OVERCOMING SONOS ISSUES
WITH ARAKNIS NETWORKS EQUIPMENT

Contents

1 - Introduction

Araknis Technical Support often helps dealers experiencing network issues after installing a Sonos system. Through extensive testing in both the lab and the field, we have been able to overcome nearly every Sonos-related problem for those using Araknis Networks products.

This guide explains the cause of these issues, how to resolve them on existing jobs, and how to prevent them on new installs when using Araknis Network products.

2 - SonosNet and STP

Sonos is equipped with a standalone, wireless mesh network technology called **SonosNet** that links together all in-range wireless Sonos devices not connected to a Wi-Fi SSID. SonosNet uses **Spanning Tree Protocol (STP)** 802.1D to prevent redundant links between SonosNet devices.

Sonos suggests using a single hardwired link between the LAN and the Sonos system. Under these conditions, STP works correctly. However, when multiple Sonos devices are hardwired to different network equipment, Sonos STP may not behave correctly, which can result in network performance issues such as slow traffic speeds, or in extreme cases, the entire LAN going down.

This is due to either incorrect STP settings in network switches, or because Sonos is connected to equipment that does not support STP, such as the Araknis router.
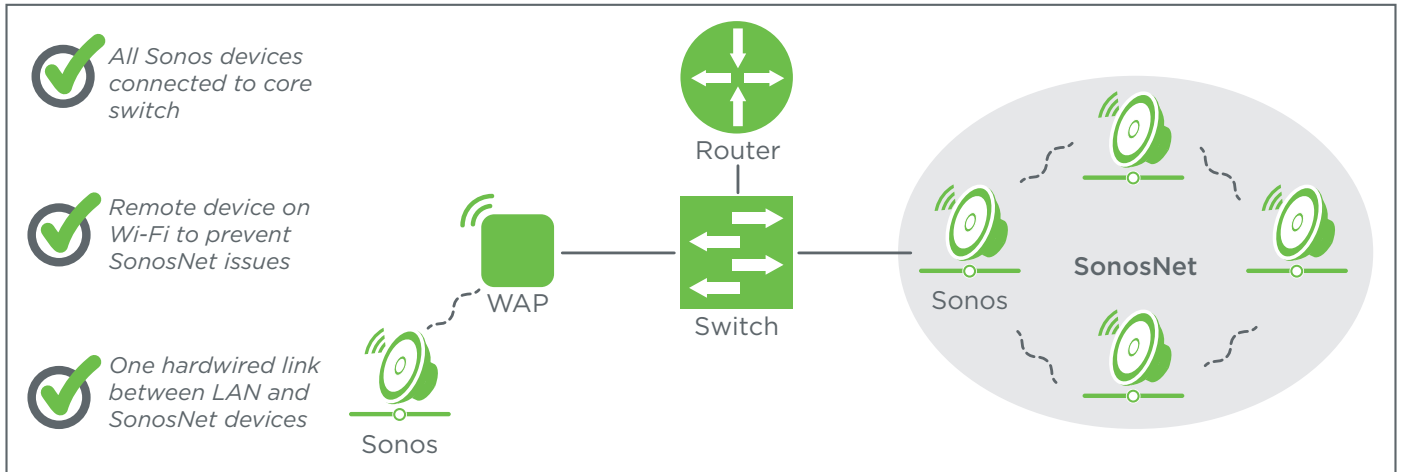
Solutions

*   Minimize the number of hardwired Sonos devices. If remote devices won't stay connected to SonosNet, try moving them to the Wi-Fi network. This will function the same as using SonosNet.

*   Daisy-chain hardwired connections between Sonos devices instead of connecting to the switch. Only works with Sonos models equipped with two LAN ports.

*   Connect all hardwired Sonos equipment to one Araknis switch (not the router). This should eliminate any LAN issues caused by Sonos. Even unmanaged 100 and 110 series switches may be used. See the next page for network topology recommendations.

*   Customize the STP settings in the switches for the install. Use this solution only if you can't move all Sonos connections to one switch. Requires the use of 210/300/310 series managed switches. See section "4 - Using Araknis STP Settings to Solve Sonos Issues" on page 4 for instructions.
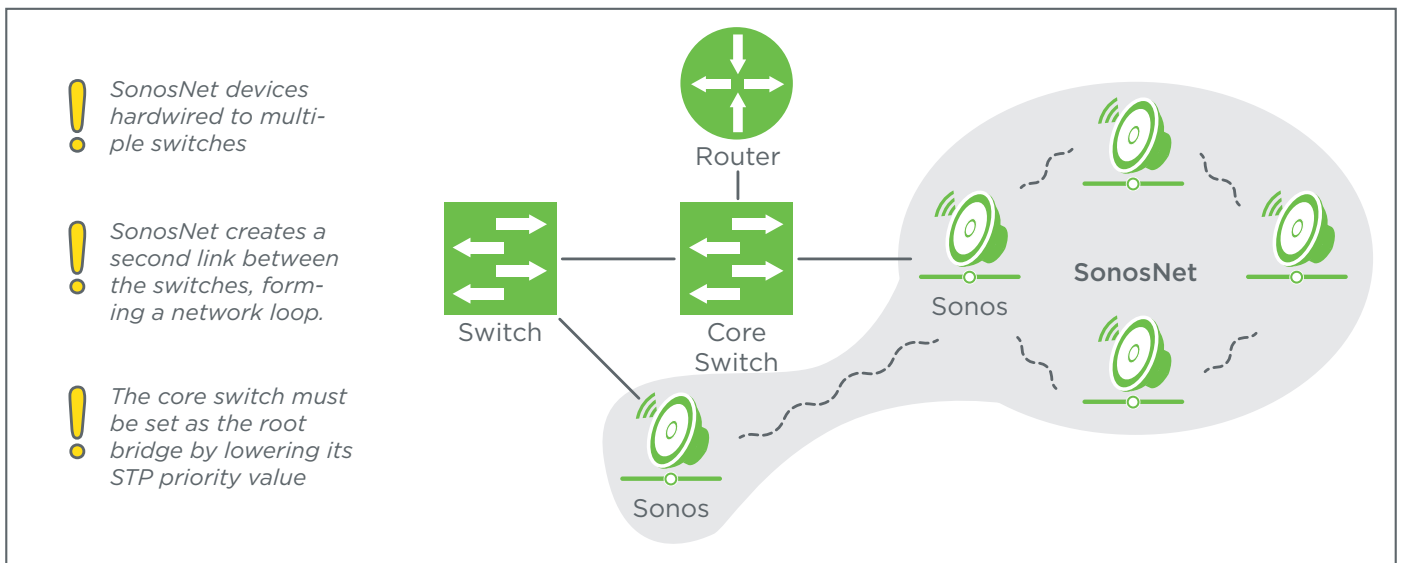
> **Note –** Always reboot the Sonos system and the LAN equipment after making changes. This will ensure that all new settings have taken effect.

