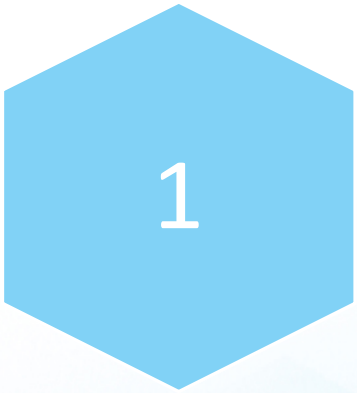
IBM Cloud:
Dream it.
Build it.

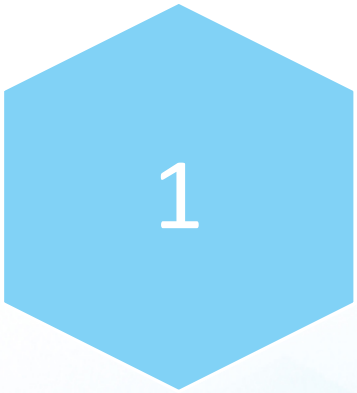


Dream it!

Talking workloads

Build it! Saving time with services!

Ready to start building?



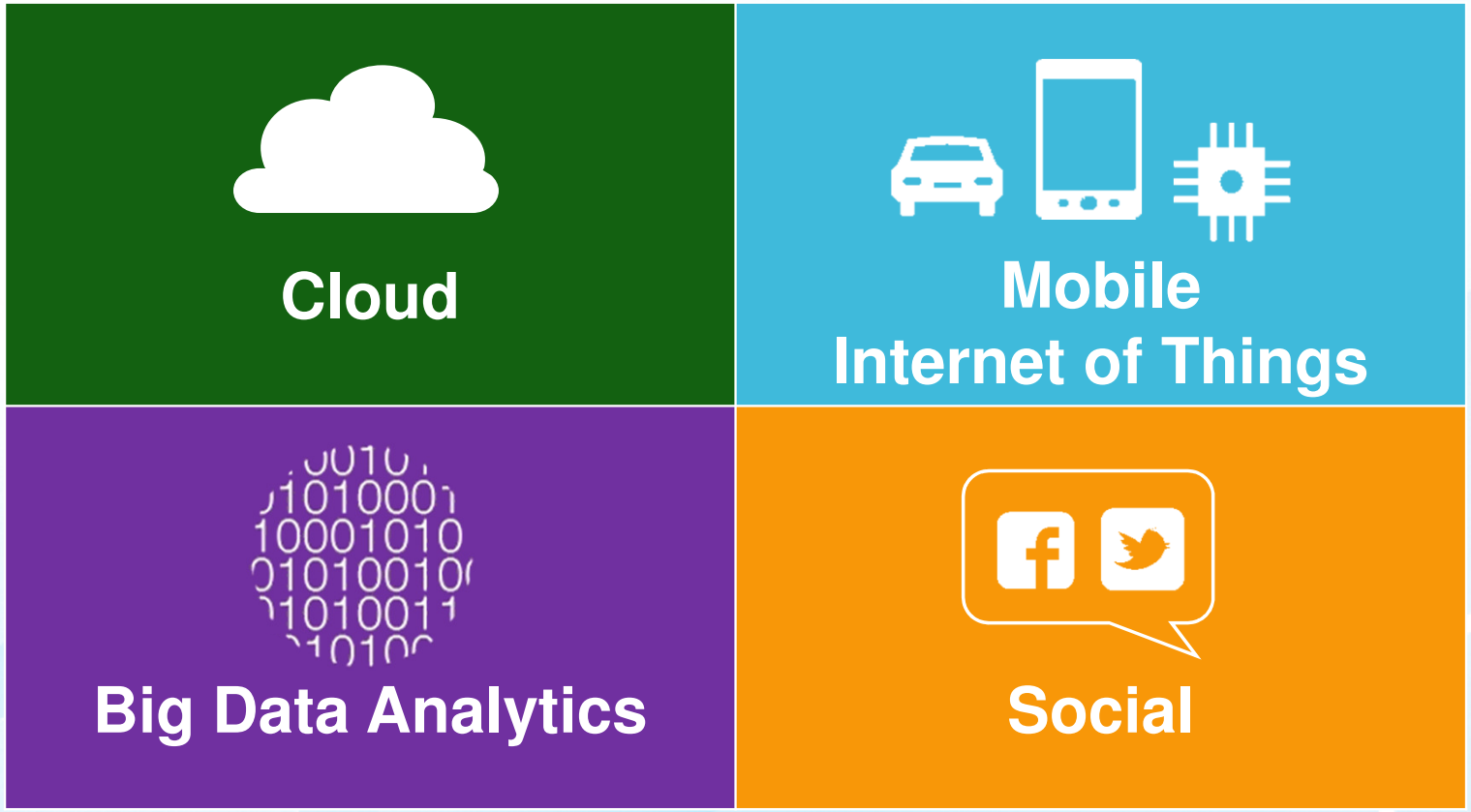
Dream it!

Talking workloads

Build it! Saving time with services!

Ready to start building?

Our World is Changing through Disruptive Technologies



Cloud enabled

All our systems are in the Cloud

In the Cloud

Cloud enabled

Without the Cloud

Cloud allows us to innovate

Consider:

Data flows from every device, replacing guessing and approximations with precise information. Yet 80% of this data is unstructured; therefore, invisible to computers and of limited use to business.

By 2020,

1.7 MB

of new information will be created **every minute** for **every human being** on the planet.

HEALTHCARE DATA

99% growth by 2017

88% unstructured

Healthcare data comes from sources such as:

Patient Sensors | Electronic Medical Records | Test Results

GOVERNMENT & EDUCATION DATA

94% growth by 2017

84% unstructured

Government & education data comes from sources such as:

Vehicle Fleet Sensors | Traffic Sensors | Student Evaluations

UTILITIES DATA

93% growth by 2017

84% unstructured

Utilties data comes from sources such as:

Utility Sensors | Employee Sensors | Location Data

MEDIA DATA

97% growth by 2017

82% unstructured

Media data comes from sources such as:

Video and Film | Images | Audio

IBM Cloud

IBM

How Can Cloud Drive Innovation?

Test new ideas

Cloud can be a Sandbox to test multiple innovation ideas in parallel to identify the right ideas to launch

Innovate with Partners

Cloud simplifies collaboration with partners in developing innovative ideas and develop innovation ecosystems

Scale quickly

Cloud allows innovations to auto scale to meet the demand, so maximise the value captured from successful innovation

Exploit data

Cloud helps exploit data by providing a platform to capture and store data from innovative sources e,g, sensors augment products. Also combine and trade data across industries

IBM Cloud is the right platform to drive innovation

Create new client experiences using all the data available at the right moment

Combining Industrialised Core Systems with those of the Agile Edge to deliver new business insights

Rapidly build systems using existing innovation components, Mobile, IoT, Analytics, Cognitive, Business Partner technologies

Expose your business services securely and as APIs to allow partners to amplify your capabilities

Simplify and automate existing systems to achieve new levels of IT productivity

1

Dream it!

2

Talking workloads

3

Build it! Saving time with services!

4

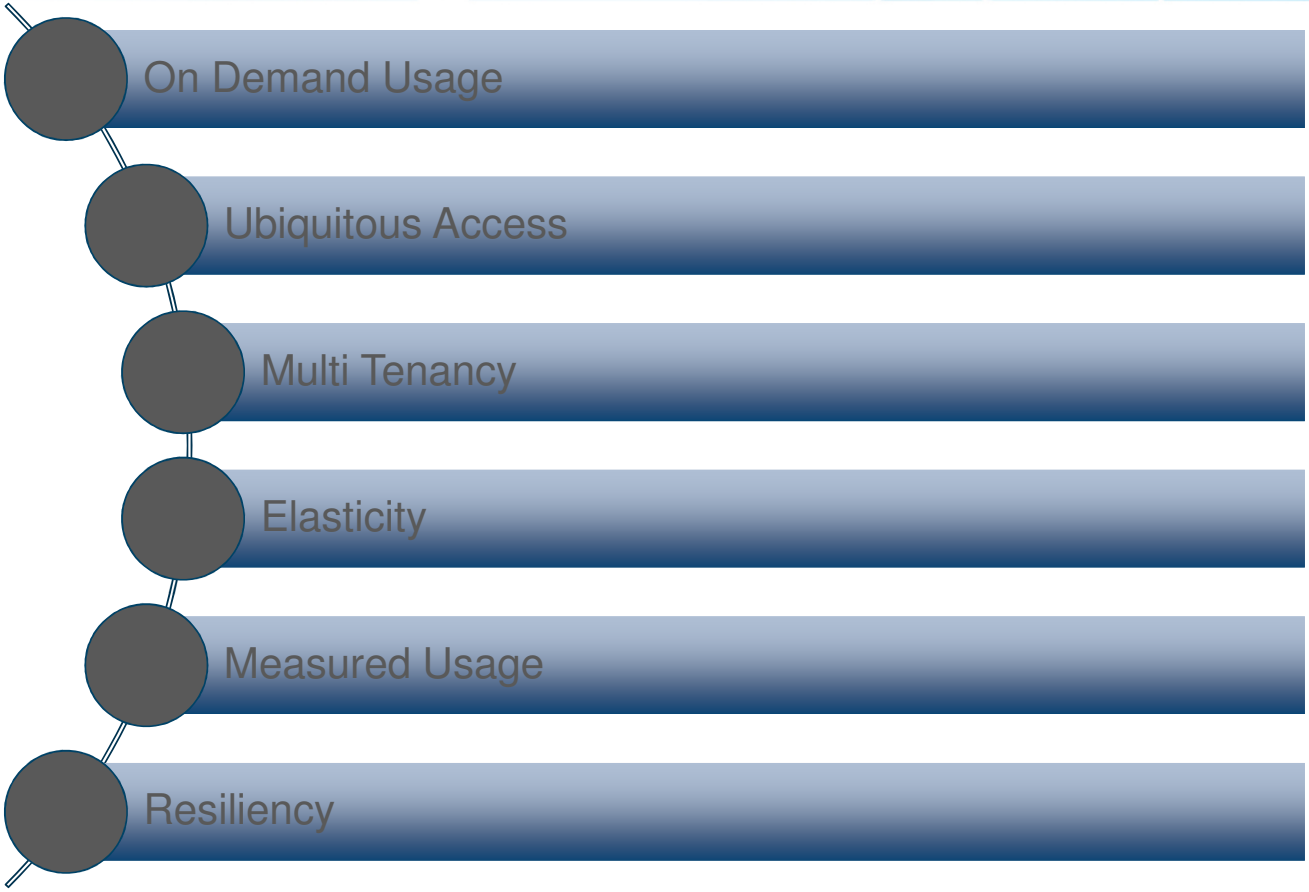
Ready to start building?

IBM Cloud

Business process *as a service*	Enabling business transformation	Smarter Commerce Smarter Workforce Big Data & Analytics Watson Solutions Smarter Cities Software Solutions GBS Cloud Business Solutions
Software *as a service*	Marketplace of high-value, consumable business applications	
Platform *as a service*	Composable and integrated application development platform	Bluemix PureApplication SOFTLAYER an IBM Company Cloud Managed Services
Infrastructure *as a service*	Enterprise class, optimized infrastructure	

Learn more

Cloud characteristics



Change the landscape without changing the definition

Describing SoftLayer Cloud – SoftLayer stands apart

Cloud myth

…resources are **virtualized**.

…resources are **shared**.

SoftLayer reality

…virtualization is a choice with a flexible set of options.

…resources can be **shared**, **dedicated**, or **mixed**.

The *client* has the ultimate choice!

Dream it! Build it!
Transitioning to the cloud case study

- Futbol Fans is global retailer of football/soccer apparel and equipment with their headquarters and data center based in the United States.
- To take advantage of the huge interest in football around the world, Futbol Fans is strategizing how to use cloud to drive revenue growth and efficiencies.
- Let's go on a journey with Futbol Fans as they transition to the cloud using SoftLayer.

Current environment

- Online global retailer of football/soccer apparel and equipment
- Single data center in the United States
- Three tier application to support web sales and infrastructure
- Global sales, with latency from remote geographies
- Single data center with no disaster recover location
- Has transitioned the retail sales to a private cloud
  - Looking to expand into a public cloud

Dream it! Infrastructure Requirements

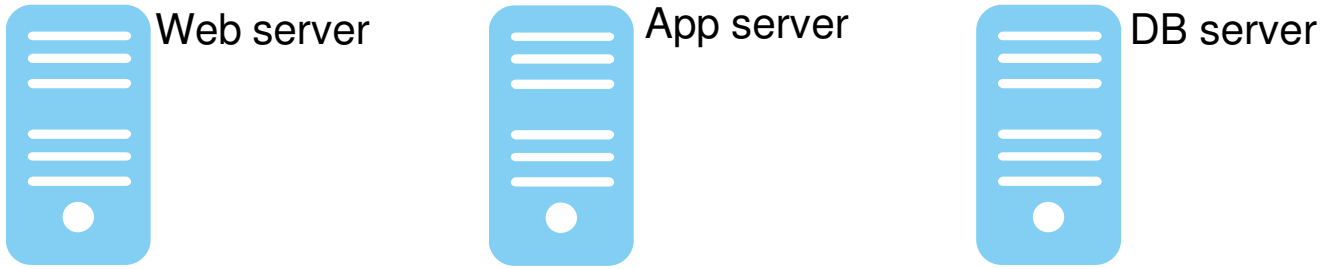
Compute Select computer resources appropriate for the workload.	• Web servers • Application servers • Database servers
Networking Allow scalable access to be able to handle peak periods of unpredictable activity.	• Allow web servers to be accessed by customers • Expand the server footprint to handle demand • Distribute users to geographically local regions
Security Build a security rich network infrastructure similar to their corporate environment, including compliance.	• Protect servers from malicious outsiders and hackers • Prohibit direct access to app and database servers • Allow corporate access to the network for employees • Maintain compliance
Storage Design storage and recovery around the required response times and build disaster recovery into the solution.	• Database server needs to hold all inventory, sales, and customer information • Database must meet SLA for performance for the application servers • Geographic redundancy and replication design

Compute instances

Building blocks needs

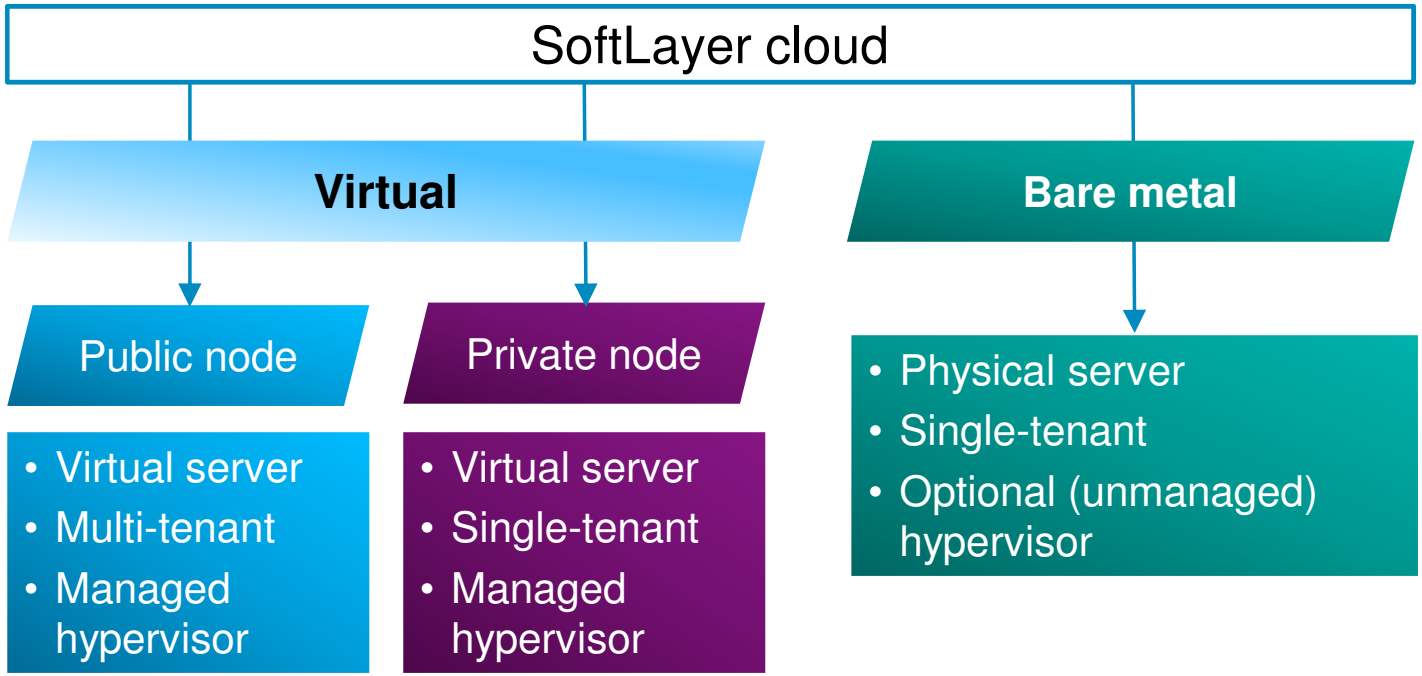
Compute
Select computer resources appropriate for the workload.

- Select web servers accept client orders from the Internet.
- Select application servers handle storefront checkout, product catalogue changes, etc.
- Select database servers hold user transactions and data.



