

Table of Contents

- IPv6 plans** 1
- IP plans** 1
- Client types** 1
- Subnets** 2
 - Subnet plan 2
 - IPv6 address offset 3
 - Loopback 3
 - Gateway 3
 - Point-to-point 3
 - Four-corners 3
 - Vlan 4
 - Loopback reference 4
 - Management reference 4

IPv6 plans

IP plans are at the heart of each IP network. The first step after creating a [Client type](#) is the modeling of the IP plans.

IPv4 Plans

Plan ID	Plan size	Description	# Subnet Ranges	Client type	Name
10	16	NetYCE Generic Demo	890	YCE	NetYCE
11	25	DBC Supernet VRF Olga	16		
12	25	DBC Supernet VRF MRA	16		
13	25	DBC Supernet VRF ManSec	16		
14	25	DBC Supernet VRF IIDB	16		
15	26	OLGA Supernet P2P	16		
16	27	DBC Supernet VRF m-bhr	32		

Subnets

Subnet name	# Seg	Subnet size	Start IP	End IP	Remark
<Free> /32	1	32	0.0.0.0	0.0.0.0	<Free>
Loopback	255	32	0.0.0.1	0.0.0.255	
Data	251	24	0.0.1.0	0.0.251.255	
<Free> /31	1	31	0.0.252.30	0.0.252.31	<Free>
ppp	383	31	0.0.252.0	0.0.254.255	
connection	1	24	0.0.255.0	0.0.255.255	

Subnets Plans

Parameter	Key	Value	Description
<if_loopback>	offset	0.0.0.0	Loopback is subnet/32 ip-address
<if_loopback>	topo_pos	L	Assign L-topology to port
Loopback	offset	0.0.0.0	Loopback ip-address in (/32) subnet
Loopback	scope	Subnet	Loopback ip-address must be unique in the subnet
Loopback	topo_pos	L	Assign L-topology to port

Within the current version of netYCE both [IPv4](#) and [IPv6](#) are supported. This page details the creation of IPv6 plans.

IP plans

IP plans are essentially supernets with a reference number and a subnet mask. The supernet will be divided into 1 or more subnets (segments). A [client](#) can have 1 or more supernets associated. This applies for both IPv4 subnets and IPv6 subnets. The two types are not linked, and can be used completely independently.

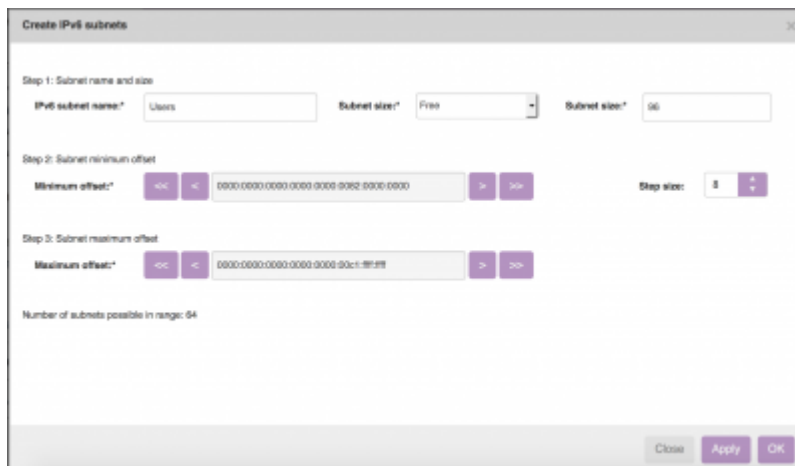
Client types

1 IPv6 plan can be used with multiple clients. Changing an IPv6 plan should be done with extreme caution. The client types section of the form will show the client types associated with the selected IP-plan.

Client type	Name
HYP1	Interhyp LAN
YCE	YCE Example database
C	Cable Service Provider
COG	Cognizant
BEL	Belastingdienst NL
VER	Verzion
A	UCL

Subnets

With the subnets section of the form, the IPv6 plans can be segmented.



