



# IBM Softlayer

Richard Holmes  
IBM Solutions Manager, Arrow ECS

**SOFTLAYER<sup>®</sup>**

IBM and SoftLayer are leaders in cloud computing – providing IaaS capabilities to organisations ranging from small startups to global enterprises.



**1500**  
cloud patents



**US\$7 billion**  
in cloud portfolio  
investments



Chosen as  
**top provider**  
of public and  
private IaaS for  
enterprises<sup>1</sup>



**SOFTLAYER**  
an IBM Company

More than  
**22 million**  
**domains**  
hosted—roughly  
one domain for  
every person in the  
10 largest U.S.  
cities



More than  
**100,000**  
devices managed  
for 21,000 customers  
in 140 countries



More than  
**130 million**  
online game players  
are playing games  
running on SoftLayer



<sup>1</sup>IDC: U.S. Buyers Rank IBM, Cisco, HP, AT&T, and Google as Likely Most Effective Top 5 Providers in Delivering IaaS, Doc # 248127 May 2014. IBM press release.

IBM and SoftLayer are leaders in cloud computing – providing IaaS capabilities to organisations ranging from small startups to global enterprises.

**The growth of big data, mobile, social and analytics are fueling the need to find new ways of doing business.**



New methods of interacting with clients and systems are allowing organizations to create innovative new products and services that can deliver greater value to clients.



More interactions means more data, which drives the need for more network bandwidth, more storage, and more processing power.

<sup>1</sup>Customer relationship management (CRM), <sup>2</sup>Human resources (HR), <sup>3</sup>Database (DB), <sup>4</sup>Enterprise resource planning (ERP)

## What do you need cloud to do for you?



**You need to bring new services and offerings to market more quickly.**

**You need to launch new business applications with minimal IT impact.**

**You need to rapidly build, test and deploy applications that scale.**

**You need to host your products and services on a resilient infrastructure.**

**You need to run high performance computing (HPC) apps.**

SoftLayer®, an IBM company, provides a global, interconnected platform with flexible options so you can move virtually any workload to the cloud.



### Hosted private clouds

Choose bare metal, virtualized infrastructure or both in a single-tenant model to meet enterprise needs.



### High-performance computing

Access industry-leading HPC cluster technologies to run entry-level to the most demanding HPC apps.



### Big data and analytics

Store, manage and analyze data with the robust storage and computer power.



### Social business

Host social business apps for global enterprise customers.



### Mobile applications

Build and host mobile apps on a global infrastructure at Internet scale.



### Development and test

Develop and test business apps with APIs<sup>1</sup> and a DevOps runtime services environment.



### Web applications and e-Commerce

Deploy any n-tier application with demanding requirements on an easily scalable, hybrid infrastructure.



### ISVs<sup>2</sup>, production ERP and unmanaged production

Combine dedicated and shared cloud environments on a hosted infrastructure, backed by monitoring, backup and restore, and high availability.

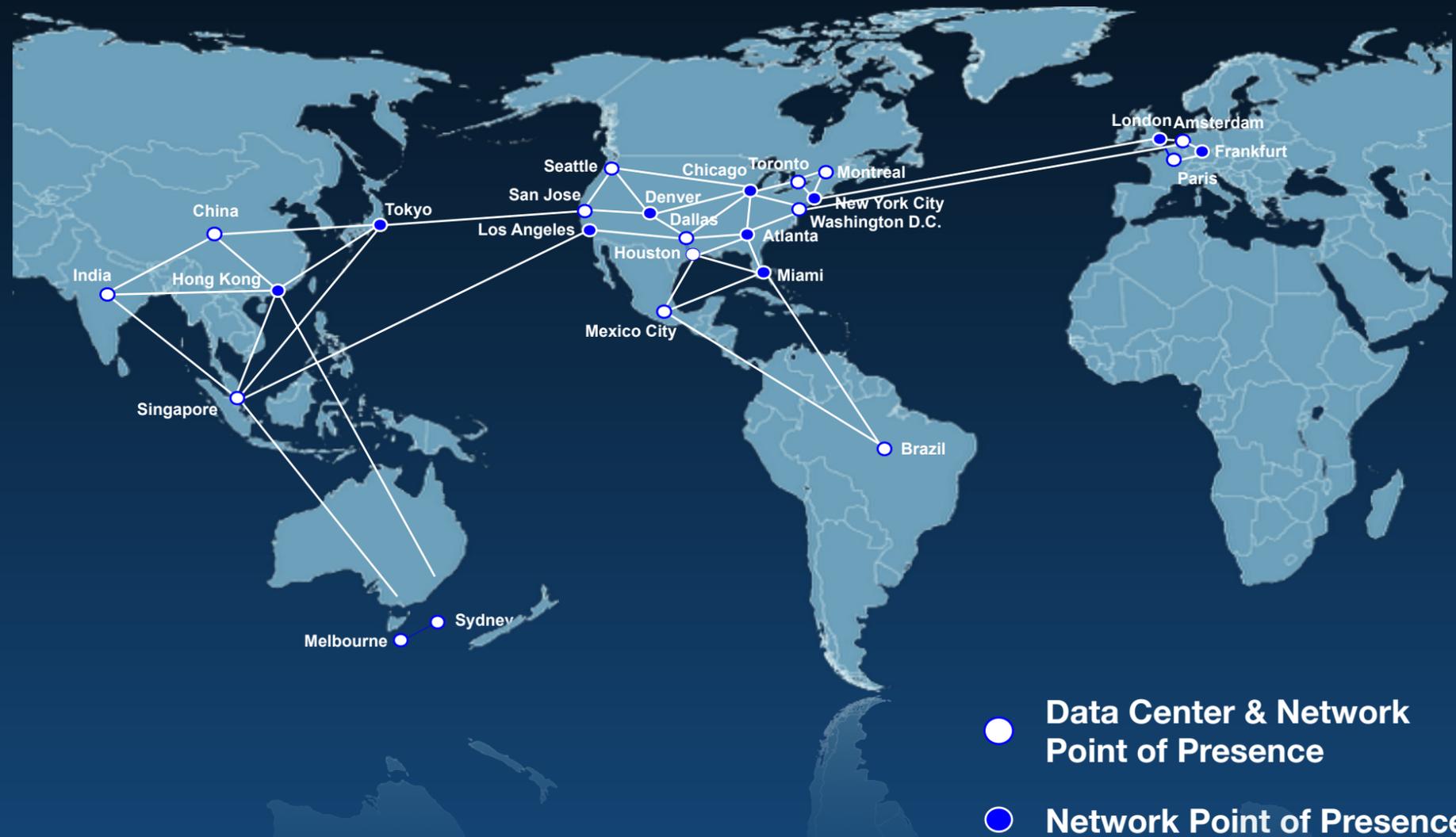
<sup>1</sup>Application programming interface (API); <sup>2</sup>Independent software vendor (ISV)