Describing SoftLayer cloud - overview

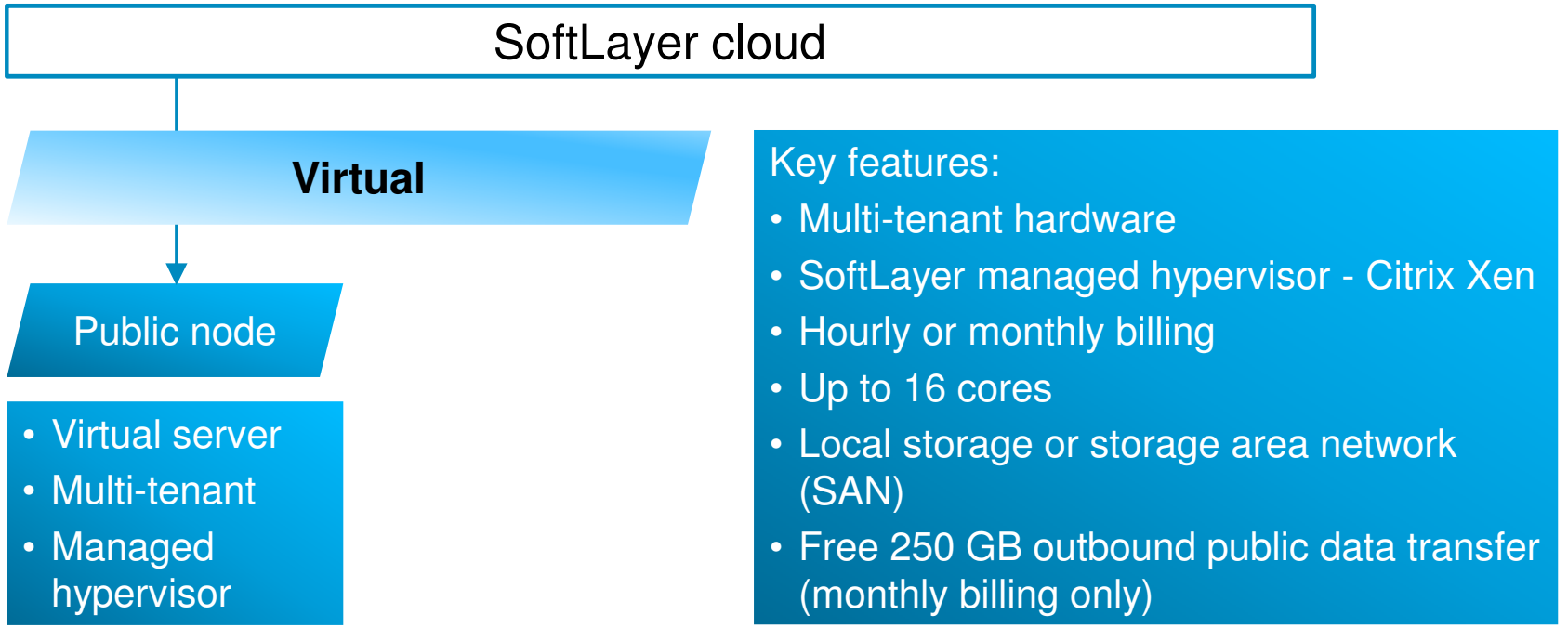
SoftLayer provides multiple offerings to provide the appropriate platform for your workload.



Learn more

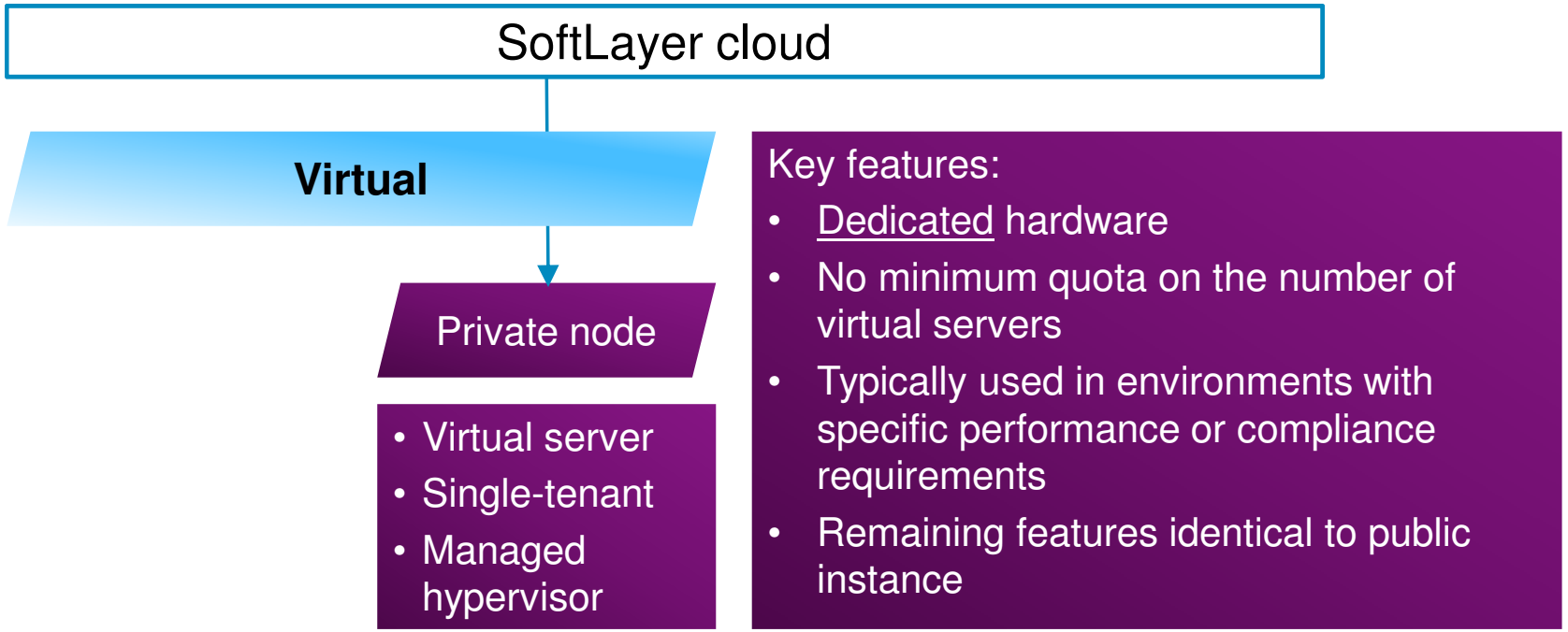
Describing SoftLayer cloud - public virtual instances

A ***public virtual instance*** is a virtual instance provisioned on multi-tenant hardware on the SoftLayer public cloud. Physical server resources will be shared with multiple customers.



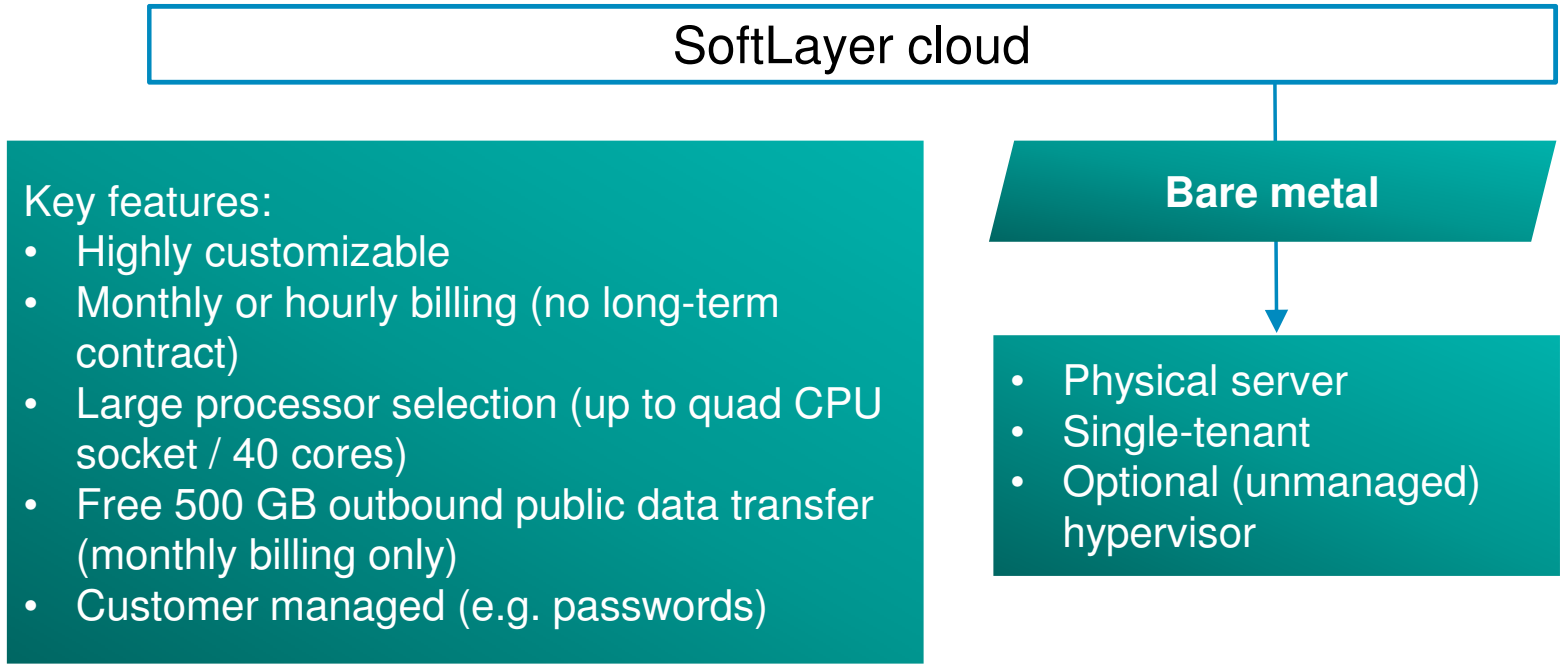
Describing SoftLayer cloud - private virtual instances

A ***private virtual server*** is provisioned on a single-tenant physical server. The physical server is dedicated to the customer (hypervisor managed by SoftLayer).



Describing SoftLayer Cloud – Bare metal

SoftLayer provides ***physical*** servers to provide the appropriate platform for your workload.



Benefits of using different compute instances

	Public virtual node	*Private virtual node*	*Bare metal*
Suited for	• Web hosting • Development sandboxes • Testing environment • Auto Scale	• Web hosting • Development sandboxes • Testing environment	• Web hosting • Development sandboxes • Back-office applications • High transaction applications • Virtualization
Benefits	• Lightweight and scalable • Rapid provisioning • Available for Auto Scale	• Lightweight and scalable • Rapid provisioning • Attain compliance	• No noisy neighbors • No hypervisor tax • High vertical scalability • Range of compute options

Comparing the security models of core IaaS platforms

Responsibility Offering	Data center management	Hypervisor provisioning	Hypervisor management	Server provisioning	Automated server management	Manual server management	Customer workload management
SoftLayer bare metal offering (bare metal)						 (in response to tickets)	
SoftLayer virtual instance						 (in response to tickets)	

 = IBM SoftLayer base responsibility as well as actions in response to customer request

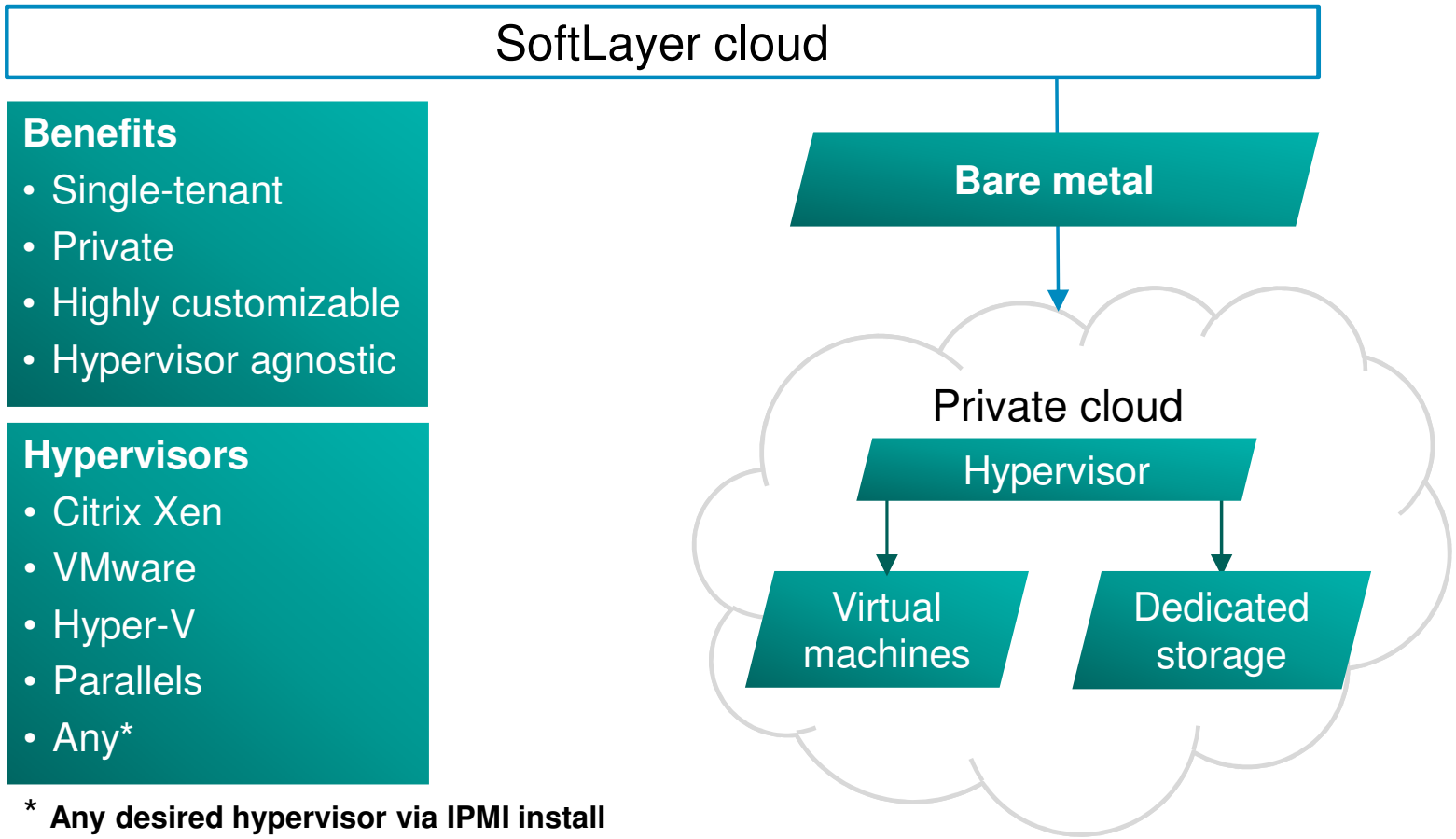
 = Customer's administrators or **their authorized agent**

 = IBM SoftLayer and the customer each has some responsibility

SoftLayer private cloud
(Bare metal server running a customer managed hypervisor)

Benefits
- Single-tenant
- Private
- Highly customizable
- Hypervisor agnostic

Hypervisors
- Citrix Xen
- VMware
- Hyper-V
- Parallels
- Any*



* **Any desired hypervisor via IPMI install**

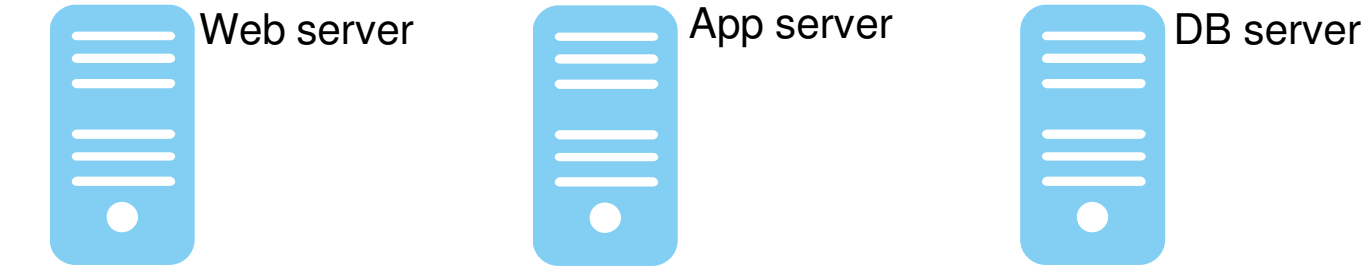
Pros and cons of private and hybrid cloud

	Pros	*Cons*	*Sample use cases*
Private cloud	• Flexibility to build your own virtual environment • In-depth compute customization capabilities • A wide range of hypervisor support	• Responsibility to manage and maintain hypervisor • Manual provisioning; not rapid • Maintain management and host software	• Special infrastructure requirements • Governance requirements
Hybrid cloud	Private cloud pros + • Automated provisioning for public instances • Rapid provisioning	Private cloud cons + • Multiple management tools	• Cloud bursting with scalable web applications • Seasonal scalability for e-commerce sites

Building blocks choices

Compute
Select computer resources appropriate for the workload.

- Select compute resources appropriate for the workload.