Using the New button New sign the IPv6 plan subnet add form is opened and one or more ip subnets can be added.

By default, the subnets will be added with a 24 bits subnet. This can be changed by typing the prefix, or using the arrows.

Each subnet must have a name. A good practice is to make a reference to the function of the subnet, such as management, voice, data, ppp etc. When needed a remark can be added.

With '**Minimum offset**' you can select the starting point of your (first) subnet. You can offset this with the single arrows of the offset size per click. If you need to take bigger steps, you can use the double arrows, to make steps increase by a number of bits, equal to the number in the Step_size field.

With '**Maximum offset**' you select the end-point of your (last) subnet. The single arrows take sequential steps, the double arrows take exponential steps, in order to get to your maximum offset.

The offset fields are intentionally not editable, this makes sure that no crazy offsets can be chosen. To overcome lots of clicking when a big free space exists in the plan, create as big as possible 'Free' ranges so that the first free offset is near the requested one. After creating the latter subnets you can remove the [segments](#) of the 'Free' subnets.

Subnet plan

In the Subnet plan tab, the subnet can be modeled. Here the Default-gateway, VLAN ID etc can be defined. By clicking New the IPv6 Subnet Plan add form will be opened.

Create IPv6 subnet plan ✕

IPv6 plan id: IPv6 subnet name:

Loopback Loopback reference:

Gateway Management reference:

Point-to-point

Four-corners range

Vlan fixed

range

fixed

IPv6 address offset

When adding an IPv6 address parameter, netYCE will use an offset from the subnet address. When the subnet address is ::1 and the offset is ::1 the resulting address will be ::2.

Loopback

Loopback will add 2 parameters. 1 is the offset of :: which means 0 bits offset from the subnet IP and number 2 is a topology position of **L**. This topology position will be assigned to the port.

Gateway

Gateway will add 1 parameter. An IP offset of ::1

Point-to-point

Point-to-point will add 8 parameters. 2 parameters will have an IP offset of ::1 and 2 will have an IP offset of ::2. Also topology positions A (left), B (right), N (north) and Z (south) will be added.

Four-corners

Vlan

VLAN will add 2 parameters. The scope of the VLAN whether it should be Site specific, Client specific or Service specific. The other parameter is the VLAN template. Here a [VLAN configuration template](#) can be used.

When adding a VLAN, the user must make a choice whether to have a range or a fixed VLAN ID.

Range

When choosing *Range*, 2 parameter will be added. The minimum- and maximum offset of the VLAN ID. The maximum offset must be higher than the minimum. The range is between 1 and 4094.

Fixed

When choosing *Fixed*, 1 parameter will be added. This is the VLAN ID.

Loopback reference

It is possible to make a named reference to the loopback address. This is useful when using [Service types](#) and using [Templates](#)

Management reference

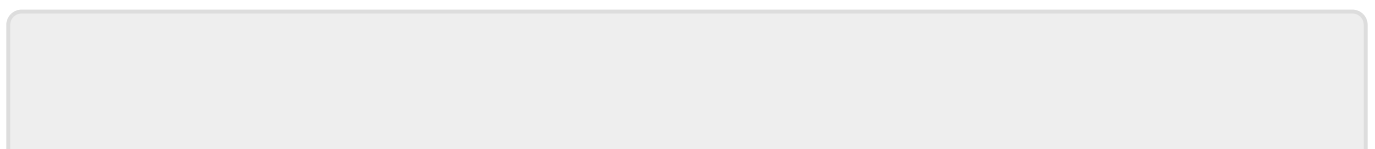
In order to force a specific IP address (or range of addresses) it is possible to use a named reference. This reference can be used in the same way as the loopback reference.

Range

The *Range* will add the *Scope* parameter, the *Topology* parameter and a minimum- maximum offset parameter. The Topology parameter can't be modified. The Scope can be Site (default) and Global.

Fixed

The *Fixed* will add the *Scope* parameter, the *Topology* parameter and a fixed offset parameter. The Topology and Site parameter are the same as the Range setting.



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