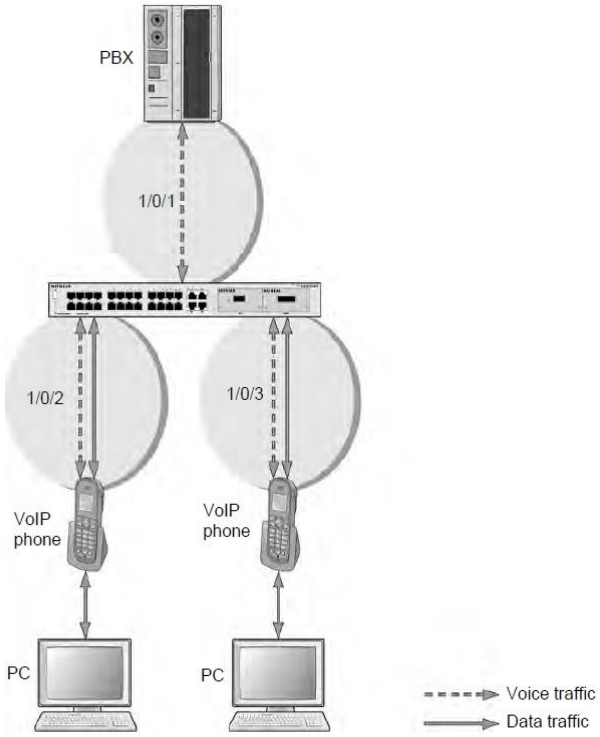
Configuring voice VLAN feature on the NETGEAR Smart switches

GS108Tv2, GS110TP, GS716Tv2, GS724Tv3 (fw 5.0.3.2) and FS728TPv2 (fw 5.0.2.20)

Voice VLAN feature

Voice VLAN allows you to enhance VoIP service by configuring ports to carry IP Voice traffic from IP phones on a specific VLAN. VoIP traffic has a preconfigured OUI prefix in the source MAC address. Network managers can configure VLANs on which voice IP traffic is forwarded. Voice VLAN also provides QoS to VoIP, ensuring that the quality of voice does not deteriorate if the IP traffic is received unevenly. Using voice VLANs ensures that VOIP devices do not have to contend directly with all the broadcasts and other traffic from data VLANs which could cause delays in voice packets delivery. Using a voice VLAN can simplify network configuration. Specifically, marking packets for QoS is easier, because there is no need to specify the various ranges of TCP and UDP ports. All packets from dedicated subnet will be assigned higher priority. The system supports one Voice VLAN.



Configuration steps

1. Create dedicated voice VLAN
2. Enable voice VLAN feature on the switch
3. Add custom OUI prefix to mach MAC address of the IP phone (optional)
4. Enable automatic recognition of VoIP device connected to swtich port
5. Verify operation status of voice VLAN

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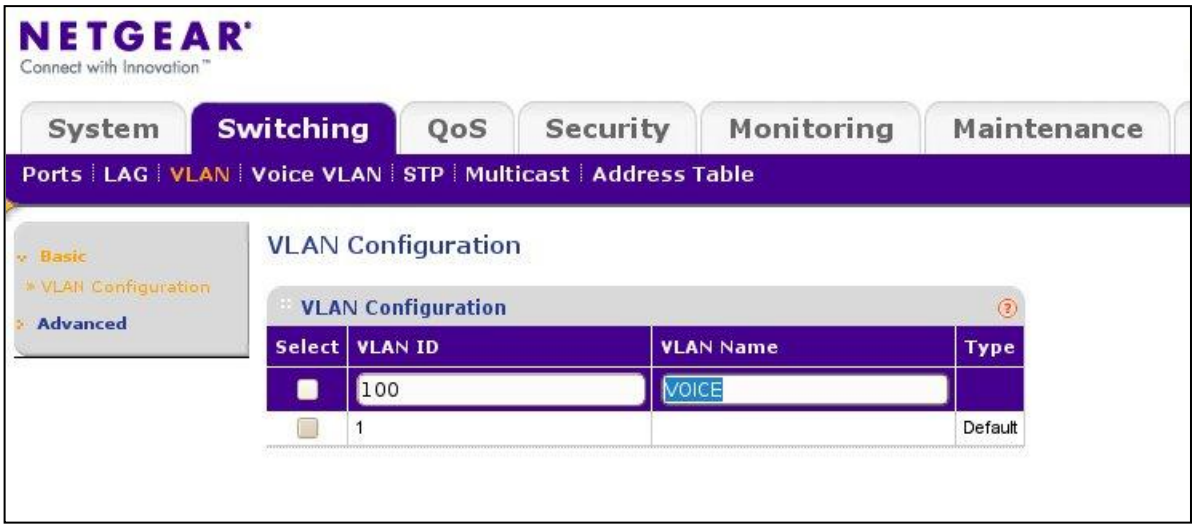
1. Create dedicated voice VLAN

1. Select **Switching** > **VLAN** > **Basic** > **VLAN Configuration**
2. In **VLAN ID** field, enter desired VLAN number, for example number **100**.
3. In **VLAN Name** field, enter desired name, for example **VOICE**.
4. Click **ADD**.

