Cisco Virtual Managed Services

Business Transformation Through Innovation

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Virtual Managed Services
Business Transformation Through Innovation

- A disruptive paradigm has emerged where innovative customer experiences are key and the value has shifted to cloud based services
- Automation of Services, NFV, SDN, and Cloud Enable the Ecosystem
- Business Creation, Execution, and Delivery Key to Take Advantage of New Markets
- Cisco strategy is to deliver new customer experiences from the cloud, through the ground to untethered users -- and to connect those clouds together
- Cisco Virtual Managed Services (vMS) is a secure cloud services solution services seamlessly, cost-effectively and on-demand to customers and partners – cost-effectively, quickly, and optimized for amazing user experiences
- Cisco has the right approach to SDN/NFV and automated services orchestration with complementary open platforms – Evolved Services Platform (ESP) , Evolved Programmable Network
- Automated, open, flexible and and application-centric infrastructure required
- Cisco Virtualized Managed Services modules are easy to buy, deploy, and maintain
- Cisco and its Partner community can uniquely help you in your journey to overcome the business challenges and seize these new opportunities.
Industry Market Trends

The World Has Gone Mobile

- Changing Customer Expectations
- Ubiquitous Access to Apps & Services

Rise of Cloud Computing

- Changing Enterprise Business Models
- Efficiency & Capacity
- Changing Architecture for Service Delivery

Massive Traffic Growth, Driven by Video

- Gaming (0.07%, 0.11%)
- File Sharing (19%, 8%)
- Web/Data (24%, 17%)
- Internet Video (57%, 75%)

M2M Driving Enterprise Business Value

- People
- Process
- Data
- Things

Emergence of the Internet of Everything

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User ≠ One Size Fits All
Business Customers Demand More Flexible Offerings
-- Inclusive of Hardware and Software

Rapid Deployment of New Business Applications

On-Demand Bandwidth & Capacity

User Experience Delivered

Open Solutions

Smart Data & Analytics

Anywhere/Anytime Secure Accessibility

PAYG Models

The New Customer Requirements

On-Demand Solutions

UX & Multi-Platform

One Stop Shop

Seamless Connectivity
The value has shifted…
Evolve your business to cloud and capture the opportunities

1. Market – Sell – Install – Support
2. Complex systems and limited automation
3. Legacy networks, legacy services

1. Fueled by Consumption Economics
2. Highly-industrialized / automated process
3. Fast-paced innovation (Software-driven)
The Starting Point: Unique Opportunity of the SMB Market
An Excellent starting point to Evolve Business Services Models

- Modular Architecture: Low Cost Customization
- Cloud Services Delivers on New Buy Models Demands & Cycles
- Variability in Vertical, Size & Offering Needs, Buy-Cycle; One-Size Does Not Fit All
SDN, NFV and Orchestration
Creating the Change Platform for Service Delivery

Orchestration
Automation, provisioning and interworking of physical and virtual resources

NFV
Network functions and software running on any open standards-based hardware

SDN
Optimization of control and data plane enabling consistent open programmability

The Time is NOW to put SDN, NFV, and Orchestration into Action
Business Customers Must Manage a Collection of Providers
“Pain Point”… Fewer Cycles Applied to Core Business

Find a Systems Integrator (SI) to:
1. Acquire Application and Manage IT
2. Manage Web Access
3. Get and Manage Servers and PCs
4. Arrange for Backup and Storage
5. Determine Security Needs

Find a Service Provider (SP) to:
1. Get Internet Connectivity
2. Manage Email
3. Offer Branch Office Communications
The Transformative Power of the Cloud

Enterprise

SMB

Self-Service Portal

Any Access
Secure Broadband / Leased Line / Carrier Ethernet …

CPE

Virtual or Physical Network Elements

Virtualized Mobility Services

Virtualized Managed Services

Virtualized Video Services

Cloud-based auto-discovery, provisioning, orchestration automation and management

Foundation for Service Agility and Transforming Customer Experience
What is needed to deliver network services from the Cloud?

