

Doctors Technology Office (DTO): Technical Bulletin

What to Know About the PPN

DTO TB - #16-002	Recommended Action re: Schedule with DTO for a 1.5hr PPN Technical Education Session or the 1hr PPN Technical Q&A Session.
<p>Brief Description (Non-Technical):</p> <p>The PPN is a private Wide Area Network (WAN) owned by the BC provincial government, managed by BC Clinical and Support Services (BCCSS). A private network allows greater control, security and reliability than a standard Internet connection. The PPN is designed and monitored by TELUS and was built for the use of doctors who are using an ASP (Application Service Provider) Electronic Medical Record (EMR) application. The PPN service is provided free of charge to clinics who qualify (must use ASP model of an EMR) and wish to use the PPN to access their EMR application. This is likely to be expanded to other health professionals in the near future.</p> <p>At this time, there are approximately 950 clinics using the PPN to access their EMR. BC is the only province using a “Private Network” to deliver EMR applications to clinics.</p> <p>Unique to the PPN:</p> <p>The PPN provides several types of circuits of varying throughput that can be divided into two categories: (Matching the PPN to the clinic’s business requirement is critical for smoother daily operations.)</p> <ul style="list-style-type: none"> • Asymmetrical Copper circuits <ul style="list-style-type: none"> ○ PPN1 (5Mbps maxium download throughput; 1Mbps maxium upload throughput) <ul style="list-style-type: none"> ▪ gradually being upgraded to the PPN1 (25/5 below) ○ PPN1(25/5) (25Mbps maxium download throughput; 5Mbps maxium upload throughput) <ul style="list-style-type: none"> ▪ launched in July 2015 as the new PPN1 default service • Symmetrical Fiber circuits (has lower latency than copper) <ul style="list-style-type: none"> ○ PPN2-MB (5Mbps throughput in both the upload and download direction) ○ PPN3 (10Mbps throughput in both the upload and download direction) <p>(These speeds are currently being evaluated and may be increased in the near future.)</p> <p>The PPN provides:</p> <ul style="list-style-type: none"> • Fully automated Dynamic Host Configuration Protocol (DHCP) servers/ services. <ul style="list-style-type: none"> ○ In other words, when you connect a device (computer, phone, printer etc.) into the network, your device will automatically receive your clinic’s assigned private IP address, without the need of a server or a router. (Please refer to additional technical detail and implications below.) • Quality of Service (QoS). <ul style="list-style-type: none"> ○ The ability to prioritize data traffic based on predefined sets of rules. E.g. EMR traffic has priority over Internet traffic for datacenters on the PPN. • Two Virtual Private Network (VPN) tunnels that are accessible anywhere for secure remote access directly to the EMR, and without the need to connect back to the office. 	

Author: Ralph Buschner, Patrick Wong

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- Extensive series of security mechanisms inside the core such as firewall, IDS (Intrusion Detection System) and AV (Anti-Virus).
- Automated failover and redundancies pathways.
- Internet access via two gateways located in Vancouver and Kelowna.
 - Although the PPN is highly secure, the very nature of the Internet and the use of mobile devices necessitates the requirement that all devices connected to the PPN must use a reputable firewall, and anti-malware product on their computers or mobile devices.
- Secure conduit to the eHealth Network Gateway (eNG).
 - Access EMR and other services from within health authorities' facilities without tokens.
- Any future government initiatives.

Details and Additional Information (Technical):

Internet Gateways Access via Vancouver and Kelowna.

- By design no unsolicited requests are allowed into the PPN from the Internet.
- Only selected ports and protocols are allowed out of the PPN to the Internet.
- Standard ports and protocols such as Web (port 80) secure Web (port 443) and SMTP (port 25) will all be supported.
 - Non-standard or specialized ports may have to be opened up by a firewall request form that the clinic can submit.
- To remote access back into a clinic from the internet.
 - Use a two factor authentication mechanism and a cloud based service such as Teamviewer, LogMeln and/ or similar products that support two factor authentications.

The PPN Dynamic Host Configuration Protocol (DHCP) servers.

- Automatically provides private IP subnets in the range of 10.20x.xxx.xxx.
- No NATing is permitted on the PPN, unless authorized. (wireless router – DHCP set to off)
- 70% dynamic addresses and 30% static address.
 - 50% dynamic and 50% static (older installed circuits).
- “/25” (126 addresses) or “/24” (253 addresses) (two addresses are reserved for TELUS).
 - “/26” and “/27” may exist for some older installations of PPN1 and PPN3 circuits.
- For outgoing email, use the TELUS SMTP servers at (smtp.telus.net)
- Lease times for DHCP is 1 hour for first connection then 2 weeks

The Do's and Don'ts when using the PPN.

- Always use a smart managed layer 2 switch for local LAN connections.
- Avoid using wireless whenever possible.
 - (Performance; stability; security; ehealth services such as Pharmanet requirements; etc.)
- Make sure all computers have current security/anti-malware software installed.
- Always use your EMR's latest hardware/software recommendations and better.
- Leave computers on and schedule automatic updates to occur during non-business hours.
- Never connect another ISP source directly to a PPN connection.

If you have any questions or would like to schedule for a Technical Education session, contact:
Doctors Technology Office, 604-638-5841, dtotechsupport@doctorsofbc.ca