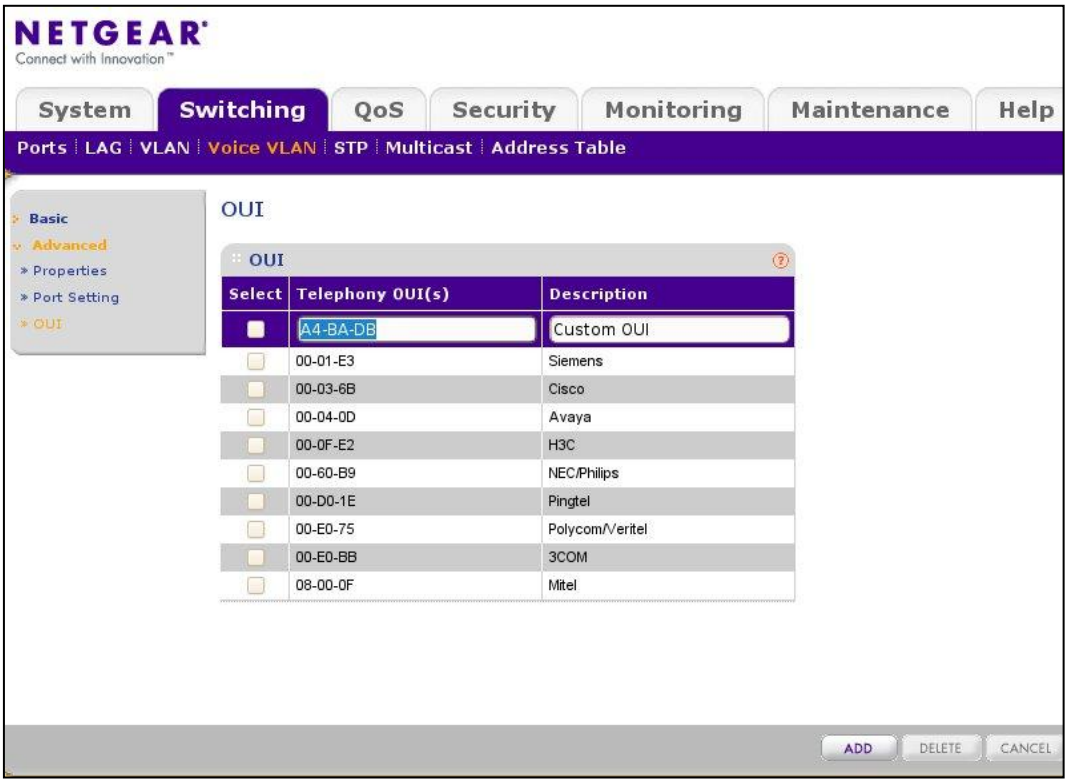


2. Enable voice VLAN feature on the switch

1. Select **Switching** > **Voice VLAN** > **Basic** > **Properties**
2. For **Voice VLAN Status** select the **Enable** radio button.
3. Click **Apply**.

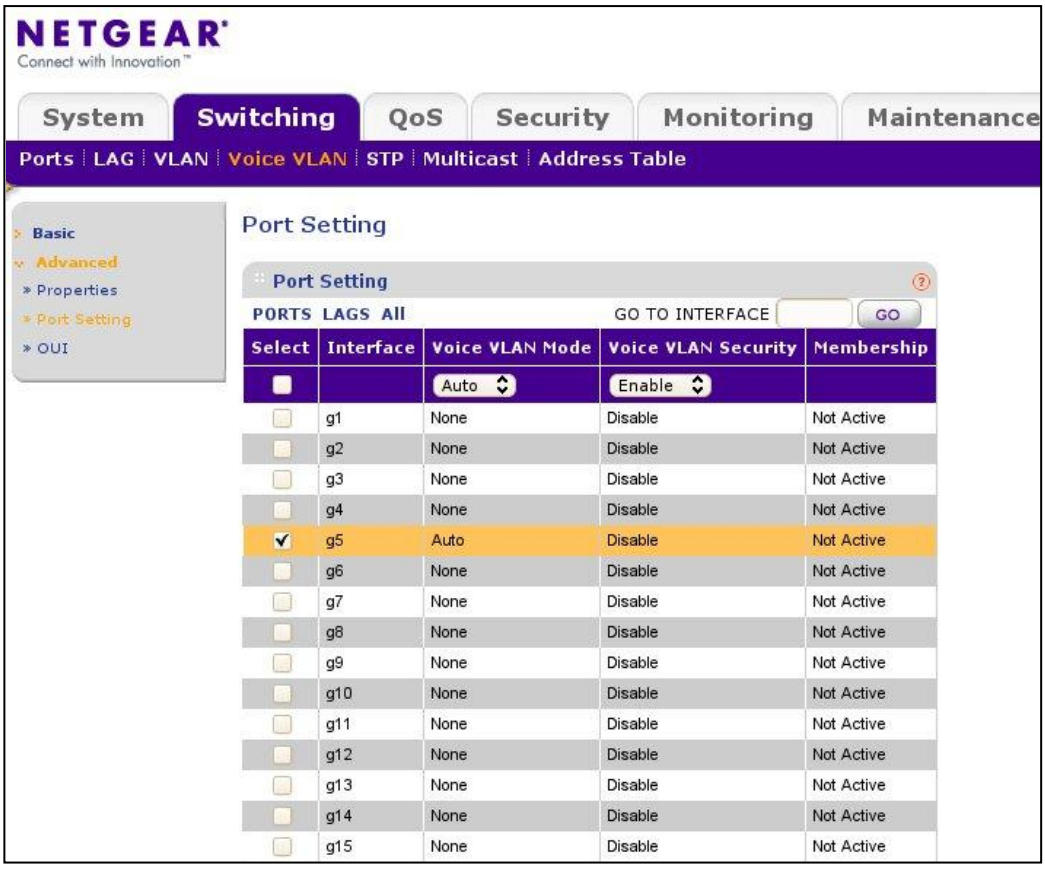
3. Add custom OUI prefix to match MAC address of IP phone (optional)

