

# CASE STUDY

Secure & Compliant Cloud Solutions



Industry  
Medical

Size  
10 - 20 staff

#### Solutions

- Virtual Server in Azure Cloud
- VPN for 4 locations
- Azure Active Directory & InTune
- Managed IT Services

#### Compliance Met:

- PIPEDA
- PIA

## Medical Practice: Cloud & Compliance

This medical practice had 4 branch offices all connecting to an Electronic Medical Records (EMR) Application called YorkMed on a local Windows Server 2012, with no computer security or endpoint management in place.

Each computer was running Windows 10 Home edition, which does not connect with professional tools and services required for IT security best practices. The branch offices each had VPN connectivity on every computer. This granted all users of all stations unrestricted access to the entire network which houses sensitive patient information.

The setup was not compliant with PIPEDA or PIA.



## Transforming The Practice

TUCU conducted a network assessment and advised on changes necessary to secure computers, protect data, and **meet PIPEDA and PIA compliance** requirements.

The goals were to secure the virtual network, secure all computers, and apply data controls and permissions, to restrict access to sensitive patient data based on permissions.

The solutions included:

- Migrate the server to **Azure Cloud Services** to provide central data storage and eliminate the physical server
- Use **VPN** appliances at each office to connect to Azure Virtual Network
- Enroll all computers in **Azure Active Directory (AAD)** and **Microsoft Endpoint Manager (Intune)** to restrict and control identity, users, permissions etc
- Create **policies** for security and compliance.
- Built in **Disaster Recovery**

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# Technical Summary



This medical practice is now **PIPEDA and PIA compliant**. Their virtual network allows them to setup additional branch offices with ease. Their **resilience to cyber threats** has increased significantly. **Disaster Recovery** of the virtual server and all data is possible within **a matter of minutes**. By comparison, a physical server disaster recovery can take days or weeks. Here's how we did it.

**Migrating The Server:** TUCU created new **virtual Windows Server 2019 in Azure** and hardened and secured it. **Migrated YorkMed EMR database** to the new virtual server. Integrated server and Azure AD to combine the two identity servers of Active Directory & Azure Active Directory. This allows each user to have one identity for both server access and cloud services (i.e. joe@healthplus.com).

TUCU created an **Azure VPN** and connected each branch office **VPN appliance via IPSEC with IDS/IPS packet inspection** to filter bad actors and cyber threats.

**Computer Security Upgrades:** The computers were running Windows 10 Home and needed to be upgraded to **Windows 10 Professional** in order to connect to the server, Azure AD and other cyber security tools. Each computer was wiped and reloaded with Windows 10 Professional, enrolled in Azure Active Directory to bind the computer to the **Identity Management Platform, Azure AD** and the **Microsoft Endpoint Manager (InTune)**, which provides policy based controls.

We created **policies** for hard disk encryption, screen locks, strong passwords, USB restrictions and session time outs.

We connected each device to files on the server in the cloud and browser based access to the YorkMed EMR.

TUCU added additional security tools, including our **Remote Management & Monitoring** suite which allows 24/7 monitoring of computers and potential problems with hard drives, memory etc. TUCU also installed **Managed AntiVirus & AntiMalware** software on all devices. TUCU also installed **automation scripts** to perform daily computer and software patches and updates to keep the devices secure.

TUCU then decommissioned the physical server, including physical destruction of disk drives containing patient information.



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