SIMPLIFYING STORAGE
FOR EDGE COMPUTING ENVIRONMENTS

STORMAGIC WEBINAR SERIES
IN PARTNERSHIP WITH CISCO

Bruce Kornfeld, CMO, StorMagic
Lucas Hanson, Product Manager, UCS E-Series, Cisco

SIMPLIFYING STORAGE AT THE EDGE
CHALLENGE OF EDGE COMPUTING

Edge requirements are different to an enterprise datacenter’s

By 2018:
47x more data will be generated outside the datacenter than inside

By 2021:
1 million new IoT devices will be sold every hour
PAIN POINTS AT THE EDGE

SPACE & SECURITY
• Limited space often in harsh environments
• Tough to secure
• Over-provisioned datacenter designs

COST & SCALE
• Budgets are constrained
• High cost of scalability
• Multiplied by 10s, 100s or 1000s of sites

SUPPORT & REDUNDANCY
• None or limited onsite support staff
• People and parts delays
• Risk of unplanned downtime
THE SOLUTION

All-in-one edge solution for networking, compute and storage

- Cisco Enterprise Branch Router – ISR 4000
- Two E-Series server blades with embedded storage
- VMware or Hyper-V
- StorMagic SvSAN for high availability and management
Cisco Enterprise Routing Portfolio

**Virtual**
- Cisco ENCS
  - Service chaining virtual functions
  - Modular WAN connectivity
  - Open for 3rd party services & apps
- ISRv
  - 50 Mbps to 2.5 Gbps
  - Run on x86 platform

**Branch CPE**
- ISR 800
  - Up to 100 Mbps
  - Fixed and fanless
  - Enterprise-class branch routing with security
- ISR 1000
  - Up to 350 Mbps
  - Fixed and fanless
  - Integrated wired & wireless access
  - Cisco SD-WAN
- ISR 1000
  - Up to 100 Mbps
  - 4G LTE & Wireless

**WAN Edge**
- ISR 4000
  - Up to 4 Gbps
  - Modular
  - Integrated container applications
  - Compute with UCS E
- ASR 1000
  - 2.5-200Gbps
  - High-performance service w/hardware assist
  - Hardware & software redundancy
- vEdge 100
  - 100 Mbps
  - Fixed
- vEdge 1000
  - Up to 1 Gbps
  - Fixed
- vEdge 2000
  - 10 Gbps
  - Modular

**Management**
- WebUI for small shops
- DNA Center for Enterprise
- Virtual Managed Services for Service Providers
- 3rd Party Solutions
Cisco 4000 Series Integrated Services Routers (ISRs)
Digital-Ready Branch Foundation

WAN and Application Assurance
- Software-defined WAN (SD-WAN)
- Application optimization
- Content caching

Unified Communications
- Voice with survivability
- High-quality video
- Session border controller

Virtualization
- Cisco or third-party virtual network functions (VNF) and app hosting

Proactive Security
- Secure connectivity
- Branch threat defense
- Visibility and analytics

Physical
- Cisco® Integrated Services Router

Converged
- Cisco Unified Computing System™ E-Series

Virtual
- Third Party
- ASA
- vWAAS
- vWLC
- VNF
- App
More performance, ports, and simplicity on the ISR 4000

**More performance**

*Boost license takes off the shaper of ISR 4000*

- Booster speed (Gbps)
  - CEF, IMIX

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**More ports**

*New high density switching module enables up to 48 ports per module*

- 16 x 10/100/1G
- 4 x 10G (2,56)

**More simplicity**

*Zero touch provisioning of routers and VNFs via DNA Center*

vEdge integration coming in late summer on all IOS XE platforms

DONE!
Branch Convergence with Cisco UCS E-Series on 4000 Series ISRs
Broadest Network and Branch Services on an Integrated Compute Blade

