

NOTE D'APPLICATION

APNFR006 - Exemple de configuration NAT *Pour WaveOS*

CONFIGURATION D'UN PRODUIT WAVEOS EN MODE NAT

Configuration NAT souhaitée :

- Réseau privé (LAN) : 192.168.100.100/24
- Réseau public (WLAN) : 192.168.1.10/24

Règles de translation :

- PLC_MASTER : TCP 192.168.1.10:8080 traduit vers 192.168.100.101:80
- PLC_IO : UDP 192.168.1.10:4200 traduit vers 192.168.100.101:4200

Côté Privé (LAN) :

Gateway par défaut = 192.168.100.100 (ou route 192.168.1.0/24 vers 192.168.100.100)

Après configuration des paramètres WiFi, allez dans **SETUP/NETWORK** et éditez le réseau par défaut (**lan**) :

NETWORK OVERVIEW

NAME	ENABLED	IP ADDRESS	NETMASK	GATEWAY	PERSISTENCE	ACTIONS
lan	<input checked="" type="checkbox"/>	192.168.1.253	255.255.255.0		Enabled	

[Add network](#)

Renommez le réseau **PUBLIC** et renseignez les champs requis. Passez ensuite sur l'onglet **Interfaces Settings**

NETWORK - LAN

On this page you can configure the network interfaces. You can bridge several interfaces by ticking the "bridge interfaces" field and tick the names of several network interfaces.

COMMON CONFIGURATION

General Setup | **Interfaces Settings** | Advanced Settings

Enable interface

Network description PUBLIC
Friendly name for your network

Protocol static

IPv4-Address 192.168.1.10

IPv4-Netmask 255.255.255.0

IPv4-Gateway

DNS-Server

You can specify multiple DNS servers here, press enter to add a new entry. Servers entered here will override automatically assigned ones.

IP-ALIASES

This section contains no values yet

[Add](#)

[Reset](#) [Save](#) [Save & Apply](#)

Décochez la case **Ethernet adapter**, puis **Save**

SETUP TOOLS STATUS

PHYSICAL INTERFACES
VIRTUAL INTERFACES
NETWORK
LAN
VPN
BRIDGING
ROUTING / FIREWALL
QOS
SERVICES

NETWORK - LAN

On this page you can configure the network interfaces. You can bridge several interfaces by ticking the "bridge interfaces" field and tick the names of several network interfaces.

COMMON CONFIGURATION

General Setup | **Interfaces Settings** | Advanced Settings

Bridge interfaces creates a bridge over specified interface(s)

Enable STP/RSTP Enables the Spanning Tree Protocol on this bridge
WARNING: Some cautions must be taken with wireless interfaces, please see user guide

Enable LLDP forwarding Enables the LLDP frame forwarding.

bridge VLAN Enable VLAN management in bridge. You must configure the bridge VLANs before enabling this option (setup->bridging)

Interface

- Ethernet adapter: LAN (lan)
- WiFi adapter: WiFi - NAT-CLIENT (lan)

MTU 1500

IP-ALIASES

This section contains no values yet

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Cliquez sur **NETWORK** à gauche pour revenir sur **NETWORK OVERVIEW**. Cliquez sur **Add Network**

SETUP TOOLS STATUS

NETWORK OVERVIEW

NAME	ENABLED	IP ADDRESS	NETMASK	GATEWAY	PERSISTENCE	ACTIONS
PUBLIC	<input checked="" type="checkbox"/>	192.168.1.10	255.255.255.0		Enabled	

PHYSICAL INTERFACES
VIRTUAL INTERFACES
NETWORK
PUBLIC
VPN
BRIDGING
ROUTING / FIREWALL
QOS
SERVICES

Nommez le réseau **PRIVATE** et renseignez les champs requis, puis passez sur l'onglet **Interfaces Settings**

PHYSICAL INTERFACES
VIRTUAL INTERFACES
NETWORK
PUBLIC: NET1
VPN
BRIDGING
ROUTING / FIREWALL
QOS
SERVICES

SETUP TOOLS STATUS

NETWORK - NET1

On this page you can configure the network interfaces. You can bridge several interfaces by ticking the "bridge interfaces" field and tick the names of several network interfaces.

