A Closer Look at SoftLayer, an IBM Company
A global hosting leader

Customers 21,000 in 140 countries

Devices 100,000

Employees 685

Data centers 13

Network PoPs 17

Top 100,000 Sites By Hosting Provider

Source: Hostcabi.net
A working definition

**Cloud** (n) On-demand compute with consumptive billing

- **On-demand**
  Rapidly provisioned services
- **Compute**
  Servers, network, storage, firewalls, ancillary services
- **Consumptive billing**
  Turns traditional fixed IT costs into variable – monthly or hourly

- Initial model – virtualized multi-tenancy computing – does not meet requirements for 100% of applications and use cases
- For broadest applicability, user-selectable levels of performance and isolation are required
A better platform

*Unified architecture with common management and programming interfaces*

- Common command and control interface across a unified architecture
- Combine bare-metal servers, public cloud instances and private cloud deployments into distributed hybrid architectures and manage from a single control pane and API
- All deployed on-demand and provisioned in real-time
- Ideally suited to big data deployments, high I/O and latency-sensitive apps

*Unique Triple Network Architecture* allows seamless communication across distributed environments

*Infrastructure Management System* provides orchestration and automation
Global footprint

13 data centers
17 network PoPs
Global private network

100,000 SERVERS
21,000 CUSTOMERS
22,000,000 DOMAINS
Triple-network architecture

- High-performance public network with transit from multiple tier-1 carriers
- Secure OOB management via VPN
- Private network for intra-application and inter-facility communications, access to shared services
- Native IPv6 support
- Virtual racks for integrated management
- Complete suite of network services
Standardized, modular infrastructure

One platform, myriad solutions to serve a broad range of customer requirements for performance, isolation

- Highly flexible architecture
- One platform for public cloud servers, private clouds, bare metal servers
- Complete integration
- Unified systems management & API
- Technology-neutral platform
- Support for broad range of operating systems, virtualization platforms
- Build hybrid, distributed, high-performance architectures and manage from a single pane of glass
- Pay by the hour or the month for a truly variable IT operations model
Robust, full-featured API

Improves customer control, reduces error, increases flexibility
SoftLayer API provides 1,600 function calls to over 200 services
Supports REST, SOAP & XML-RPC interfaces
Enables full auto-scaling implementations
Comprehensive documentation, libraries and support

Functions include:

• Automatic server deployment
• Service provisioning
• Reboots & reloads
• Ticketing
• Hardware configuration
• Software load
• DNS
• Network
• Storage
• Security scans
• Monitoring
Complete control

- Mobile and Web-based management portals
- Purchase, provision, deploy & manage infrastructure
- Access to services, tools, automation & tutorials
- Secure access via VPN to management network
- Two-factor authentication to Web portal
Service portfolio
Compute & Storage

Public Cloud Instances
- Virtual server instances
- Dedicated physical nodes available

Bare Metal Servers
- Dedicated servers deployed on demand
- Hourly & monthly pricing
- Complete range of options
- GPU servers for HPC

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

- Multiple local storage options
  - SAS
  - SATA
  - SSD
- SAN
- NAS
- QuantaStor Storage Server
- Object Storage
  - Global platform
  - Meta tagging
- Backup services
Network & Security

CDN
- 24 nodes
- Secure content management

Load balancing
- Local
- Global
- Citrix Netscaler

Firewalls
- Shared
- Dedicated
- Fortigate Security Appliance

Application acceleration
DNS services
IDS protection and assessment
SSL certificate management
Antivirus & malware protection
Platform Management

Systems Administration
- Monitoring packages
- Managed hosting
- Managed database services

Software
- Complete library of OS, database, virtualization and administration software deployable on-demand and by subscription

Flex Images
- Imaging & deployment system provides migration, compatibility across bare-metal and virtual servers

Message Queue
- Message & notification service for intra-application and inter-system communications
Big Data Solutions

Push-button provisioning of complex, multi-server deployments via online Solution Designer

