



## Technical E-Zine

### April 2016 Edition

*Welcome to the April 2016 Edition of the Cisco Technical E-Zine.*

This is put together by members of the Global and Financial Services Technical Community to provide up-to-date technical information on Cisco Products, Technology and Services.



Many of the products mentioned can be seen here in the lab at the Cisco City Office, Finsbury Circus.

We hope you will find this edition useful and if you have any questions on the details included or the lab in the City Office please ask your Account Manager or Systems Engineer for more information.



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## Breaking News...

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### Cisco and NATO expand cyber security partnership

Perhaps more than ever, cyber security is about cooperation. To defend alone is to fail. To have knowledge alone is to fail your peers. Today NATO and Cisco, two long-time cyber defence partners, are [formalising a key piece of our cooperation](#) – information sharing.

NATO's Communications and Information Agency provides secure systems to support NATO's mission. Cisco's products, services, and analytics make us a global security leader. Together we can better deliver on our missions – protecting the 28 NATO member nations and Cisco's customers.

Cisco sees trends, like those in our [Annual Security Report](#), develop because of our global footprint. We know that modern attacks are the same for private and public organisations. Meeting them head-on requires teamwork across the research community, companies, and governments. By exchanging threat data and defence methods quickly, all can benefit. All but the attackers, that is.

At Cisco, security isn't just a product. At NATO, security isn't just a product. We both believe that security results from design, effectiveness, and trust. Our shared trust enables the rapid exchange of threat information. Together we will protect NATO's networks, Cisco's global customers, and future innovation.

[http://blogs.cisco.com/security/cisco-and-nato-expand-cyber-security-partnership?\\_ga=1.42130659.715176552.1457519116](http://blogs.cisco.com/security/cisco-and-nato-expand-cyber-security-partnership?_ga=1.42130659.715176552.1457519116)

### C&W Business to Offer Cisco Collaboration as a Service over its MPLS Networks

C&W Business, a division of [Cable & Wireless Communications](#) Plc (CWC), announced that it will offer Cisco® Unified Communications as a Service over its multiprotocol label switching (*MPLS*) network to its customers across the Caribbean and Latin American region.

The C&W Business portfolio will also include the Cisco Hosted Collaboration Solution (HCS) for the Contact Centre. C&W Business will become the first supplier in the Caribbean and Latin America to offer a contact centre in the cloud, which represents a more agile, efficient, flexible and scalable contact centre solution.

Cisco HCS is a next-generation unified communications and collaboration platform for partners who want to offer unique Cisco collaboration technologies using hosted and managed models. By consuming collaboration services from the cloud, organisations have the flexibility to choose the collaboration applications specific to their requirements.

<https://newsroom.cisco.com/press-release-content?type=webcontent&articleId=1754979>



## Cisco Introduces Innovations for Transport Network Modernisation

Cisco announced innovations in its optical transport portfolio, at the Optical Fibre Communications Conference, to address service providers' challenges of migrating large volumes of profitable time-division multiplexing (TDM) services to an IP/MPLS infrastructure. Until today, migrating TDM to packets has been costly and has forced some service providers deploying older transport networks to change or re-engineer their network configuration. Now, Cisco's cost-effective and scalable solutions can help service providers build a packet network of the future while still delivering their customers' TDM services at a fraction of the cost.

- **Cisco® Network Convergence System (NCS) 4200 Series:** Part of the Cisco Evolved Programmable Network (EPN), this transport system addresses network inefficiencies with high-density circuit emulation technology located at the network edge. It converts TDM services into pseudowires that facilitate transport over highly scalable MPLS core networks.
- **Increased density and flexibility for the Cisco NCS 4000 Series:** New, multi-service, 100 percent pluggable, 400Gps line card that doubles slot bandwidth to 400Gbps
- **Increased density and flexibility for the Cisco NCS 2000 Series:** New XPonder line card provides 400 Gbps of client and 400 Gbps of trunk capacity to Cisco's widely deployed optical transport platform

<http://newsroom.cisco.com/press-release-content?type=webcontent&articleId=1755696>

## Cisco ACI Adopted for NTT DOCOMO's Network Functions Virtualisation (NFV)

Cisco announced that its next-generation Software Defined Network (SDN) solution, Cisco Application Centric Infrastructure (ACI), has been adopted for deploying NTT DOCOMO, INC.'s Network Functions Virtualisation in Long-Term Evolution (LTE) systems for handling the company's mobile communications.

DOCOMO selected Cisco ACI as the best SDN solution to improve overall efficiency by automating virtual network function deployment and increasing visibility. With Cisco ACI, DOCOMO can repurpose the network as subscribers and applications change, and improve subscriber experience during network recovery and congestion periods by adjusting fabric operations based on application policy.

"DOCOMO is working to provide our customers with high-quality telecommunications services that address the increasing demands of data," said Seizo Onoe, Executive Vice President and Chief Technology Officer, NTT DOCOMO INC. "We are pleased that we have built an NFV system employing Cisco's SDN solution ACI for our network infrastructure. We look forward to working with Cisco to build an ecosystem for the mobile network industry."

<https://newsroom.cisco.com/press-release-content?articleId=1753087>



## Cisco Completes Acquisition of Jasper to Accelerate Enterprise IoT

Cisco has completed its acquisition of Jasper, a privately held company based in Santa Clara, Calif. Jasper's industry-leading cloud-based Internet of Things (IoT) service platform enables companies of all sizes to rapidly and cost-effectively launch, manage and monetise IoT services on a global scale.