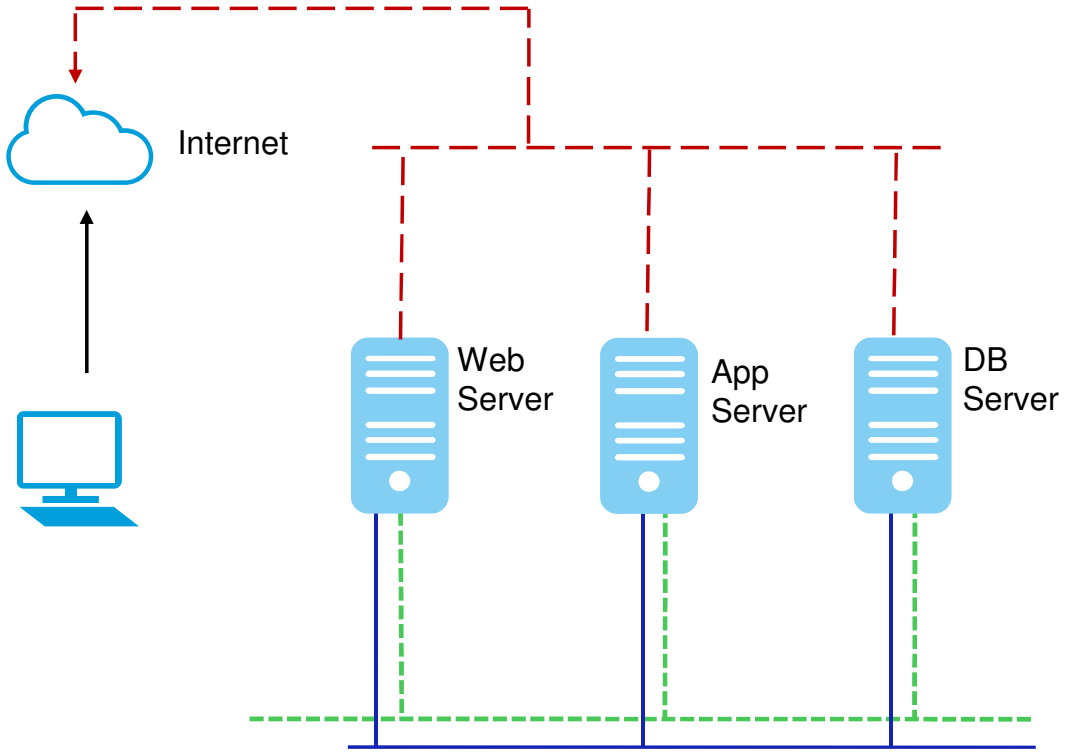


Connect to the cloud

Fundamental connectivity needs

Networking
Allow scalable access to be able to handle peak periods of unpredictable activity.

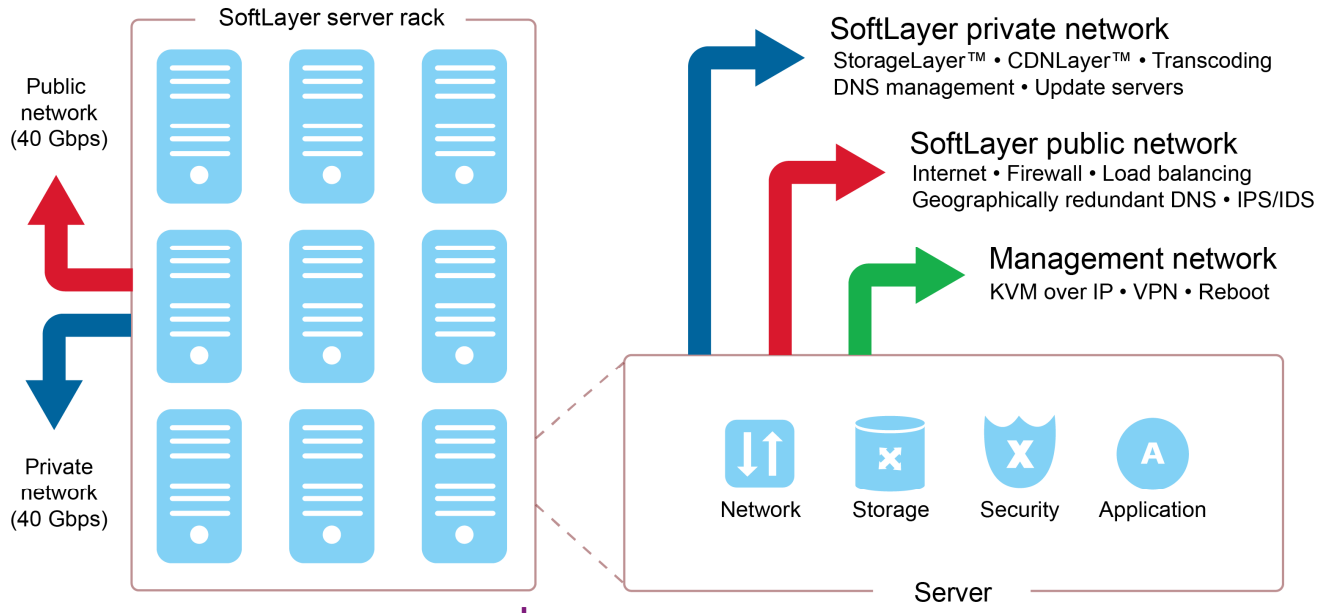
- Allow web servers to be accessed by customers
- Prohibit direct access to the application and database servers
- Communication between servers



Networking overview

The SoftLayer global network seamlessly integrates three distinct and redundant network architectures: private, public, and management.

Accessibility **Security** **Control**



Learn more

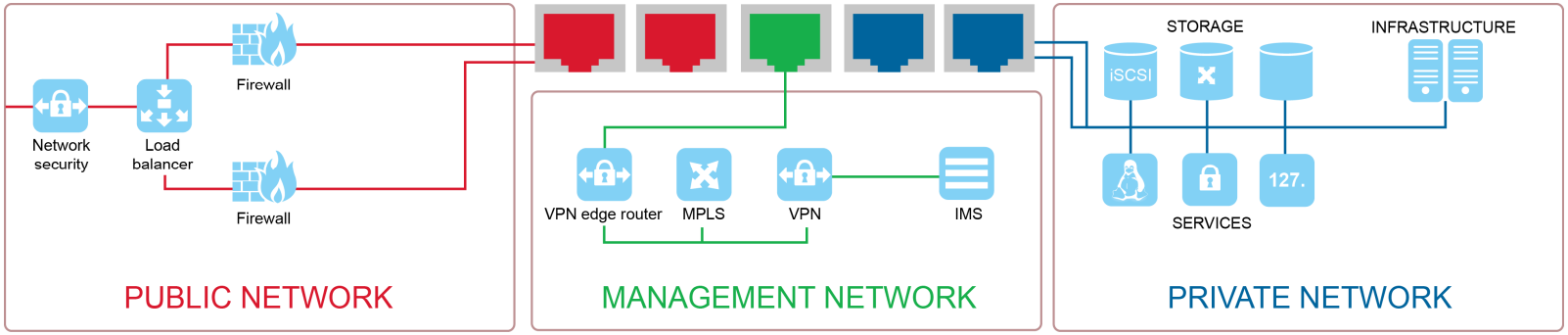
Network interfaces

Bare metal servers:

- Provisioned with five physical NICs
- Two public (red), two private (blue), and one management adaptor (green)
- Adaptors are initially set at 100 Mbps, but can be upgraded to 1 Gbps
- Optional: 10 Gbps NICs available for 2U or 4U bare metal servers

Virtual servers:

- Provisioned with two virtual NICs
- One public (red) and one private (blue)
- Adaptors are initially set at 100 Mbps, but can be upgraded to 1 Gbps
- Management connectivity (console access) is provided via the Portal



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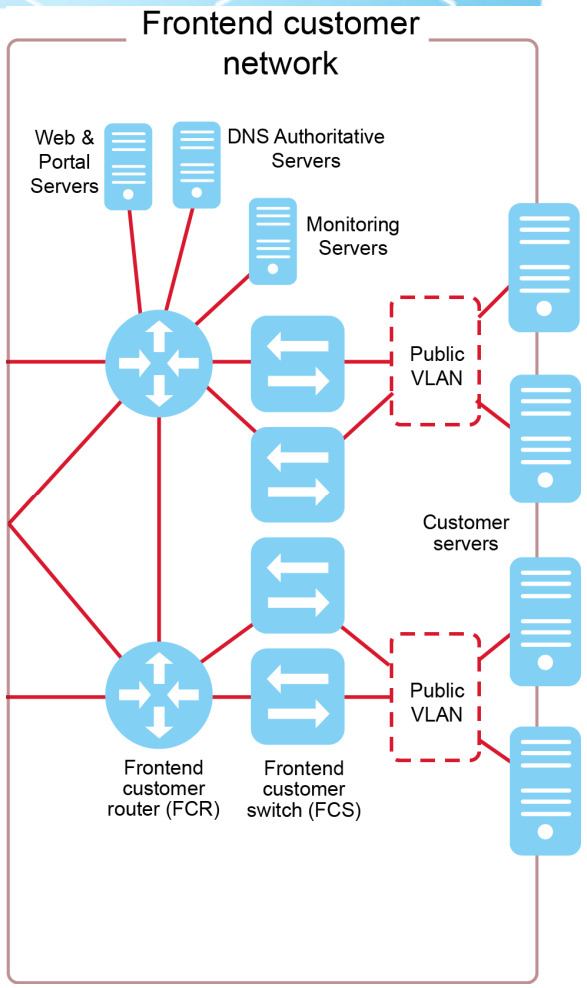
SoftLayer public network

Key differentiators in the SoftLayer public network:

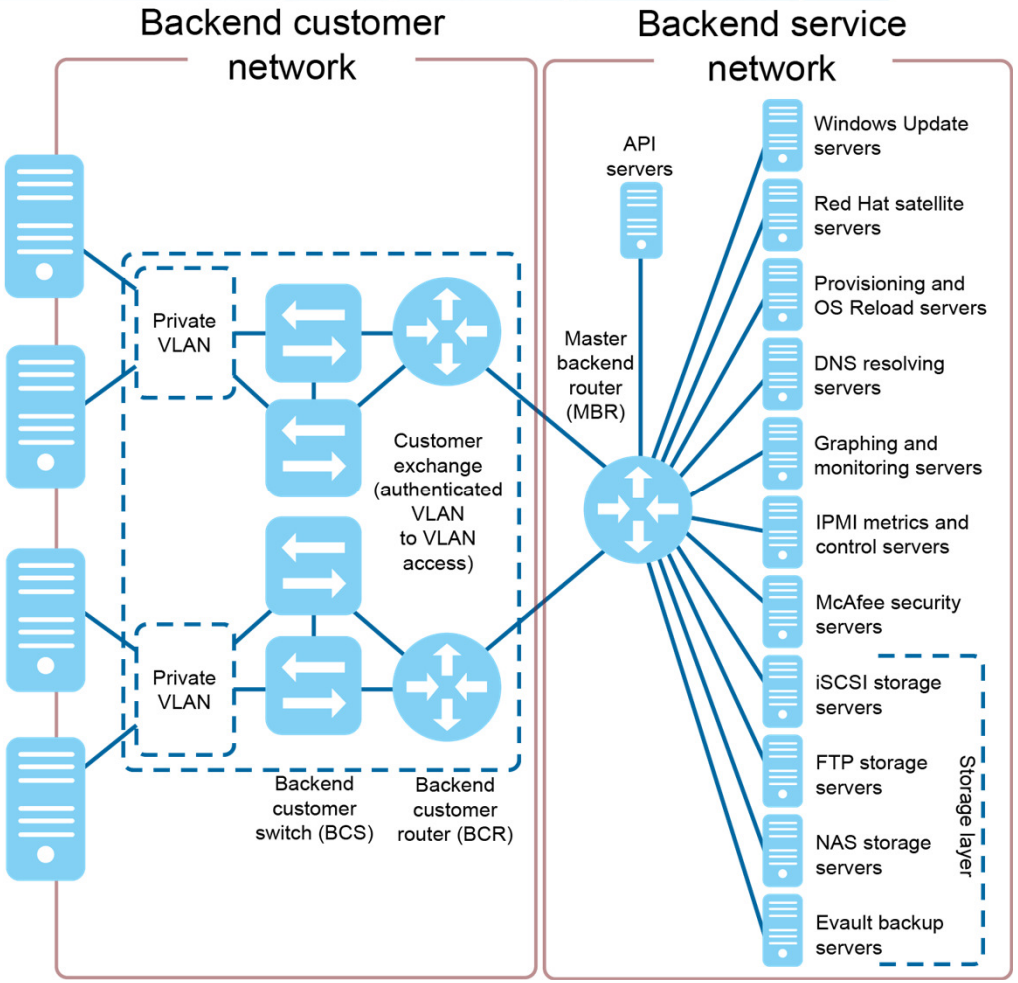
- Dedicated VLAN per customer
- Load balancing and firewall services can be quickly added to existing servers
- Automated IP routing and management
- Gigabit speed from server to Internet
- Native IPv6 ready
- 250GB outbound bandwidth provided with monthly virtual servers
- 500GB outbound bandwidth provided with month bare metal servers
- Inbound bandwidth is free



SoftLayer private network

The SoftLayer private network provides:

- Unlimited FREE bandwidth
- Dedicated VLAN per customer
- Gigabit server-to-server speeds
- Redundant 10+ Gbps global fiber backbone
- Out-of-band VPN gateways
- Direct Link connections available



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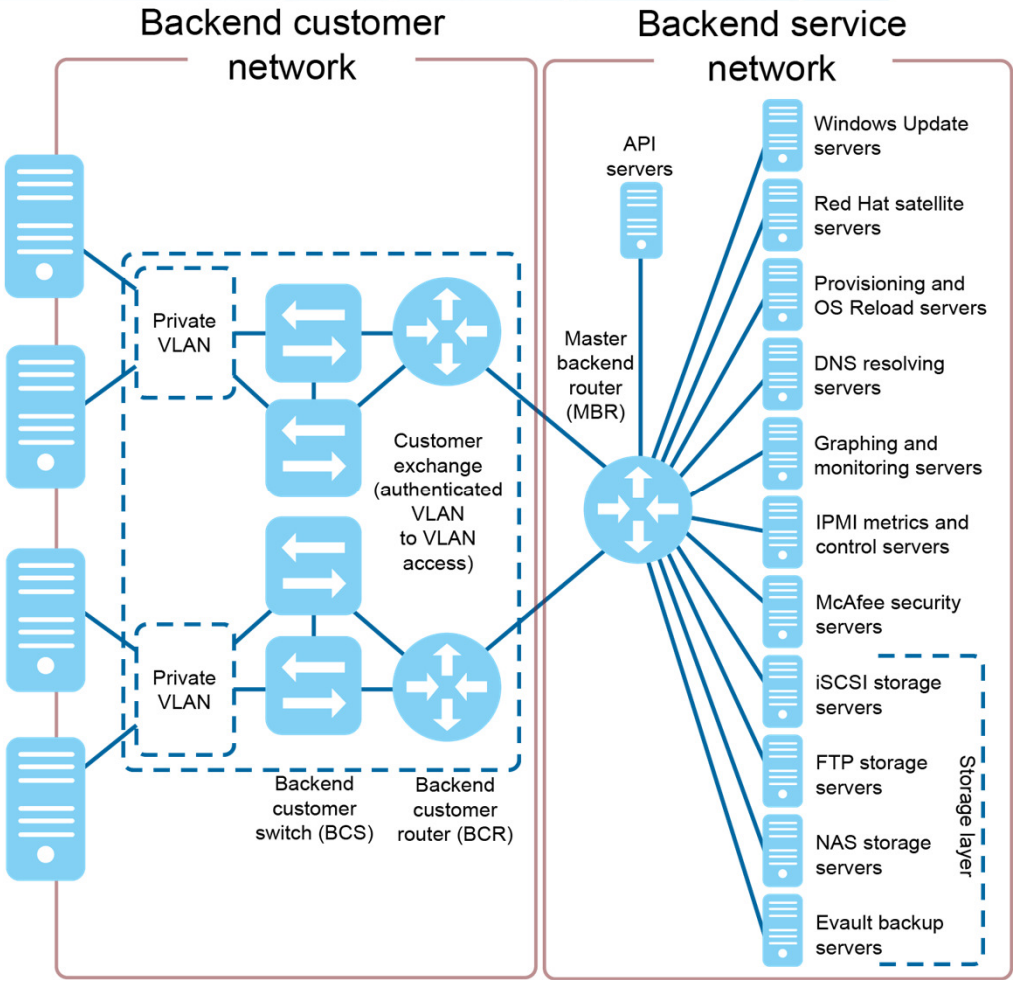
SoftLayer Shared Services

SoftLayer Shared Services offers the following features:

- Private OS update, reload, and change servers
- Geographically redundant Domain Name System (DNS) resolvers
- SoftLayer software repository
- Centralized network-attached storage (NAS) and backup
- Centralized storage area network (SAN)
- McAfee security update server