1) Self Service
   - Portal

2) Orchestration
   - Service Catalogue
   - Orchestration Engine

3) Virtualized Services
   - vCPE
   - vISE
   - vNAT
   - vFW

4) Network: Open, Fast, Reliable

5) Flexible CPE – Zero Touch Provisioning

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Cisco Service Provider Strategy
Business Transformation Through Innovation

Applications
- Business
- Mobility
- Video
- Consumer
- Cloud

Evolved Services Platform
- Automation Management
- Orchestration Policy (MANO)
- Service Broker
- Catalog of Virtual/Physical Functions
- Orchestration Engine
- Service Profiles

Evolved Programmable Network
- Physical And Virtual Infrastructure (NFVI)
- VNFs
- Network
- Compute
- Storage

Cisco Services
- Mobility
- Video
- Consumer

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Our Industry’s Mission: Business Transformation
Cost reduction and agility leads to success for all

Automation is Not New – REQUIRED NOW for Business Success

- Full Access to Resource Pools Anywhere in the Cloud
- Orchestration
- Dynamic Set-Up, Tear Down and Provisioning
- Workload Portability
- On-Demand Workload Movement with Service Profiles
- Data Center
- Virtualized Resource Pools (network ready compute/storage)
- Network
- Virtualized Network Functions
- Cloud Services

Cost reduction and agility leads to success for all
Service Provider Vision for Next Generation Business Services

- Deliver business outcomes based on services automation
- Integrated SDN and Cloud platforms – networks and applications services
- Agile DevOps-based orchestration
- Best-in-class multi-vendor physical and virtual networking functions
- End customer visibility and control
- Open platform for integration with open source & 3rd party VNFs / applications
Cisco Virtual Managed Services
A Focused Approach

• Integrate Virtual Private Networks (VPN) with Cloud Services
• Self Service – Catalog Driven
• Addressing : Small [branches] of the Large [enterprises]
  ++ Plus Remote Worker, SOHO, Distributed Sites (hospitality, retail)
• Lower TCO (Agility, Automation, Simplification)
  via Virtualization & Cloud Management
• Leverage Existing SP Network Infrastructure
• Shorter Time To Revenue with NO upfront CAPEX
• Ability to Bundle / Package services
  >> Business, Security Mobile, and Video
Virtual Managed Services is a portfolio of secure cloud-based services solutions enabling automated delivery of business connectivity and applications services cost-effectively, seamlessly, and on-demand to customers and partners - optimized for amazing user experiences.

What is Cisco Virtual Managed Services

- Automate Services End-to-End
- Create New Services On-Demand
- Simple / Customized Shopping Portal
- Modular Tools to Match Your Business
- Easy to Deploy and Maintain
- Seamless and Secure Cloud Delivery
- For Enterprise and SMB Customers
For Your Customers, Users, IT: One Portal, One Bill

Comprehensive Services Where and When You Need Them

Compliance & Service Level Agreements

Secure User & Permissions Based

Virtualized Services

Network & Internet Plus Additional Services

- Mail, Apps (CRM, ERP)
- VoIP & Mobility
- Big Data & Analytics
- Advertising/Media
- Security, Permissions

Support

- Doc/App Storage
- PAYG Collaboration, Communications (UC)
- CloudVPN On-Demand (New Sites, Users, Stores)
- eCommerce, Websites

Branch Offices

Home / Remote Offices

Retail Locations

Remote Workers

Public/Community Wifi
Goal: Multi-tenant Virtual Private Network + Cloud

1. User Self-Service: GUI Input rendering & corrections
2. Auto-created design based on user inputs
3. Order Auto-orchestration in virtualized Multi-Service Smart Infra Cloud
4. IT-Friendly Service Control: Self-monitoring, Self-maintaining Elastic, Self-Adopting

Virtual Private Cloud (VPC)
Logical design automatically created within the WAN and Cloud Data Center self-service creation and modifications

Enabled For Rapid Growth & Seamless Services Delivery

**Your Needs:**
Easy to Sell, Activate, Create, Maintain

**Your Org Needs:**
Easy Integration, Customization, Usability, Serviceability

**Your Customers’ Needs:**
Fast Start-Up, Easy-to-Use On-Demand, Customizable UX

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- Northbound APIs for SP Integration (Plug & Play w/Tools You Want to Use)
- Service Agility: SP Template-Based Configuration
- Immediate GTM with No CAPEX, Multi-Vendor Interoperability
- Portal for Service Creation, Offers and Expansions; Simple Dashboards & Tooling for Visibility & Analytics
- Plug & Play Install (No Staging); Multi-Size Businesses
- Easy On-Demand Ordering of New Applications, Services
Customer Experience in a Nutshell

Order Services

CPE ships

Orchestration happens!

