

IPR512 Network Configuration

December 11th 2019
Created by: Razvan Mirodotescu

Preface

This document will present how the network configuration should be done, in order to prevent flooding the IPR512.

IPR512 Network configuration

IPR512 was designed to function as a receiver and handle only messages coming from deployed accounts (setups).

We found that in practice and in some monitoring stations the IPR512 unit is not running on isolated networks and the IPR512 has to handle other messages broadcasted in the network that might not be of interest.

This is making the unit to process unnecessary packets and therefore consuming processing resources, at some point causing the unit to reboot.

To cope with that Paradox is **STRONGLY** recommending isolating the network physically and if not possible then to create VLAN with distinct subnets for each IPR512 WAN and LAN ports. The protocols that needs port forward are: LAN TCP only and WAN UDP only.

Please check following diagrams with details that need to be implemented to isolate the network, using VLANs (Figure 1) or using routers (Figure 2).

Firewall rules

1. From workstation to IPR512 LAN IP web management
2. From ISP to IPR512 WAN1&2 Accounts signaling
3. QoS rule and queue, to not lose packets when the rate limit is reached

* Each IPR512 interface must be in different subnet

* Calculate the ISP line bandwidth and quality to prevent packet loss

IPR512 network isolation example to prevent network noise that flooding the IPR512 device

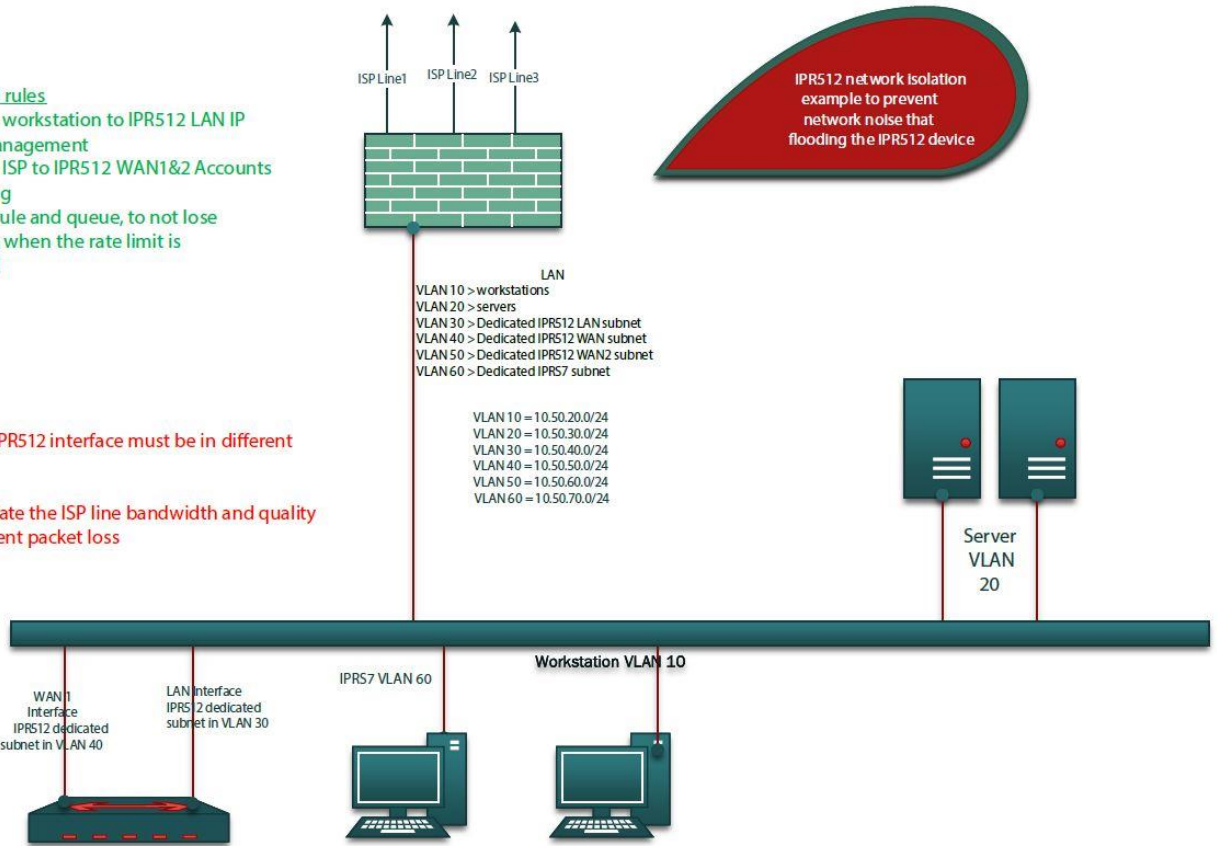


Figure 1. Network isolation using VLAN.

Router1 config.