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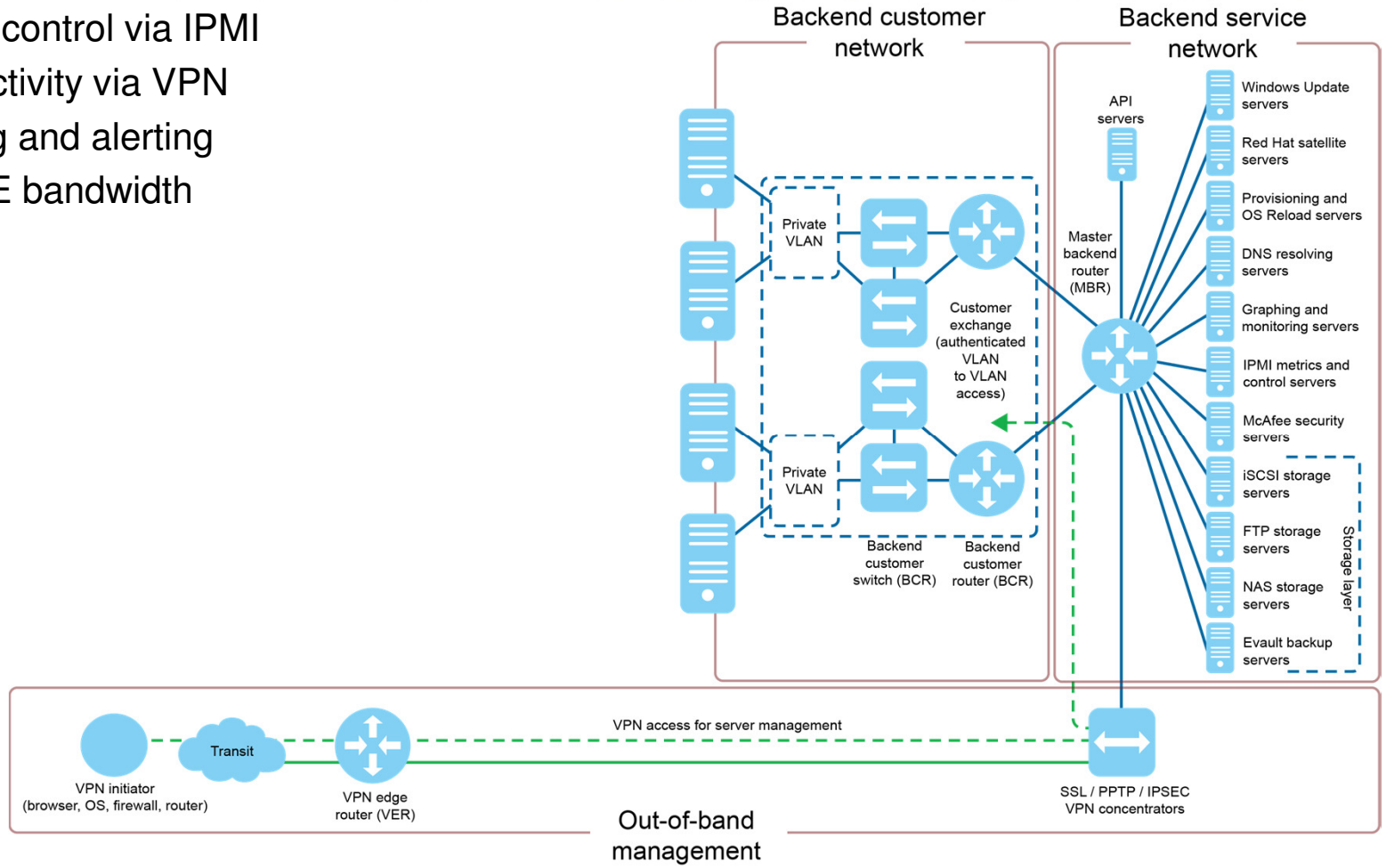
SoftLayer management network

- Remote server control via IPMI
- Remote connectivity via VPN
- Host monitoring and alerting
- Unlimited FREE bandwidth



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Using Content Delivery Network

EdgeCast CDN puts the data closer to the end user, reducing latency and improving the customer experience.

Industries that utilize CDN include:

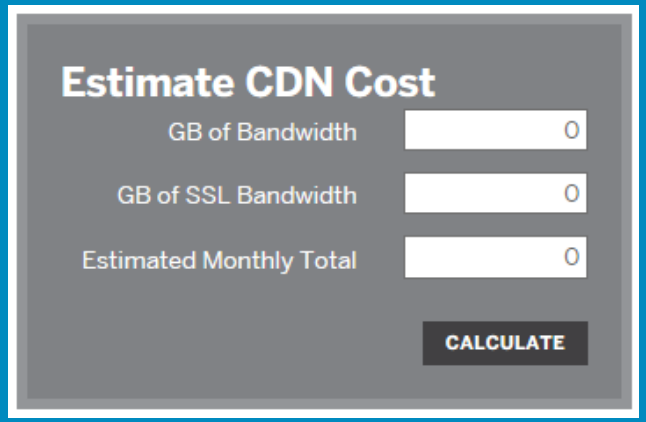
- Social networking
- Entertainment
- Gaming
- Software development
- E-commerce
- Financial services

Who should use SoftLayer's CDN?

Customers that provide services such as:

- Content caching
- Streaming
- Downloading

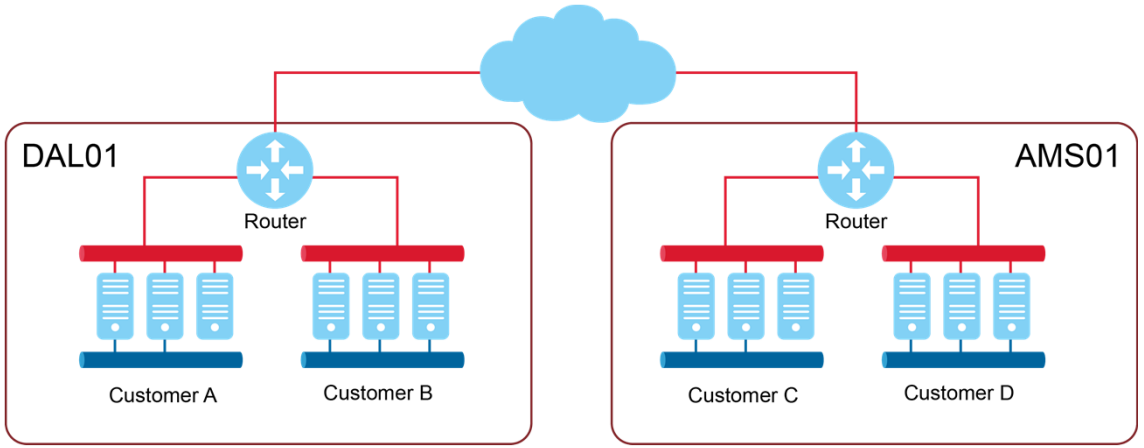
Use the online calculator to estimate your CDN costs.



Learn more

Describing a VLAN

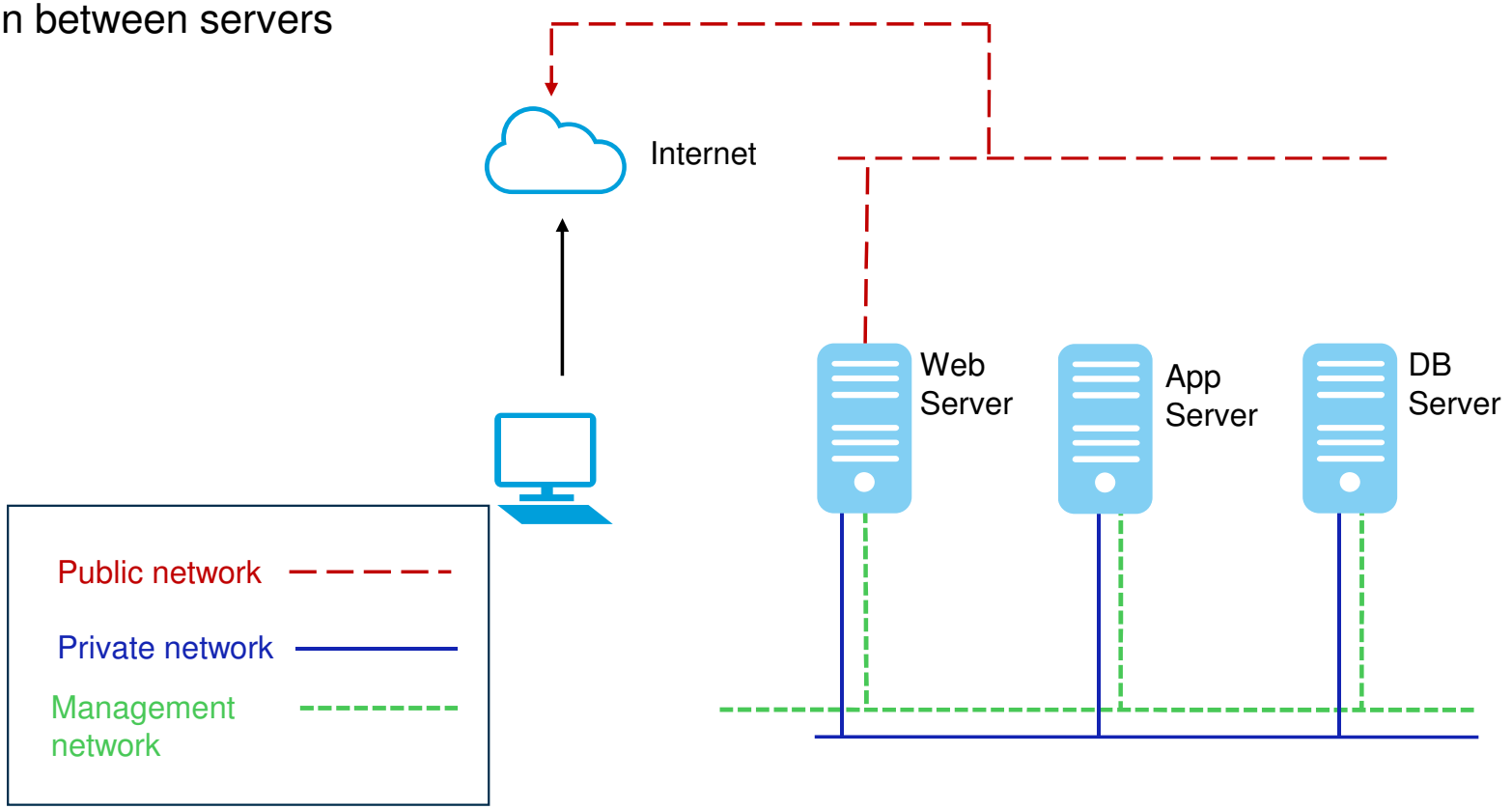
- Virtual local area networks (VLANs)
  - Isolate one or more computers into groups (i.e. different customers)
  - Allow multiple customers to share the same physical cabling
- How are VLANs used by SoftLayer?
  - Customers are issued one or more VLANs for the private and public networks.
  - Servers are provisioned into these VLANs.
  - VLANs are contained within a single data center.
  - VLANs may be routed to other data centers for an additional charge.



Fundamental connectivity choices

Networking
Allow scalable access to be able to handle peak periods of unpredictable activity.

- Allow web servers to be accessed by customers
- Prohibit direct access to the application and database servers
- Communication between servers



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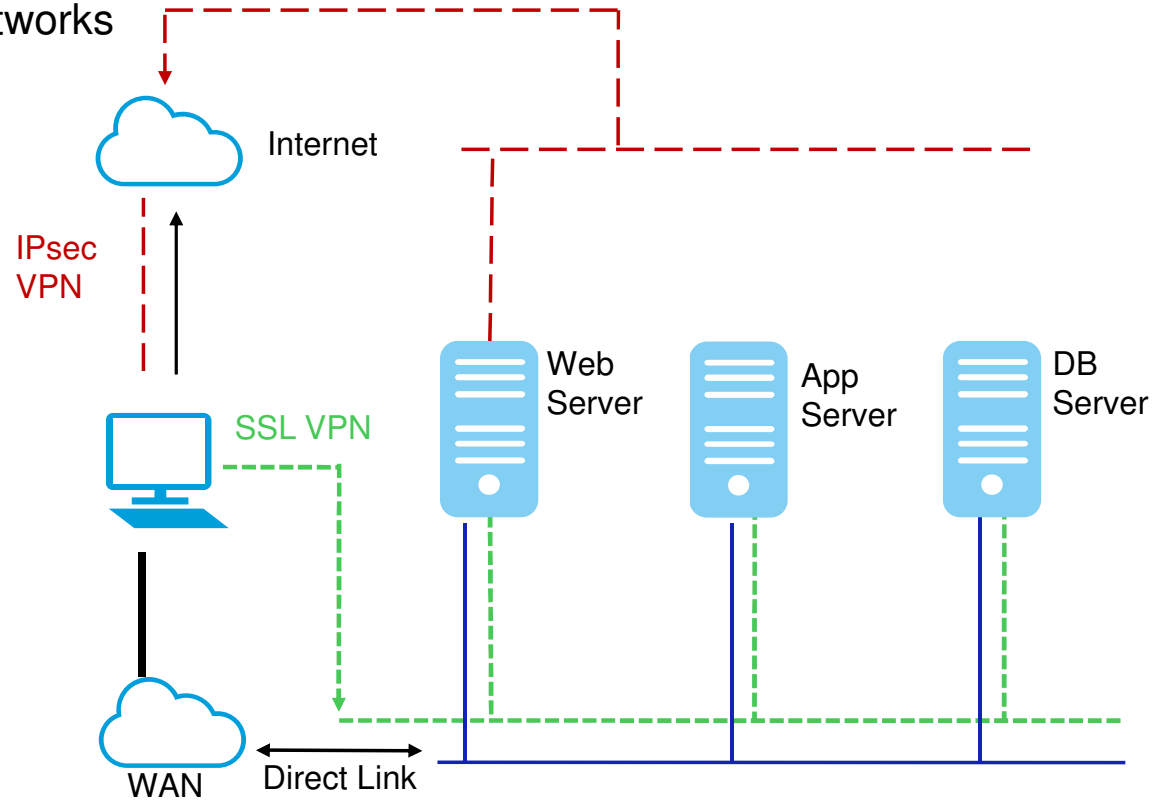
Management access needs and choices

Networking
Allow scalable access to be able to handle peak periods of unpredictable activity.

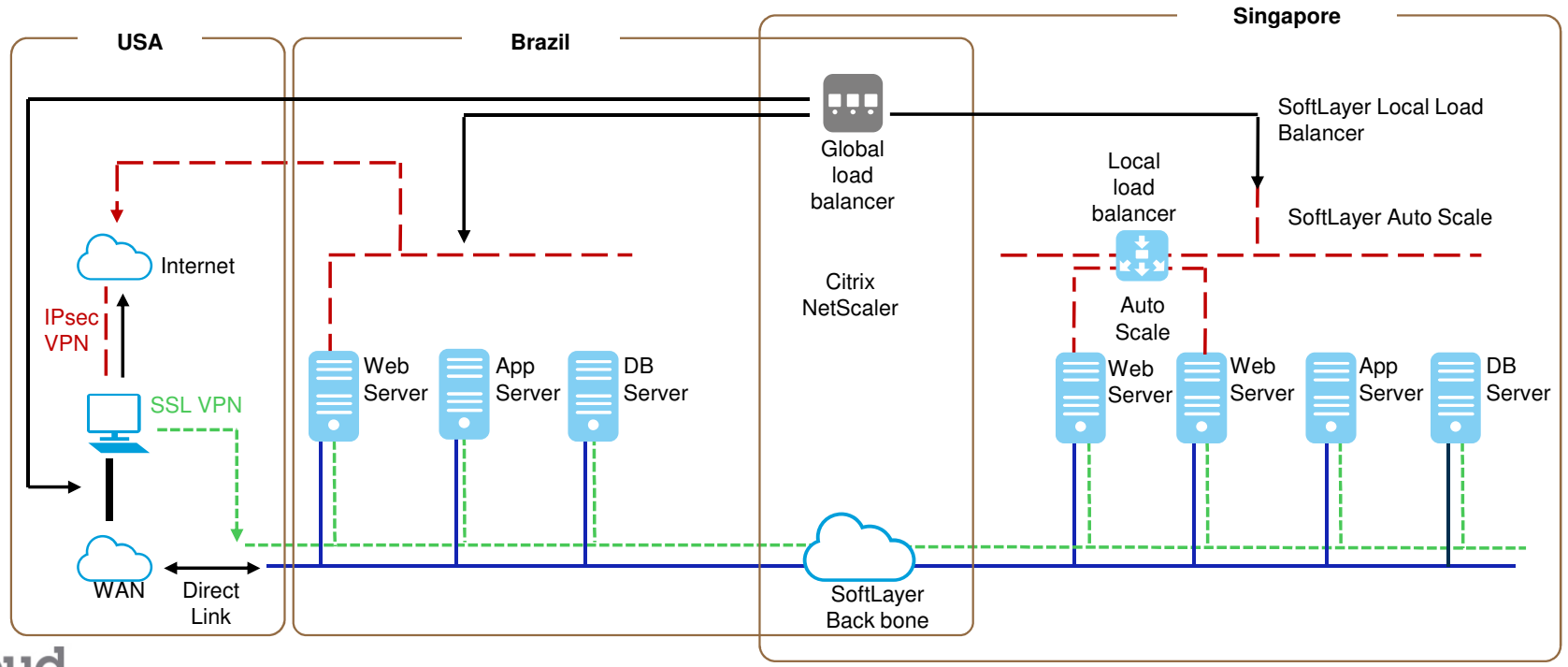
- Create an IPsec tunnel
- Connect via SSL VPN
- Establish a connection between networks



Workload scalability needs and choices

Networking
Allow scalable access to be able to handle peak periods of unpredictable activity.

- Distribute users to geographically local regions.
- Expand the server footprint to handle demand.