# In collaboration with SoftLayer



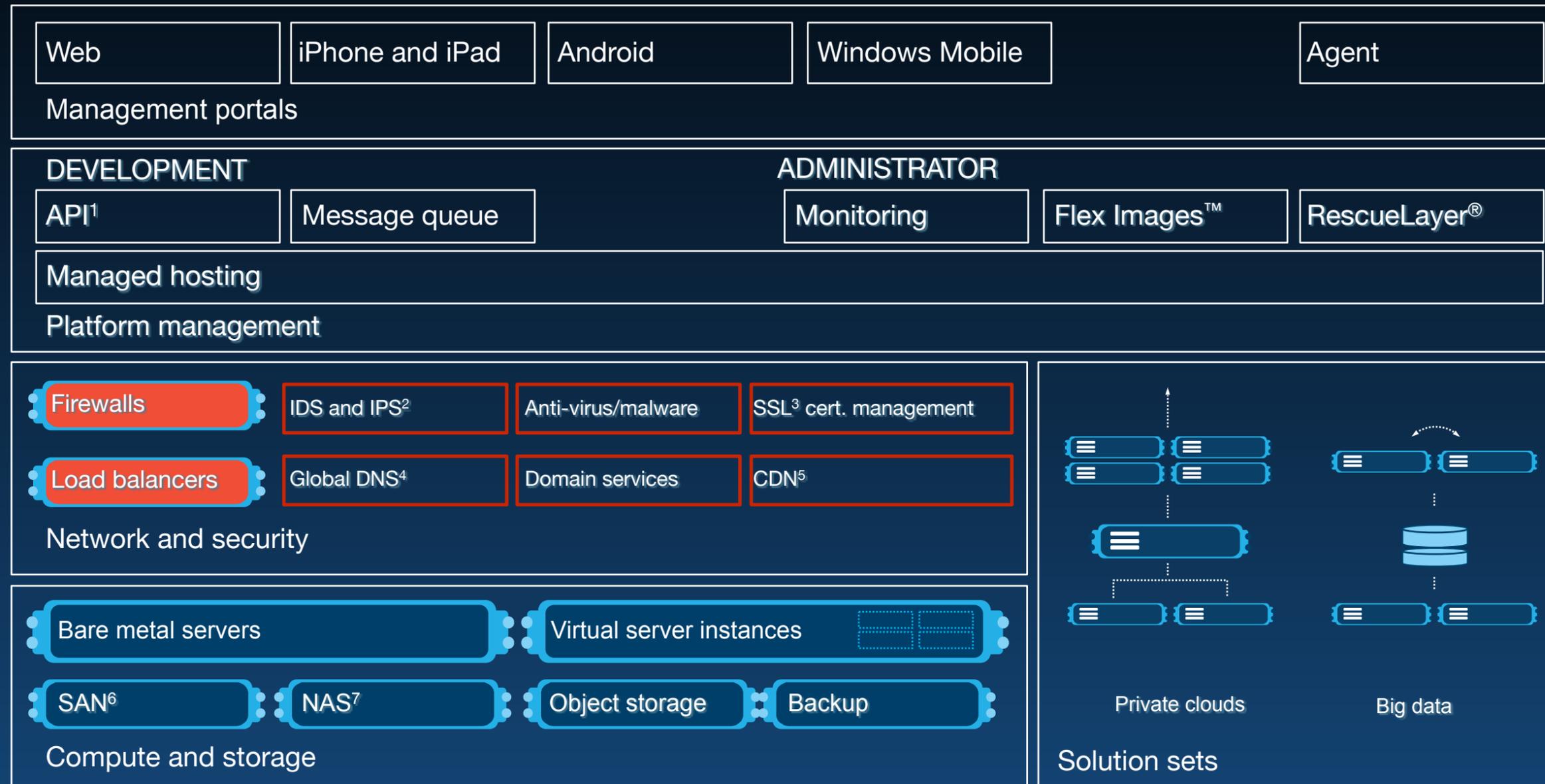
# IBM has invested US\$1.2 billion to expanding the SoftLayer global footprint for even greater access to our infrastructure choices.

- **Key markets for expansion in 2014:** Hong Kong, London, Canada, Japan, India, China, Mexico, Washington, D.C., and Dallas<sup>1</sup>
- Geographically dispersed points of presence (PoPs) bring connectivity to our carrier-grade network backbone closer to the end user
- These PoPs, combined with over 2,000 Gbps connectivity between our data centers around the world, can deliver exceptional bandwidth and connectivity
- **2015 Expansion:** Italy, 2<sup>nd</sup> Australia, 2<sup>nd</sup> Canada,



<sup>1</sup>Plans are subject to change without notice.

# The SoftLayer on-demand global cloud platform supports a range of infrastructure products and services.



<sup>1</sup>Application programming interface (API); <sup>2</sup>Intrusion detection system and intrusion protection system; <sup>3</sup>Secure socket layer (SSL); <sup>4</sup>Domain name server (DNS); <sup>5</sup>Content delivery network (CDN); <sup>6</sup>Storage area network (SAN); <sup>7</sup>Network-attached storage (NAS)

To deliver on our commitment to offer you the choices you need, we can provide virtually any compute and storage combination at any time in three delivery models.



- Dedicated servers deployed on demand
- Hourly and monthly pricing
- Near-comprehensive range of options
- Graphics processing unit (GPU) servers for high performance computing

- Virtual server instances
- Dedicated physical nodes available

- Support for multiple virtualization platforms
- Turnkey solution for Citrix CloudPlatform

SoftLayer's vast customization options enable you to freely move back and forth between dedicated servers and shared virtualized servers, depending on your workload needs.

Move back and forth between dedicated servers and shared virtualized servers for greater business agility with the **Flex Images™ server deployment system**

Provides image capture and deployment for dedicated servers, unified across bare metal and shared cloud servers

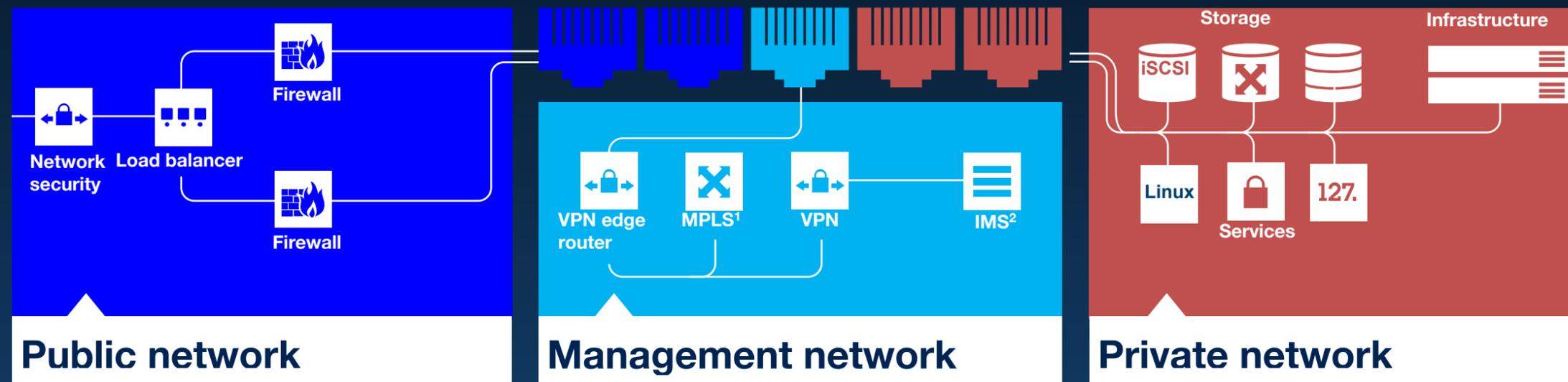


**Combine workloads on the same network:** Use a combination of virtual servers for your front-end workloads that need to scale out while using bare metal for your back-end high input/output workloads like app or database servers.