From this

To this

Traditional Branch IT

Switch
Router
Wireless
Security
WAN Op
Voice
Apps Server

Connection Anywhere
Wired and 3/4G LTE

Automation
Central controller and SDN app

Virtualization
VNF and app hosting

Branch and DIA Security
Malware, firewall, IPS/IDS, and cloud

Insights
Cisco UCS® E

Automation
Simplicity

Pervasive Security

Unified Communications
Voice, video, data assurance

Application Experience
WAAS and Akamai Connect

Customer Experience

Branch IT

Security

Application Experience

WAAS and Akamai Connect
UCS E-Series Portfolio

Scalability

- UCS-EN140N
  - 4-core, 1.0 GHz, 8 GB RAM

Performance

- UCS-E140S-M2
  - 4-core, 1.8 GHz, 16 GB RAM

- UCS-E160S-M3
  - 6-core, 1.9 GHz, 64 GB RAM

- UCS-E180D-M3
  - 8-core, 2.0 GHz
  - 12-core, 1.5 Ghz
  - 128 GB RAM

UCS-E1120D-M3
Casual bakery-café chain increases customer satisfaction

Business Objectives
- Upgrade network to meet demand for increased bandwidth
- Increase customer satisfaction
- Enable business applications

Solutions
- ISR 4000 routers and app hosting on UCS E-Series blade compute servers deployed in over 1300 stores
- Provides customer WiFi, private employee WiFi and support for applications such as POS services, IP telephony, streaming music, digital signage, etc.

Business Outcomes
- Enables performance, scalability and reliability of applications
- Increases security, data protection and PCI Compliance
- Reduces technology debt, complexity and footprint
- Increases visibility and analytics
- Improves quality of service and support providing a better user experience for both customers and employees
SvSAN SOLVES PAIN AT THE EDGE

- Virtualizes disk, flash and memory

- Software only: runs on any hardware

- Start with 2 node clusters with no single point of failure

SIMPLE
Set and forget

COST EFFECTIVE
Lightest footprint, lowest cost

FLEXIBLE
Today’s needs, future proofed
RUN 1000 SITES AS EASILY AS 1

- Centralized management and deployment
- Split-brain risk eliminated – one tiny remote witness for all sites
- Powerful automation tools and scripts
- Integrates with vCenter and SCOM
PREDICTIVE STORAGE CACHING

400% PERFORMANCE IMPROVEMENT MANAGING ‘HOT’ DATA

AUTOMATED
• System memory and/or SSD
• Patent-pending algorithms

BUILT FOR PERFORMANCE
• Lower latency
• Data pinning mode
• Solves the “IO blender effect”

COST EFFECTIVE
• Use fewer and less expensive drives
• Less power, cooling, maintenance
SLASHING THE COST OF DATA ENCRYPTION

ACHIEVE MILITARY-GRADE DATA SECURITY AND SAVE 85%

SIMPLE – Secure data without the hassle
• 100% software approach – FIPS 140-2 compliant
• Data destruction on failed drives not needed

COST-EFFECTIVE – 85% less than competitors
• No OS or hypervisor-level encryption required
• No special hardware

FLEXIBLE – Use any key manager
• KMIP compliant – use any KMS
• Encrypt any volume and data in flight between servers
CASE STUDY: KAR AUCTION SERVICES

SvSAN and Cisco UCS Eliminate Need for Onsite IT

Challenge:
Distributed IT had become unsustainable as remote servers approached end of support life. Aging routers consumed space as well as power and cooling, while an unreliable “community” supported open-source virtualization software.

The auction application lacked redundancy, with paper back-up that slowed multimillion dollar transactions. Recovery processes required disruptive, expensive travel by home-office specialists.

Outcome:
• TCO reduced by up to 40% through server and software savings
• Faster, simpler physical server provision and system maintenance
• Powerful, virtualization-ready solution
• Scalable infrastructure that protects infrastructure investment
• Reduced complexity enabled capability for remote administration
• KAR partner feedback: StorMagic aftersales support is phenomenal
Q&A AND NEXT STEPS

• Schedule a live demo
ciscoteam@stormagic.com

• Request a quote
stormagic.com/request-a-quote/

• Download a free trial of SvSAN
stormagic.com/trial/

• Further information and documentation
stormagic.com/svsan/svsan-with-cisco/