COMMON CONFIGURATION

General Setup | **Interfaces Settings** | Advanced Settings

Enable interface

Network description PRIVATE
Friendly name for your network

Protocol static

IPv4-Address 192.168.100.100

IPv4-Netmask 255.255.255.0

IPv4-Gateway

DNS-server

You can specify multiple DNS servers here, press enter to add a new entry. Servers entered here will override automatically assigned ones.

IP-ALIASES

This section contains no values yet

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Décochez la case **Bridge interfaces** et sélectionnez **Ethernet adapter LAN**

PHYSICAL INTERFACES
VIRTUAL INTERFACES
NETWORK
PUBLIC: NET1
VPN
BRIDGING
ROUTING / FIREWALL
QOS
SERVICES

SETUP TOOLS STATUS

NETWORK - NET1

On this page you can configure the network interfaces. You can bridge several interfaces by ticking the "bridge interfaces" field and tick the names of several network interfaces.

COMMON CONFIGURATION

General Setup | **Interfaces Settings** | Advanced Settings

Bridge interfaces creates a bridge over specified interface(s)

Interface Ethernet adapter: LAN
 WiFi adapter: WiFi - acksys (PUBLIC)

MTU 1500

IP-ALIASES

This section contains no values yet

Dans l'onglet **Advanced settings**, vérifiez que la persistance réseau est sur **Enabled** puis sauvez (**Save**)

NETWORK - PRIVATE

On this page you can configure the network interfaces. You can bridge several interfaces by ticking the "bridge interfaces" field and tick the names of several network interfaces.

COMMON CONFIGURATION

General Setup | Interfaces Settings | **Advanced Settings**

Network persistence Enabled
Avoid the network deletion after a link down.

IP-ALIASES

This section contains no values yet

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Cliquez sur **Routing/Firewall**

NETWORK OVERVIEW

NAME	ENABLED	IP ADDRESS	NETMASK	GATEWAY	PERSISTENCE	ACTIONS
PUBLIC	<input checked="" type="checkbox"/>	192.168.1.10	255.255.255.0		Enabled	
PRIVATE	<input checked="" type="checkbox"/>	192.168.100.100	255.255.255.0		Enabled	

Cliquez **NETWORK ZONES** puis **Add zone**

NETWORK ZONES OVERVIEW

NAME	COVERED NETWORKS	FORWARD TO DESTINATION ZONE	NAT ENABLE	LOCAL SERVICES	ACTIONS
<input type="button" value="Add zone"/>					

Nommez la zone **PRIVATE** et sélectionnez le réseau **PRIVATE**

SETUP TOOLS STATUS

NETWORK ZONES - ZONE SETTINGS

ZONE "ZONE_1"

This section defines common properties of "zone_1".
Covered networks specifies which available networks are members of this zone.

General Settings | Advanced Settings

Name PRIVATE

Enable NAT Only on public zones. Warning: if using VRRP, the NATed network must be set to protocol NONE

MSS clamping

Default acceptance policy for local services All enabled
You can restrict or open the local services in the firewall section below

Covered networks

PUBLIC:

PRIVATE:

INTER-ZONE FORWARDING

Use this section only if NAT is disabled on this zone.
The options below control the forwarding policies between this zone (zone_1) and other zones. Destination zones cover forwarded traffic **originating from "zone_1"**. The forwarding rule is *unidirectional*, e.g. a forward from lan to wan does *not* imply a permission to forward from wan to lan as well.