## Our triple-network architecture is fundamental to the performance of the SoftLayer infrastructure.

SoftLayer integrates three distinct and redundant gigabit network architectures—public, private, and data center-to-data center management—into a network-within-a-network topology.

**Any device at any time can have any of three types of connections:**



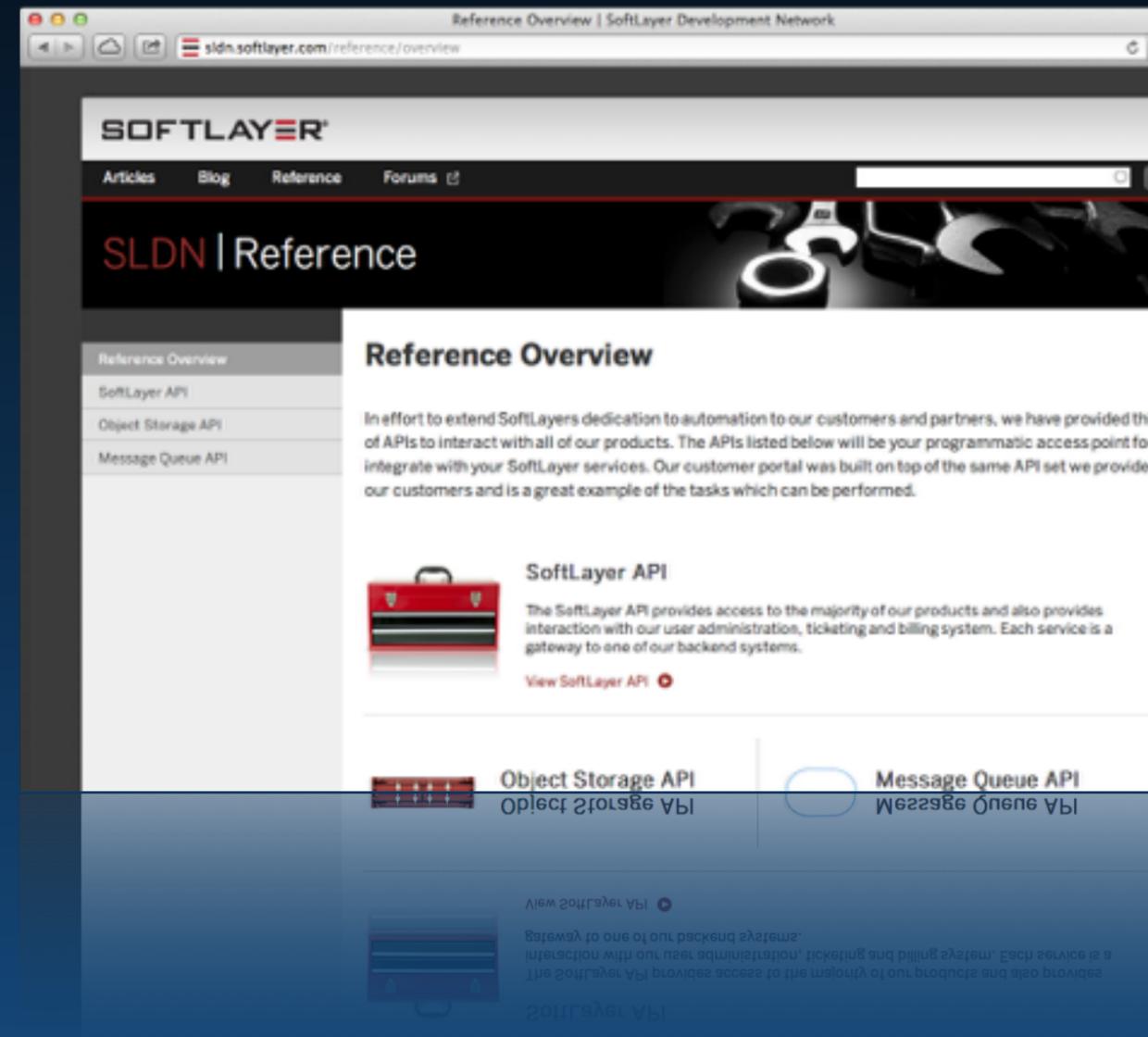
- **Public network:** Connection to public Internet through Tier 1 carriers
- **Private network:** Virtual private network (VPN) server access through dedicated, stand-alone third carriers not connected to the public network
- **Management network:** Out-of-plane management network connection through an unlimited VPN connection

<sup>1</sup>Multiprotocol label switching (MPLS); <sup>2</sup>Integrated management system (IMS)

Functions within the SoftLayer API can help improve customer control, reduce errors and increase flexibility.

### Functions of the SoftLayer API include:

- Automatic server deployment
- Service provisioning
- Reboots and reloads
- Ticketing
- Hardware configuration
- Software load
- Domain name system (DNS)
- Network
- Storage
- Security scans
- Monitoring



For greater control over resiliency and risks, security is built into the SoftLayer infrastructure.

**Security certifications and alignment with stringent government and industry standards, such as:**

- Service Organization Controls (SOC2)
- Safe Harbor
- Cloud Security Alliance – STAR registrant
- Payment Card Industry (PCI) compliance
- Health Insurance Portability and Accountability Act (HIPAA)

**A secured single global network with a highly redundant architecture, firewalls and load balancers**

**Single-tenant options for operational control and compliance management**

**Virtual local area networks (VLANs) for customer isolation on private networks**

**Add-on security products**

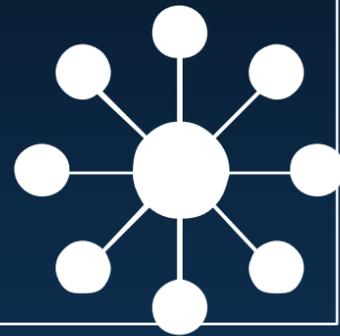
**Add-on IBM security services**



IBM's security services and solutions portfolio can enhance your security posture

SoftLayer can deliver a robust, industry-leading solution that gives you the control, visibility and flexibility you need to streamline your transition to a cloud environment.

**Single management system:** We integrate virtually every facet of your system—including dedicated servers, firewalls and load balancers.



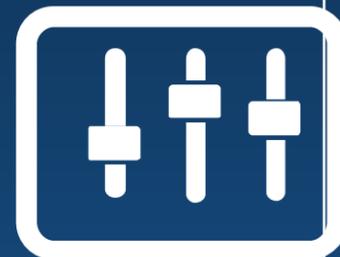
**Automation:** Built-in automation helps you purchase, provision, deploy and manage your infrastructure more easily. Dedicated servers can be provisioned in hours, not days, and shared servers can be deployed in just minutes.



**Standardization:** We standardize points of delivery (POD) within each data center and build them from the ground up to help improve power, environment and network efficiencies.



**Transparency:** Visibility from network to hardware can help you improve control and compliance management.



**Billing:** We offer pay-as-you-go monthly and hourly contracts with no long-term commitments.

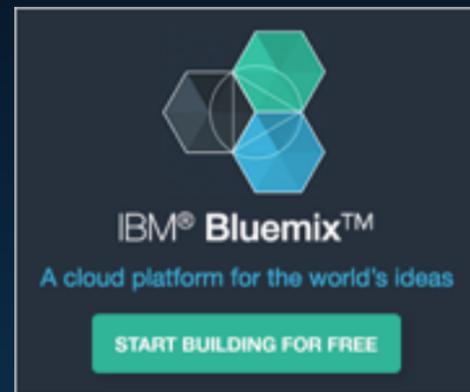


**Support:** Around-the-clock support personnel are available via ticket, chat or voice anytime of the day, for no extra cost.