1. Select **Switching** > **Voice VLAN** > **Advanced** > **OUI**
2. In **Telephony OUI(s)** field, enter custom OUI, for example **A4-BA-DB**.
3. In **Description** field, enter description of the entered OUI.
4. Click **ADD**.



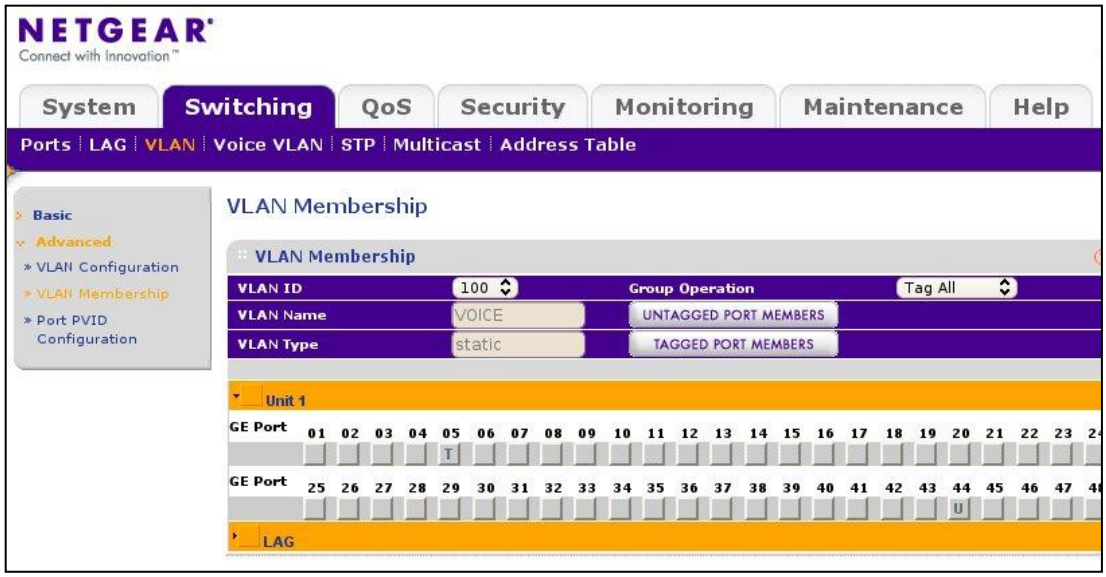
4. Enable automatic recognition of VoIP device connected to switch port

1. Select **Switching** > **Voice VLAN** > **Advanced** > **Port Setting**
2. Select interface to which IP phone is connected.
3. For **Voice VLAN Mode** select **Auto**.
4. (**Optional**) For **Voice VLAN** security select **Enable** so unrecognized OUI will be dropped.
5. Click **Apply**.



5. Verify operation status of voice VLAN

1. Select **Switching** > **VLAN** > **Advanced** > **VLAN Membership**
2. For VLAN ID select voice VLAN number.
3. Select desired unit number, for first unit click Unit 1.
4. First screen shows that the switch has automatically enabled tagging (**T**) on port to which IP phone is connected.
5. Additional ARP table shows that MAC address of the IP phone was assigned to voice VLAN.


NETGEAR
Connect with Innovation™
System
Switching
QoS
Security
Monitoring
Maintenance
Help
Ports | LAG | VLAN | Voice VLAN | STP | Multicast | Address Table
Basic
Advanced
» VLAN Configuration
» VLAN Membership
» Port PVID Configuration
VLAN Membership
VLAN Membership
VLAN ID
100
Group Operation
Tag All
VLAN Name
VOICE
UNTAGGED PORT MEMBERS
VLAN Type
static
TAGGED PORT MEMBERS
Unit 1
GE Port
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
T
GE Port
25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47
U
LAG