Allow forwarding to destination zones:

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Sauvez puis ajoutez une nouvelle zone depuis **NETWORK ZONE**

SETUP TOOLS STATUS

NETWORK ZONES OVERVIEW

NAME	COVERED NETWORKS	FORWARD TO DESTINATION ZONE	NAT ENABLE	LOCAL SERVICES	ACTIONS
PRIVATE	"PRIVATE"	-	<input type="checkbox"/>	All enabled	

Add zone

Nommez la nouvelle zone **PUBLIC**, cochez **NAT** et sélectionnez le réseau **PUBLIC**, puis **Add** dans **TRAFFIC FORWARD**.

NETWORK ZONES - ZONE SETTINGS

ZONE "ZONE_2"

This section defines common properties of "zone_2".
Covered networks specifies which available networks are members of this zone.

General Settings | Advanced Settings

Name PUBLIC

Enable NAT Only on public zones. Warning: if using VRRP, the NATed network must be set to protocol NONE

MSS clamping

Default acceptance policy for local services All enabled
You can restrict or open the local services in the firewall section below

Covered networks

PUBLIC:

PRIVATE:

INTER-ZONE FORWARDING

Use this section only if NAT is disabled on this zone.

The options below control the forwarding policies between this zone (zone_2) and other zones. Destination zones cover forwarded traffic originating from "zone_2". The forwarding rule is unidirectional, e.g. a forward from lan to wan does not imply a permission to forward from wan to lan as well.

Allow forwarding to destination zones: PRIVATE PRIVATE:

TRAFFIC FORWARD

Use this section only if NAT is enabled on this zone

This section allow to redirect the input traffic on this zone to a device on other zone

SOURCE ZONE	NAME	SOURCE IP	FRAME PROTOCOL	PUBLIC PORT	PRIVATE PORT	DESTINATION IP	SORT
		Blank any ip source		Blank, all ports	Blank, all ports		

This section contains no values yet

Add

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Renseignez les champs pour la première règle de translation, puis ajoutez la seconde règle

TRAFFIC FORWARD

Use this section only if NAT is enabled on this zone

This section allow to redirect the input traffic on this zone to a device on other zone

SOURCE ZONE	NAME	SOURCE IP	FRAME PROTOCOL	PUBLIC PORT	PRIVATE PORT	DESTINATION IP	SORT
Public	PLC_IO	any	udp	4200	4200	192.168.100.101	

Add

TRAFFIC FORWARD

Use this section only if NAT is enabled on this zone

This section allow to redirect the input traffic on this zone to a device on other zone

SOURCE ZONE	NAME	SOURCE IP	FRAME PROTOCOL	PUBLIC PORT	PRIVATE PORT	DESTINATION IP	SORT
Public	PLC_IO	any	udp	4200	4200	192.168.100.101	
Public	PLC_MASTER	any	tcp	8080	80	192.168.100.101	

Add

Sauvez et revenez dans **NETWORK ZONE** pour éditer la zone **PRIVATE**

SETUP TOOLS STATUS

PHYSICAL INTERFACES
VIRTUAL INTERFACES
NETWORK
VPN
BRIDGING
ROUTING / FIREWALL
DOS PROTECTION
MULTICAST ROUTING
NETWORK ZONES
STATIC ROUTES
QOS
SERVICES

NETWORK ZONES OVERVIEW

NAME	COVERED NETWORKS	FORWARD TO DESTINATION ZONE	NAT ENABLE	LOCAL SERVICES	ACTIONS
PRIVATE	"PRIVATE"	-	<input type="checkbox"/>	All enabled	 
PUBLIC	"PUBLIC"	-	<input checked="" type="checkbox"/>	All enabled	 

 Add zone

Dans **INTER-ZONE FORWARDING**, autorisez l'acheminement vers la zone **PUBLIC**, puis sauvez

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SETUP TOOLS STATUS

PHYSICAL INTERFACES
VIRTUAL INTERFACES
NETWORK
VPN
BRIDGING
ROUTING / FIREWALL
DOS PROTECTION
MULTICAST ROUTING
NETWORK ZONES
STATIC ROUTES
QOS
SERVICES

NETWORK ZONES - ZONE SETTINGS

ZONE "PRIVATE"

This section defines common properties of "PRIVATE".
Covered networks specifies which available networks are members of this zone.