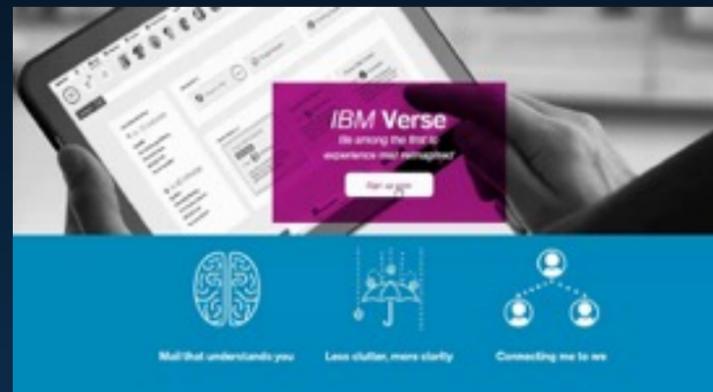


# IBM, a strategy for Cloud & SoftLayer

SoftLayer underpins all IBM Cloud offerings – from Bluemix, to IBM SaaS products such as Verse, Security Cloud Enforcer, Storage Insights and many more.



IBM® Bluemix™  
A cloud platform for the world's ideas  
START BUILDING FOR FREE



IBM Verse  
Be among the first to experience this paradigm

Multi that understands you | Less clutter, more clarity | Connecting me to me



IBM SaaS supports 47 of the top 50 Fortune 500 companies

IBM  
To learn more about IBM SaaS, visit the IBM Cloud marketplace [ibm.com/cloud](http://ibm.com/cloud). Follow us on @IBMcloud.

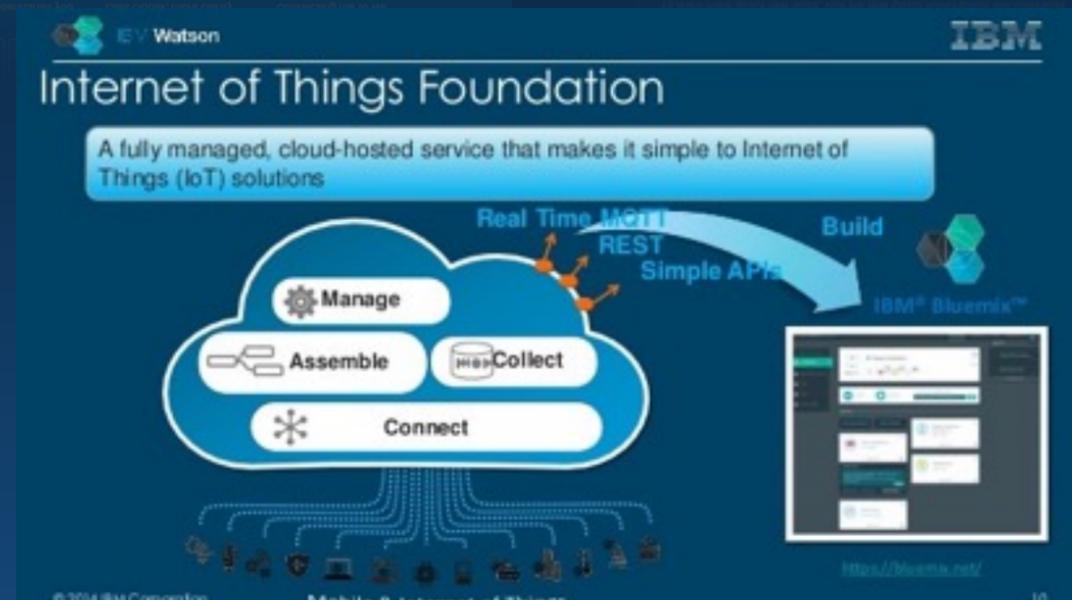


IBM Watson Analytics  
Powerful analytics for everyone.



IBM SaaS  
Why IBM Service Engage?  
Learn More

Simple | Fast | Cost Effective



IBM Watson  
Internet of Things Foundation

A fully managed, cloud-hosted service that makes it simple to Internet of Things (IoT) solutions

Manage | Assemble | Connect

Real Time M2M REST Simple APIs | Build | IBM® Bluemix™

© 2014 IBM Corporation | <https://bluemix.net/>



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# Security Everywhere Extended

Jatinder Shetra  
Consulting Security Engineer



# Dynamic Threat Landscape

## Customers Biggest Security Challenges

Changing  
Business Models



Dynamic  
Threat Landscape



Complexity  
and Fragmentation



A community that hides in plain sight avoids detection and attacks swiftly

**60%**

of data is  
stolen in

**HOURS**

**85%**

of point-of-sale intrusions  
aren't discovered for

**WEEKS**

**54%**

of breaches remain  
undiscovered for

**MONTHS**

**51%**

increase of companies  
reporting a \$10M loss  
or more in the last

**YEAR**

**100%**

of companies connect to  
domains that host malicious  
files or services last

**YEAR**

# Security Everywhere



Broadest scope of threat-centric coverage from the network to the data center, cloud, branch and endpoints – before, during and after

Extending Security Everywhere Further into the Cloud,  
Endpoint and Network

# Announcement Highlights



## Cloud Security

Open DNS  
Cloud Access Security (CAS)  
CWS Updates



Network



## Network and Endpoint

ISE 2.0 and AnyConnect 4.2  
AMP Everywhere Progress



Endpoint



Mobile



Virtual



## Organizations of All Sizes

Cisco  
Threat Awareness Service



Cloud

# OpenDNS Adds to Cisco's Security Portfolio

## Attack Continuum



## OpenDNS Umbrella

**Umbrella**

Stay ahead of future attacks by blocking malicious domains, IPs, and ASNs

**Umbrella**

Block callbacks on any port, protocol, or app at the DNS & IP layers

**Investigate**

Query live threat intelligence of all the domains & IPs on the internet.



Threat Grid Integrated into AMP on CWS



Cloud Access Security



Greater Network Integration



UI and Ease of Use Enhancements

# Announcing Cisco Identity Services Engine 2.0

## Extending Security Deeper into Networks and Endpoints



### Identity Services Engine (ISE) 2.0

- Deeper Visibility to Drive Superior Network Insights and Control
- Streamlined Access Policy Management to Simplify Security and Compliance
- Enhanced Contextual Data Sharing & Control to Accelerate Threat Mitigation



### Cisco pxGrid Ecosystem

- Adaptive Network Control to Adjust Network Policy and Execute Threat Responses
- New pxGrid ecosystem partners including Check Point, Invincea and Infoblox



### AnyConnect 4.2

- New Network Visibility Module (NMM) to Monitor Application Flows on Endpoints On-premises and Off.
- Advanced Application Flow Inspection to Enable Comprehensive Analysis on Endpoints to Detect and Prevent the Spread of Threats.

