REQUEST TO PROCURE JUNIPER NETWORK DEVICES

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Table of Contents

Overview

Network switches are computer networking devices that connects devices together on a computer network. These devices receive, process and forward data to their appropriate destination location (e.g: Internet, Servers, etc.)

On July 2015, The City of Riviera Beach's Information Technology Division in collaboration with ClientFirst Consulting Services completed an in-depth IT Strategic Master Plan. During their discoveries and findings, ClientFirst and the Information Technology Division discovered major flaws within the current infrastructure. Some of those flaws are the obsolescence of network switching devices that cause:

- Stifled network speed performance
- Risk of specific locations network downtime due to malfunction of network switches due to age.

This document below explains the current issue with the Network Infrastructure and the recommendations to resolve these issues to provide proper networking to the City.

Current Internet Infrastructure

The City currently utilizes 4 Routers and 41 Switches currently in the network to transfer communication across the network. Out of the 41, only 24% of these current switches are within the end of life support cycle. That leaves 76% that are past their end of support from the Manufacturer and need to be completely replaced. Below is an inventory of the current infrastructure switches:

Serial Numbers	Make	Purchase Date	Model	Location	Asset End Date
CAT0919Z08T	Cisco	05/01/05	WS-C3750-48P	Library	04/30/11
CAT0919N0A2	Cisco	05/02/05	WS-C3750-48P	Public Works	05/01/11
CAT1050NG56	Cisco	12/10/06	WS-C3750-24P	City Hall	12/08/12
FDO1131Y2W0	Cisco	07/29/07	WS-C3750-24P	IT Trailer	07/27/13
FDO1131Y2Z5	Cisco	07/29/07	WS-C3750-24P	Port Center	07/27/13
FOC1205Y258	Cisco	01/27/08	WS-C3750G-24TS	Police Department	01/25/14
FDO1206Y0E6	Cisco	02/03/08	WS-C3750G-12S	City Hall	02/01/14
FDO1206Y0E9	Cisco	02/03/08	WS-C3750G-12S	Police Department	02/01/14
FDO1207Z2PY	Cisco	02/10/08	WS-C3750-24P	City Hall	02/08/14
FDO1207Z2QG	Cisco	02/10/08	WS-C3750-24P	Police Department	02/08/14
FDO1207Z2QD	Cisco	02/10/08	WS-C3750-24P	Police Department	02/08/14
FDO1207Z3CC	Cisco	02/10/08	WS-C3750-24P	Utility District	02/08/14
FDO1207Z2QB	Cisco	02/10/08	WS-C3750-24P	Library	02/08/14
FDO1207Z2QP	Cisco	02/10/08	WS-C3750-24P	Public Works	02/08/14
FDO1207Z2QH	Cisco	02/10/08	WS-C3750-24P	Port Center	02/08/14
FDO1207Z319	Cisco	02/10/08	WS-C3750-24P	Marina	02/08/14

