



AV Network Best Practices (Araknis Configuration)

*"The network is the foundation of a reliable system."*

Best Practice's AV Network

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Not All Managed Switches are Created Equal

*"There are AV Centric Managed Switches Pre-configured out of the box and some Managed Switches Need to be Configured to Support Information Below"*

All Araknis Managed Switches are Layer 2 and will work more efficiently with the following Configurations.

Please note that Layer 2 Managed Switches are not ideal for today's Consumer Electronics Infrastructure.

***\*These configurations are for Networks that will NOT be using SONOS.***

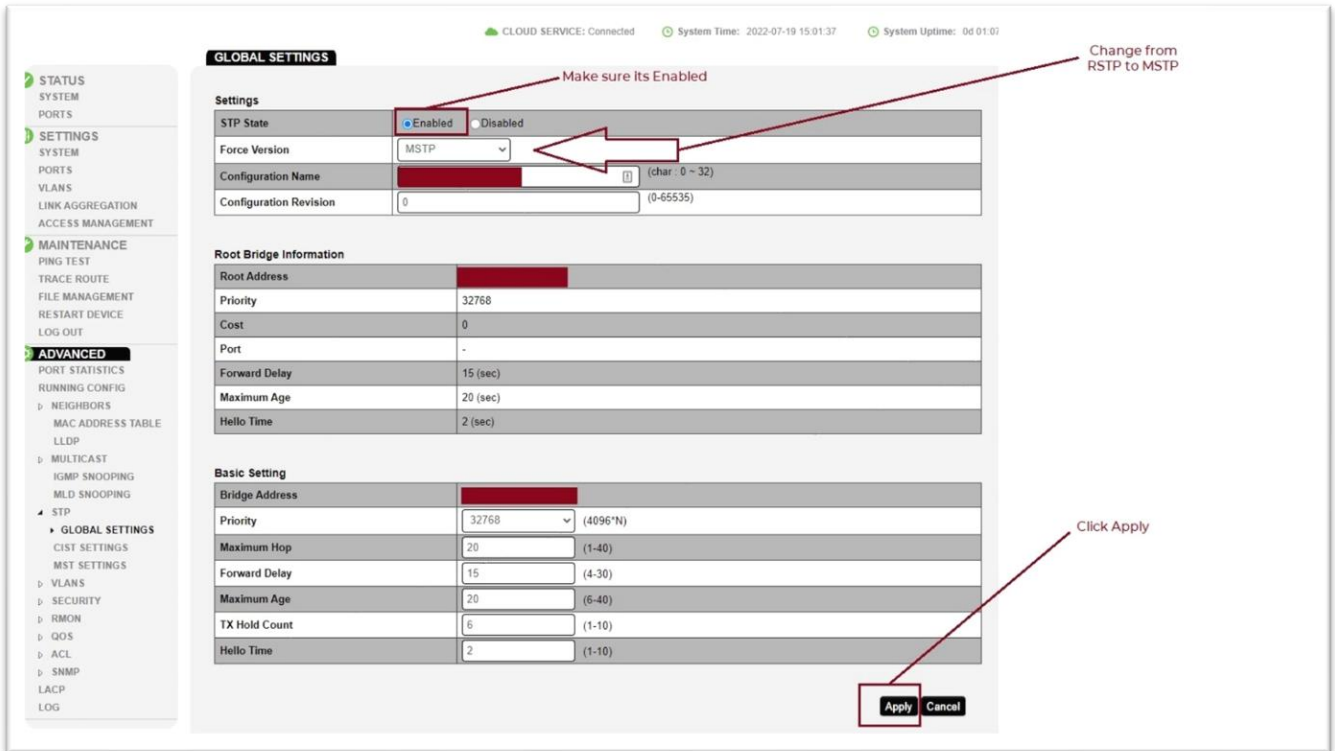
***For Networks that will be using SONOS (5 or More Devices), please see the end of document.***

Enable STP, Set to:

- MSTP (Multiple Spanning Tree Protocol) *“Because Android/Google TV Uses Ethernet [V]LAN or inter-VLAN”*

Root Bridge Priority:

- Default 32768 Should Be Fine when using (1) Managed Switch



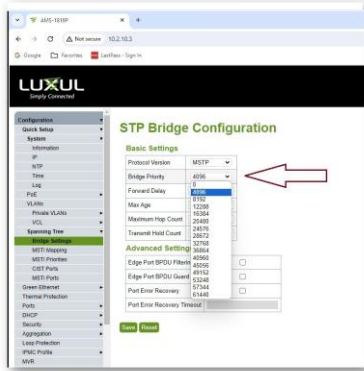
- When using more than (1) Managed Switch
  - o Main Managed Switch needs to be the LOWEST Number, making it the Priority.
    - Example: 32768
  - o Next Managed Switch needs to be a HIGHER Number, so all traffic gets Managed by the Priority Switch.
    - Example: 36864

***\*If you don't change these settings, the Managed Switch with the LOWEST MAC Address will assume Priority.***

Example of Root Bridge Priority in a Daisy Chain Configuration

# Root Bridge Priority

\*Daisy Chain



**RACK**  
**Location**  
 Default 32768  
 MAC 00:50

**RACK**  
**Location**  
 Default 36864  
 MAC 00:40

**Guest House**  
 Default 40960  
 MAC 00:30



Example of Root Bridge Priority in a Star Topology Configuration

- Main Managed Switch will be the **LOWEST**, while the Managed Switches off the Priority Switch can all be the same, just needs to be a **HIGHER** number.