Service up and running
Self-Service User Portal - Customizable
Evolution of Managed Services – Premise to Cloud
Accelerate Delivery of New Services via Secure Transport

Network Functions from the Cloud

Premise

- L3 “classic”
- L3 CPE + x86 on premise
- L3 CPE + cloud managed
- Simple L3 CPE
- vMeraki on X86 on prem
- L2 NID

Cloud

Network Functions on the CPE

Virtual Network Functions

Network Functions

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How It Works: Cloud Based IT

Cloud Managed into SMB & Enterprise

Today

Time to Market

Cloud Management

On-Prem Device
Add Virtual Infrastructure & Bundle Offers

Today

Time to Market

Cloud Managed SMB & Enterprise

- Retail
- Small Business
- ISR
- L2 NID

Next Step

Add Premise Devices and Secure Connection

Self-Service Portal / Catalog

Evolved Services Platform (NFV MANO)

REST API

Cross Domain Device and Service Orchestration

- Premise (CPE)
- WAN
- DC Network
- Virtualized Services

Evolved Programmable Network (NFVI)

Email cleansing, advanced security, CSR, ASA, WSA.
Add Hybrid Cloud and As a Service Offerings

**Today**
Time to Market

Cloud Managed
SMB & Enterprise
- Retail
- Small Business

**Next Step**
Secure End-End Connections to Services

Self-Service
Portal / Catalog
Evolved Services Platform
(NFV MANO)

REST API
Cross Domain
Device and Service Orchestration

Evolved Programmable Network (NFVI)

Premise
(CPE)
WAN
DC
Network
Virtualized
Services

Email cleansing, advanced security, CSR, ASA, WS

**Hybrid Workload**
Add PaaS, SaaS, NAAS

Cloud Services
Intercloud
3rd Party Cloud

Email cleansing, advanced security, CSR, ASA, WS

**Today**
Time to Market

Cloud Managed
SMB & Enterprise
- Retail
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**Next Step**
Secure End-End Connections to Services

Self-Service
Portal / Catalog
Evolved Services Platform
(NFV MANO)

REST API
Cross Domain
Device and Service Orchestration

Evolved Programmable Network (NFVI)

Premise
(CPE)
WAN
DC
Network
Virtualized
Services

Email cleansing, advanced security, CSR, ASA, WS

**Hybrid Workload**
Add PaaS, SaaS, NAAS

Cloud Services
Intercloud
3rd Party Cloud

Email cleansing, advanced security, CSR, ASA, WS
Cisco Virtual Managed Services
Cloud VPN / Cloud Security

Customers

Flexible CPE
Secure Broadband Internet
Cisco ISR
Meraki MX
Ethernet NID

Service Provider Cloud
Cisco Evolved Services Platform
Service Catalog
Orchestration Engine
Open APIs

Business Outcomes
~ 65 %

Operations Savings

Sources: ACG Research, Cisco BTA, Cisco SPTG
Virtual Managed Services -- Cloud VPN
Package 1: CloudVPN with Internet, Firewall (FW), Remote Access (RA)

Cloud IPVPN with FW and Remote Access to Internet
- vFW with NAT and Policy
- vFW with IPSec/SSL Remote Access including Remote End-Host posture verification

Overlay Packet Tunnels
- IPSec tunnels – mesh, hub/spoke
Virtual Managed Services -- Cloud VPN

Package 2: CloudVPN with Internet, FW, RA and Enhanced Web Security

Cloud-Hosted Management
Scalable, elastic, on-demand

Cloud IPVPN with FW and Remote Access to Internet
- vFW with NAT and Policy
- vFW with IPSec/SSL Remote Access including Remote End-Host posture verification
- WSAv for Enhanced Web Security

Overlay Packet Tunnels
- IPSec tunnels – mesh, hub/spoke
Virtual Managed Services: Cloud
Package 3: CloudVPN with Internet, FW, RA and Next-Gen-IPS