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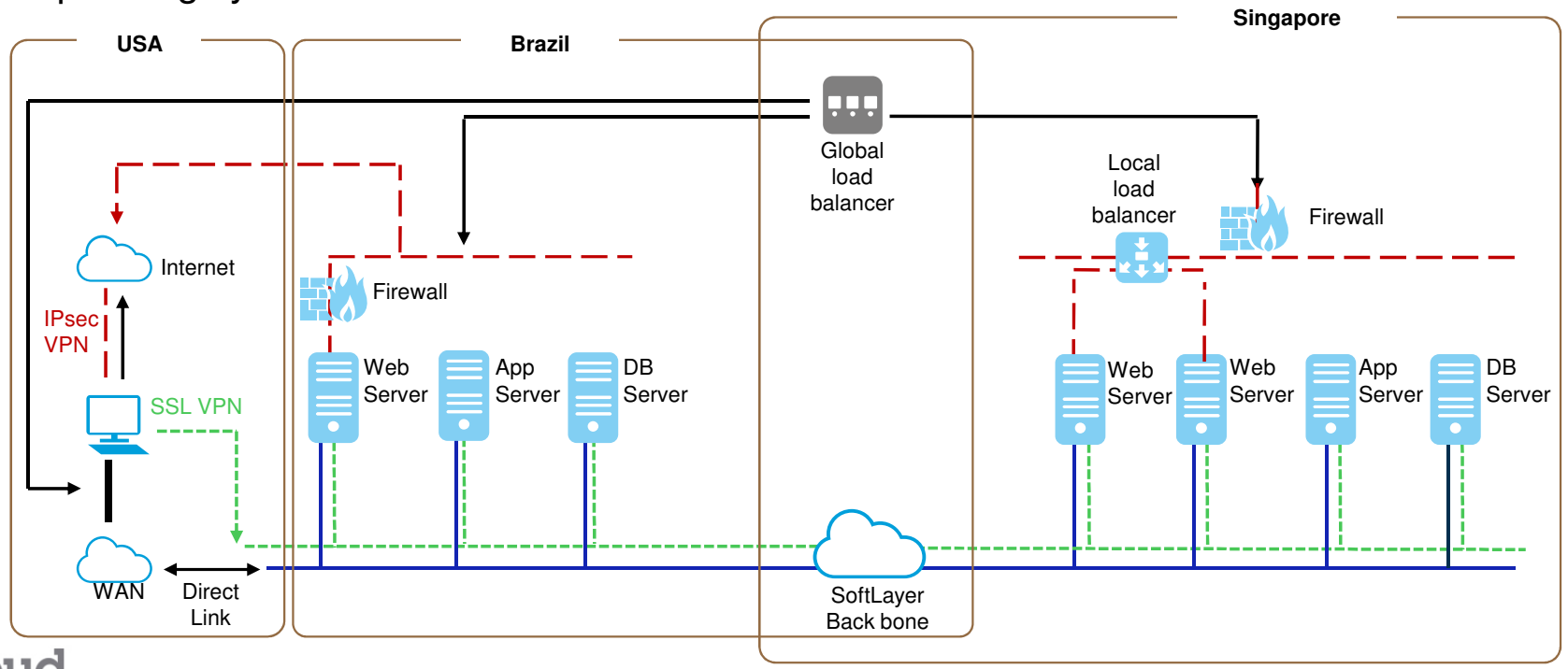
Network security needs and choices

Security
Build a security rich network infrastructure similar to their corporate environment, including compliance.

- Protect a VLAN
- Protect an individual instance
- Protect an operating system



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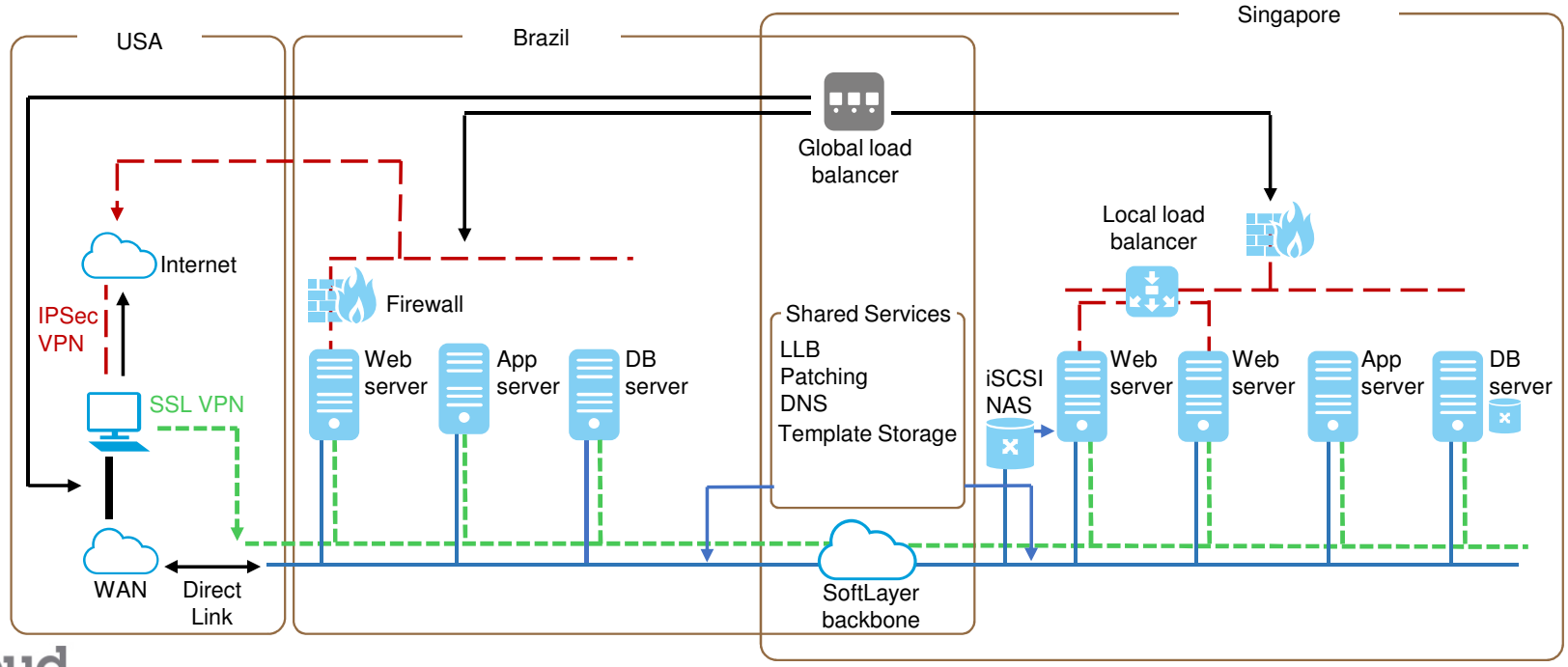
Storing your data

Data storage needs and choices

Storage
Design storage and recovery around the response times and build disaster recovery into the solution.

- High performance storage for database usage
- Resiliency of virtual instances and data
- Distributed storage to minimize latency for video streaming



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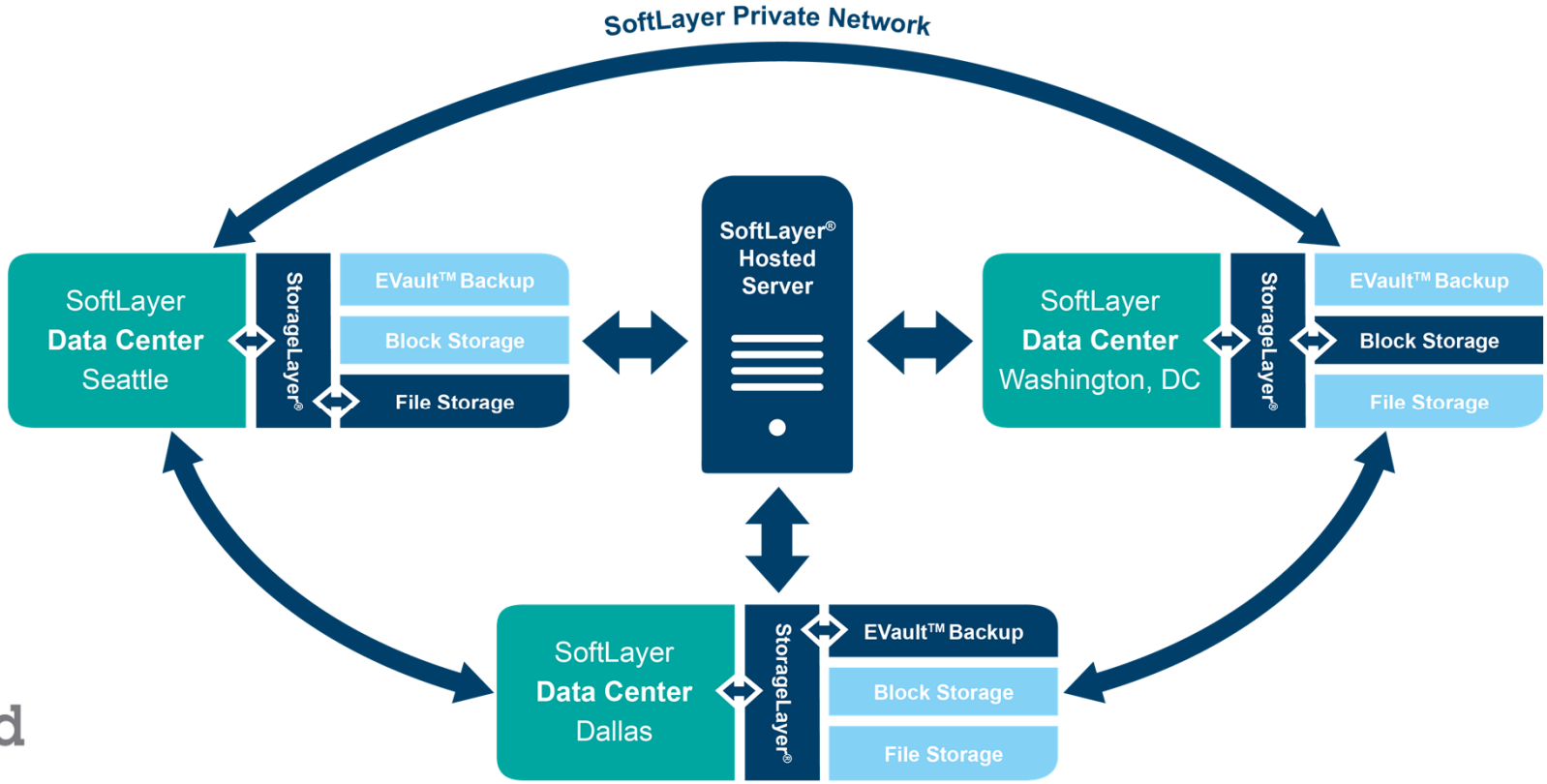
Understanding SoftLayer storage

SoftLayer storage is designed to integrate multiple storage technologies into a unified offering with the ultimate level of security, reliability, and flexibility.



SoftLayer storage solutions

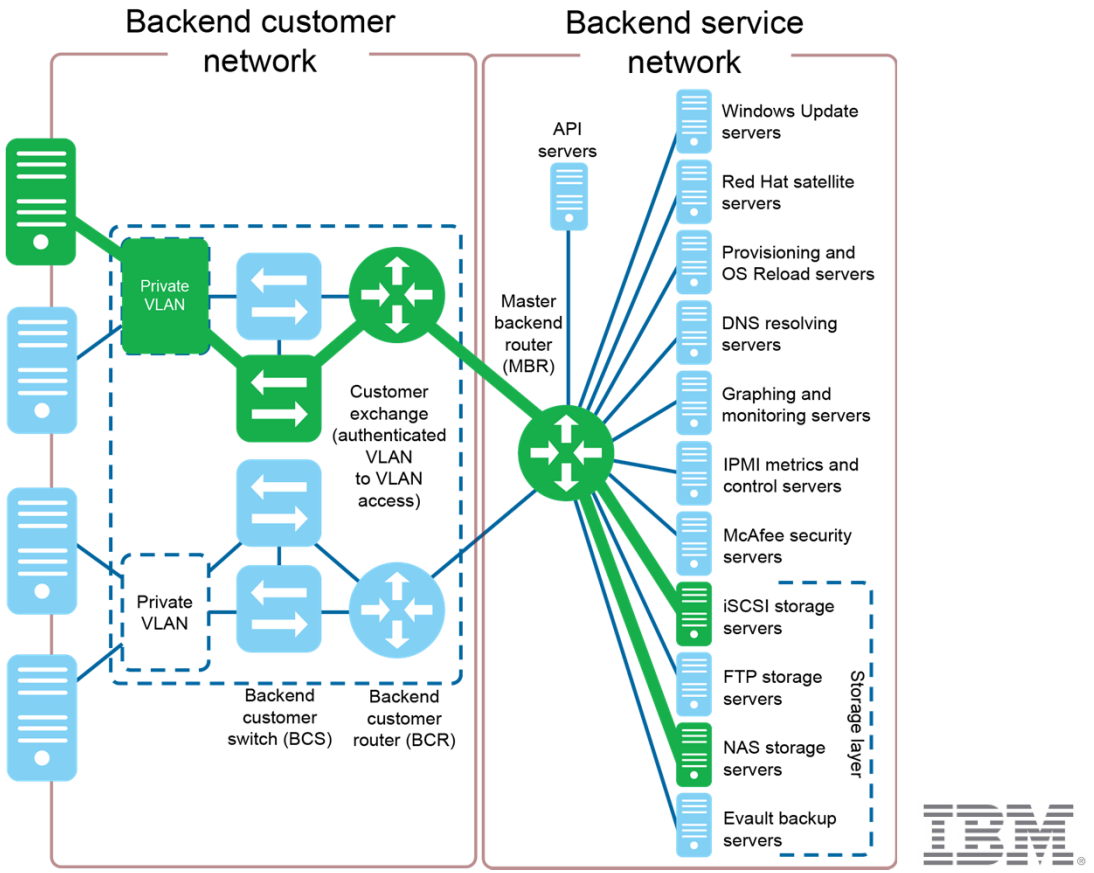
Storage solutions		
Block Storage 	• Local • SAN (virtual instances) • Performance Block Storage • Endurance Block Storage	Learn more about Block Storage
File Storage 	• Performance File Storage • Endurance File Storage	Learn more about File Storage
Object Storage 	Learn more about Object Storage	
Mass Storage 		

Endurance storage allows for snapshots and replication

Learn more

IP storage

- Both Block and File storage over private network
- Unlimited free bandwidth on the private network
- Performance allows for high I/O and throughput
- Endurance storage allows for snapshots and replication



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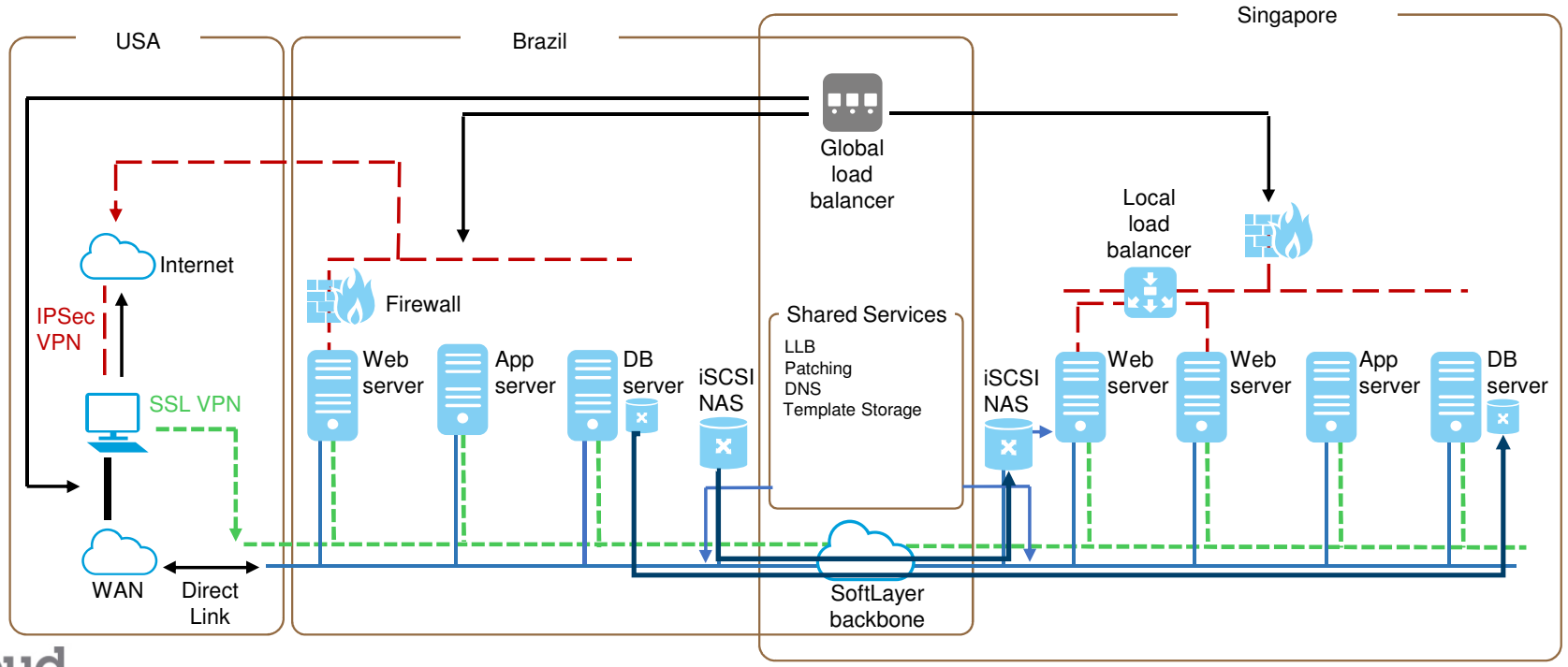
Backup and recovery needs and choices

Storage
Design storage and recovery around the response times and build disaster recovery into the solution.

- Use backup software at corporate data center.
- Protect data with geographic redundancy.



