

TOWN OF BONNYVILLE PROPOSAL FOR I.T INFRASTRUCTURE OVERHAUL & SECURITY

OVERVIEW

I am submitting this proposal for the modernize of the Town of Bonnyville I.T infrastructure. To move away from conventional practices and be in line with the current server design and future production needs. **While vastly improving disaster and recovery capabilities and cyber security protection in this ever-increasing hostile environment.**

The Objective

i *To provide a 10-year solution for modernization of the infrastructure, while providing work life enhancements to production, maintenance, cost, and security.*

- Unify server design where resources are shared and prioritized vs operating independently.
- Unify data storage, using the latest hardware technology for faster data speeds, easy expansion, data recovery and maintenance.
- Upgrading the underlying network infrastructure to support faster data transfers that coincide with faster server storage, VoIP (voice over internet protocol) requirements and PoE (power over ethernet) capabilities.
- **Complete disaster and recovery solution with advanced cyber security protection. (offsite, offline, completely turnkey solution, 1 hour disaster recovery)**
- Low cost of operation due to reduced maintenance, downtime, and future expandability.

The Benefits

i *To provide the Town of Bonnyville residents, and its staff the tools for better customer services with a secure and speedy infrastructure.*

- Faster data and network speeds when accessing all the databases, accounting, and data management software.
- Faster simultaneous downloads/uploads, better Wi-Fi speeds, more VPN connections, better work from home experience.
- Faster response times for hardware intense programs, DM, Vadim, and server related tasks.
- **Better protection of all the stored data from ransomware and malware attacks. Full disaster recovery with the ability to be up and running in less than a day.**

PROPOSAL

i *A brief summary of what my vision is for this proposal.*

The main focus and purpose is to put in place the infrastructure and security so the Town of Bonnyville is protected from whatever happens in the future. It's not how, but when something will happen, and we need to be ready.

The world is changing, and environmental disasters are happening more frequently. Compound with the growing and ever more sophisticated cyber-attacks.

That is why 1/3 of the proposal is on data protection, the remaining is on overhauling the infrastructure. The backbone to all IT is a good network, that is why we need to upgrade the networking devices to support faster data speeds and data throughput, also adding the capability for PoE. This will help with the transition to VoIP, the new phone system the town is implementing.

The remaining bulk of the cost is the new server node technology. Which gives us the ability to add more server nodes to the overall collective resources, which act like one. This means all resources are shared and load balanced across all nodes giving power to where it is needed. All nodes have the latest storage technology, SSD's which are 10x faster than conventional storage solutions. This increases the speed of data flow which increases productivity, and all the quality-of-life improvement that comes with faster load times.

The old hardware will not go to waste as it will be used to increase redundancy and for disaster relief. It will be used to fully virtualize up to 20 virtual desktops so employees can work from home or any location and have full access to the work environment and applications.

This is not a once a year upgrade this proposal will provide the Town of Bonnyville with 10 good years of solid I.T infrastructure. It's about \$20,000/year of spending on I.T but having all the benefits and protection at once.

Rationale

i *The world is rapidly changing and so should we.*

- Bring the Town of Bonnyville in line with industry standards and practices.
- Make the Town of Bonnyville more resilient to online attacks and/or natural disasters.
- Replace aging hardware due to end of service life.
- 10-year ROI plan, while lowering future maintenance and upgrades.

EXPECTED RESULTS

i *The staff and public will notice a night and day difference to everyday I.T tasks.*

Financial Benefits

- Lower overall costs for operation and future maintenance and upgrades, inherit by design.
- Higher production value, by increased productive and data flow.
- All software, product support and licensing are bundled in for the first 5 years.

Technical Benefits

- Faster network for faster data flow.
- Faster storage for faster data flow.
- Modular server node design for easier maintenance and upgrades.
- Fully integrated backup and data protection for fast recovery and security.

Other Benefits

i *Overall quality of life improvements to daily operation, including the backend maintenance tasks.*

PRICING

The pricing may fluctuate by +/- 10% due to global supply shortages.

Production Hardware Cost	Price
(E560F VXRail, Intel Xeon Gold 6248 20c/40t, 192GB 3200Mhz Ram, 3.84 TB SSD) x3	\$102,300.00
(S4112T 12 Port Switch, 10GbaseT, 100Gb ASFP28) x2	\$20,100.00
(N2048 48 Port Switch, 1GbaseT, 10Gb SFP, PoE) x3	\$11,600.00
Total Costs	\$134,000.00
Backup & Recovery Hardware Cost	
DP4400 12TB	\$37,400.00
DP4400 8TB	\$27,300.00
Total Costs	\$64,700.00
Grand Total	\$198,700.00

Price includes all cables, additional hardware, software, and support for 5 years.

The Solution

i 3 recommended ways to fund the proposal.

- Capital expense the full amount and ROI over 10-year period.
- Finance the full amount over 5 years and ROI over 10-year period.
- Save for 5 years, no upgrades and capital expense 50% over 5 years.

CONCLUSION

i A 10-year plan.

This may seem like a big request or initial ask, but on a technically level its accomplishing so much at the same time. When a business or government plans long term, we all share the benefits.

Thank you for your consideration,

Bryon Mickelson
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