FDO1207Z31D	Cisco	02/10/08	WS-C3750-24P	Fire Station #1	02/08/14
FDO1207Z2ZJ	Cisco	02/10/08	WS-C3750-24P	Fire Station #1	02/08/14
FDO1209Z4DZ	Cisco	02/24/08	WS-C3750-48P	City Hall	02/22/14
FOC1209U4WF	Cisco	02/24/08	WS-C3560-8PC	Fire Station #3	02/22/14
FOC1209U4VT	Cisco	02/24/08	WS-C3560-8PC	Fire Station #4	02/22/14
FDO1210X0JS	Cisco	03/02/08	WS-C3750-48P	City Hall	03/01/14
FDO1210X0Q1	Cisco	03/02/08	WS-C3750-48P	City Hall	03/01/14
FDO1210X0K5	Cisco	03/02/08	WS-C3750-48P	Police Department	03/01/14
FDO1210X0NK	Cisco	03/02/08	WS-C3750-48P	Police Department	03/01/14
FDO1210X0K4	Cisco	03/02/08	WS-C3750-48P	Utility District	03/01/14
FDO1210X0K8	Cisco	03/02/08	WS-C3750-48P	Port Center	03/01/14
FOC1211U2GR	Cisco	03/09/08	WS-C3560-8PC	Fire Station #2	03/08/14
FOC1349Z5PW	Cisco	11/29/09	WS-C3750G-24PS	Police Department	11/28/15
FOC1349Z5PP	Cisco	11/29/09	WS-C3750-24P	Port Center	11/28/15
FOC1420Z4CZ	Cisco	03/09/10	WS-C2960S-48P	Library	03/07/16
FOC1435X4DF	Cisco	08/22/10	WS-C2960S-24PS-L	Port Center	08/20/16
FDO1444X3UA	Cisco	10/24/10	WS-C3750V2-48PS	Police Department	10/22/16
FOC1517Z6PG	Cisco	04/17/11	WS-C3750G-24PS	Police Department	04/15/17
FOC1517Z6FX	Cisco	04/17/11	WS-C3750G-24PS	Police Department	04/15/17
FDO1518X0Y6	Cisco	04/24/11	WS-C3750V2-24PS	Barracuda Bay	04/22/17
FOC1533W0FR	Cisco	08/07/11	WS-C3560-8PC	Barracuda Bay	08/05/17
FDO1624X1D8	Cisco	06/10/12	WS-C3750-48P	Utility District	06/09/18
FDO1814Z1RF	Cisco	03/30/14	WS-C3750-48P	Police Department	03/28/20
FOC1821X0M5	Cisco	05/18/14	WS-C3750V2-24PS	IT Trailer	05/16/20
FDO1837R2AY	Cisco	09/07/14	WS-C3750-48P	Police Department	09/05/20

Recommended Internet Infrastructure

In 2015, the Information Technology Division collaborated with ClientFirst Consulting to create the IT Strategic Master Plan. ClientFirst is a Technology Consulting firm with 10+ years' experience, 1,000 projects with over 250 public agencies focusing on government agencies, processes, best practices, network designing and strategic planning.

In this Master Plan, the team work side by side tackling the entire network infrastructure and recommended that the City do the following:

- Replacement of Network devices due to obsolescence
- Perform inventory and audit of network equipment and determine end-of life dates, developing a capital replacement plan. Review switch, router, and firewall configurations. Upgrade WAN equipment to support increased bandwidth needs and security. Develop new network design to fit into the overall operating and to meet the needs of the Disaster Recovery Plan
- Upgrade core network switch to resilient Cisco 4500 Series model or higher and eliminate all non-managed switches; implement redundant core switching capabilities and institute maintenance policy and standards for switch, router, firewall and various network devices.

The Information Technology Division in collaboration with ClientFirst Consulting Services completed a network redesign where the Information Technology Division discovered the following:

- 76% of the network equipment were past the end of support lifecycle
- IT completed a proof of concept with Juniper Networks and discovered Juniper to provide and exceed the expectations of performance and quality of network devices as well as provide a 30% decrease in annual maintenance cost by switching from Cisco to Juniper.
- IT no longer needs to use Router network devices in the network due to Juniper's routing/switching capabilities with their network switching devices.
- IT will be able to manage all network devices from one enterprise solution to patch, upgrade and view asset end date replacements which will allow the City to endure less cost by properly procuring devices two years prior to their end of support cycle.

Procurement Process

The Information Technology Division went through the process of collecting 3 quotes from 3 vendors. As you will see below is the cost from each vendor:

Network Equipment Quotes:

Vendor	Price
Hayes Communication	$355,755.42
Copper River	$585,547.25
Sanforce	$613,194.47

Each cost provides the City with the network devices for each location, implementation and installation costs and also includes training to Certify 3 Staff members on the basic and advances skills needed to properly manage, deploy and protect the City using the Juniper Networks.

Conclusion

Network switches are computer networking devices that connects devices together on a computer network. These devices receive, process and forward data to their appropriate destination location (e.g: Internet, Servers, etc.)

On July 2015, The City of Riviera Beach's Information Technology Division in collaboration with ClientFirst Consulting Services completed an in-depth IT Strategic Master Plan. During their discoveries and findings, ClientFirst and the Information Technology Division discovered major flaws within the current infrastructure.

By procuring these devices we do the following:

- Prevent network downtime by replacing obsolete equipment before they malfunction.
- Increase network performance by improving the speed of the network due to each device functioning faster than their replaced predecessors.
- Reduce annual maintenance cost for Network devices.