General Settings | Advanced Settings

Name PRIVATE

Enable NAT Only on public zones. Warning: if using VRRP, the NATed network must be set to protocol NONE

MSS clamping

Default acceptance policy for local services All enabled
You can restrict or open the local services in the firewall section below

Covered networks

PUBLIC: 

PRIVATE: 

INTER-ZONE FORWARDING

Use this section only if NAT is disabled on this zone.
The options below control the forwarding policies between this zone (PRIVATE) and other zones. Destination zones cover forwarded traffic originating from "PRIVATE". The forwarding rule is unidirectional, e.g. a forward from lan to wan does not imply a permission to forward from wan to lan as well.

Allow forwarding to destination zones: PUBLIC PUBLIC: 

Vous allez maintenant pouvoir rebooter pour que la nouvelle configuration soit activée. Dans **TOOLS/SAVE CONFIG**, cliquez sur **REBOOT**. A ce point, assurez-vous que votre PC est bien configuré sur le subnet du réseau **PRIVATE** du produit (192.168.100.0/24) pour revenir dans l'administration.

SETUP TOOLS STATUS

FIRMWARE UPGRADE
PASSWORD SETTINGS
SYSTEM
NETWORK
SAVE CONFIG / RESET
LOG SETTINGS

CONFIGURATION MANAGEMENT

SAVE AND RESTORE CONFIGURATION

Configuration file Parcourir... Aucun fichier sélectionné.

Restore configuration from file Restore

Backup settings to file Backup

RESET AND REBOOT

Reset to factory settings Reset

Reboot your device Reboot

Après reboot, vous pouvez vérifier que les interfaces physiques sont bien fonctionnelles dans la page **STATUS/NETWORK**

SETUP TOOLS **STATUS**

DEVICE INFO
NETWORK
WIRELESS
SERVICES
LOGS

INTERFACES

PRIVATE

IP CONFIGURATION
IPv4: 192.168.100.100 Netmask: 24 MTU: 1500
DNS server: 0.0.0.1

GRAPH	PHYSICAL INTERFACE	MAC ADDRESS	TX COUNT (IN BYTES)	RX COUNT (IN BYTES)	INTERFACE MODE	MTU
	LAN	00:09:90:00:90:d4	2256162	4792868	Negotiated 1000 baseTX FD, link ok	1500

PUBLIC

IP CONFIGURATION
IPv4: 192.168.1.10 Netmask: 24 MTU: 1500
DNS server: 0.0.0.1

GRAPH	PHYSICAL INTERFACE	MAC ADDRESS	TX COUNT (IN BYTES)	RX COUNT (IN BYTES)	INTERFACE MODE	MTU
	WiFi	c4:93:00:08:a0:76	153832	156724	Role: Client (infrastructure) SSID: NAT-CLIENT Channel: 48	1500

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Si le point d'accès est à portée, vous pouvez vérifier dans **STATUS/WIRELESS/ASSOC STATIONS** que le produit est bien associé

SETUP TOOLS **STATUS**

DEVICE INFO
NETWORK
WIRELESS
ASSOC STATIONS
CHANNEL STATUS
MESH SURVEY
SERVICES STATUS
SITE SURVEY
SRCC STATUS
SERVICES
LOGS

ASSOCIATED STATIONS

ASSOCIATED STATIONS RESULTS : 1

GRAPH	RADIO	NAME / SSID	MODE	MAC	CHANNEL	SIGNAL	NOISE	SIGNAL/NOISE
	WiFi	NAT-CLIENT	Infrastructure	00:80:48:7A:80:63	48	-45 dBm	-91 dBm	46 dB

Reset