

For Many-to-Many Configuration of IP-Based Extenders

A Many-to-Many configuration of IP-based extenders allows multiple transmitters and multiple receivers to be connected to a single managed network switch wherein the switch can provide the routing of signals from transmitters to receivers. Through the assignment of VLAN groups, a transmitter can send video to multiple receivers within the same-named group.

Note: Only one transmitter can be connected per group.

Be sure to take note of which ports belong to each group assigned. Once the group is created, simply plug the transmitter (for the video source) and the receivers (for the displays that are intended to receive video). The following procedure provides example of just such a configuration.

Procedure to configure VLAN groups for a Cisco Managed Network Switch.

1. Connect an Ethernet cable between the PC and OOB port on the Cisco switch. The OOB port will be labeled "OOB". (If your managed Cisco switch does not have an OOB port, just connect the PC to any Ethernet port on the switch.)
2. Change the PC's IP to be in the 192.168.1.x subnet.
3. Log into the web interface of the Cisco switch (the switch we used has a default IP of <http://192.168.1.254>).
4. Select "**VLAN Management**" on the leftmost list of the webpage.
5. In "**VLAN Settings**", click "**Add..**" to create a new VLAN group. (You could repeat this step to create multiple VLAN Groups.)
 - a. In the pop-up window, type a number between 2 and 4094 as the "**VLAN ID**" of the group. You could use any name you want for the "**VLAN Name**".
 - b. Click "**Apply**" to finish adding a new VLAN group.
6. Under "**VLAN Management**", click "**Interface Settings**".
 - a. If you see that the "**Interface VLAN Mode**" of the ports that you want to set up for your video extender are already set to "**Access**", you could skip this step and go to step 7.
If you see that they are set to "**Trunk**", continue to step 6(b).
 - b. Choose a port you want to use, then click "**Edit**" on the bottom of the table.
 - c. In the pop-up window, change the "**Interface VLAN Mode**" from "**Trunk**" to "**Access**". Click "**Apply**".
 - d. Repeat step 6(b) and 6(c) to finish setting up all ports that you want to use.
7. Under "**VLAN Management**", click "**Port VLAN Membership**"
 - a. Select a port you want to use, then click "**Join VLAN..**" at the bottom of the table.
 - b. In the pop-up window, assign the "**Access VLAN ID**" of the desired VLAN group ID number for this port to be part of. Click "**Apply**".
 - c. Repeat step 7(a)-(b) to set up all ports that will be part of that group.
8. Repeat steps 5-7 for all VLAN groups that you want to create.

Now your VLAN groups should be configured correctly and ready for use.

IP Conflicts

When preparing to connect your IP extenders to the managed network switch, be careful to make sure your extenders will either 1) all have different pre-assigned static IP addresses or, if your switch includes and you are using a DHCP server, 2) they should all be set to have their IP addresses assigned dynamically by that server. Otherwise your network will not work due to IP conflicts between devices with the same IP address.