### ***Our Vision Together***

With the acquisition, Jasper forms the new IoT Cloud BU within Cisco, which will bring to market a comprehensive IoT service platform to enable service providers, enterprises & ecosystem partners to rapidly build IoT service businesses such as usage-based insurance for connected cars, predictive maintenance for industrial manufacturing, and asset tracking for commercial fleet management.

### ***Enterprise IoT Transformation***

With the Jasper IoT service platform, Cisco can enable companies to automate the management of IoT services across connected devices. Now, enterprises will be able to transform their products into connected services, creating new business models and generating new sources of ongoing revenue.

### ***Service Provider Acceleration***

Today, service providers are vying for a slice of the forecasted \$4.3 trillion IoT opportunity<sup>[1]</sup> to increase their top-line growth. The breadth and depth of relationships that Cisco and Jasper have with service providers puts the combined company in a unique position to help service providers meet the ever-changing IoT needs of their customers.

### ***Ecosystem Interoperability***

Cisco and Jasper will provide an industry-wide interoperability platform that ecosystem partners can build on, accelerating the creation and deployment of IoT services by enterprises. Some of the world's largest IT solution vendors – including IBM, Microsoft, Salesforce and SAP – already integrate with Jasper's IoT service platform.

<http://blogs.cisco.com/digital/cisco-discusses-iot-platform>

## Cisco Announces \$100 Million Investment Plan to Accelerate Country Digitisation in India

Cisco announced a planned series of strategic investments in India that will total over US \$100 million including US \$40 million to fund early-stage and growth-stage companies in the country and train 250,000 students in India by 2020.

- Deepen Commitment to 'Start-Up India' & 'Skill India' vision; target training 250,000 students by 2020
- Drive the digital transformation of states and innovation in smart cities, the Internet of Things and cyber security: Open 6 Innovation Labs and 3 Centres of Expertise

<https://newsroom.cisco.com/press-release-content?articleId=1754544>



# Training Events or Summits/Webcasts 2016

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## Cisco on Cisco Webinars



Take a look inside Cisco IT and join us for technical sessions, panel discussions and global webinars. Our IT experts share their insight, technical acumen and first hand experiences deploying and using Cisco products that yield tangible business benefits. You can also find Cisco IT subject matter experts at

industry trade shows, conferences, and Cisco events worldwide.

Why not take a look inside Cisco IT? Find out how Cisco addresses many of the same IT challenges you face every day:

<http://www.cisco.com/go/ciscooncisco>

## Upcoming Webinars

### Stopping Security Threats with Your Network's Built-In Defences

(Live webcast April 26, 2016, at 10 a.m. Pacific Time/1 p.m. Eastern Time)

As organisations rush to embrace digitisation, the traditional client/server model is rapidly evolving to a network-centric one. With the rise of the cloud, mobile computing, the proliferation of BYOD, and the dawn of the Internet of Things (IoT), companies and their employees are increasingly connected to users, data, and even applications beyond the safe confines of the traditional enterprise network perimeter.

Discover how easy it is to turn on your network's built-in defence capabilities and transform it into a comprehensive, yet simple-to-manage security sensor and policy enforcer.

Topics to be discussed include:

- Current research findings about today's threat landscape from Zeus Kerravala of ZK Research
- Why traditional endpoint security is no longer adequate
- Using your network's built-in capabilities to adopt a threat-centric security strategy
- Live demos of:
  - Cisco IOS Flexible Netflow
  - Cisco Identity Services Engine (ISE)
  - Cisco TrustSec
  - Cisco StealthWatch
- Q&A

Approximate duration: 60 minutes

Register on this link: [Register](#)



## Cisco HyperFlex Systems: Agile, Efficient, and Adaptable Infrastructure

(Live Webinar April 27, 2016 at 10:00 am Pacific Time / 1:00 pm Eastern Time)

As business and application needs change, the need for infrastructure to be equally responsive, agile, and scalable has become not just nice to have. It's now a crucial necessity. Do you have IT operational challenges? Are you searching for ways to create a pay-as-you-go model for infrastructure? Is granular scalability as important as ultimate scalability? Cisco's entry into hyperconverged infrastructure is the most advanced, complete, and compelling hyperconverged solution available today. Cisco HyperFlex systems will solve those challenges and set you up for success with easy deployment, management, and growth.

- In-depth look at Cisco HyperFlex Systems
- The business value of hyperconverged infrastructure
- Differentiating features of hyperconverged infrastructure
- Live Q&A

Approximate duration: 60 minutes

Register on this link: [Register](#)

## Under the Hood: Cisco Enterprise NFV

(Live Webinar May 11, 2016 at 10:00 am Pacific Time / 1:00 pm Eastern Time)

Cisco recently introduced Enterprise Network Functions Virtualisation (NFV) as part of the digital network architecture: an architecture that allows you to transform your business to innovate more quickly, simplify operations, and reduce risk.

In workshop you'll learn about the four components—orchestration and management, virtual network functions, virtualisation layer, and the underlying hardware—and how all the components work together to provide a custom-fit solution for the enterprise.

- Overview of Cisco Enterprise NFV
- Four components of NFV and its benefits:
- Orchestration: Cisco ESA
- Network services: virtual network functions
- Virtualisation layer: Cisco Enterprise NFV Infrastructure Software (NFVIS)
- Hardware: freedom of choice
- Demo of ESA

Approximate duration: 60 minutes

Register on this link: [Register](#)





## Cisco TechWiseTV News

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**TechWiseTV - Cisco's window to the world :** <http://www.cisco.com/go/techwisetv>

**Subscribe to Cisco's YouTube channel :** <http://cs.co/Subscribe>

TechWiseTV examines the technology driving IT strategy and decision-making. Join hosts Robb Boyd, Jimmy Ray Purser, and their guests in these informative and entertaining videos and online workshops.

