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 switch port
5. Verify operation status of voice VLAN

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**.

![NETGEAR Switching Configuration](image-url)
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.