# Advanced Malware Protection Everywhere



Mac OS X



Dedicated FirePOWER Appliance



Web & Email Security Appliances



Cloud Based Web Security & Hosted Email



Private Cloud



PC



Mobile



Virtual



NGIPS / NGFW on FirePOWER



Integration of Threat Defenses



Visibility and control from edge to endpoint



Minimize time to detection and remediation

## Cisco Threat Awareness Service

Cisco Threat Awareness is a portal-based, threat intelligence service that enhances threat visibility by making broad, foundational security information accessible 24-hours a day:

Leverages one of the world's most advanced threat databases

- Timely **detection** of **malicious activities**

Identifies compromised networks & suspicious behavior

- Helps companies quickly **identify** compromised **systems**

Gains actionable intelligence

- Helps IT and security teams **identify threats**

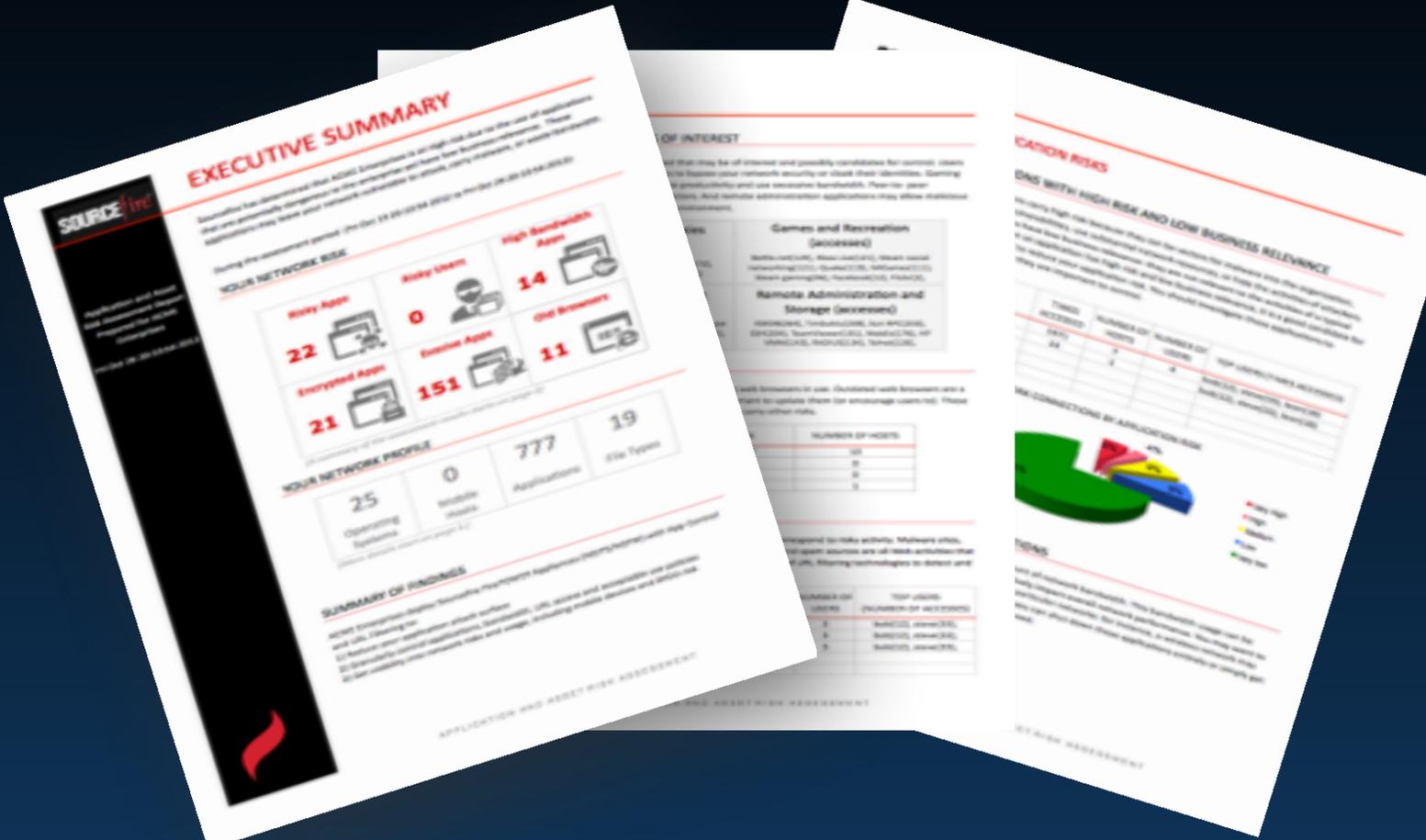
Analyzes network traffic as it is seen from outside the network

- Enables continued improvement of **overall security**





# Proof of Value (PoV)



Leverage ASA 5515-X Equipment with SSD and FirePOWER Services



POV Risk Reports

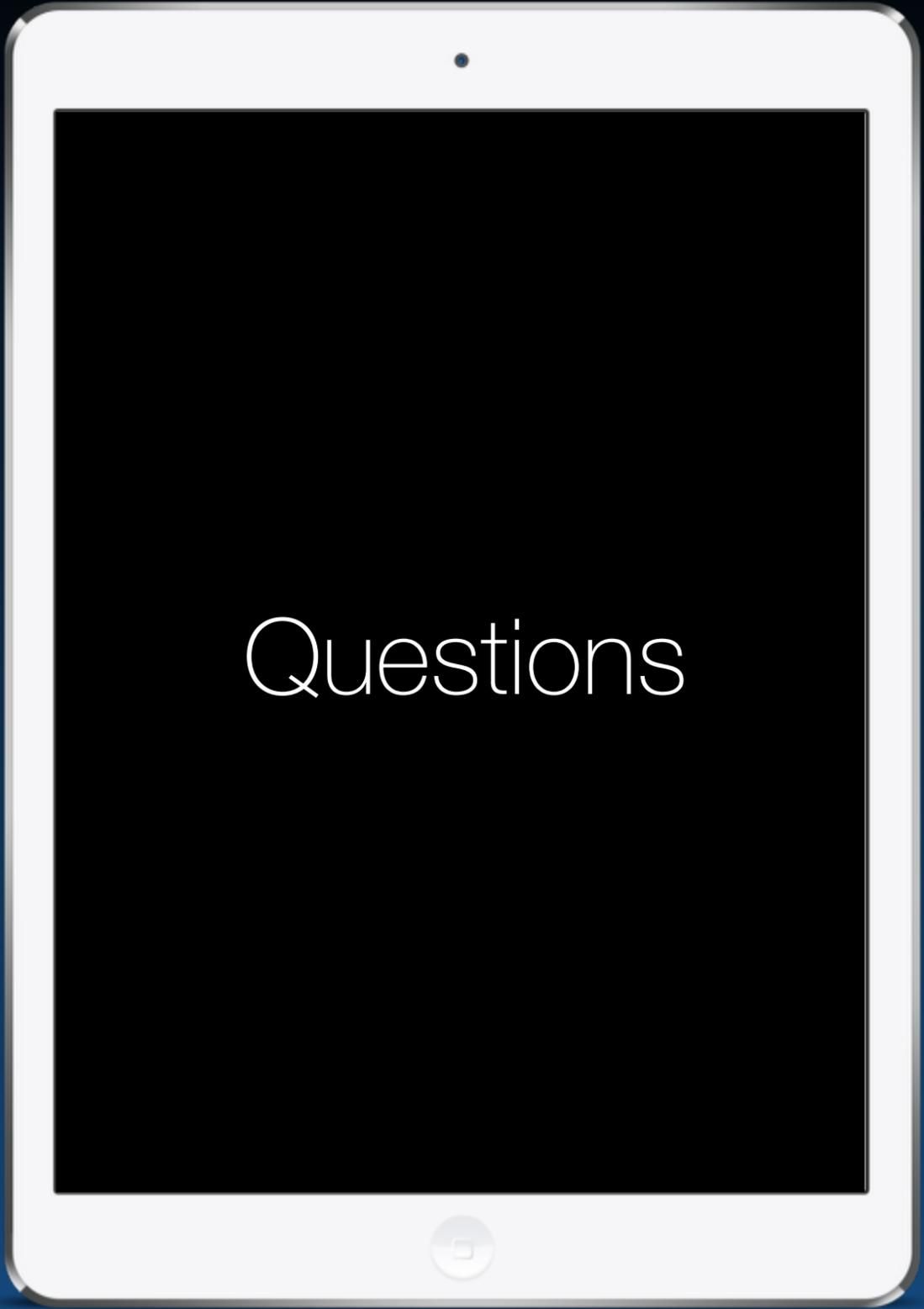


**CISCO**

*TOMORROW starts here.*

# LIVE HACK INTRODUCTION



A white tablet is centered on a dark blue background. The tablet's screen is black and displays the word "Questions" in a white, sans-serif font. The tablet has a small circular camera lens at the top center and a circular home button at the bottom center.

