COMPUTERWORLD SNIA

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Transforming the Information Infrastructure: Build, Manage, Optimize.

FALL 2011

Networking Strategies for Distributed Data

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Oct. 10, 2011

Today's Business Challenges

The GAP is widening!

WORKFORCE

- **Distributed**
- **Lower productivity**
- **Higher cost**

DATA & APPS

- **Centralized**
- **Access methods**
- **Security**
- **Cloud-based**

Bottom Line

Challenges for the Enterprise

- Data Replication
- Data Migration
- Cloud Storage
- Disaster Recovery

Context

- Business leaders looking to expand revenue see the use of networks as critical
- Network infrastructure is removing barriers to employee communication
- Network budgets are increasing and cost mitigation is key
- Effective network strategy = New markets + new products
- After ‘Compute’ and ‘Storage’ its time for the ‘Network’ to complete ‘Cloud’
- Datacenter to datacenter, datacenter to backup, datacenter to cloud, headquarters to branches

Data Replication

- DC-DC
  - Bandwidth
  - Throughput
- Dedicated Links
  - Cost & Complexity
- Cloud
  - Elasticity

Data Migration

- Storage on tap
- Cloud Storage
- Migration to and from
  - Temporary versus permanent
- Dedicated links
  - Cost & Complexity
- Cloud
  - Elasticity

Cloud Storage

- SaaS-based or Storage-on-demand
  - ‘Near’ storage
  - Datacenters versus ‘Cloud’ realities
  - Customers = ‘Near’ + ‘Far’
    - Cloud geography matters
    - ‘Network’ barriers

Disaster Recovery

- Zero data loss + Zero time loss = cost
- Offsite backup
- Offsite SAN
- Network strategy?
- Can optimization help?
  - Compression
  - Data deduplication
  - TCP optimization
  - Elasticity

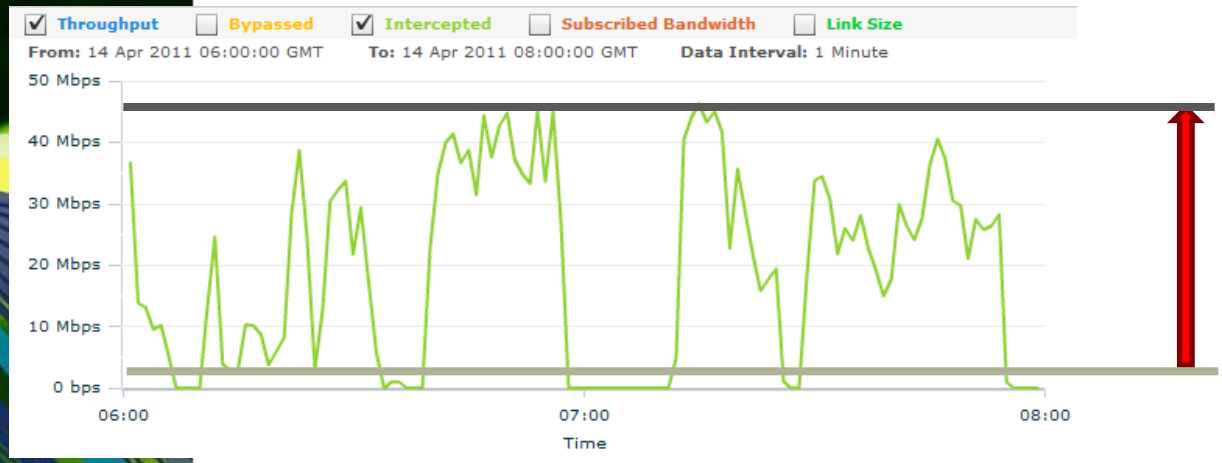
Performance Optimization

- Compression
- Data Deduplication
- Protocol tuning and acceleration
  - Transport protocols (TCP)
- Protocol tuning and acceleration
  - Application protocols
  - File transfer and replication (FTP, CIFS)
  - Distributed file access
  - Packaged apps and databases (Exchange or SharePoint)
  - Web browser acceleration
- Quality of service (QoS)
  - VoIP and Video
- Virtual Desktop Acceleration
- Cloud Services Access (SaaS)
- Isolated and mobile users

Case Study

Customer provides cloud and managed hosting solutions to accelerate enterprise growth and scale operations while controlling costs and reducing IT infrastructure support risks.

- US East-West DC-DC Data Replication of 60GB
- No Data De-duplication
- Replication failed sync each 30 minutes
- 37X increase in throughput (1.2→45Mbps)
- 20X Reduction in transfer time (60mins→3 mins)



With cloud WAN-op 45 Mbps

Without -1.2 Mbps

Conclusion

- ‘Network’ is the barrier for ‘Storage’ and ‘Compute’ success in the Cloud
- Optimization techniques provide improvements in application performance and file access across the WAN
- Optimization reduces WAN bandwidth
- Optimized networks (like Aryaka) are changing the game

THANK YOU!

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