1. port forward - port 10000 to IPR512 WAN1 192.168.13.2
 2. Disable DHCP,SNMP,IP v6 and wireless
 3. QoS rule and queue, to not lose packets when rate limit is reached
- * For clients point of view - IPR512 WAN1 IP 192.168.2.249 Port 10000

Router2 config.

1. port forward - port 8080 to IPR512 LAN IP 192.168.12.2
 2. Disable DHCP,SNMP,IP v6 and wireless
 3. QoS rule and queue, to not lose packets when the rate limit is reached
- * For clients point of view - IPR512 LAN IP 192.168.12.240 Port: 8080

- * Each IPR512 interface must be in different subnet
- * Calculate the ISP line bandwidth and quality to prevent packet loss

IPR512 network isolation example with home routers in case it's not possible to implement VLANs

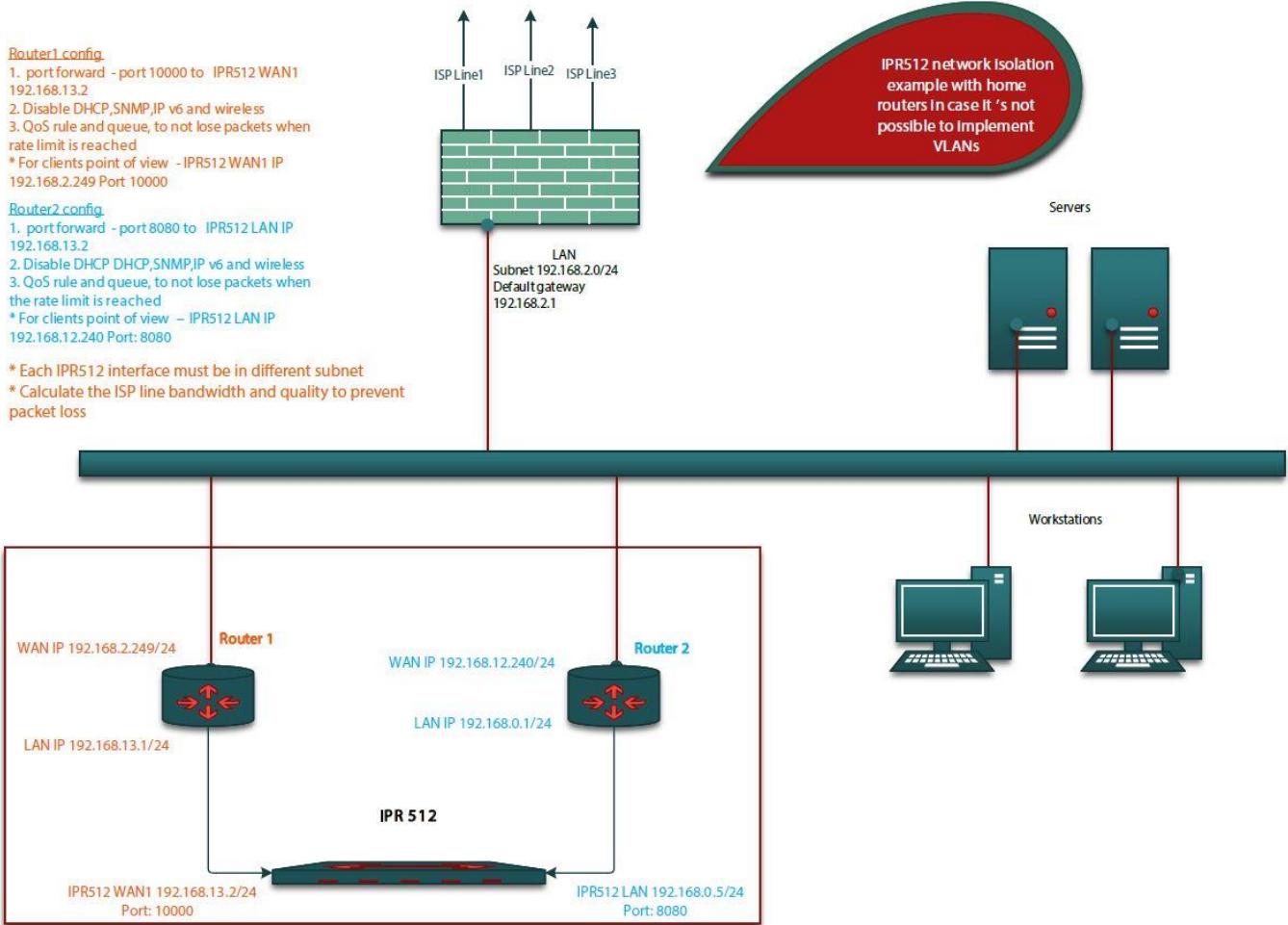


Figure 2. Network isolation using routers.