

VPN Briefing

What you need to know

07/10/2012

Currently...

- ◎ EBN VPNs have been in use since 2006
 - > Published pricing
- ◎ Start ups and small CUs
 - > Four currently on system
 - > Requires indemnification agreement
 - > Pricing case by case
- ◎ CU*NW has been using VPNs (supported by WESCO *Net*) for over 5 years
- ◎ Free, automatic VPN backups to MPLS
 - > ~ 90% penetration

Why VPN?

- ⦿ Potential for lower cost
 - > Remote areas
 - > Typically faster (download) bandwidth at lower costs
- ⦿ Agility
 - > Can typically provision faster
- ⦿ Carrier independent; CU provisions themselves
- ⦿ CUs must have Internet strategy
 - > Our Internet apps require more and more bandwidth
 - > Vault access routed over Internet where possible
 - > Many CUs using VPNs for their WAN

What is our solution?

- ◎ An extension of what we already do with VPN backup today
 - > Cisco™ router (2911, same as today)
 - > Internet connection
 - Must be provided by CU
 - Should be redundant. We recommend different carriers.
 - Requires static IP address
 - Recommend “business class” offering from ISP
- ◎ Modem for router
 - > Modem? Seriously?
 - Yes: for out of band management/support (not for redundancy)

What is our solution?

- ◎ Standard phone line (POTS)
 - > For out of band management modem
 - > Provided by CU
- ◎ Network Services router management
 - > Covers 8x5xNBD hardware replacement through Cisco™
 - > Cisco™ software updates
 - > Security patching
 - > 24x7 monitoring and alerting
 - > Automated backups

Some Disadvantages of VPN

- ⊙ We can't control network end-to-end
 - May be "slow" (i.e. uncontrollable "latency")
 - CU activities on the Internet may affect GOLD
 - Everything shares "one pipe" (Facebook™, YouTube™, etc.)
- ⊙ Reliability
 - Consumer grade Internet access may not be as reliable as MPLS (our network data confirm this)
 - Time to repair may be longer
 - CU responsible for coordinating repairs
 - (USE REDUNDANT CONNECTIONS!)
- ⊙ Other "Internet hazards"
 - Denial of service attack could affect DP connection

Firewall

- ⦿ All CUs must have a firewall
- ⦿ Our router is not a firewall, but will be secured
- ⦿ Remember to present Network Services' managed firewall services
 - > *Strongly* recommended. Can offer more support in “line down” situations.
 - > Improved troubleshooting: full visibility into connection
 - > More advanced routing/improved business continuity options for branch offices

How much is it?

- ◎ VPN has the following cost components:
 - > Standard router maintenance/management
 - \$149/mo for single router
 - \$99/mo for two or more routers (this is a pricing *decrease*)
 - This charge will NOT be optional for VPN clients
 - > VPN Connection Fee
 - \$64/mo per site
 - NOT optional
 - (This cost has been proposed to management. Might go down. Safe to quote.)
 - Actually includes *three* different VPN “connections”
 1. Connection to PROD
 2. Connection to HA
 3. Connection to DR (currently IBM™ BCRS) *coming*

Pricing Examples (MPLS vs. VPN)

Client	Routers	MPLS cost/mo	Router Mgt (ea.)	Router Mgt (total)	Total Comm. Cost
Client A	1	\$460	\$0	\$0	\$460

Client	Routers	VPN cost/mo	Router Mgt. (ea.)	Router Mgt (total)	Total Comm. Cost
Client A	1	\$64	\$149	\$149	\$213

Total savings with VPN strategy: \$247/mo.

This DOES NOT include:

- Firewall management
- Internet connection costs (should be redundant Internet)
- Cost for POTS telephone line for Modem



Under
\$215/CU
Anywhere
Fixed!

Pricing Examples (MPLS vs. VPN)

Client	Routers	MPLS cost/mo	Router Mgt (ea.)	Router Mgt (total)	Total Comm. Cost
Client B	2	\$1160	\$149	\$298	\$1,458

Client	Routers	VPN cost/mo (ea. site)	VPN cost/mo (total)	Router Mgt. (ea.)	Router Mgt (total)	Total Comm. Cost
Client B	2	\$64	\$128	\$99	\$198	\$326

Total savings with VPN strategy: \$1,132/mo.

This DOES NOT include:

- Firewall management
- Internet connection costs (should be redundant Internet)
- Cost for POTS telephone line for Modem

VPN Hardware: NEW Conversion

⦿ Equipment required for NEW CLIENT

QTY	Item	Resell
1	Cisco™ 2911	\$2,416.15
1	USR Modem	\$92
1	USR Cable	<u>\$28.75</u>
		\$2,536.90

NOTES:

- VPN router is less than MPLS router (MPLS card not required)
- Modem is new requirement
- CU MUST PROVIDE a POTS (telephone) line for the Modem
- DO NOT FORGET to propose Firewall Management!

VPN Hardware: EXISTING Client

- Equipment required if existing MPLS client wants to migrate to VPN

QTY	Item	Resell
1	USR Modem	\$92
1	USR Cable	<u>\$28.75</u>
		\$120.75

NOTES:

- Modem is new requirement
- CU MUST PROVIDE a POTS (telephone) line for the Modem
- Router management will be REQUIRED for all VPN connections
- DO NOT FORGET to propose Firewall Management!

What will happen with MPLS?

- ◎ MPLS will continue to be primary strategy at least until 10/2012
- ◎ Let's get the Open Beta "under our belts"
- ◎ Start quoting VPN now

Would we stay on MPLS for some clients?

- ◎ Depends
 - > Some clients may refuse to migrate to VPN
 - > We may decide to offer services that require end to end control and guaranteed low latency
 - I.e. hosted phone systems
 - > Clients remaining on MPLS may see rate increases (we may lose volume discounts)
 - > Other factors
- ◎ We will determine this as we move along to the future

What happened to CU*NextNET?

- ⦿ Our VPN strategy is part of our CU*NextNET concept
- ⦿ The marketing term will live on even through the addition of VPN

Disaster Recovery

- ◎ Same as with MPLS
- ◎ VPN connections from each CU will go to:
 - > Production Facility (now)
 - > High Availability Facility (now)
 - > IBM™ BCRS (target 8/12)
 - Contract negotiations with IBM™ BCRS for “always on” Internet

How long to install?

- ◎ VPN Typical Installation Time:
 - > We need 4-6 weeks to provision a new VPN
- ◎ MPLS Typical Installation Time:
 - > MPLS requires 12 week lead time

Small CUs?

- ◎ The small credit union strategy is TBD (but likely isn't VPN)
 - > Recommending Virtual BranchSM as preferred solution
 - > Simpler/faster for <5 users than VPN
 - > Custom virtual desktop delivered over SSL VPN
 - Includes limited set of applications: CU*BASETM, MS OfficeTM, eDOCTM, Web Browser
 - Access from any Internet connected PC/Laptop
 - Supports locally attached peripherals (printers, sig capture, scanner)
 - No “messy” onsite technology to coordinate/support