INFRASTRUCTURE ASSESSMENT

KCi NETWORKS
Quality IT Solutions

INFRASTRUCTURE ASSESSMENT REPORT

VERSION: 1.0

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INTRODUCTION

This report is intended to provide the Township of Beckwith with an overview of its current network status at 1702 9th Line Beckwith, Carleton Place ON K7C 3P2.

This report focuses on the general network and this is NOT an audit as quoted on quote 50693. It also discusses thoughts on how the IT should be managed as managing the IT onsite in an orderly fashion helps with the overall health of the environment. Upon arrival onsite I was walked through the office and given a tour. It was mentioned that there is a new building and plans are in place for a move. Cassandra will be sending Sam Kaddoura of KCiNetworks the floor plans for later reference if required.

DISCLAIMER

This report entitled Infrastructure Assessment Report is made available by KCiNetworks for the purposes of pointing out general network setup within the Township of Beckwith network. Some general recommendations will be suggested in this report.

Sam Kaddoura

Sam Kaddoura
KCiNetworks

Date: December 2020

SCOPE OF WORK REVIEW

- Write a General Assessment Report for Modernization

- IT Infrastructure Review – Current State with some recommendation input on the below:

  - ✓ Review computer systems and end user use

  - ✓ Hardware Review – Servers Network Gear and Computers (Backup Equipment, Information Storage)

  - ✓ Network Review - Firewall, Switches, Routers, and cabling

  - ✓ Applications Review – Server-Side Applications, Desktop Applications, Cloud Applications (Financial Software Review)

  - ✓ Vendor Review – Internet Provider, Anti-Virus Provider

Notes: This is an assessment and not an audit. An assessment offers a high-level view. An audit is a detailed review.

KEY ASSUMPTIONS

- The review provided on the security is a snapshot in time, any changes done during or after the review may change the opinion(s) and/or suggestions of this report.

- There was limited access to resources while onsite as the County of Lanark is running the IT Infrastructure.

- Manufacturers expectations for proper functionality such as should be considered

REPORT LIST

Below is the list of FCI devices which have been reviewed by KCiNetworks

IP/HOST	DESCRIPTION
216.46.2.54	Bell Home Hub 2000
192.90.135.1	SonicWall TZ300
N/A	WiFi
N/A	Dell Switch 48 Port
N/A	Network
BWSRV01	Dell Power Edge T620
N/A	Backup Tape Unit
N/A	Council Chambers
N/A	New Site Location Plans

ISP

Bell Home Hub 2000
Public IP - 216.46.2.54

Explanation: The current Internet Service Provider is Bell Canada. The technology being used is PPPOE. This internet is not very stable and is not something the Township of Beckwith should rely on.

Action: Upgrade your internet service to symmetrical fiber 50/50 or 100/100. The Symmetrical Fiber also offers a Service Level Agreement where your current internet does not. If this is not available in your area, I would suggest getting another internet provider that uses coax and bond both the Bell Internet (currently being used) and another coax internet provider. This will provide redundancy and increase bandwidth.

SONICWALL

SonicWall TZ300
IP – 192.90.135.1

Explanation: This device is a good industry device that provides adequate services to the network environment its shelf life will extend till 2025-01-23. For better manageability and reporting considering a cloud-based Firewall would be better allowing a more detailed approach to combating web based malicious attacks at the perimeter.

Action: Changing to a subscription-based solution would offer many features that are more current and in line with industry standards. If adding another internet service provider ISP is being considered this device would need to be changed to get the most out of a dual connection.

Wi-Fi

Explanation: The Wi-Fi is standard and sufficient. The Wi-Fi has not been separated from the internal network. There are two SSIDs (Beckwith-Public-Wi-Fi and Beckwith), but both have access to the LAN 192.90.135.0 even though they have different IP ranges.

Action: Get a more suitable Wi-Fi solution to provide stringent access controls straight from the AP and allows for content filtering based on SSID.

SWITCHING

Explanation: The Dell switch 48 port that is currently being used is standard and works fine for this type of network environment.

Action: Nothing required.

NETWORK

IP Network - 192.90.135.0
Subnet Mark - 255.255.255.0
Gateway - 192.90.135.1
DNS – 192.90.135.9
DHCP – 192.90.135.9
Internal Domain – beckwithtwp. local
External Domain – twp.beckwith.on.ca

Explanation: The above network range allows for 254 devices to be on the network with one subnet. This is likely adequate for the Township of Beckwith. Should you require more than one subnet, based on the above IP Networks and Subnet Mask your devices will be significantly diminished from 254 devices to 126 devices.