### What's New?

#### [Digital Network Architecture, Part I: The Design](#)

Get an overview of the key benefits of this comprehensive approach, how it was purpose-built to accelerate your digital transformation and why network functions virtualisation offers the flexibility and agility your enterprise network requires to achieve digital speed.

**Duration 22 minutes.**

#### [Mobility Beyond Wave 2: New High-Speed Access Points](#)

Learn how these highly intelligent solutions deliver greater flexibility, a more optimised wireless environment, and a better user experience through innovations such as:

- Flexible radio assignment
- Turbo performance
- Multigigabit uplinks
- Hyperlocation antenna
- Bluetooth integration

**Duration 14 minutes.**

#### [HyperFlex: The Next Generation of Complete Hyperconvergence](#)

Take an up-close look at Cisco HyperFlex Systems and how they can deliver dramatic benefits to your organisation, including:

- Plug-and-play setup
- Powerful data management services
- A 30 percent reduction in TCO and up to 40 percent higher performance than provided by competitive solutions by extending hyperconvergence to a much wider spectrum of your workloads

**Duration 18 minutes.**

#### [Cisco Firepower Next-Generation Firewall](#)

See what makes the Firepower threat-focused approach so different from that of other security solutions and get an exclusive, under-the-hood look at the four new Cisco Firepower 4100 Series appliances

**Duration 20 minutes.**



## Segment Routing Demonstrations

Our HERO BU has recently published a series of demos on YouTube, covering new innovations in Segment Routing. Check them out.

### **SR On-Demand Next Hop (ODN)** [\(YouTube Demo\)](#)

Segment Routing On-Demand Next-hop (ODN) functionality enables on-demand creation of SRTE Policies for service traffic. Using the IOS XR based Segment Routing Stateful Multi-domain Path Computation Element (SR PCE), end-to-end SRTE Policy paths can be computed to provide end-to-end Segment Routing connectivity, even in multi-domain networks.

### **SR Agile Carrier Ethernet (ACE)** [\(YouTube Demo\)](#)

Agile Carrier Ethernet (ACE) is the SDN-enabled architecture for large-scale Service Provider networks. It combines the latest innovations, like Segment Routing, centralised path compute, and full service automation with Network Service Orchestrator (NSO).

### **SR TI-LFA FRR Node Protection** [\(YouTube Demo\)](#)

Topology Independent LFA (TI-LFA) provides 50-msec link, node and SRLG protection with 100% coverage. It's simple to operate and understand, and the backup path is automatically computed by the IGP. No specific tuning is required. By using the post-convergence path as the backup path, it prevents transient congestion and sub-optimal routing on the backup path. TI-LFA is a local functionality and can be incrementally deployed.

### **SR Microloop Avoidance** [\(YouTube Demo\)](#)

Microloops are transient packet loops that occur in the network following a topology change. They are caused by the non-simultaneous convergence of different nodes in the network and result in packet loss, jitter, out-of-order packets. The traffic steering capabilities of Segment Routing allow to prevent such microloops to occur for link down, link up and metric change events. The Microloop Avoidance functionality detects if microloops are possible following a topology change. If microloops could occur, then it steers the traffic on the final post-convergence path through the network, but on a path that is guaranteed loop free thanks to the Segment Routing steering.

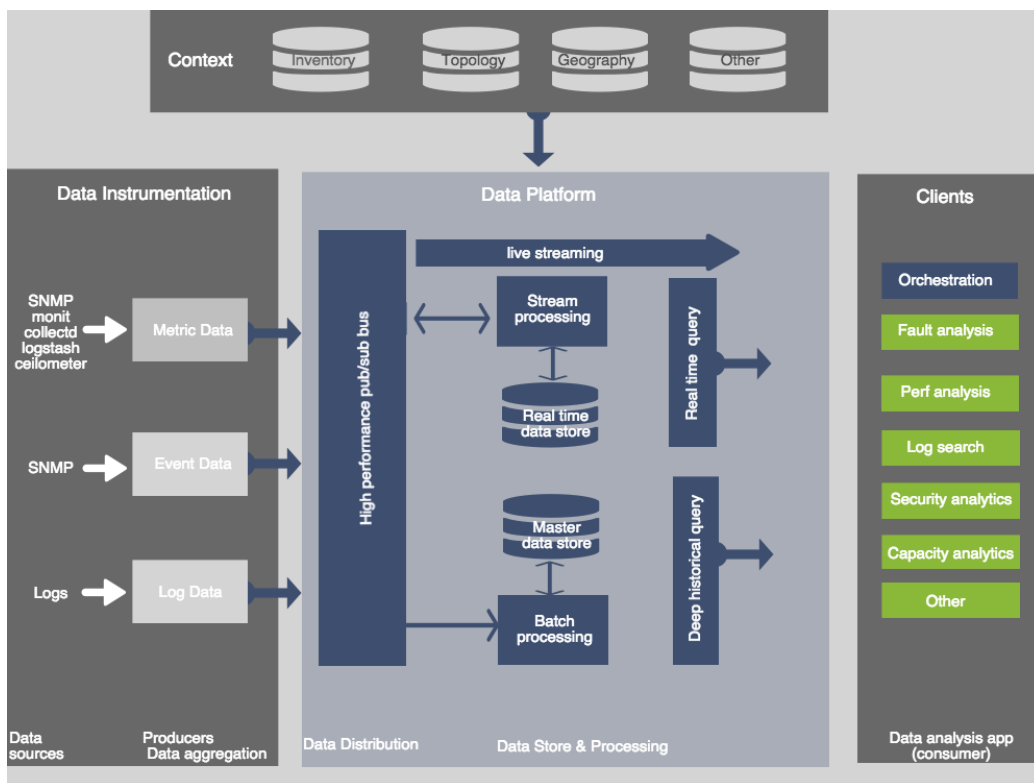
More Segment Routing information at <http://segment-routing.net>

# Enterprise Network News

## Panda Analytics



The PaNDA project is a collaborative open source development project dedicated to providing a simple, extensible and scalable 'big-data' platform for network data analytics, including operational intelligence (OSS) and business intelligence (BSS) applications.



