Reply

Pre-Installation Design Guide for the Reply Sidekick

August 2019

The Reply Sidekick has been designed to be installed directly into a customer local network switch, with no complex requirements or network settings to be made in advance for the Sidekick to function. Network environements can vary drastically, this document reviews how to answer the following questions when implementing the Reply Sidekick:

1. What are the connectivity requirements for the Sidekick?

2. What type of Sidekick is required?

3. How many Sidekicks are needed?

4. Where in the network should the Sidekick be installed?

5. Does the Sidekick need to be installed on the VoIP VLAN?

6. What should the installer be aware of?

Overview

- The Reply Sidekick is not an in-line device.
- The Sidekick WAN port connects to the Ethernet switch and operates on the LAN in the same manner as an IP Phone.
- The Sidekick MIRROR port (optional, but recommended) connects to the port on the Ethernet switch configured to mirror(monitor) all, or all VoIP VLAN packets to the mirror port.

1. What are the Connectivity Requirements for the Reply Sidekick?

- The Reply Sidekick requires 1 or 2 open ports on your switch.
- 1 x 100Mbps Full Duplex RJ-45 Ethernet -- WAN Port connection (required)
- 1 x 100Mbps Full Duplex RJ-45 Ethernet -- Mirror Port connection (optional, but recommended)
- If the Ethernet topology for the VoIP or native VLAN supporting the IP Phones has more than 1 Ethernet switch, the Reply Sidekick must be connected to the Ethernet switch connected to the Router/Gateway (ie: up-stream of all other switches on the VLAN).
- If an **access-list** is desired or required at a location's edge router, an example ACL is provided with the IP addresses of the servers accessed by the Reply Sidekick for testing and auto-provisioning.

Service	Listening Port	Outbound Port	Notes
DNS	TCP/UDP 53	TCP/UDP 53	Part of dnsmasq :: iptables entry to drop all inbound packets with source port = 53
NTP		UDP 123 18.233.142.154	Reply NTP Server
DHCP		UDP 67-68	Local DHCP Server
HTTPS		TCP 443 34.234.245.213	Reply Cluster API Server
HTTPS		TCP 443 52.70.49.68	Reply Cluster JOB Server
HTTPS		TCP 443 34.237.134.227	Reply Cluster MGMT Server
SIP		TCP/UDP 5060 34.237.115.221	Reply Cluster HPBX for MOS test calls from Sidekick, Concurrent Calls

Service	Listening Port	Outbound Port	Notes
RTP		UDP 10000-20000 34.237.115.221	Reply Cluster HPBX for MOS test calls from Sidekick, Concurrent Calls
FWTest		TCP/UDP 50-65535 18.233.142.154	Reply Cluster FWTest Server to run CPE Firewall tests per SP FWTest profile
Speedtest		TCP/UDP 984 104.203.234.115	Reply speedtest VM for TCP Speedtest

2. What type of Sidekick is Required?

There are two Sidekick models available, the **Sidekick 1** and the **Sidekick 2**.

A **Sidekick 1** is deployed when the location meets the following criteria:

- Monitoring 300 endpoints or less in a single Layer 2 network domain
- The network switch where the Sidekick will be installed supports 100Mbps Full Duplex RJ-45