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Backup and disaster recovery solutions

Overview

- Solutions for backup and restore
- Comprehensive DR capabilities
- Efficient storage options
- Wide DC footprints, redundancy

Backup

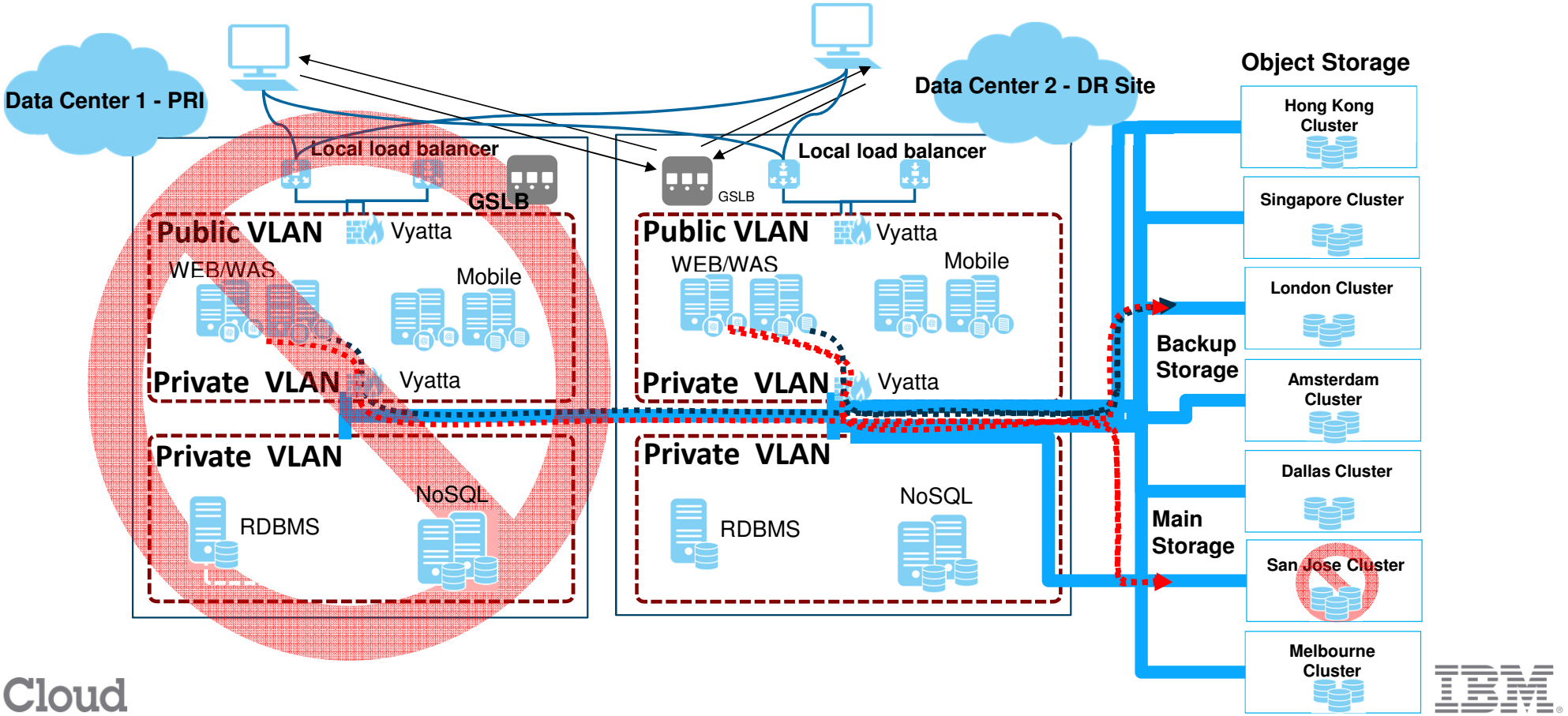
- Image templates
- Evault – per server
- Idera - centralised
- Custom

Storage

- iSCSI SAN
- NAS
- Object Storage

Learn more

Disaster recovery



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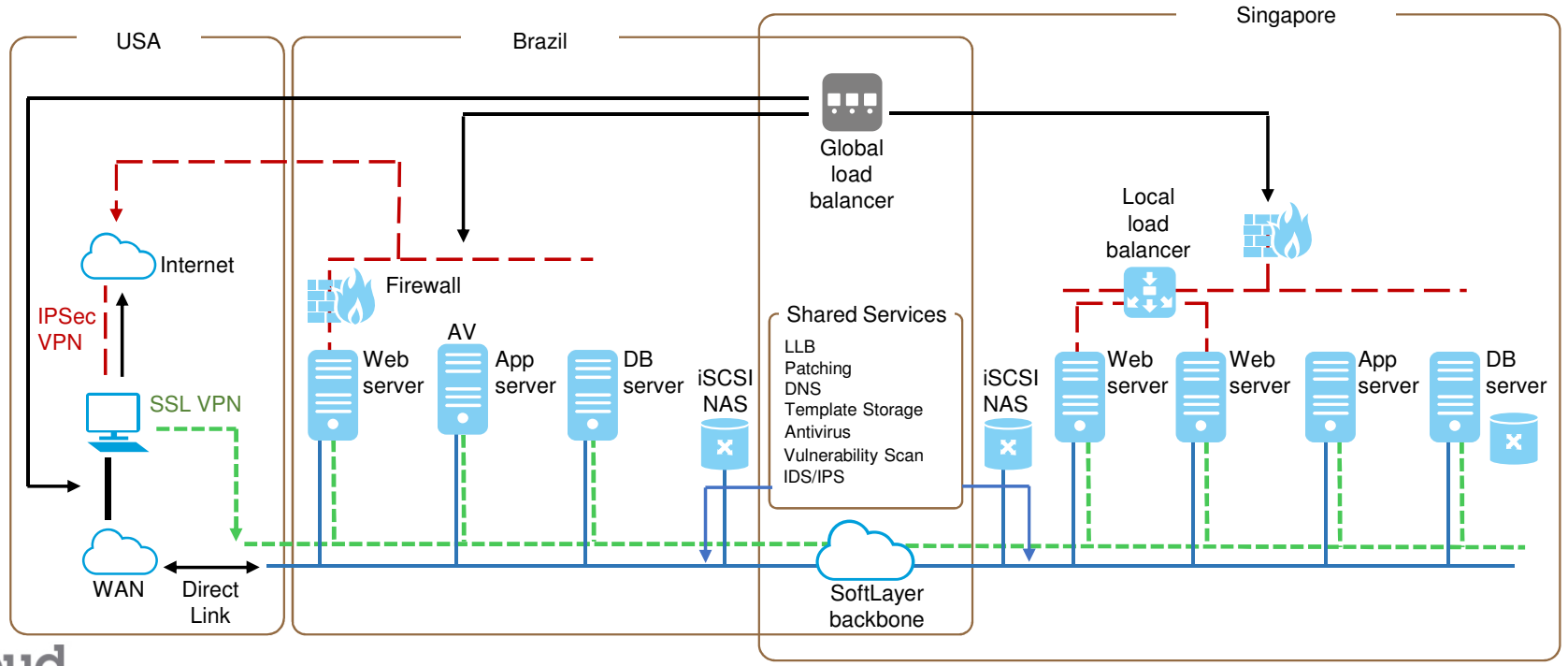
Keep safe – security, compliance, and data management

Security in depth needs

Security
Build a security rich network infrastructure similar to their corporate environment, including compliance.

- Protect the infrastructure from malicious software
- Protect financial data from hackers



IBM Cloud

Security overview

SoftLayer provides a security-rich environment for deploying and running customer workloads.

The environment is achieved through a combination of:

Ease of use when enabling SoftLayer security features

+

Certified physical and logical security of the SoftLayer data centers

+

Architecture and operational responsibilities in the SoftLayer offerings

Learn more

Secure the environment

SoftLayer offers security services that can be used by the customer to protect their environment:

- Firewalls
- VLANs
- Antivirus and malware protection
- Distributed Denial of Service (DDoS) protection
- Drive wiping procedures
- Vulnerability scanning
- Trusted Execution Technology (TXT) support
- Host-based intrusion protection
- Two-factor authentication

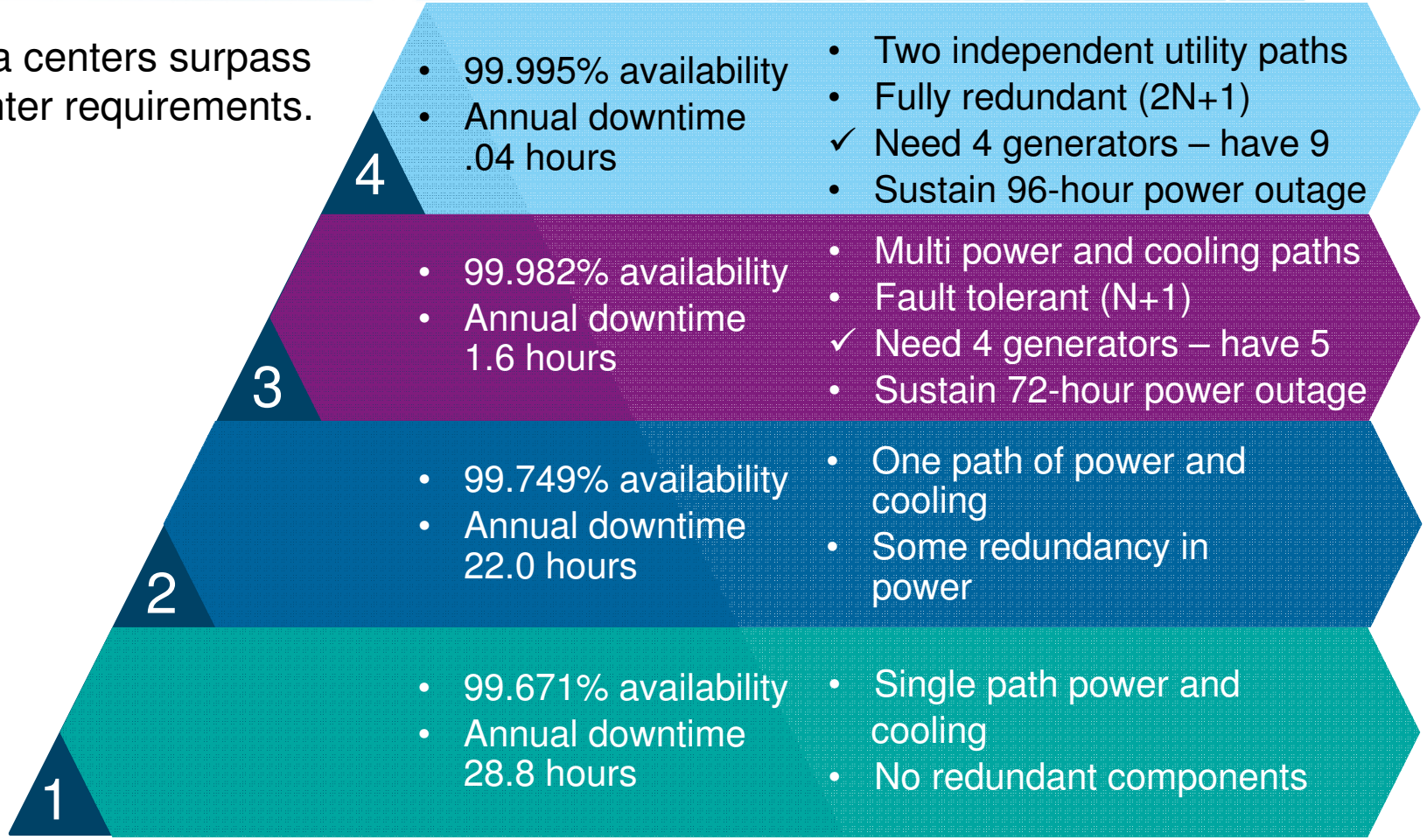
Delivering unmatched security in your cloud environment

- ✓Trusted computing environment
- ✓Controlled VM distribution
- ✓Enhanced IT compliance

VM/workload policy management	Virtustream, HyTrust; specify and define granular security policies and enforce these policies
Trusted Compute Pool (TCP)	Use virtualization management and orchestration software to create TCP (aggregation of trusted systems)
Intel TXT and TPM	Select Intel Trusted Execution Technology (TXT) for trusted platform launch with hardware-based root of trust
Server isolation	Select bare metal server for server isolation
Geo placement	Select SoftLayer data center in your country of choice
Drive Wipe	Drives are securely erased or destroyed after instance cancelation

Data center tiers

SoftLayer data centers surpass tier 3 data center requirements.



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Certifications for sensitive workloads

SoftLayer has a comprehensive SOC2 Type II report for all of its data centers, evaluating controls and their effectiveness.

SoftLayer self-assessment indicates that SoftLayer satisfies the relevant PCI controls (Sections 9 and 12).

Working towards FISMA-moderate compliance in 2015

Supports clients and their HIPAA workloads through its policies and procedures

Part of the Cloud Security Alliance and has completed the STAR self-assessment

Provides privacy protection as defined by the U.S. Department of Commerce's Safe Harbor directive

Supports clients and their FFIEC workloads through its policies and procedures

Provides tools needed to meet guidance provided by OSFI

SoftLayer compliance: ISO 27001 and SOC2
SoftLayer holds both

ISO 27001

- Risk assessment approach evaluates effectiveness of controls based on perceived risk

SOC2

- Prescriptive in its assessment of implemented controls, regardless of perceived risk
- Security, Availability, Process Integrity, and Privacy are evaluated against common criteria

Recognizing the value of APIs

"Our API provides direct control over every aspect of every SoftLayer service.... And when we say every, we mean every."

A cloud service is only as good as its API!

APIs (Application Programming Interface):

- Become crucial assets and selling points in a networked and automated world
- Enable management and automation of the full range of SoftLayer services
- Create and build "born on the cloud" applications through:
  - Software development for dynamic IT infrastructure ("cloud scale")
  - New development techniques such as Agile, DevOps, and mobile
- Promote growth of a broad ecosystem
- Continue to grow exponentially through areas of significant innovation and open standards development

Learn more

Understanding the SoftLayer API structure

SoftLayer API

Provides access to products and services including interaction with the administration, ticketing, and billing system

Object Storage API

SoftLayer Object Storage is based on the Openstack Swift project and builds on this to provide a unique set of value-add features.

Message Queue API

Enables higher level of scaling for applications by taking the bottlenecks out of inter-system communication

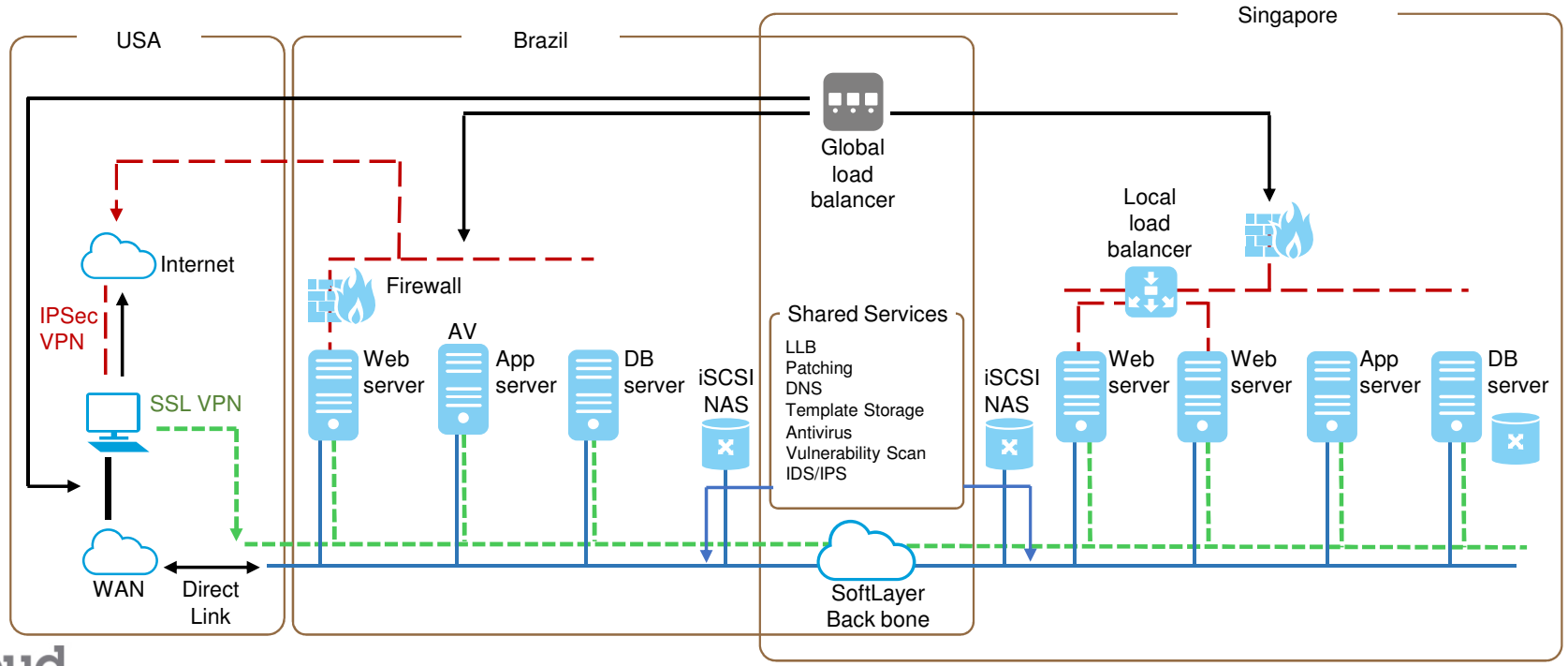
Infrastructure management system provides orchestration and automation.

- “Automate everything” with API level access philosophy
- Robust API library (2,200 APIs, 180 services), drives automation
- “Flex images” allow for snapshots from virtual or bare-metal servers
- Flex image snapshots can be redeployed on virtual or bare-metal servers
- **Security differentiator:** High degree of automation means low degree of manual support, manual error.

Security in depth choices

Security
Build a security rich network infrastructure similar to their corporate environment, including compliance.