### Benefits

- Open system architecture
- Collect data once, allow any analysis application to use any data
- Enables real time and offline analytics loops
- Extensible – add new analysis functions quickly and seamlessly with minimum of development cost
- Leverage rapid innovation in (big) data analytics space

For more information see: <http://panda.cisco.com/>



## Your Network (re)Imagined – Now with More NET, Less WORK

There was a time when the network was thought of as a bottleneck to innovation. It is the weakest link in the chain. Its rigid, inflexible and labour-laden infrastructure inhibits growth for the business, productivity for its workforce, and diminishes the experiences for customers. Those days are long gone. The network has been reimagined.

### The Era of a Digital Network

With the recent Cisco Digital Network Architecture (#CiscoDNA) announcement, we shared how an open, extensible, software-driven and services-centric network design not only enable, but also propel digital transformation. In two blog posts by Raakhee Mistry, she highlighted the [design principles behind Cisco DNA](#) and the [market applications](#). Key take-away message: innovation requires IT agility. IT agility is powered by a software-driven network.

### Cisco Enterprise NFV – the key enabler

IT agility is the ability to respond to business demands in a fast and efficient manner. NFV enables that agility in three areas: the designing, the provisioning, and the management stages of the network infrastructure. However, only Service Providers and very large Enterprises have taken advantages of such NFV benefits thus far. That is no longer the case with [Cisco Enterprise NFV](#). Our goal is to bring the same capabilities **and more** to all enterprises. That **more** part can be summarised as follows:

Purpose-built software overlay ([Cisco Enterprise NFVIS](#)) optimised not just for applications, but also network functions. (More details in this [post](#) under *Support System*) NFVIS virtualises and abstracts network functions from the underlying hardware, allowing Cisco and 3rd party virtual network functions (VNFs) to be managed independently and provisioned dynamically. But, we don't stop there. Cisco NFVIS also adds life cycle management and service chaining capabilities. This helps ensure the health and performance of VNFs, ensuring the best user experience.

Set of trusted Cisco network services as VNFs ([ISRv](#), [vWAAS](#), [ASAv](#), and [vWLC](#)) to start the virtualisation journey. This makes the path to virtualisation easy and less cumbersome for:

- a) Cisco customers as well as
- b) enterprises with a multi-vendor environment that includes Cisco.

An orchestration app, Enterprise Service Automation (ESA), that works in tandem with NFVIS to unleash limitless possibilities in this “composable world” powered by SDN. Think “agility and flexibility” for NFV and “orchestration and management” for SDN. ESA is the fruit of that marriage. SDN and NFV allows enterprises to dynamically build what they need on a platform of their choosing and spin up and down services on-demand.

Imagine the following very likely ideals: having all of the above capabilities in a converged infrastructure with a purpose-built server blade, such as the ISR with UCS-E, that can host apps in addition to virtual network functions and (ii) a hyper-converged infrastructure on commodity hardware. The possibilities are endless!

Read the overview about Cisco Enterprise NFV [here](#).



## Digital Networking Architecture

The Cisco Digital Network Architecture is Cisco's new strategy, vision and roadmap for enterprise networking for the digital era. It is an open and extensible, software-driven network architecture designed to rapidly deliver services that enable IT to innovate faster, reduce costs and complexity, lower risk, and comply with regulatory requirements.

### Network Requirements for the Digital Organization



**Insights &  
Experiences**

Drive Business  
Innovations



**Automation  
& Assurance**

Speed, Simplicity and  
Visibility



**Security &  
Compliance**

Real-time & Dynamic  
Threat Defense

**The Network Enables Digital Business**

The following documents provide more information about Cisco DNA:

Overview document: <http://www.cisco.com/c/en/us/solutions/collateral/enterprise-networks/cisco-digital-network-architecture/solution-overview-c22-736580.html>

Cisco Blog: <http://blogs.cisco.com/news/cisco-digital-network-architecture-dna>

Frequently Asked Question: <http://www.cisco.com/c/en/us/solutions/collateral/enterprise-networks/cisco-digital-network-architecture/q-and-a-c67-736803.html>