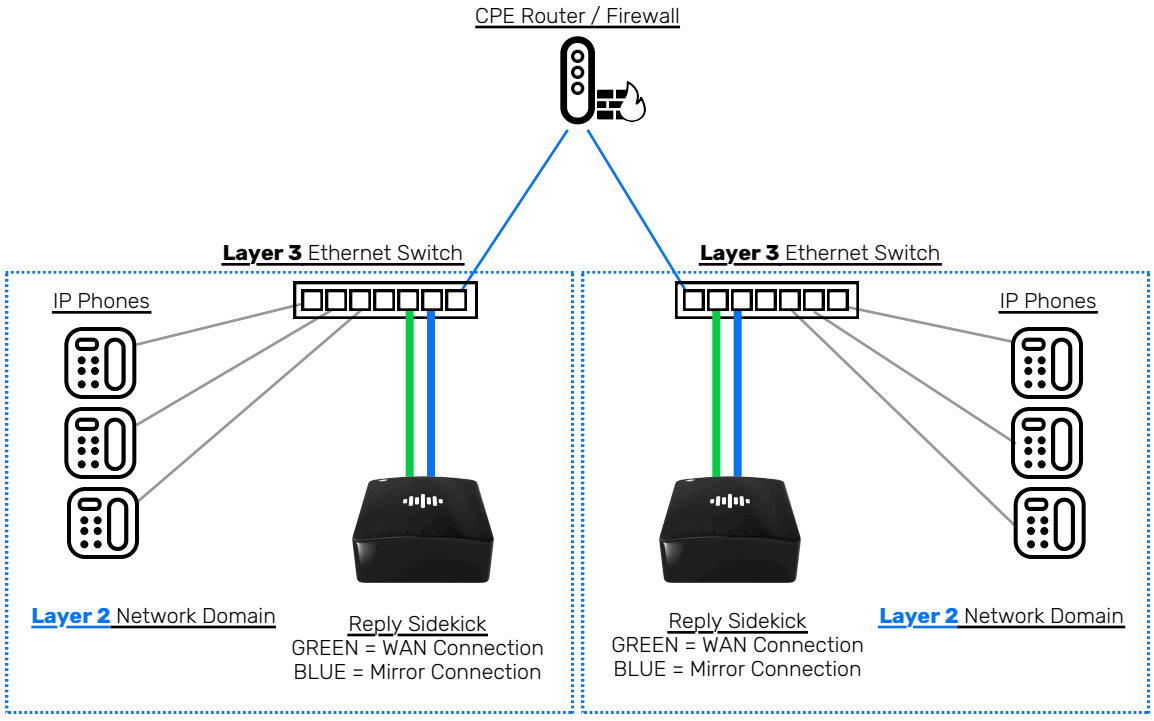
A **Sidekick 2** is deployed when the location meets the following criteria:

- Monitoring up to 1,000 endpoints in a single Layer 2 network domain
- The network switch where the Sidekick will be installed supports 1GigE Full Duplex RJ-45
- Prefer or require power over ethernet (POE) to power the Sidekick unit

3. How Many Sidekicks are Needed?

The general rule for deploying Sidekicks is that there should be one Sidekick per office or retail location, however, there are exceptions to the rule.

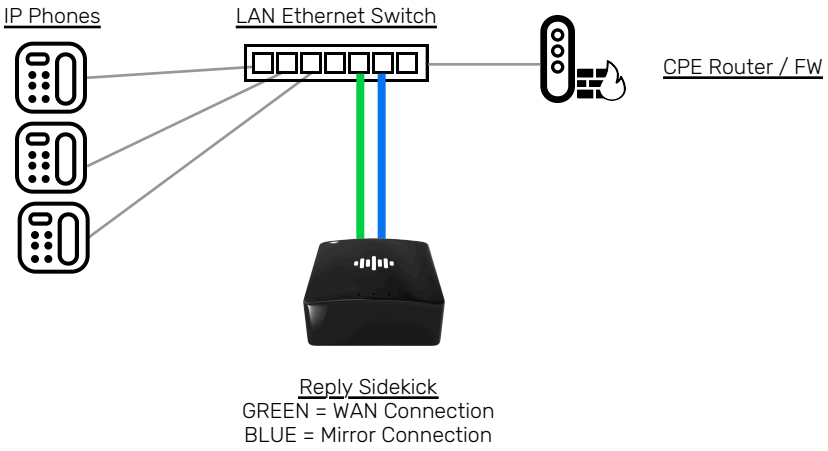
- There should be one Sidekick per Layer 2 Network Domain.
- If a single corporate office, branch office, or retail location has multiple Layer 3 switches peforming network routing, then there should be one Sidekick per Layer 3 switch/router (or Layer 2 Network Domain)
- If there is more than one Sidekick deployed at a single location, then each Sidekick will report as a seperate location in the Reply Portal and can be designated by a unique name (ex: Floor 2).