3 - Network Topology Recommendations

Example 1 – No STP Setup Required

All Sonos devices connected to core switch

Remote device on Wi-Fi to prevent SonosNet issues

One hardwired link between LAN and SonosNet devices

Example 2 – STP Setup Required

SonosNet devices hardwired to multiple switches

SonosNet creates a second link between the switches, forming a network loop.

The core switch must be set as the root bridge by lowering its STP priority value

Topography Notes

- The diagrams illustrate a **router-on-a-stick** topology, with a single link from the router to the most central switch, called the core switch. All other network devices connect to the core switch. This topology is recommended for use in all LANs with one or more switches.

4 - Using Araknis STP Settings to Solve Sonos Issues

STP chooses the best path for network traffic by calculating priority values assigned to ports and switches. If two paths exist, one will be used and the other will be blocked. STP selects one switch in the network as the root bridge, which should be the core switch. This should be the most central route for traffic between devices in different parts of the LAN.

When SonosNet creates a network loop between switches, Sonos STP values cause the wrong network device to be designated as the root bridge, resulting in traffic from the wired network moving over SonosNet instead. To fix the issue, the value assigned to the core switch can be lowered in order to force STP to select the correct path.

Core Switch Setup Instructions

1. Log into the **core switch** interface as an administrator and navigate to Advanced>STP>Global Settings.

2. Under the Basic Setting menu, change the Priority setting to a smaller value than the default (32768). If you have not changed any other STP settings in the network, we recommend using value 28672. Contact technical support if you need assistance choosing the best value.
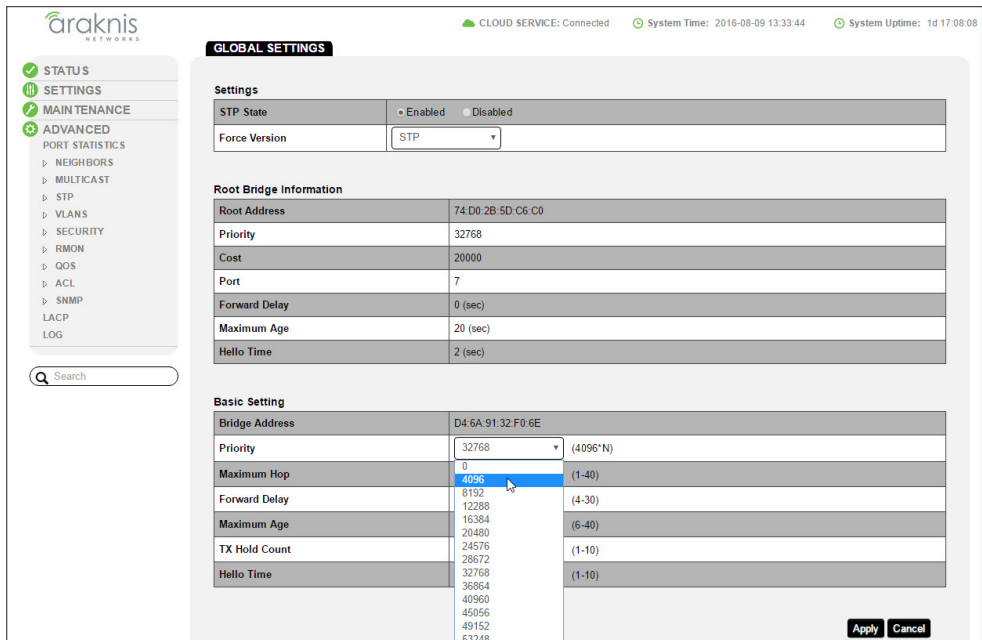
3. Click **Apply** to save the new settings. Refresh the page to confirm that the new setting was saved,

4. Reboot the network and all Sonos equipment.

5. Test the network to ensure that everything works as expected. If you are still having problems, please contact Technical Support. There is more we can do to help!

5 - Contacting Technical Support

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