# Collaboration News

## TrustSec for Collaboration - An Overview

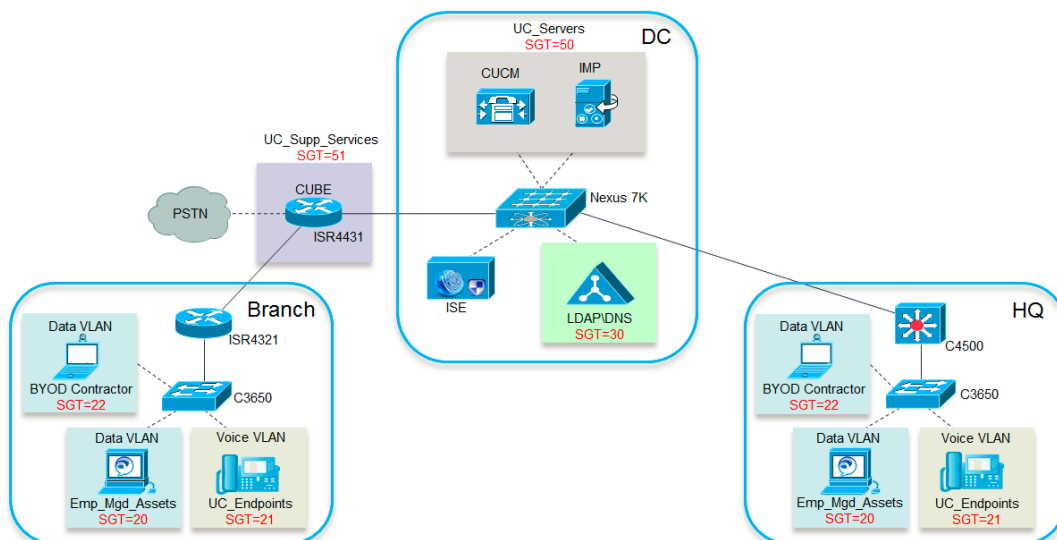
Cisco has historically advocated separate data and audio/video VLANs. This is a great best practice as it enables Access Control Lists (ACLs) to be easily added at the Layer 3 boundary to control both signalling and media traffic.

This has worked well for many years, but unfortunately the proliferation of mobile soft clients, such as Jabber, has somewhat broken the traditional design guidance. Whether it's due to Jabber deployed on laptops using the wired infrastructure, or on smart phones over wireless, the topological demarcation between the data and collaboration environments has disappeared. This can make it very complex to use traditional VLANs to secure access to core collaboration services; as Jabber enabled devices can roam the Enterprise and often share the same VLAN with non-Jabber enabled data devices.

What is really needed for modern security conscious collaboration deployments is a dynamic policy based enforcement solution, so it's a good thing that Cisco Security Technology Group invented TrustSec.

In a recent Proof of Concept that was put together to demonstrate to partners and customers how a Cisco Collaboration deployment could be integrated into an Enterprise's TrustSec implementation.

The following diagram shows simplified lab topology with the associated functional components.



For the uninitiated TrustSec is Cisco's software defined segmentation technology embedded into its network infrastructure equipment. TrustSec uses contextual data about whom and what is accessing the network, and enables role based access using Security Group Tags (SGT) to segment the infrastructure. To learn more about TrustSec please click [here](#).

More details of POC for Collaboration with TrustSec:

<https://communities.cisco.com/community/technology/collaboration/business/blog>



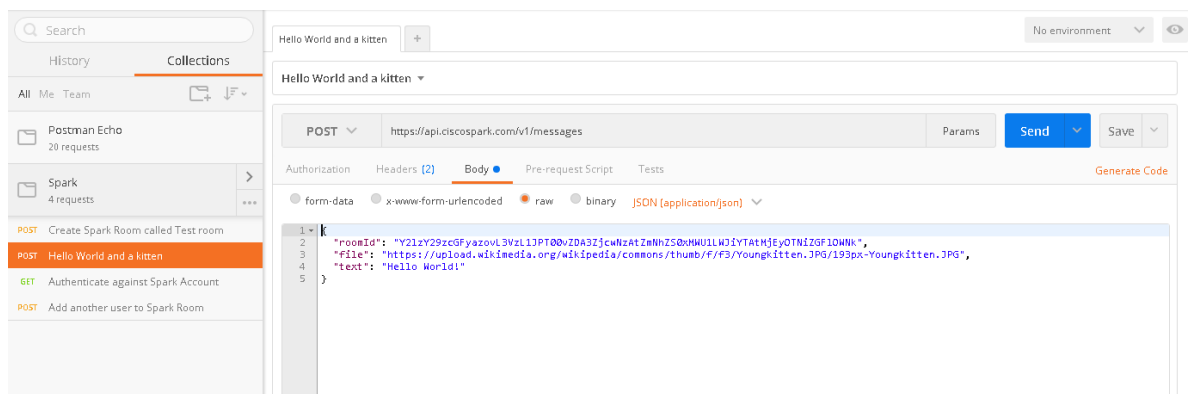
## Cisco Spark for Developers

Hello there, FrenchBulldogSparky here again. I wrote an article a couple of months ago on [Spark for Developers](#). I had the crazy idea of writing a little App that would encourage my Mother-in-law her to back up her iPhone by automating the reminders I would send her in Cisco Spark. I'm delighted to say that I have made some progress. I've just posted a jpg of a kitten along with the ubiquitous "Hello World" into a room that I created and invited someone else into all through REST APIs from the Postman Google App.



Now I must point out that the French Bulldogs were not so pleased at this development, however they have bought into the big picture and do realise the benefits of having "Grandma" not losing her rag over lost photos.

Going on this exploration has not been easy. It has been some time since I have written any code and the going is very slow at first. That said with learning or re-learning skills, regular focus is key. Getting into a routine of ring fencing some time each day and "playing" around on the [Cisco DevNet](#) site is critical. Moreover, the [Postman](#) App from Google is pretty easy to use. Coding these days is all about building up little blocks of code and stitching them together to do something useful. As long as you have a good handle on the logic of what you are trying to achieve it looks to be really straightforward.



