

Deployment Mode Options for your OSS

Bluestone Telecom, Rev 1.0

For the OSS (*On Site Server*) to be able to shape the voice and data traffic to the WAN then it **MUST** be the access point for your site, i.e. immediately behind the cable/optical modem. The chart below (*taken from the network interface of the OSS*) presents a concise view of how the various networking modes affect the function of the device's Ethernet ports and VLANs.

Interface	Mode 1	Mode 2	Mode 3	Mode 4	Mode 5
eth0	DHCP Server	DHCP Server	DHCP Client	DHCP Client	DHCP Client
eth0.4	X	DHCP Server	DHCP Server	DHCP Server	DHCP Server
eth0.8	X	X	X	✓	X
eth1	✓	✓	✓	✓	X
br0	X	X	X	✓	X
Port Fwd	✓	✓	✓	X	X

Modes 1,2,3: Provide for standalone OSS deployment

Mode 4: Transparent mode for shaped-bandwidth WAN deployment

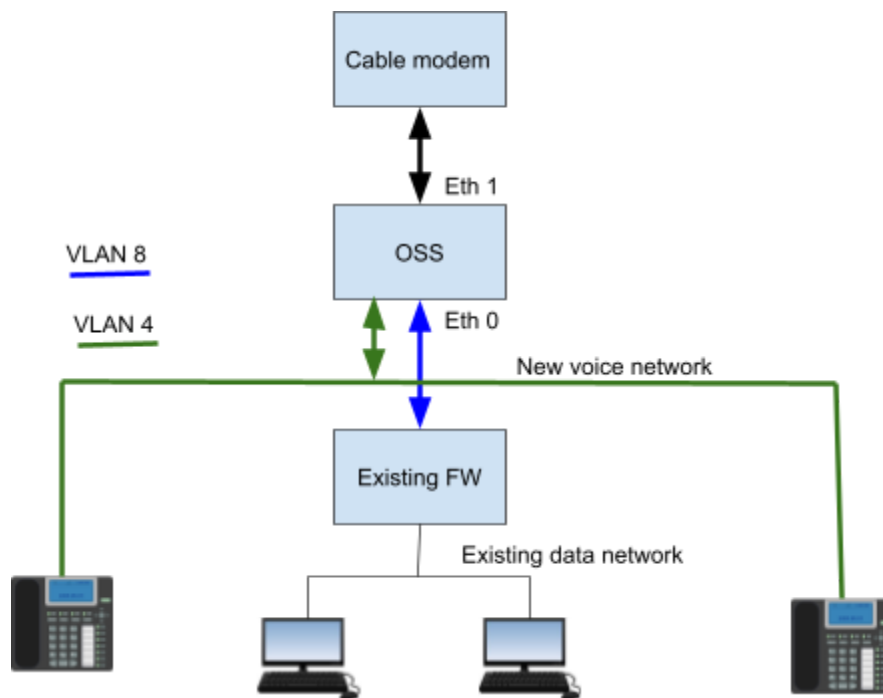
Mode 5: For OSS deployment behind NAT

Table 1 - An overview of the networking modes

Network Mode 4 (Transparent Mode)

If you want to leave your current networking arrangement undisturbed and just overlay the new voice network on top of it then transparent mode is for you. It requires 2 static IPs, one for accessing your existing router/firewall and another for accessing the OSS. In the diagram below eth1 is bridged to VLAN8 on eth0 (we shall refer to this as eth0.8 going forward). The bridge means that the existing router/firewall sees nothing different in it's WAN access, it's exactly the same as it was prior to the installation of the OSS. The only difference is that the OSS will shape the outbound traffic such that voice always has priority over data. It does this dynamically, it does not set aside some percentage of the WAN bandwidth for voice as other schemes might. The consequence is that most of the time there is very little impact on the bandwidth seen by the existing PCs, however should one of those PCs suddenly decide to upload a large file it will not dominate the WAN bandwidth and cause voice issues as more basic deployments would.

As far as the voice network is concerned it uses VLAN 4. The DHCP server that is in the OSS and sets itself up without any interference from or causing any issues with any existing DHCP services. The OSS also contains the phone provisioning functionality as well as obviously the PBX itself. Just ensure that the phones are deployed to use VLAN4 and DHCP and the system will take care of the rest.



Networking Mode 4

Network Modes 3,2 and 1

These omit the Ethernet bridging function, and vary how DHCP is either received or provided by the OSS.

Mode 3

In the diagram below of mode 3 the OSS is:

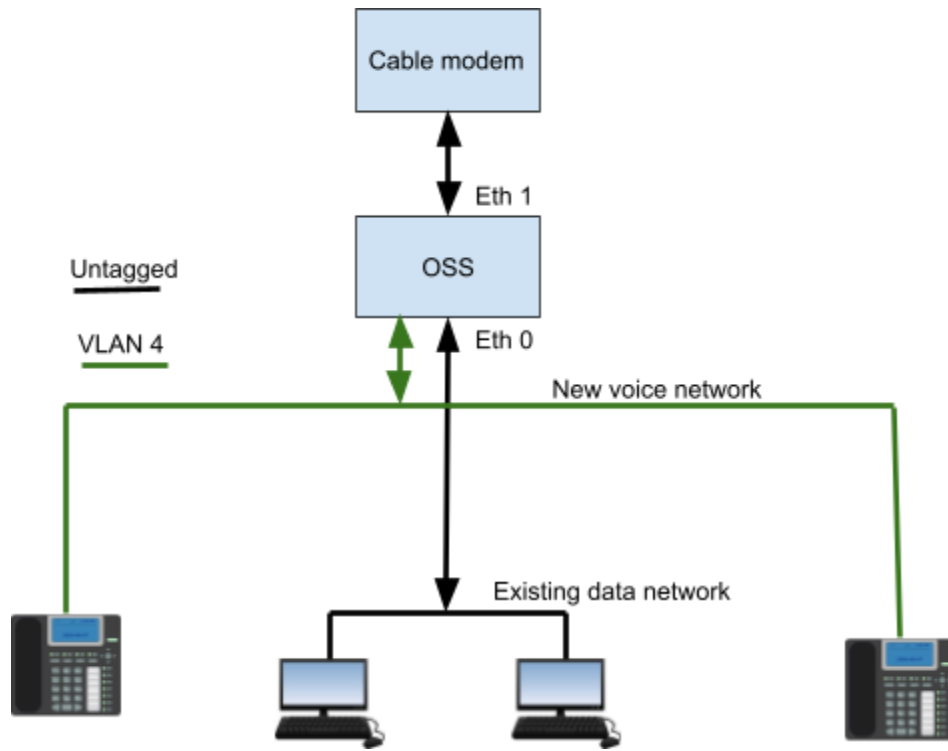
- Providing DHCP on VLAN4 for the phones.
- Uses a DHCP client on untagged that integrates the OSS with the existing LAN..

Mode 2

- Providing DHCP on VLAN4 for the phones.
- Provides DHCP on untagged for the data LAN.

Mode 1

- Removes VLAN4
- Provides DHCP on untagged for the phones and data LAN...



Networking Modes 3, 2 and 1