- Protect the infrastructure from malicious software
- Protect financial data from hackers

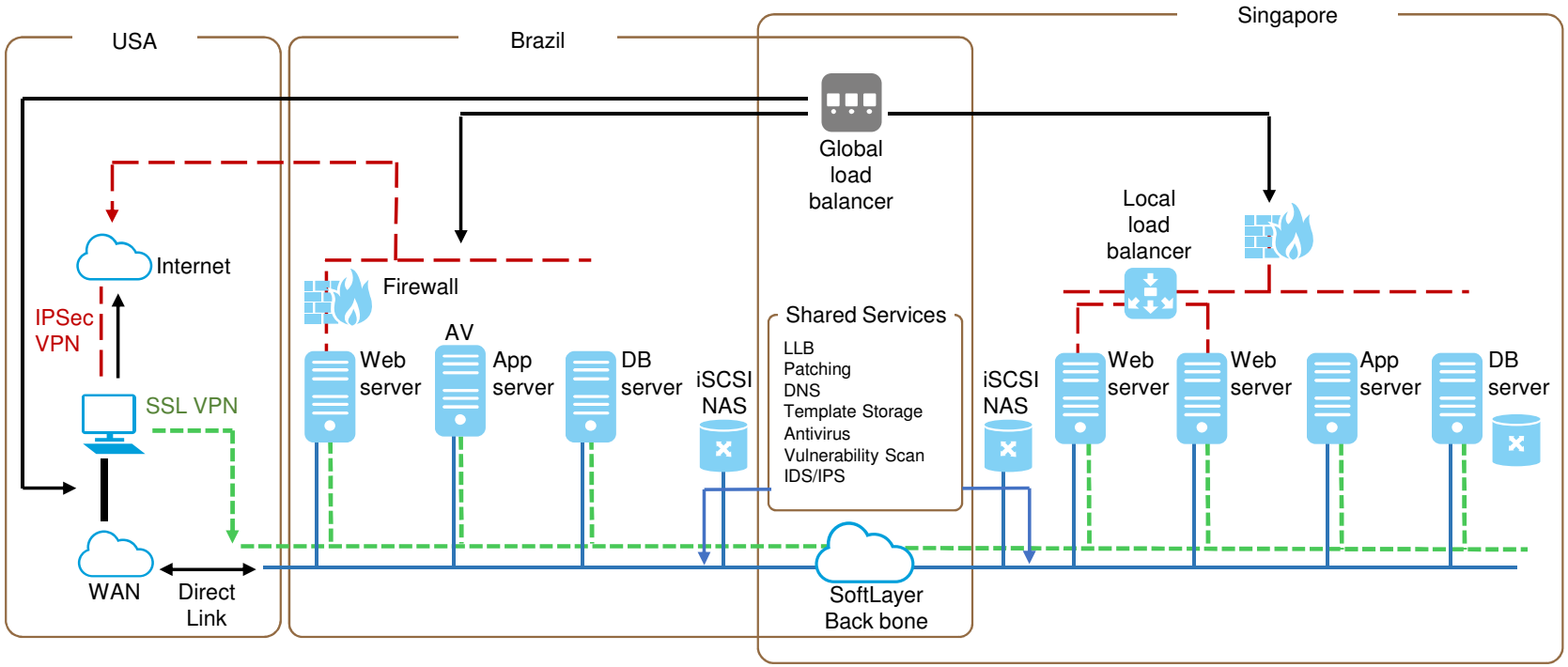


IBM Cloud

IBM

Leveraging the SoftLayer differentiators

Futbol Fans use of SoftLayer capabilities



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Build it! Infrastructure choices

Compute Select computer resources appropriate for the workload.	• Virtual public instance • Virtual private instance • Bare metal
Networking Allow scalable access to be able to handle peak periods of unpredictable activity.	• Public network • Private network • Management network • Global load balancer • Local load balancer and Auto Scale
Security Build a security rich network infrastructure similar to their corporate environment, including compliance.	• Firewall • Antivirus • Vulnerability scan
Storage Design storage and recovery around the response times and build disaster recovery into the solution.	• Database server needs to hold all inventory, sales, and customer information • Database must meet SLA for performance for the application servers • Geographic redundancy and replication design

SoftLayer differentiators and price comparison
Music Mastermind Case Study

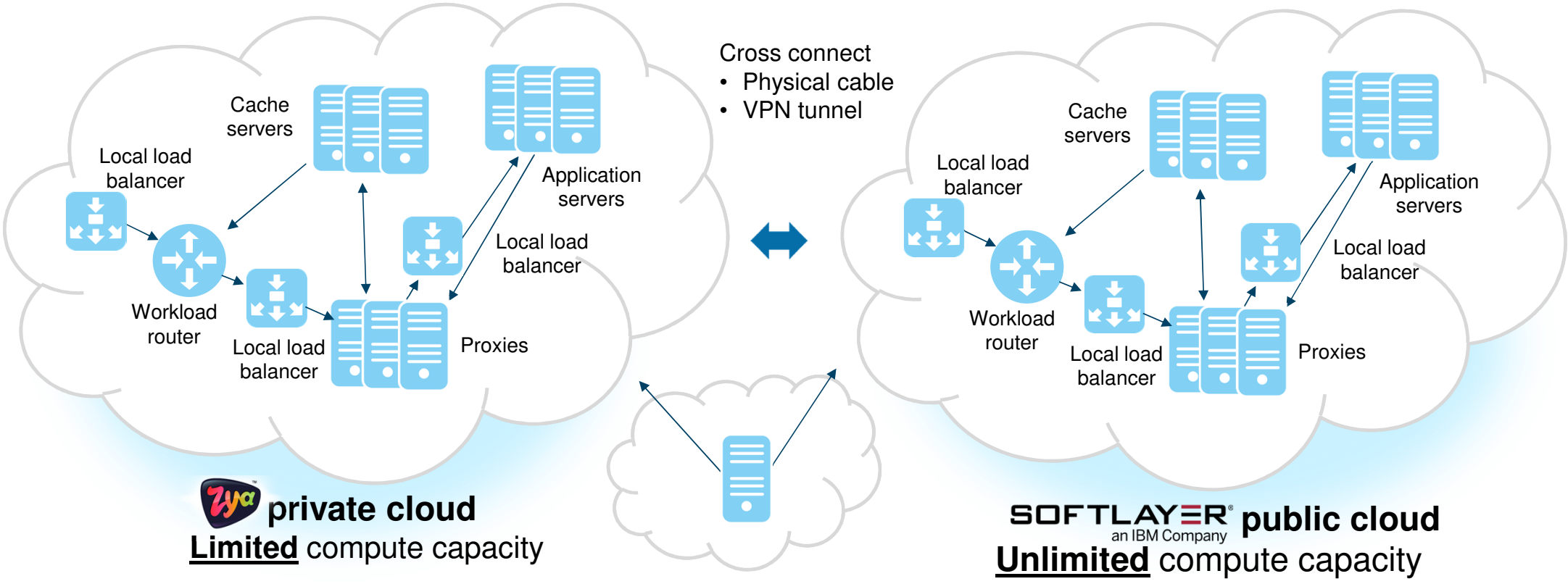
an entertainment and technology company dedicated to simplifying music creation

ZyaCloud by ZyaMusic

Win area categories:

- Programs – SaltStack for configuration, orchestration, auto-scaling
- Performance
- Security
- Control
- Transparency
- Automation
- Flexibility
- Innovation

ZyaCloud's hybrid architecture



private cloud
Limited compute capacity

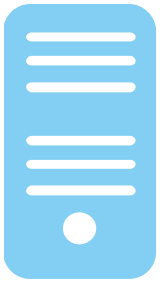
End user

public cloud
Unlimited compute capacity

music mastermind

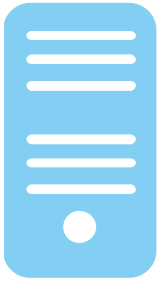
Compute needs

Presentation layer - Gateway load balancer



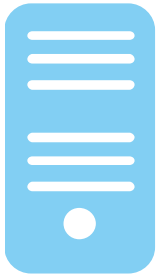
- 8 cores
- 2 GB memory
- Ubuntu

Lightweight application server



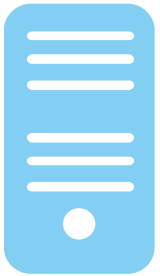
- 2 cores
- 2 GB memory
- Ubuntu

Database server



- 4 cores
- 16 GB memory
- Ubuntu

Heavy application server



- 4 cores
- 16 GB memory
- Windows DataCenter

Comparing compute needs – head-to-head deep dive

SoftLayer

Comparison Item (Wanted)	1	2	3	4
Instance Usage	Gateways/LBs	Lightweight App	Database Tier	Heavy Application
Cores @ 2.0GHz	8	2	4	4
Memory GB	2	2	16	16
Network	1Gbps Pub/Priv	1Gbps Priv	1Gbps Priv	1Gbps Priv
OS Type	Ubuntu	Ubuntu	Ubuntu	Windows Datacenter
Hourly Rate (Comparison Rate)	$0.223	$0.119	$0.413	$0.559

amazon web services

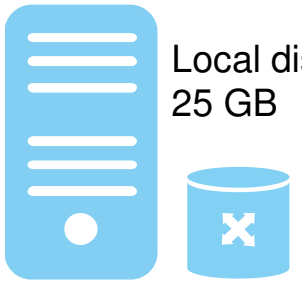
AWS Virtual Instances				
Instance Size/Type	M1 - 2x7.5x840	M1 - 2x7.5x840	M3 - 4x15+EBS*	M3 - 4x15+EBS*
AWS EC2 instance per hour	$0.175	$0.175	$0.28	$0.532
EBS Optimized Instances Charge*			$0.025	$0.025
Hourly Rate (Combined) (Comparison Rate)	$0.175	$0.175	$0.305	$0.557

IBM

music mastermind

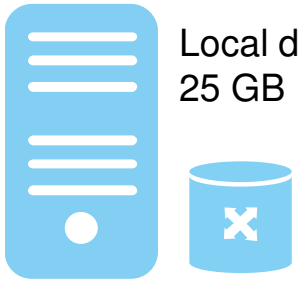
Storage needs

Gateway load balancer



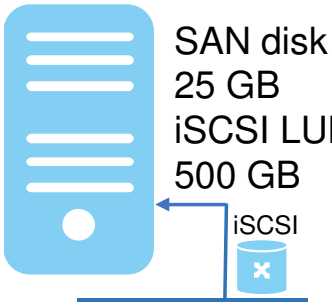
Local disk – 25 GB

Lightweight application server



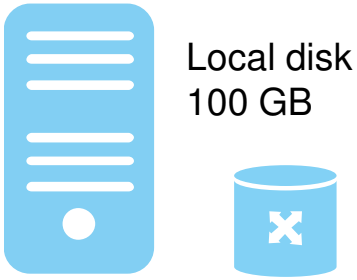
Local disk – 25 GB

Database server



SAN disk – 25 GB
iSCSI LUN – 500 GB

Heavy application server



Local disk – 100 GB

IBM

Comparing storage needs – head-to-head deep dive

Comparison Item (Wanted)	1	2	3	4
Instance Usage	Gateways/LBs	Lightweight App	Database Tier	Heavy Application
SoftLayer				
Storage GB (Local or SAN) - 25, 100GB	Local 25	Local 25	SAN 25	Local 100
Add Storage SAN – 500GB	-	-	$32.57	-
amazon web services				
EBS Provisioned IOPS @ $.125/GB (500)			$62.50	$12.50
– IOPS @ 30 days – $0.065/IOP			$65.00	$32.50

IBM Cloud

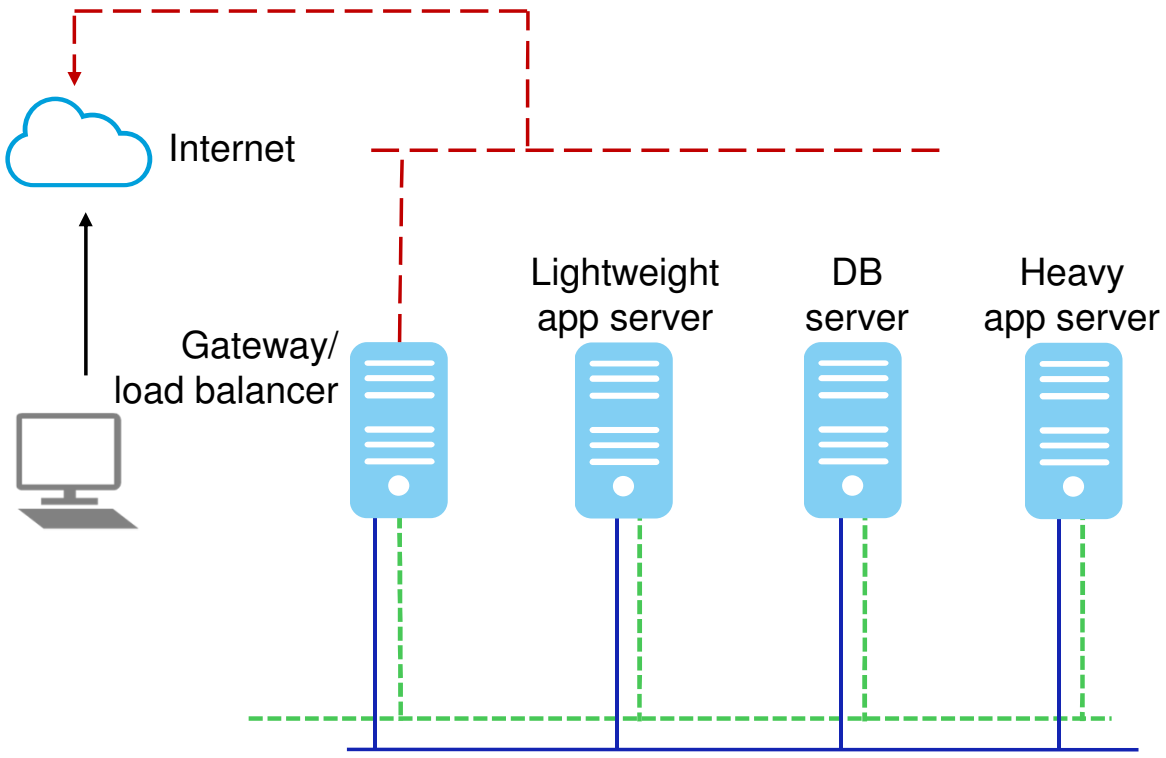
IBM

69

music mastermind

Network needs

- Gateway / load balancer
  - 1 Gbps – private and public
- Lightweight application
  - 1 Gbps – private
- Database server
  - 1 Gbps – private
- Heavy application
  - 1 Gbps – private



Comparing network needs – head-to-head deep dive

Comparison Item (Wanted)	1	2	3	4
Instance Usage	Gateways/LBs	Lightweight App	Database Tier	Heavy Application
SoftLayer				
1GB Network Upgrade	$20.00	$10.00	$10.00	$10.00
AWS Virtual Instances				
AWS Data Transfer @ $0.09/GB	$44.91	$0.00	$0.00	$0.00

Comparing support needs – head-to-head deep dive

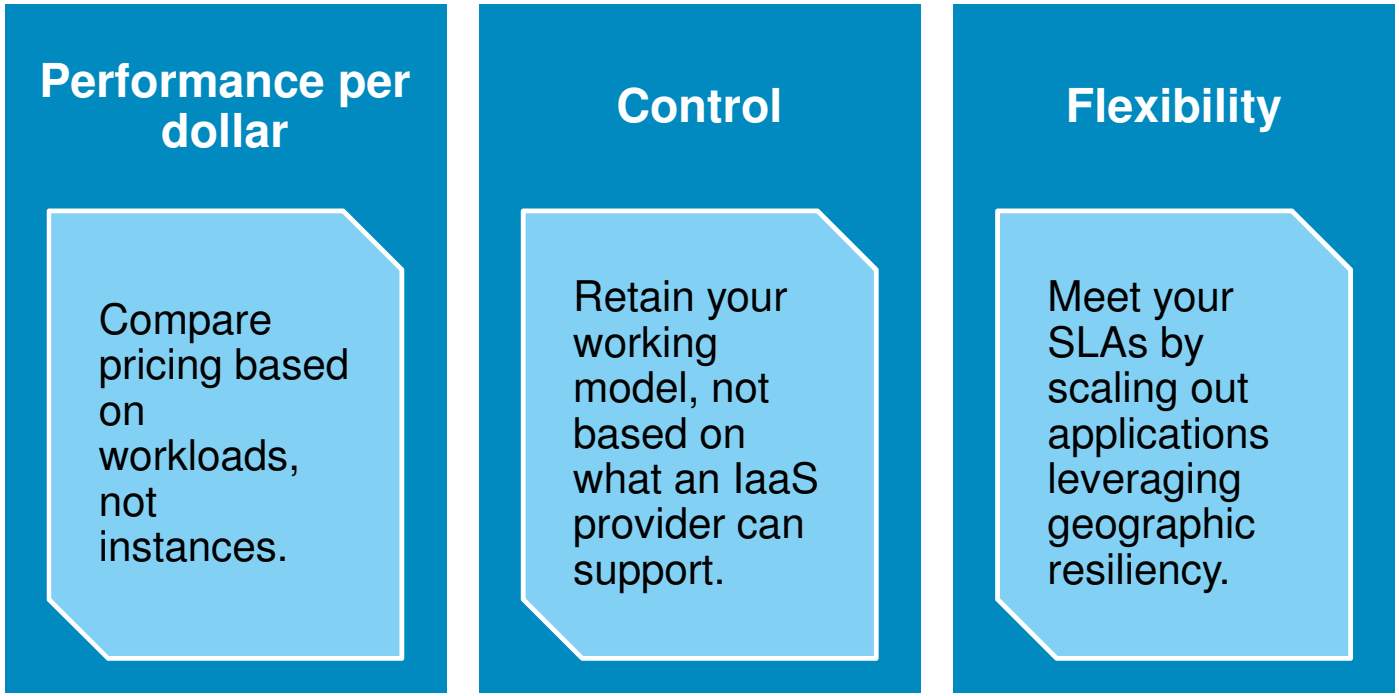
Comparison Item (Wanted)	1	2	3	4
Instance Usage	Gateways/LBs	Lightweight App	Database Tier	Heavy Application
24/7/365 Support	Included	Included	Included	Included
	AWS Virtual Instances			
Instance Size/Type	M1 - 2x7.5x840	M1 - 2x7.5x840	M3 - 4x15+EBS*	M3 - 4x15+EBS*
AWS Support*	$21.80	$17.28	$34.71	$44.60