This screenshot, shows the Postman interface. On the left side I've created a "Collection" called Spark – in it are 4 requests – little bits of code that makes stuff happen in Spark. I've highlighted the Hello World "request". In it is a little bit of JSON (That'll be Java Script Object Notation – not the chap that hung out with the Argonauts). The first line points to a unique identifier for the Spark room "Test Room" I had created previously; the second line points to the location where the jpg file for the kitten; the last line prints out "Hello World". As soon as you have fiddled around copying and pasting little bits of code, it is then very gratifying pressing the send button and seeing the direct result on Spark client on your Smart phone.

The next lesson focusses on App Authentication – I'm hoping this will enable the hooks from my Microsoft Outlook client to directly push content securely into Cisco Spark.

If you want to find out more do check out [Cisco DevNet](#)



## Collaboration Endpoints - Presentation Cable

Due to customer demand the unique Cisco three headed dongle is now available to order for all Video Rooms systems and suitable for retro fit with included 9 Metre cable.

**SKU: CAB-HDMI-MULT-9M=**

Previously only available on the top of the range IX5000 series of Immersive systems the solution cuts down on table top clutter and offers an elegant solution to presentation cables.

Connectors include:

- **Display port**
- **Mini Display port**
- **HDMI**







## Data Centre News

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### Processor Updates to UCS Mini and M-Series

UCS Mini is optimised for branch and remote offices, point-of-sale locations, smaller IT environments or inside the datacentre where you need physically isolated servers. The solution is ideal for customers who need fewer servers but still want the comprehensive management capabilities provided by UCS Manager.

UCS Mini supports [B200 M4](#) blade servers and the [C220 M4](#) and [C240 M4](#) rack servers. Those servers have been updated to include the Intel Xeon E5-2600 v4 series of processors. These new processors offer greater performance through architectural enhancements including more cores and threads per processor. They also support faster memory speeds. This means you won't have to compromise if you only need a few servers but want the fastest performance.



We've also updated the [M2814 M-Series Modular Server](#). The M-Series is part of our [composable infrastructure](#) line of products. M-Series disaggregates the CPU and memory subsystems from the rest of the server components. This allows you to replace a cartridge to take advantages of processor and memory enhancements like those offered by the Intel Xeon E5-2600 v4 series of processors while preserving your investment in the other components. They will be shipping later this year.

With the M-Series you can optimise application performance by composing and scaling subsystems to achieve the best ratio of computing of I/O and storage in small, discreet increments, so your applications have the number of computing nodes they need to achieve desired performance and availability.

### Moving to Cloud? Intelligent Buffer Matters!

[Craig Huitema](#) and [Soni Jiandani](#) blogged about Cisco's latest ASIC innovations for the Nexus 9K platforms and IDC did a [write up](#) and [video](#). In this blog, I'll expand on one component of the innovations, **intelligent buffering**.

First let's look at how switching ASICs may be designed today. Most switching ASICs are built with on-chip buffer memory and/or off-chip buffer memory. The on-chip buffer size tends to differ from one ASIC type to another, and obviously, the buffer size tends to be limited by the die size and cost. Thus some designs leverage off-chip buffer to complement on-chip buffer but this may not be the most efficient way of designing and architecting an ASIC/switch. This will lead us to another critical point, how can the switch ASIC handle TCP congestion control as well as the buffering impact to long-lived TCP and incast/microburst packets (a sudden spike in the amount of data going into the buffer due to lots of sources sending data to a particular output simultaneously). [...]

Full blog post available here: [Moving to Cloud? Intelligent Buffer Matters!](#)

Related white paper: [Advantage Series White Paper Smart Buffering](#)



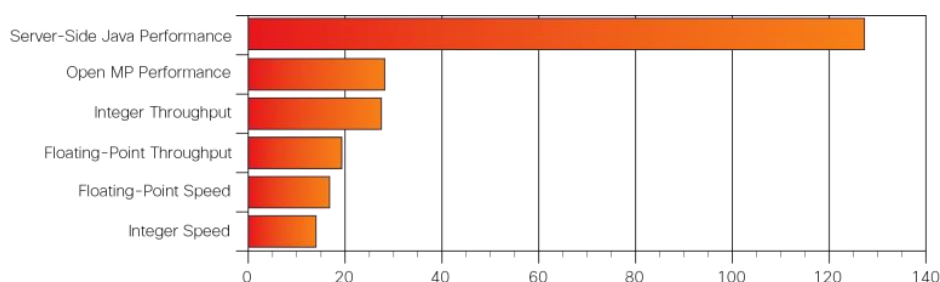
## Cisco UCS Claims Nine World Record Benchmarks with the Intel® Xeon® processor E5-2600 v4 family

On the same day as the Intel announcement, Cisco captured **Nine world records on industry benchmarks on Cisco UCS** to highlight the way in which Cisco UCS can accelerate performance across the data centre. As we know, there is no better way to compare performance than by using industry-standard benchmarks, & with [Nine new world record benchmark performance results](#) Cisco has demonstrated Cisco UCS's outstanding performance and IT productivity across key data centre workloads. Check out the [Performance Brief](#) for additional information on the nine new Cisco UCS world record benchmarks. The detailed benchmark disclosure reports are available [here](#). The performance leadership across a wide range of workloads is validated by the nine World records announced today summarised below:

1. SPECfp®\_rate\_base2006 – Best 2-socket x86-architecture result
2. SPECint®\_rate\_base – Best 2-socket x86-architecture result
3. SPECint\_base2006 – Best 2-socket x86-architecture result
4. SPECjbb®2015-MultiJVM – [Best 2-socket x86-architecture result for critical jOPS](#)
5. SPECfp®\_base2006 – Best 2-socket x86-architecture result
6. TPC Express Benchmark HS (TPCx-HS)- [Best performance and price/performance at the 1-TB scale factor](#)
7. TPC Express Benchmark HS (TPCx-HS)- [Best performance and price/performance at the 10-TB scale factor](#)
8. SAP Sales and Distribution (SD)- [Best 2-processor, 44-core, 2-tier result](#)
9. SPEC®OMPG2012 – Best 2-socket x86-architecture result

Cisco's results demonstrate the degree to which Cisco UCS servers with large memory configurations deliver the power of the new Intel Xeon processor E5 v4 family. Compared to Cisco's previous-generation servers powered by the Intel Xeon processor E5 v3 family, Cisco's new servers demonstrate dramatic improvements in raw CPU power as well as business and parallelised application performance.

