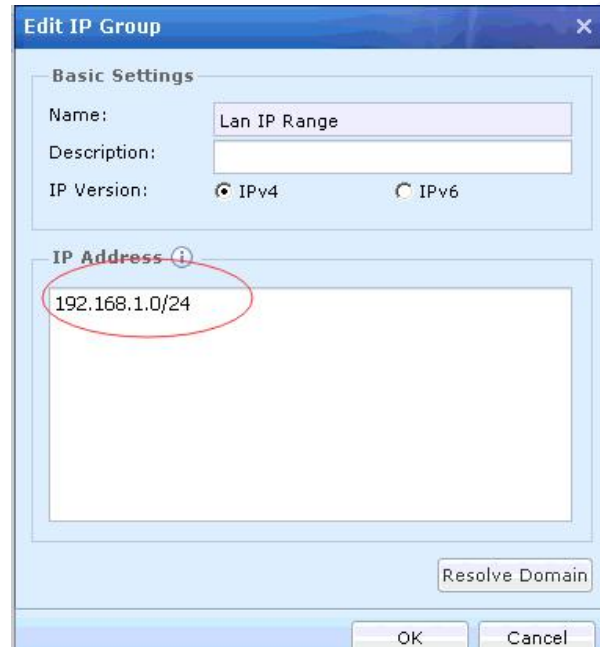
## 3. Route:





# Hybrid Mode Case Study

## 4. Configure the IP group and source NAT.



**Edit IP Group**

**Basic Settings**

Name: Lan IP Range

Description:

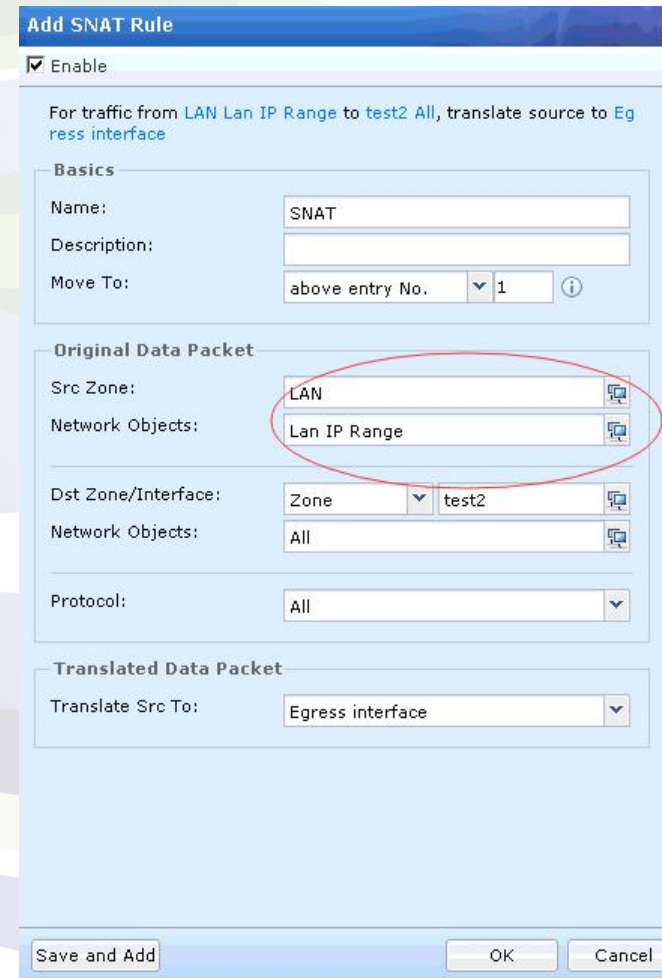
IP Version: ☒ IPv4 ☐ IPv6

**IP Address**

192.168.1.0/24

Resolve Domain

OK Cancel



**Add SNAT Rule**

☒ Enable

For traffic from LAN Lan IP Range to test2 All, translate source to Egress interface

**Basics**

Name: SNAT

Description:

Move To: above entry No. 1

**Original Data Packet**

Src Zone: LAN

Network Objects: Lan IP Range

Dst Zone/Interface: Zone test2

Network Objects: All

Protocol: All

**Translated Data Packet**

Translate Src To: Egress interface

Save and Add OK Cancel



# Thank you !

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