Questions

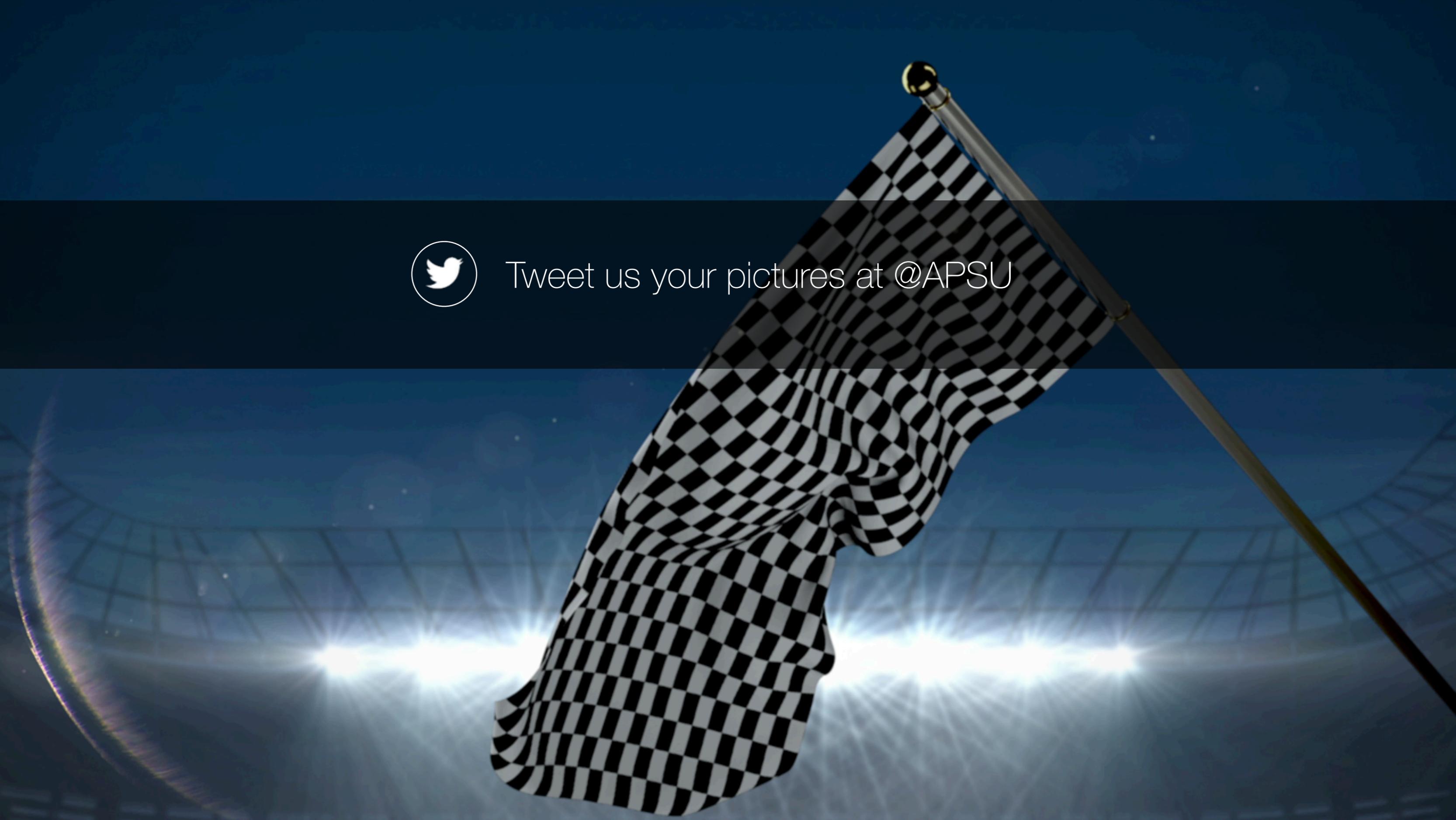


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Tweet us your pictures at @APSU





# Software Asset Management (SAM)

Sarah Lawrence

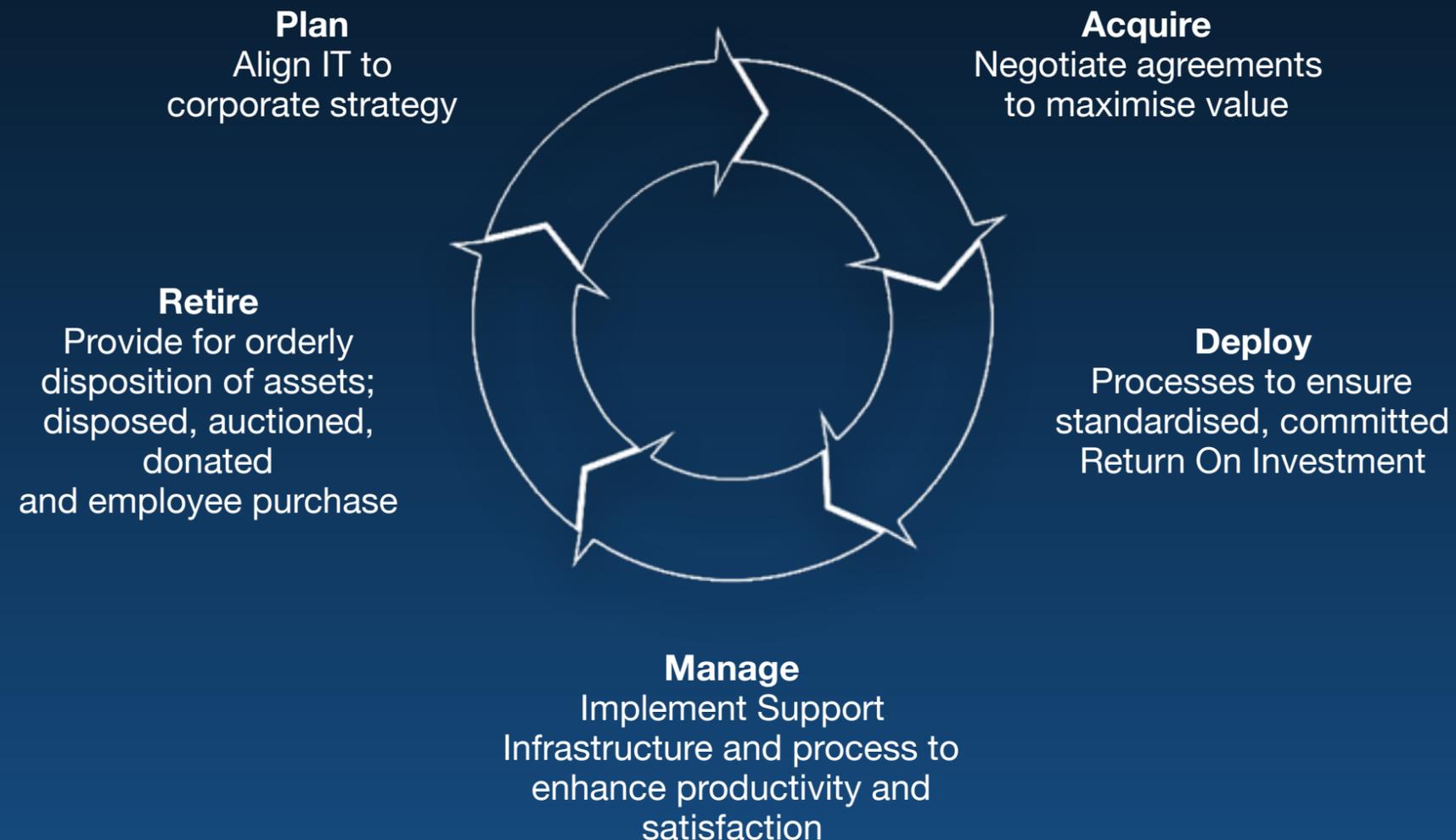
Software Asset Auditor, Software & IBM TSS