Cisco UCS with the Intel® Xeon® processor E5-2600 v4 family delivered up to 127 percent better performance over the prior generation Intel® Xeon® processor E5 family as shown in the graph below:



**Figure 1: Performance Improvement Compared to Previous Generation Cisco UCS Servers (Percent)**

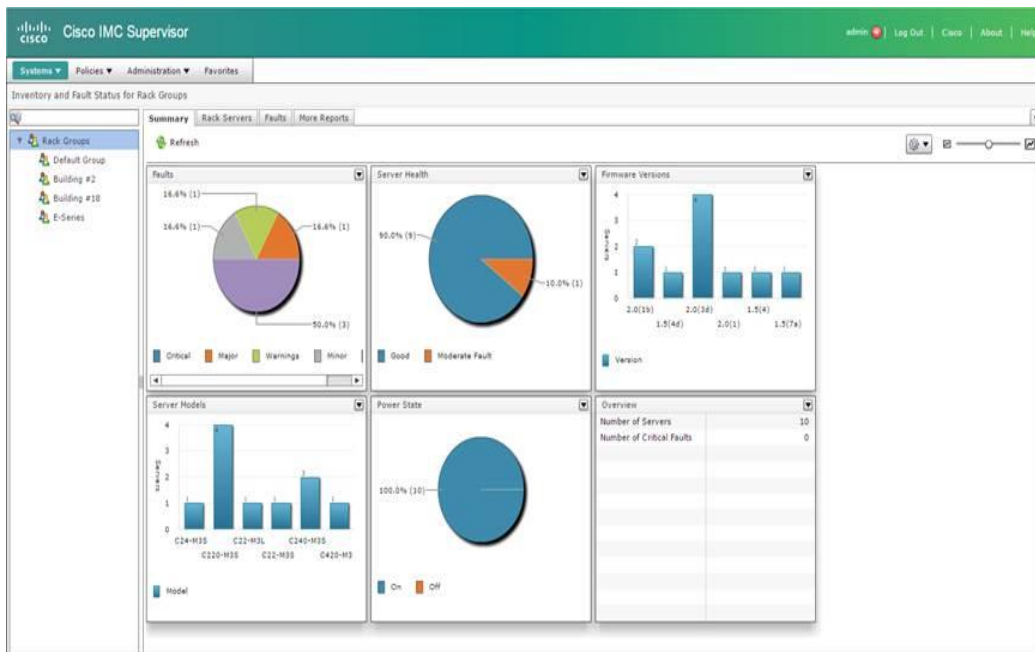
It is interesting to note that although all vendors have access to the same Intel processors, Cisco UCS unleashes their potential to deliver high performance to applications through the power of unification and performance optimisation. Cisco UCS integrates industry-standard x86-architecture blade and rack servers with networking and storage access into a unified system. Automated server and network configuration let you quickly and easily deploy new applications, repurpose existing servers, and scale applications with configurations that are compliant with your IT standards.

Full article: <http://cs.co/9002BYcEp>



## Cisco IMC Supervisor 2.0 Release Announcement

We are pleased to announce the release of IMC Supervisor 2.0, also known as “Gold Town 3”.



Cisco IMC Supervisor is a management system that enables management of up to 1,000 Standalone C-Series and E-Series Servers.

New in the v2.0 release, IMC Supervisor delivers the following enhancements:

- Northbound API implementation (Phase 1)
- Smart Call Home support
- IMC Supervisor automated patch download
- Policy delete override
- LDAP group to role mapping support
- Supervisor manual HUU image upload
- Server utilisation statistics collection
- Scheduler (discovery & firmware updates)
- TechSupport file management
- Non-interactive diagnostic suite management
- FlexFlash policy support

The release is now available for download on Cisco.com:

[IMC Supervisor 2.0 Software Download](#)

[IMC Supervisor 2.0 Release Notes](#)

[IMC Supervisor 2.0 Installation Guide](#)

[IMC Supervisor 2.0 Management Guide](#)



## UCS Manager 2.2(7) “El Capitan MR6” Release

We are pleased to announce the release of UCS Manager 2.2(7b), codenamed “El Capitan MR6”. The release is now available for download on Cisco.com.

The UCS Manager 2.2(7) release enables support for the Intel Xeon E5-2600 v4 “Broadwell” processor on the C220 M4, C240 M4, and B200 M4 server platforms, delivers support for new peripherals, as well as quality and operational enhancements.

