

A practical view of data exchange

- Considerations
- Monitoring
- Network Performance

Considerations

Network Design:

- high availability
- secure/dedicated
- growth

Infrastructure:

- build or lease (Service Provider) –reliability key
 - Fiber Optic
 - Microwave/Spread Spectrum
 - Copper (HVP)
 - VSAT Very Small Aperture Terminal –Satellite
 - hybrid

Cost:

- total cost of ownership (TCO)
- ongoing expense vs. project capital
 - licensing and support of the physical layer, layer 2 and layer 3 elements that make up the network.

Change Management:

- clearances or Request For Change (ITIL RFC's) –site power, transport, LAN, WAN, Server patches, Relay/IED, Application
- maintenance windows on computing, network or application

Personnel

- training and experience

Monitoring

Various tools: “no single solution”

- up/down, traffic level reporting, errors, discards, correlated (MOM) vs. system specific
- configurations, inventory, rules and policy, access control
- log files: (local and central with time sync)

Alarms:

- data sheet or action plan for dispatch
- correlation when possible
- suppression when possible to reduce flooding or maintenance windows
- clear linkage or API to Incident and RFC/ ticketing system so they can be tracked

Circuit Records:

- database best
- system drawing very useful

SLA/OLA Service Level Agreements or Operational Level Agreements –RACI model support roles leading defining:

- incident response
- planned outage or maintenance windows
- clear escalation for service restoration
- monitoring built to support these agreements

Performance

Baseline

Latency or congestion

- network Level
 - queuing policy or QOS
 - link saturation
 - errors/discards
- device Level
 - CPU
 - I/O
 - Memory

Reporting

- metrics
- compliance
- SLA/OLA adherence

Thank you

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