The last word in VoIP support

4. Where should the Sidekick be installed?

If there is only 1 Ethernet Switch on the network:



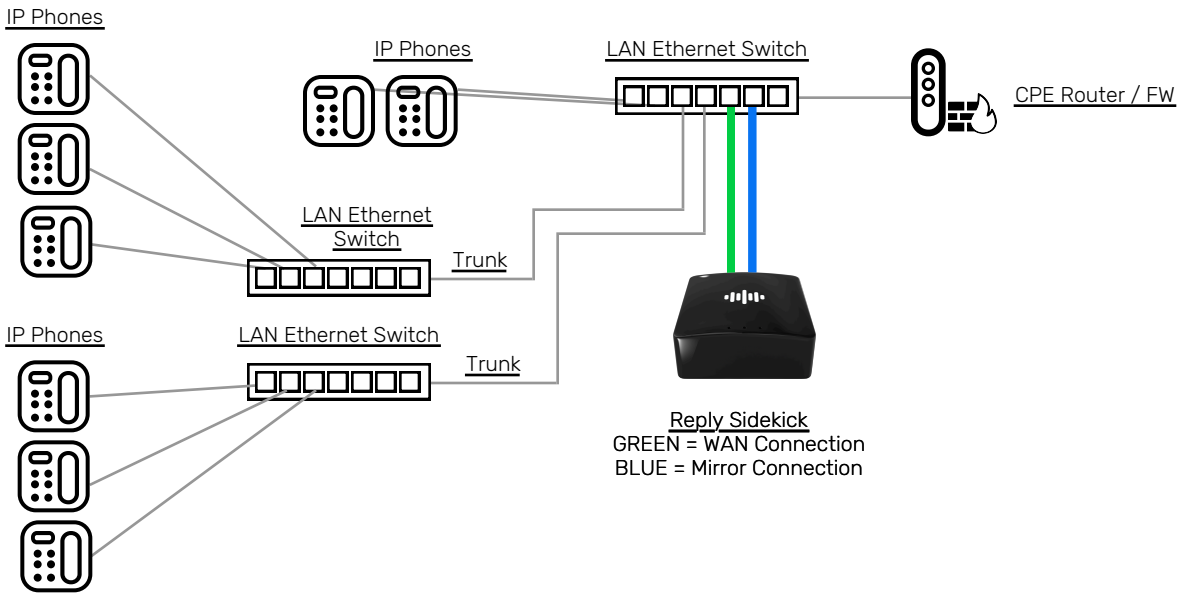
If there is more than 1 Ethernet Switch on the newtork:

DETERMINE:

- What are the trunk ports between the Ethernet switches for the VoIP or native VLAN supporting the IP Phones?
- Which Ethernet switch has the connection to the Router/Gateway to the Internet?

ACTIONS:

- On all Ethernet switches ***without*** the Router/Gateway connect to it, no mirror action is necessary.
- On the Ethernet switch ***with*** the Router/Gateway connected to it, configure the switch to mirror all Received (RX) packets on all ports (or including all ports with IP Phones, all Trunk ports from other switches, all the port to the Router/Gateway) to the Reply Mirror Port



5. Does the Sidekick need to be installed on the VoIP VLAN?

- If the Sidekick is installed without a mirror port, then it can support device visibility and registration from one VLAN only, and must be installed on the VoIP VLAN.
- If the Sidekick is installed with a mirror port, then it can support device visibility and registration from multiple VLAN's, and does not need to be installed on the VoIP VLAN.

6. What should the installer be aware of before installation?

This should act as a checklist for any Sidekick installation.

- [ ] The installer knows which port number on the network switch will support the WAN connection for the Sidekick.
- [ ] The installer has been given the port number on the network switch that has been configured to mirror the VoIP VLAN traffic for the Layer 2 domain per the instructions found on the **MIrror Port Configration Guide.**
- [ ] Ensure that the installer has a copy of the **Installation Guide** to complete the Sidekick installation via the Reply portal or the Mobile App. If activating via the Reply Portal, you will need to know the MAC address of the Sidekick. If activating via the mobile app, the installer will need the Activation code from the Reply Portal.