Action: No Action is required at this time unless the new site plan requires a VLAN/SUBNET for security.

SERVER(s)

Dell T620 Power Edge

Physical 192.X.X.X
Host Server Running VMWare

Explanation: The Dell Power Edge server T620 has VMWare as its platform to run Windows BWSRV01. Limited access to this console.

Action: No Action is required at this time on the server. The physical security of the server is an issue and should be put in a secured and locked room or lockable rack.

SERVER(s) CONT'D

Dell T620 Power Edge (Virtual Machine BWSRV01)
BWSRV01 Virtual Machine

ITEM	SUGGESTIONS / RECOMMENDATIONS
Windows	Only allow specified IP's to RDP and add a Certificate **Explanation:** The cert is really there to warn you there is potential risk. Adding a cert isn't necessary although should be done. Adding a management IP to connect to network device like the server through RDP is best. Only allowing specified IP's to access the RDP console allows for a more secure connection.
Windows	Windows Updates should be kept up to date **Explanation:** Running Windows updates at a specified time and a schedule on a weekly or daily basis is valuable. This is an easy way to keep your security updated with relative ease.
Windows	Have all Windows Event Logs go to an external server **Explanation:** Syslog watcher is a useful tool but the Township of Beckwith being able to track who is logging in and out of their network is important. This has low risk, it is more of a helpful tool to be able to monitor security after the fact. Who has logged in and when. This helps more with the internal security and helps pin point internal user that may have caused a security breach.
Windows	Remove all Windows components that are not required. Turn off all services that are not used. **Explanation:** Removing non-essential services and components limits the potential for exploits
Software	Remove software that is not required, TeamViewer **Explanation:** TeamViewer is a remote control and asset tool(s), remote access should never be given to anyone without the explicit consent of the IT administrator. If it is a must then this goes hand in hand with the ("have all Windows Event Logs go to an external server") This way any remote control can be monitored.
Windows	RDP NLA should be used **Explanation:** This provides an extra layer of security. You need to provide credentials before the connection is established

Cloud / Remote Server (usti-connect.local)

IP Address - 192.90.130.6

Explanation: This server runs Financial Software and is not in the Township of Beckwith's network. Limited access is available.

Action: No Action is required at this time.

TAPE DRIVE

Physical LTO

Explanation: The backup LTO is directly connected to the Dell Power Edge server T620, It is an 800GB tape drive.

Action: It is recommended that you move to a cloud-based backup that supports DRaaS and cloud storage. A backup check sheet should be used to ensure backups are complete.

COUNCILS CHAMBERS

Explanation: Site is very dated and has no or old conference technology that has been 'put' together.

Action: Replace equipment and setup a modern conference solution. Quotes have been sent for template of technology. Quote # 50700 & 50701

NEW SITE LOCATION PLANS

Explanation: Reviewed site location plans with Cassandra.

Action: Reviewed site location floor plans. Will discuss further with Cassandra once we are closer to a firm completion date and a budget has been established for the IT, cabling and conference setups.

CONCLUSION

After reviewing the Township of Beckwith network there are some things that can be done to improve performance, specifically around project-based work and modernizing. The network itself seems to be setup in a sound manner. Based on the size of Township of Beckwith, a dedicated person is not required to maintain the network and associated projects. This work should be outsourced.