# Root Bridge Priority

\*Star Topology



**RACK**  
**Location**  
 Default 32768  
 MAC 00:50



**Pool House** 36864  
 Default 32768  
 MAC 00:40



**Guest House** 36864  
 Default 32768  
 MAC 00:30

Port Settings:

- Set All to Priority 128

**CIST SETTINGS**

Confirm All Priority is 128

Port Settings

Port	Priority	Path Cost Conf / Oper
1	128	0 /20000
2	128	0 /20000
3	128	0 /20000
4	128	0 /20000
5	128	0 /20000
6	128	0 /20000
7	128	0 /20000
8	128	0 /20000
SFP1	128	0 /20000
SFP2	128	0 /20000
LAG1	128	0 /20000
LAG2	128	0 /20000
LAG3	128	0 /20000
LAG4	128	0 /20000
LAG5	128	0 /20000
LAG6	128	0 /20000

- ✓ STATUS
  - SYSTEM
  - PORTS
- ⋮ SETTINGS
  - SYSTEM
  - PORTS
  - VLANS
  - LINK AGGREGATION
  - ACCESS MANAGEMENT
- 🔧 MAINTENANCE
  - PING TEST
  - TRACE ROUTE
  - FILE MANAGEMENT
  - RESTART DEVICE
  - LOG OUT
- ⚙️ **ADVANCED**
  - PORT STATISTICS
  - RUNNING CONFIG
    - ▷ NEIGHBORS
      - MAC ADDRESS TABLE
      - LLDP
    - ▷ MULTICAST
      - IGMP SNOOPING
      - MLD SNOOPING
    - ▲ STP
      - GLOBAL SETTINGS
        - ▶ **CIST SETTINGS**
        - MST SETTINGS
      - ▷ VLANS
      - ▷ SECURITY
      - ▷ RMON
      - ▷ QOS
      - ▷ ACL
      - ▷ SNMP
      - LACP
      - LOG

🔍 Search



## ***For Networks that will be using SONOS (5 or More Devices)***

### STP (Spanning Tree Protocol):

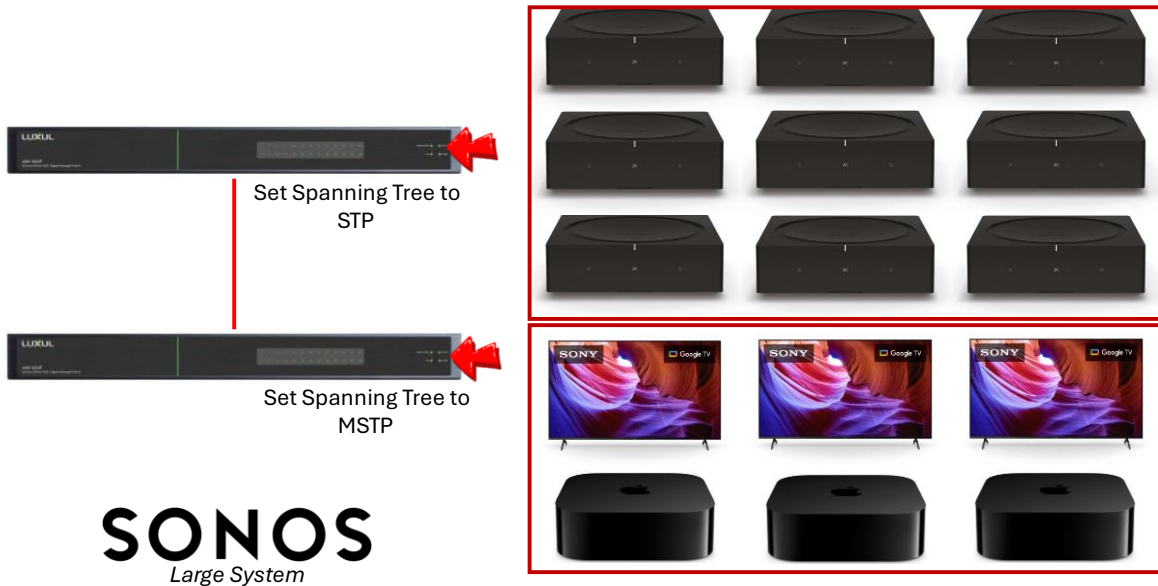
- Sonos (SonosNet)
  - **Needs STP**
- Android/Google TV ("Zero-Configuration Networking" Protocols, including Multicast version of DNS Service Discovery ([m]DNS-SD) Ethernet [V]LAN or inter-VLAN), Nest (Weave), Ring (Z-Wave), Apple (Real Time Streaming Protocol (RTSP), Apples Bonjour ("Zero-Configuration Networking") etc..
  - **All Needing MSTP**

## Configure (2) Managed Switches

Program one Managed Switch that has ALL Sonos devices to:

- Spanning Tree Protocol to **STP**
- Set Path Cost to **Specific** and Path Cost to **10** for Each Port with a Sonos Device

Program the other Managed Switch to **MSTP** and Follow Above Instructions



**SONOS**  
Large System

Configuration

- Quick Setup
- System
- POE
- VLANs
- Private VLANs
- VLAN
- Spanning Tree
- Bridge Settings
- MSTI Mapping
- MSTI Profiles
- CIST Ports**
- MSTI Ports
- Green Ethernet
- Thermal Protection
- Ports

CIST Normal Port Configuration

Port	STP Enabled	Path Cost	Priority	Admin Edge	Auto Edge	Restricted Role	TCN	BFDU Guard	Point-to-point
1	<input checked="" type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto
2	<input checked="" type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto
3	<input checked="" type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto
4	<input checked="" type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto
5	<input checked="" type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto
6	<input checked="" type="checkbox"/>	Specific	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto
7	<input checked="" type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto

enter the value 10

<input checked="" type="checkbox"/>	Specific	10	128
<input checked="" type="checkbox"/>	Auto		128

**SONOS**  
Large System