## What is Software Asset Management?

**Software Asset Management (SAM)** is a business practice that involves managing and optimising the purchase, deployment, maintenance, utilisation, and disposal of software applications within an organisation.

It follows the lifecycle of the software and enables an organisation to capitalise on that asset.



# High Level SAM Plan

## Inventory

What do you have already?

Where is it allocated?

Is it still in regular use?

Discovery tools or manual?

## Organisation

Inventory all licenses and proof of purchase

Record and organise license evidence

Do they match the versions you're using now?

## Policies & Procedures

Establish the software lifecycle in order to manage it effectively

Acquisition, retirement, storage, disaster recovery all need a process

Create a SAM culture throughout your organisation

## SAM Optimisation

Maintain your SAM plan using the following:

Spot checks

Inventory reports

Quarterly audits

Working with other departments

## Ensuring Audit Readiness

**Around 40% of mid-size and large businesses can expect an external audit**

**A software audit can tie up valuable IT resources for up to a year if you don't have an organised system of monitoring**

**Gartner: Most organisations are over-licensed for 60% of its software and under-licensed for 30%**



## **Benefits of Managed Service**

**Continuous management of software estate**

**Early identification of risks/exposures**

**Highlight cost savings/avoidance**

**Deeper understanding of the customer and their requirements**

**Reduces risk of audit penalties**

### **Server virtualisation can dramatically increase the probability of software license non-compliance, for several reasons:**

- The ease of duplicating operating systems and applications on virtual machines
- Virtual machine mobility - moving them from one physical host to another
- The complexity of software license terms for virtual environments

## Server virtualisation rules include:

### Device-specific software license models:

These tie the software license to a particular computer and may also impose move restrictions. With this kind of license, the dynamic load balancing that is sometimes applied in VMware environments can cause non-compliance



### Processor-based software license models:

These software licenses require details of the physical processor(s) in order to determine license compliance, but on a virtual machine the hardware details are often hidden by the hypervisor



### Virtual machines per host software license rules:

These allow the software to run on a certain number of virtual machines for each physical machine with a valid license



### **APSU can facilitate the management of License Compliance in 3 ways:**

- Business as usual – providing engagement is made prior to any audit notification, APSU will charge 10% of any savings
- Audit Notification – APSU will work to provide housekeeping on licenses, charge of 15% of any savings that are made
- In Compliance – APSU engaged after the penalty notice is issued, we charge 20% of any reduction in penalty.

# About APSU



#1

in South West England

#20

in United Kingdom



\$11.2  
Investment

# One of the leading Managed Services Business in the UK

**Highest  
Technical  
Accredited**

Business  
Partner

**IBM's 1st  
cloud service  
for Power I**

delivered by  
APSU

**CISCO  
Premier Partner  
Specialist**

in Security

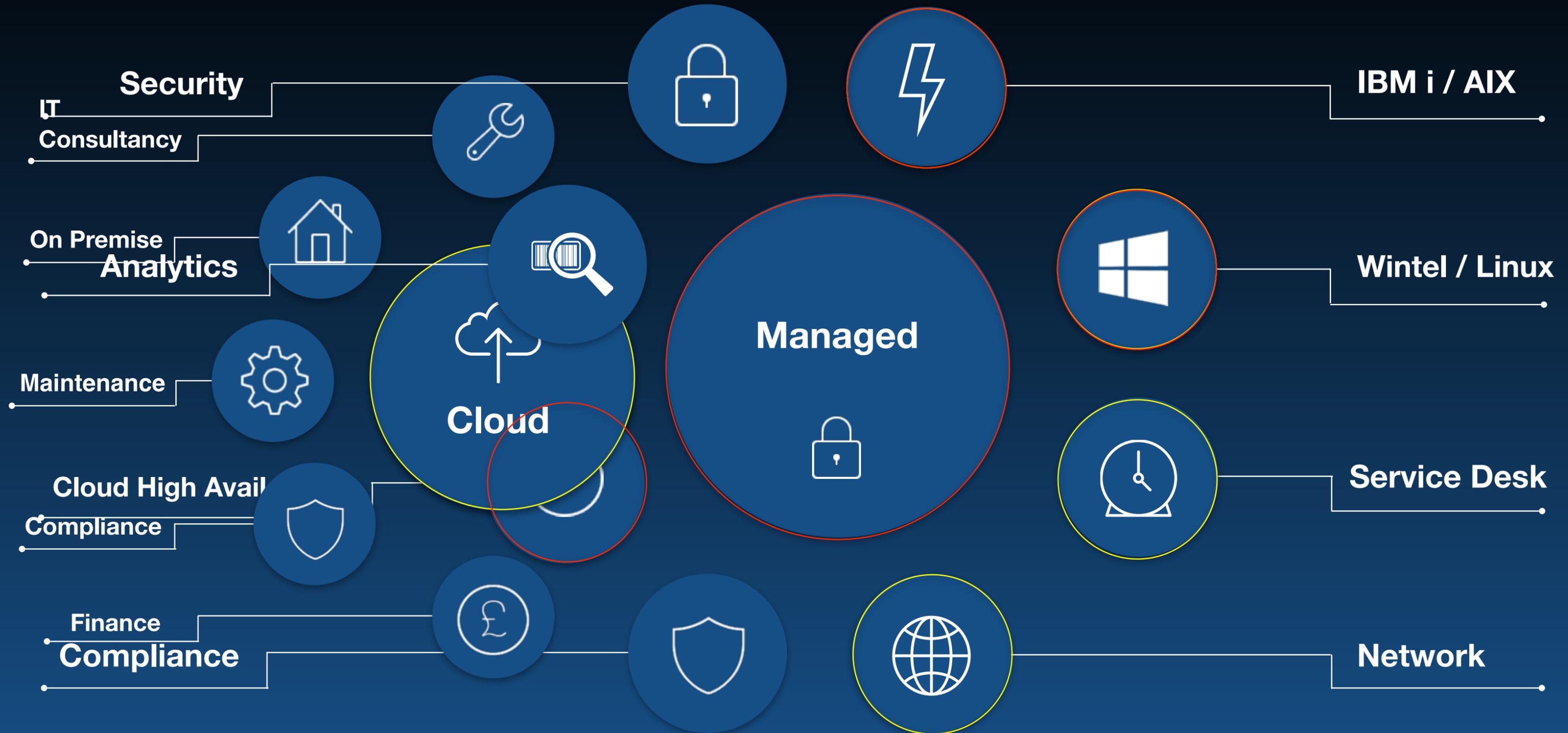
**IBM's  
preferred  
TSS partner  
in UK**