GENERAL OVERVIEW AND ADDITIONS

I would suggest filtering your outbound/inbound email traffic through a third party filtration system provider. Currently you are using O365 for this service.
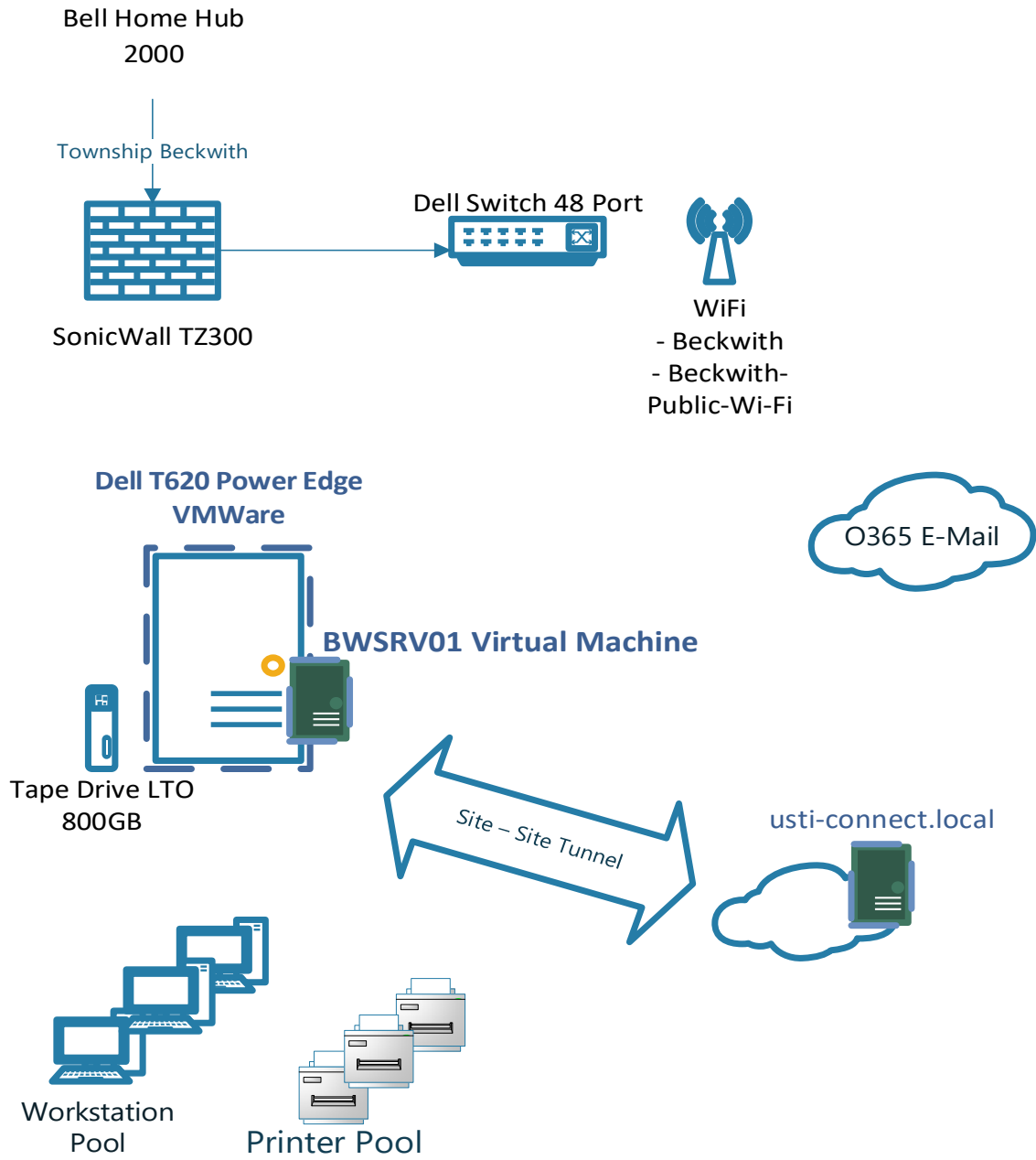
I propose maintaining network documentation as it makes it much easier to keep the network secure. A process sheet could be made available for onboarding and off boarding new staff. Template users should also be used. Accidental security changes are more likely to happen than someone infiltrating your network.

Physical security should be always maintained. There is no good reason to have your server out in the open.

With the cost of technology today the difference in price between a laptop and desktop are small. Laptops would be a better option for desktop users. Upgrading your laptops is a good investment.

Printing should be backed up and secured. There should be 2 high volume Multi Function Printer using secure print for the tax statements.

SAMPLE DIAGRAM

Bell Home Hub
2000

Township Beckwith

Dell Switch 48 Port

SonicWall TZ300

WiFi
- Beckwith
- Beckwith-
Public-Wi-Fi

**Dell T620 Power Edge
VMWare**

O365 E-Mail

BWSRV01 Virtual Machine

Tape Drive LTO
800GB

Site – Site Tunnel

usti-connect.local

Workstation
Pool

Printer Pool

END OF DOCUMENT