Cloud-Hosted Management
Scalable, elastic, on-demand

Cloud IPVPN with FW and Remote Access to Internet
- vFW with NAT and Policy
- vFW with IPSec/SSL Remote Access including Remote End-Host posture verification
- vNG-IPS (SourceFire) for advanced threat protection and real-time contextual awareness

Overlay Packet Tunnels
- IPSec tunnels – mesh, hub/spoke;
Flexible Deployment Options – Cloud VPN / Cloud Security

**Individual Functions**
- NSO
- CSR1Kv
- vIPS
- ISR
- Meraki

**Virtualized Functions with Service Orchestration**
- NSO
- CSR1Kv
- vIPS

**Integrated Solution**
- NSO
- CSR1Kv
- vIPS

**As-a-Service Delivery**
- NSO
- CSR1Kv
- vIPS

**Elements that Plug and Play**
- Physical and Virtual Infrastructure
- Advanced Services

**Repurposed on the Fly**
- Leveraging Intercloud Ecosystem

**Open Interface to 3rd Parties**
The Transition to Cloud Based Services
Deployment Implications

Disruptive Technologies
- SDN + NFV
- Open Source

Operational Disruption and Uncertainty…
- Analytics
- Process
- People Skills

Key Strategic Operational Questions…
- WAN + DC Operations?
- Virtual & Physical?
- What MANO tools?
- Multi-Vendor?
- What SLAs?

Partner with Cisco
- Solution Based Services
  - Assessments
  - Insights
  - Customization
  - Design & Deploy
  - Build & Operate
  - As a Service
  - Systems Integration
End to End System Architecture
CloudVPN (ISR) CPE Use Case

Customer Orders Service

- Tenant Portal
- SP’s OSS/BSS

Network Services Orchestrator (NSO)

- Elastic Services Controller (ESC)
- OpenStack

PnP Functionality
- Zero Touch Provisioning

PnP server

Provide Day 1 Configuration

Establish VPN: IPSec tunnel, IP Overlay (L2TP, VXLAN, GRE, LISP)

CPE

- CPE Shipped at Customer Site, connected & Powered ON

Internet Gateway

VNF Service chain

X86 Server

OVS

VTF

CSR1Kv

ASAv

vESA

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CloudVPN (Meraki CPE) Use Case

Customer Orders a Meraki CPE

Meraki CMS

Network Services Orchestrator (NSO)

Tenant Portal

Elastic Services Controller (ESC)

OpenStack

SP’s OSS/BSS or Prime Order Fulfillment (POF)

API

Info Exchanged on new CPE Provisioning

Call Home and Zero Touch Provisioning

IPSec Tunnel

Meraki CPE Shipped at Customer Site, connected & Powered ON

CloudVPN Connectivity up

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End to End overview - CloudVPN system components
Innovation Driving New Business Models
Or Why are We Doing This?
Virtual Managed Services Advantages

- **Agile Automated Customized Service Creation**
- **Flexibility, Scale, Performance, and Security**
- **Service Readiness, Operations, and Support**
- **Flexible Deployment Models Commercial Terms**
- **Go-to-Market Support**

Accelerating Time to Revenue
Reducing Deployment Risks
Advantages in Partnering with Cisco

Value Creation
- Agility in new service creation and business models

Accelerate Time to Market
- 30-40% Reduction in time to adoption

Services Assurance
- Service/Support KPIs/SLAs

Risk Mitigation
- Build / Operate And White Label Models for “Pay as you go”
Why is This Important for You?
Opportunity to Disrupt the Market -- Significant Value At Stake

- Automate Cloud Based Service Offerings and Reduce Opex
- Extend Market Reach and Accelerate Revenue Growth
- Imperative to understand where to focus immediate attention for business benefit to you and your customers
- The time to act is now to drive your revenue growth quickly
- Cisco and its Partner community can uniquely help you in your journey to overcome the business challenges and seize the opportunities.
Thank You ..

Need More Info?

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http://www.cisco.com/go/epn
http://www.cisco.com/go/cloud
http://www.cisco.com/go/ciscopowered
TOMORROW starts here.