Total Cost Comparison – head-to-head deep dive

Comparison Item (Wanted)	1	2	3	4
Instance Usage	Gateways/LBs	Lightweight App	Database Tier	Heavy Application
Cores @ 2.0GHz	8	2	4	4
Memory GB	2	2	16	16
Network	1Gbps Pub/Priv	1Gbps Priv	1Gbps Priv	1Gbps Priv
OS Type	Ubuntu	Ubuntu	Ubuntu	Windows Datacenter
SoftLayer Virtual and Dedicated Instances				
Storage GB (Local or SAN) - 25, 100GB	Local 25	Local 25	SAN 25	Local 100
Add Storage SAN – 500GB	-	-	$32.57	-
1GB Network Upgrade	$20.00	$10.00	$10.00	$10.00
24/7/365 Support	Included	Included	Included	Included
Hourly Rate (Comparison Rate)	$0.223	$0.119	$0.413	$0.559
Instance Monthly Rate	$160.56	$85.86	$297.36	$402.48
SoftLayer Monthly Rate Total	$143.60	$65.20	$264.16	$364.60
AWS Virtual Instances				
Instance Size/Type	M1 - 2x7.5x840	M1 - 2x7.5x840	M3 - 4x15+EBS*	M3 - 4x15+EBS*
AWS EC2 instance per hour	$0.175	$0.175	$0.28	$0.532
EBS Optimized Instances Charge*			$0.025	$0.025
Hourly Rate (Combined) (Comparison Rate)	$0.175	$0.175	$0.305	$0.557
AWS Price per Instance / Month	$172.80	$172.80	$219.6	$401.04
EBS Provisioned IOPS @ $.125/GB (500)			$62.50	$12.50
– IOPS @ 30 days – $0.065/IOP			$65.00	$32.50
AWS Data Transfer @ $0.09/GB	$44.91	$0.00	$0.00	$0.00
AWS/Month Subtotal	*$217.7*	*$172.80*	*$347.10*	*$446.04*
AWS Support*	$21.80	$17.28	$34.71	$44.60
AWS Monthly Total	$239.50	$190.08	$381.81	$490.64
Savings (-) SL vs AWS	-$95.90	-$124.88	-$117.65	-$126.04
Total Advantage			-$229.17	

Daring to compare

Dare to compare against the competition on the levels you need to measure!



Learn more

Want to know more?

IBM Cloud	IBM Cloud	IBM Cloud Resource Center	IBM Cloud YouTube Channel
SOFTLAYER an IBM Company	SoftLayer Training • Get the big picture • Dive in • Learn by level	Instructor-led training • SoftLayer Fundamentals • SoftLayer Solutions Design	Online training resources • On-demand webinars • SoftLayer YouTube Channel • KnowledgeLayer

1

Dream it!

2

Talking workloads

3

Build it! Saving time with SoftLayer integrated services!

4

Ready to start building?

IBM

Build it!
Business requirements

Integration

Integrate with business processes and back-end systems

- Understand and respond to customers' needs
- Integrate e-commerce business processes
- Integrate development and test into existing business processes
- Combine environments from multiple vendors

Disruption

Disrupt marketplace with anywhere, any time, any device access

- Deliver a consistent experience across every customer interaction
- Interact with buyers on their mobile devices
- Reduce customer churn – increase customer loyalty

Migration

Rapidly move additional workloads to cloud (eg HR, Finance)

- Provide a secure, near-real-time system to exchange information
- Quickly pull together new workloads using APIs
- Expand existing IT skills for new workloads

Integration with processes and systems

Integration
Integrate with business processes and back-end systems

Integration services

- IBM UrbanCode®
- IBM Development & Test
- IBM Automated Modular Managed Services
- IBM Cloud Managed Services™

How can Futbol Fans integrate business processes and back-end systems?

IBM UrbanCode

Integration services

- IBM UrbanCode®
- IBM Development & Test
- IBM Automated Modular Managed Services
- IBM Cloud Managed Services™

IBM urban{code}® Deploy is designed to help you:

- IBM UrbanCode Deploy is a tool for automating application deployments
- Manage application components and versions across all platforms
- Manage configurations across all environments (private/public/hybrid cloud, on-prem)
- Offer secure “self-service” capabilities
- Increase transparency
- Assure governance and compliancy
- SoftLayer Integrates with UrbanCode Deploy via native Softlayer API

Learn more

IBM Development & Test

Providing environment-as-a-service for more efficient development and test

Integration services

- IBM UrbanCode®
- IBM Development & Test
- IBM Automated Modular Managed Services
- IBM Cloud Managed Services™

IBM Development & Test Environment Services (IDTES) provides on-demand, comprehensive dev/test environments built on SoftLayer:

- Self-service access to development and test environments on the IBM cloud
- Pre-built dev/test environment built on SoftLayer
- Multiple, parallel, complete development and test environments for quicker releases
- Increased test coverage and ability to reproduce and resolve defects quicker
- Improved productivity and costs savings via a consumption-based licensing model

Learn more

IBM Cloud Automated Modular Managed Services

Reduce costs › Control governance › Simplify management › Improve service quality

Integration services

- IBM UrbanCode®
- IBM Development & Test
- IBM Automated Modular Managed Services
- IBM Cloud Managed Services™

Automated fully supported management tools: IBM deploys and supports the tools. You manage your SoftLayer environment with the tools.

Automated fully managed services: IBM manages your SoftLayer environment using the tools. You focus on your business.

Learn more

IBM Cloud Managed Services

Integration services

IBM UrbanCode®

IBM Development & Test

IBM Automated Modular Managed Services

IBM Cloud Managed Services™

Large scale global deployment on premise or off premise:

- Disaster recovery
- Best-practice security
- Compliant processes (PCI, HIPAA+)
- Solutions for SAP, SAP HANA, Oracle
- Highly flexible, scalable, available, turnkey solutions

Learn more

Disrupt marketplace

Disruption
Disrupt marketplace with anywhere, any time, any device access

Disruption services

IBM Bluemix

IBM Cloudant

IBM Cloud Analytics Application Services

How can Futbol Fans disrupt the marketplace with anywhere, anytime, any device access?

IBM

IBM Bluemix

Disruption services

- IBM Bluemix
- IBM Cloudant
- IBM Cloud Analytics Application Services

Why  IBM Bluemix™ ?

- ✓ **Open cloud**
- ✓ **Hybrid integration, deployment, management**
- ✓ **DevOps, app life cycle management**
- ✓ **Built on SoftLayer®**
- ✓ **Syndicated catalog of IBM, 3rd party and community services and images**

- Bluemix is a PaaS solution to build, run and manage new apps and services.
- Rapidly bring new products and services to market at lower cost
- Balance agility with quality, security and governance
- Extend existing IT investments into cloud business and delivery models

Learn more

IBM Cloudant

Services

IBM Bluemix

IBM Cloudant

IBM Cloud Analytics Application Services

Why Cloudant DBaaS ?

✓ **For apps that need:**

- Elastic scalability
- Data mobility
- High availability
- Text search
- Data model flexibility
- Geospatial

✓ **Available as:**

- Fully managed DBaaS
- On-premise private cloud
- Hybrid architecture

- With custom coding that enables unique data needs to be developed ***in days*—not weeks!**

Learn more

IBM Cloud Analytics Application Services

- *For high-performance clusters*
- *With automated cluster management and*
- *Pre-integrated big data/analytics software*
- *Running on SoftLayer infrastructure*

Services

IBM Bluemix

IBM Cloudant

IBM Cloud Analytics Application Services

Why  ?

For big data software:

- ✓ Infosphere Streams
- ✓ Infosphere BigInsights
- ✓ More to come!

- Offers superior performance and manageability of analytics workloads
- Pre-integrated with customers' licensed big data/analytics software (software license not included)
- Full production and global capability throughout 2015
- Limited preview (no charge) available now for a limited time!

Learn more

Rapidly move additional workloads to the cloud

Migration
Rapidly move additional workloads to cloud

More services

IBM Cloud OpenStack

IBM Data Encryption

How can Futbol Fans rapidly move additional workload to cloud?

IBM Cloud OpenStack Services

- ***Provides*** *common APIs*
- ***Maximizes*** *interoperability*
- ***Ensures*** *automation portability*
- ***Enables*** *integrated management*

More services

IBM Cloud OpenStack

IBM Data Encryption

OpenStack Public

- Multi-tenant
- Managed on SoftLayer
- Powered by IBM Cloud OpenStack Services

OpenStack Dedicated

- Single tenant
- Managed on SoftLayer
- Powered by IBM Cloud OpenStack Services

OpenStack Local

- Single tenant
- On-premise
- Powered by IBM Cloud Manager with OpenStack

- **OpenStack** is an open-source cloud computing software platform, primarily used for IaaS
- IBM Cloud OpenStack simplifies later migration to hybrid cloud, with no vendor lock-in
- Meets regulatory and compliance needs while preserving an integrated and consistent experience
- Offers consistent pricing options independent of deployment model to simplify consumption of our hybrid OpenStack platform
- Delivers a unified user experience throughout the *Learn, Try, Buy, Use, and Support* life cycle

Learn more

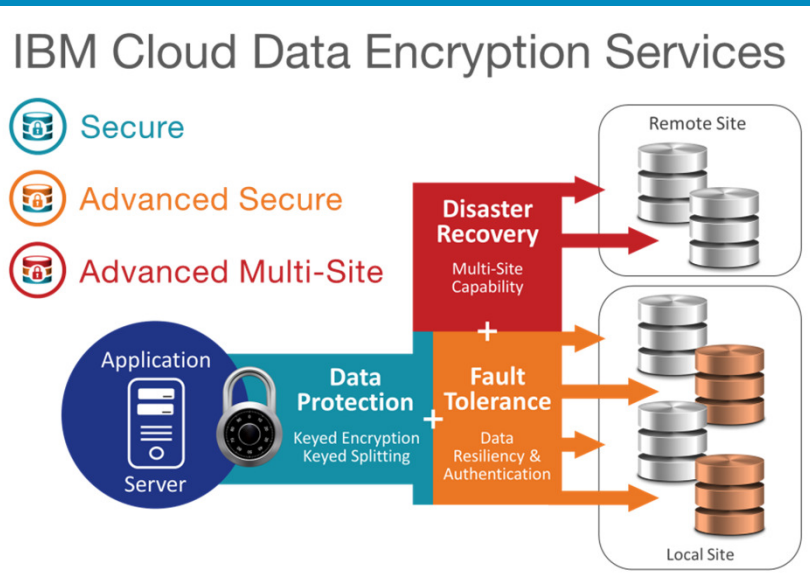
IBM Cloud Data Encryption Services

One of the industry's only data encryption solutions offering cryptographic splitting—protecting the data itself so that it ***is invulnerable to attacks***

More services

IBM Cloud OpenStack

IBM Data Encryption



- Built on SoftLayer
- Advanced security with cryptographic splitting, rendering your data ***invulnerable to attacks***
- Built-in resiliency, enabling data high availability and disaster recovery
- Protects data across hybrid environments – including private cloud, public cloud, and traditional IT

IBM Cloud offerings

*A wide range of offerings to help you **simplify** workload migration to Cloud*

Dev/test and ops	Web hosting	Security/compliance	E-commerce	Big data/analytics
IBM Development and Test Environment Services	IBM Cloud Builder Professional Services	IBM Cloud Builder Professional Services	IBM Cloud Builder Professional Services	IBM Cloud Builder Professional Services
		IBM Cloud Automated Modular Management Services	IBM Cloud Analytics Application Services	IBM Cloud Automated Modular Management Services for SAP HANA One
		IBM Cloud Data Encryption Services with Security First	IBM Cloud Data Encryption Services with Security First	IBM Cloud Analytics Application Services

Find out more on the IBM Cloud marketplace

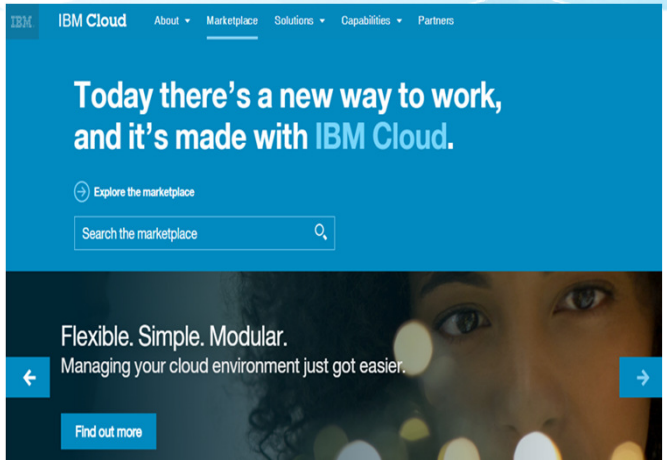
ibm.com/marketplace

Developers can learn more at IBM developerWorks, IBM Cloud marketplace Developers Community, or Look at the marketplace For IBM and 3rd Party offerings

For customer **Presentations**

Partner Overview **Videos**

Customer **Case Studies & Whitepapers**



400+ IBM and Business Partner offerings

- Infrastructure
- Development platforms
- Business applications
- Business process services

IBM Bluemix™

SOFTLAYER® an IBM Company

New Business Partners can learn more and join online

IBM Cloud

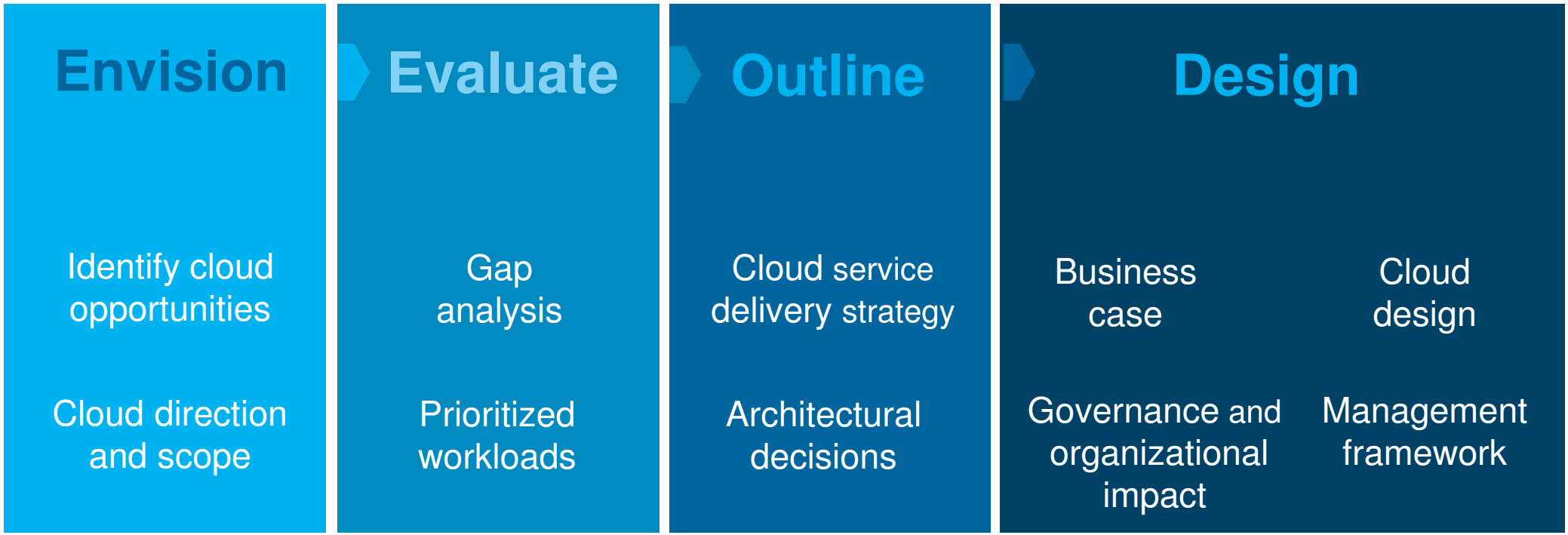
IBM Cloud Advisory Services

So, if you don't want to do it yourself …

We've got services to help.

Learn more

IBM Cloud Advisory Services Model



Four areas to prioritize workloads when addressing cloud strategy

Cloud Infrastructure Strategy and Design

Selecting the best target cloud(s) for all your workload types

Workload Transformation Analysis

Assessing the precise “fit” of the cloud selected for a workload

Application Performance Optimization for Cloud

Assessing the precise “fit” of the cloud selected for a workload

Rapid Migration Assessment

Identifying workloads that can migrate most rapidly to SoftLayer

1

Dream it!

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Talking workloads

3

Build it! Saving time with services!

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Ready to start building?

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We have tools to help!
Cloud Rapid Assessment Tool

Take a quick survey to determine if your workload is a candidate for a free migration!

Learn more

Get a jumpstart as a special “thank you”

Take $500 and get started on the SoftLayer platform.*

- *Must register and attend to receive $500 off promotion code.
- Terms and conditions to follow in e-mail.

Please complete the survey.

Legal

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IBM Global Technology Services
Route 100
Somers, NY 10504

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