UCS Manager 2.2(7) has a number of key updates including:

- **Next Gen Server Platforms:**
  - Cisco UCS B200 M4, C220 M4, and C240 M4 shipping with the Intel® Xeon® Processor E5-2600 v4 series CPUs on Cisco UCS 6100 and 6200 Series fabric interconnects
- **VIC Adapters:**
  - UCS Manager support for Cisco UCS VIC 1385 and VIC 1387 network adapters
- **Server options:**
  - NVIDIA Tesla M6 GPU accelerator for B200 M4 servers
  - NVIDIA Tesla M60 GPU accelerator for C-Series Servers
  - UCSB-LSTOR-PT storage controller
  - UCSC-SAS12GHBA PCIe adapter card
  - PCIe SSD on B200 M4 servers
  - QLogic QLE8442 10Gb Dual port 10GBaseT network adapter
  - QLogic QLE8442 10Gb Dual port SFP+ network adapter
  - Emulex OCE14102 B network adapter
- **Operational Enhancements:**
  - Trusted Platform Module (TPM) 2.0
  - Firmware Upgrade Checks the VIF/Interface Status After Fabric Interconnect Reboot
  - vNIC Redundancy Pair
  - Locator LED support for server hard-disks
  - Provision to Reset Peer I/O Modules to Factory Defaults
  - vNIC template CDN Source
  - Discovers, identifies, and displays NVMe PCIe SSD devices

... and much more.

### Additional Information

UCS Manager 2.2 and Maintenance Releases will be the last to support the Gen1 hardware, including 6100 series Fabric Interconnects, 2100 IO Modules, M1 series Servers, and M1 adapters.

Key release information for UCS Manager 2.2(7b) includes:

[UCS Manager Release Notes](#)

[UCS Manager User Guides](#)

[UCS Manager Release Bundle Contents](#)



## Network Programmability and Automation White Paper

Organisations today need to deploy applications much faster, making use of agile software, and improve existing processes to support software upgrades. They need to manage and operate networks more productively using common tools that the network, server, and software teams can use in collaboration. In environments in which constant change is the norm, organisations need to deploy high-quality user-focused applications that deliver immediate business value. Accomplishing these goals requires a new approach to the data centre. This approach needs to fill the gap between the development and operation teams, enabling developers to push code to the infrastructure quickly without negatively affecting the overall behaviour of the network.

To understand the ways in which operations need to change, consider the ways in which networks are set up and provisioned today. Most organisations spend most of their time trying to make sure that the network works by staging and testing it. Furthermore, they use cumbersome, disjointed, and error-prone manual tasks to provision and change the network to accommodate application needs. They also use manual processes to identify the potential sources of network problems and to perform repetitive tasks, consuming large amounts of network engineers' time.

To improve data centre operations and better meet business needs, organisations need process automation and holistic architecture provisioning. Achieving these goals requires cultural changes by IT teams. Organisations need better and more open libraries and interfaces, with common DevOps tools to automate scripting and provide higher-level programmatic control. They need agents and distributed processes to collect and process information about the state of the network and its components

The following white paper linked below explores how a highly programmable network can enable automation of the full network lifecycle, supporting agile development and achieving operational efficiency. It examines several use cases that use the power of the programmable and open Cisco® NX-OS Software operating system:

- Extended interfaces (Cisco NX-API command-line interface (CLI), NX-API representational state transfer [REST], and Broadcom shell access)
- Native Linux-based management
- Open-source tools (Ignite, Preboot Execution Environment [PXE] and Power-on Autoprovisioning (POAP))
- Linux containers (LXCs) in either a guest or native shell and Red-Hat Package Manager (RPM)
- Scripting languages such as Python, Ruby, and data representation (JavaScript Object Notation [JSON] and XML)
- Configuration management and orchestration tools (Puppet, Chef, Ansible, OpenStack plug-in, and Cisco UCS® Director)

To continue reading the full white paper please visit the following location on CCO:

<http://www.cisco.com/c/dam/en/us/products/collateral/switches/nexus-9000-series-switches/gain-network-programmability.pdf>



## Introducing Nexus 3100-V switches

We are pleased to introduce the new line of Nexus 3100-V switches, with the 3132Q-V orderable now. With over 10 million ports shipped, the Nexus 3000 series has more than 8,000 customers worldwide, making it the industry's leading switching product line using merchant silicon. The Nexus 3200 modules announced on March 1st are now shipping in volume. You can read more on [3 reasons 10 million is a big number](#).

The three new models available now and by the end of April are:



The Nexus 3100-V switches provide with the same robust, proven, and innovative feature set as previous generation Nexus 3100 switches. Incremental benefits over 3100-XL series modules include:

- Support of 100G uplinks
- VxLAN routing
- 33% more packet buffer (16MB)
- System memory doubled to 16GB improving capacity for object-model programming
- Ingress ACL increased from 4K to 16K, enhancing security and policy management flexibility

[Nexus 3100-V switches datasheet](#)



## EOS/EOL Notifications

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### End of Support – Windows XP with Webex Notification for 1st July 2016



Cisco is committed to security of all Cisco WebEx services and our customers' information. We routinely assess the security strength of the platforms and applications that we support and retire those that cannot be kept secured enough to meet modern threats. By our earlier notifications dated **July 1, 2014** and **December 14, 2014**, Cisco has announced end of support for Windows XP with all versions of Cisco WebEx services as of **January 2015**.

[http://www.cisco.com/c/en/us/td/docs/collaboration/support\\_center/WBS29-13/Support-Center-Release-Notes.html](http://www.cisco.com/c/en/us/td/docs/collaboration/support_center/WBS29-13/Support-Center-Release-Notes.html)

On **July 1, 2016** we will be discontinuing the use of RC4 based cipher suites for encryption of WebEx traffic. Our servers will reject any connection request using RC4 based cipher suites. Given Windows XP relies on these cipher suites to allow WebEx to create encrypted meeting connections, users on Windows XP machine will not be able start or join WebEx meetings with any version of WebEx after **July 1, 2016**.

All Windows XP users will have impact to their WebEx Service on July 1, 2016. It is required that our customers and partners move to a supported version of Windows for continued service.