



IPv6 Course

Making Assignments

The goal of this exercise is to practice the assignment process. The work is done in groups so that you can learn from each other. Your group's task is to make an IPv6 assignment and register the assignment in the RIPE Database.

Assumptions

You work for the LIR nl.ripencc-ts.

Your LIR has a /32 allocation: 2001:db8::/32

You are working together with a start-up company called Future Casa on a project called "Smart Home 6".

Future Casa wants to use IPv6 address space from your registry.

You will announce the space aggregated in your allocation.

Future Casa will use LTE (4G) to connect each home and all the homes are in the same network. Each home gets an IPv6 block from a pool when the base unit is connected.

Product Description

The "Smart Home 6" project is an ambitious one. Each home will be equipped with a base unit that connects wirelessly to the nearest 4G access point. No cables are required! The base unit will serve as a central hub for a variety of different devices that can be connected and controlled from an app on your smartphone or computer. Most of the devices will also have manual controls on them.

The devices that can be connected are supported by the services provided within the "Smart Home 6" framework.

These services include:

- controlling the house lights
- monitoring window and door activity
- a closed-circuit webcam monitoring system
- temperature meters that can interact with the room heating devices
- controlling and monitoring several household appliances, like the refrigerator
- VoIP communication devices to make phone calls from any room
- a home wifi router to connect your computers and other Internet devices
- a wifi guestnet for visitors



At any moment, a customer can subscribe (or unsubscribe) to any of the smart home services that are offered. The base unit will automatically configure a subnet for the new service, depending on the QoS and security settings defined by the vendor and the user.

New services and devices are being developed and will be automatically supported by the Smart Home 6 base unit in the near future.

Tasks

Phase 1

For phase 1, Future Casa wants to connect 4000 Smart Homes.

Collect Information

- Read the product description and options, and ask questions to the product manager from Future Casa to determine the size of the assignment per smart home
- Consider the IPv6 prefix size per smart home

What is the total amount of address space you will need to connect all the smart homes?

How would you register the address space in the RIPE Database?

Phase 2

If this project is a success, in the foreseeable future Future Casa wants to connect one million smart homes. This is Phase 2 of the project.

What is the total amount of address space you will need to connect all the smart homes?

How would you register the address space in the RIPE Database?

IPv6 Course Exercise:



Making Assignments

Phase 1

inet6num:	
netname:	
descr:	
country:	
admin-c:	FC1356-RIPE
tech-c:	LC6420-RIPE
status:	
assignment-size:	
mnt-by:	LIR-MNT
created:	(generated by RIPE DB)
last-modified:	(generated by RIPE DB)
source:	RIPE

Making Assignments

Phase 2

inet6num:	
netname:	
descr:	
country:	
admin-c:	FC1356-RIPE
tech-c:	LC6420-RIPE
status:	
assignment-size:	
mnt-by:	LIR-MNT
created:	(generated by RIPE DB)
last-modified:	(generated by RIPE DB)
source:	RIPE