**Managed  
Services  
White  
Labelled**

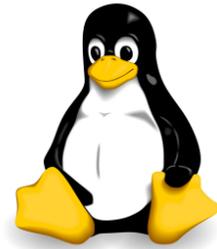
**IBM  
Softlayer  
Partner**

1st in the UK

# What we do



# Accreditations



**TOSHIBA**



# Industry leading companies trust APSU



**420+**  
**CUSTOMERS**

 **THE NO 1 TECH CONSULTING COMPANY<sup>1</sup>**

 **2 OF THE TOP 20 UK INSURERS<sup>3</sup>**

 **8 OF THE TOP 10 IBM POWER CLIENTS**

 **11 OF THE TOP 50 UK RETAILERS<sup>4</sup>**

 **THE TOP 4 UK HIGHSTREET BANKS<sup>2</sup>**

 **6 OF THE FTSE 100 COMPANIES**

<sup>1</sup> Vault (2011), Tech Consulting Firm Rankings 2012

<sup>2</sup> Wikipedia (2013), List of banks in the United Kingdom

<sup>3</sup> Incisive Media Investments Limited (2013), Top 20 UK insurers

<sup>4</sup> RetailWeek (2009), Top UK Retailers 2009

# APSU Monitoring

100+  
SYSTEMS



MAXIMIZE



APSU DEPLOYS MAXIMIZE TO  
MANAGE OVER 157 IBM I SYSTEMS  
IN THE UK AND OVERSEAS

IBM i system management toolset



Standard Operating Procedure stream



**MAXCHANGE**

Software Change  
Management Tools (SCM)



# APSU Testing-as-a-Service



SINCE THE BEGINNING OF  
COMPUTING, THE NO. 1 REASON  
WHY THINGS GO WRONG....

Someone made a

# CHANGE



**MAXCHANGE**

Software Change  
Management Tools (SCM)

# APSU Cloud Solutions

PRIMARK®

NEW RETAIL ORDERING SYSTEM

ON-PREMISE



APPLICATION BACKEND PROCESSING  
HSV SECURES NET NEW CLIENT  
TO RUN ON POWER I SERVICES



PRIMARK CAN NOW SET THE BEST SOFTWARE  
SUBSCRIPTION DREWS CUSTOMERS FOR POWER I

You could say we are a Cloud Pioneer

White Paper



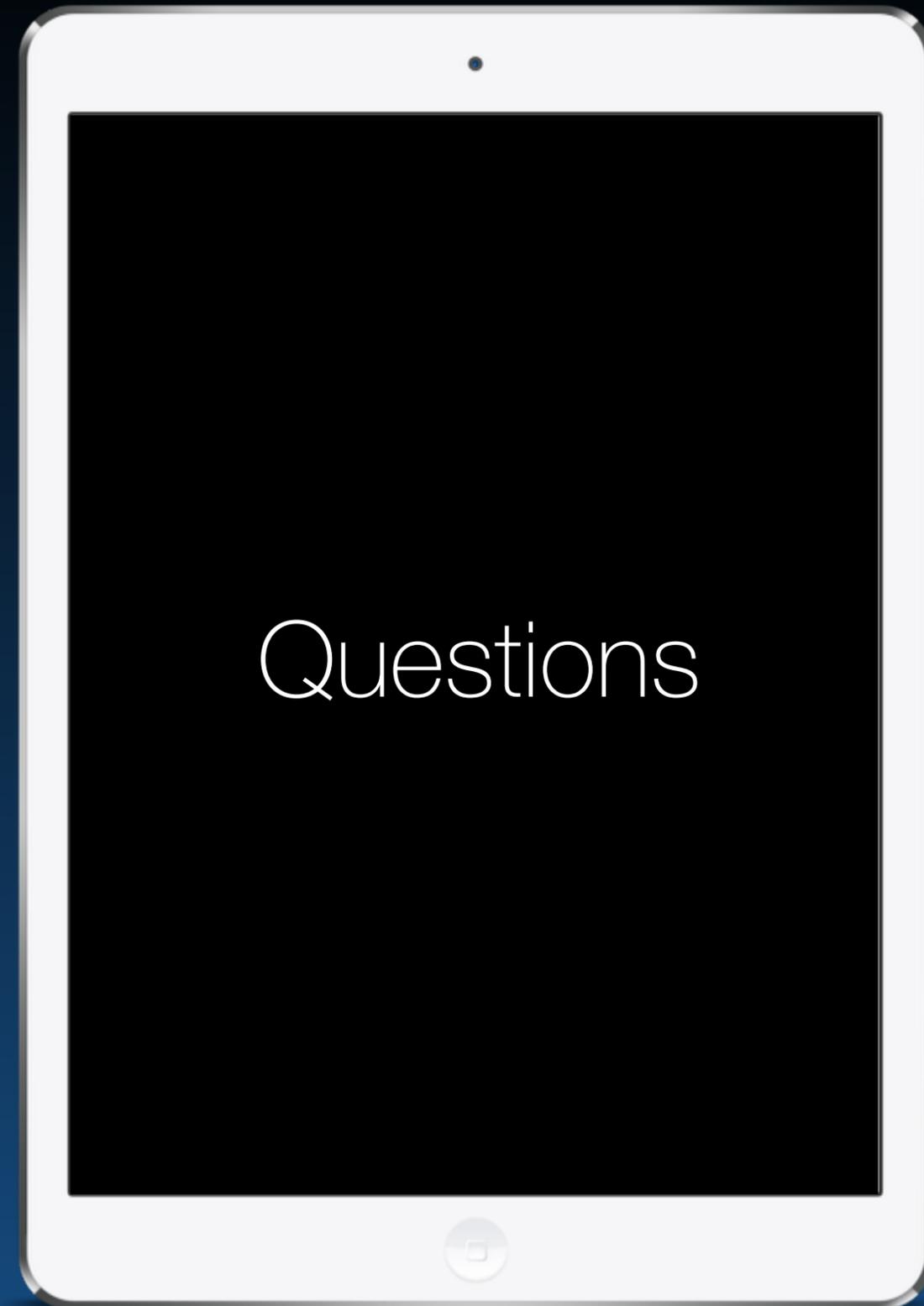


## Case Study

- » Hosted and Remote Managed Service of their IT Infrastructure
- » Supporting Ireland, UK and European locations
- » Hosted Managed Service of their production iSeries systems
- » IBM i Cloud for High Availability
- » Helpdesk for the IT Team out of hours
- » Infrastructure provider to ABP for Servers and Software

**apsu**

**EXPANDING GLOBALLY WITH.... SOFTLAYER®**





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# Technology Showcase Winner

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Williams Tour

**opsu**