Support for distributed environments

Solutions leverage performance of local storage and bare-metal compute; outperform commodity public clouds

**MongoDB** Engineered in partnership with 10gen

**Riak** Engineered in partnership with Basho
21,000 leading-edge customers*

Software as a Service
- avast!
- SendGrid
- heroku
- MailChimp
- fitbit

Social
- slideshare
- Scribd
- twitpic
- PeopleBrowsr
- Path

Platform as a Service
- MODX
- CLOUDANT
- distil
- DISQUS
- cloudbase.io

Hosting & Service Providers
- ZipServers.com
- XO Communications
- midPhase

Mobile & Communications
- Bump
- Voxer
- Instapaper
- Yelp

Games and Entertainment
- Garena
- HYPERNIA
- HOTHEAD
- electrotank
- peak

Marketing and Digital Media
- Ogilvy
- pardot
- collective
- DIGITAS
- NETBASE
- struq

Enterprise
- CITRIX
- LAN
- REPSOL

* SoftLayer references,
Managed Production Workload for M&E

Workload Detail

• High I/O intensity, Predictable QOE

• Supports existing portfolio, license model, and provides platform for future services

• Managed Instance

• Global reach and load balancing

Use Cases for Industry

• Move non differentiated workloads to cloud to allow greater investment in content production.

Softlayer Drivers

• Managed Instance
• Predictable QOE

Case Studies

Pearson was interested in moving from a traditional outsourcing model to a consumption-based model running in the cloud. Increasing cost pressures was also requiring Pearson to reduce expenses and transfer non differentiating infrastructure to a consumption-based cloud model.

The IBM solution involved two phases. The first phase addressed the consolidation of Pearson's two Mainframes into the IBM z/OS Cloud. The second phase focused on the distributed platforms running in the Pearson NJ. Approximately 700 servers were virtualized and consolidated entire environment was transitioned to a second z/OS cloud datacenter.

IBM BCRS will provide Disaster Recovery Services for both the Mainframe and Distributed environments. BCRS will also provide back-up services for the Distributed environment using managed Back-Up.
Hosted Enterprise Private Clouds

Workload Detail

• High I/O intensity, Predictable QOE

• Excellent base to build out enterprise PC requirements (HA, data isolation, encryption, reporting, hybrid cloud, etc.)

• IBM SCO Openstack and Citrix Private Clouds

Use Cases for Industry

• Private hosted cloud for primary and disaster recovery data centers

Softlayer Drivers

• Managed Instance
• Predictable QOE
• High Availability

Case Studies

FINS is a cloud service provider for the network broadcasting companies in Japan. Amid declining advertising revenue, an increase in online advertising and an economic recession, FINS operated servers that ran custom applications. This led to a huge increase in IT costs, even though the client also ran standard applications on existing systems at Fuji Network Systems (FNS) affiliates.

After experiencing the 2011 Japan earthquake, FINS - and its customers - needed reliable, robust systems that would perform better in case of a disaster. Further, FINS did not want to pay large up-front costs to obtain this technology. To meet its objectives, FINS engaged IBM Global Business Services - Application Innovation Services, IBM Global Technology Services - Worldwide Strategic Outsourcing and IBM Global Financing to design, host and finance cloud computing environments for its customers.

FINS uses IBM facilities in two separate locations for its primary and disaster recovery data centers. Cache servers remain in the client’s customer’s TV stations and are operated remotely by IBM. The Worldwide Strategic Outsourcing team manages the client’s customized applications, which enable its customers to develop and broadcast TV program content.
High Performance Computing

Workload Detail

• High I/O intensity, Predictable QOS
• Dedicated high performance servers and GPUs with cloud flexibility
• Load Balancing
• GPU offering available

Use Cases for Industry

• Transcoding
  • Infrastructure as a Service
  • Bare Metal Cloud option

Softlayer Drivers

• High I/O intensity
• Predictable QOS
• Dedicated high performance servers and GPUs with cloud flexibility
• Load Balancing
• GPU offering available

Case Studies

Flumotion is a leader in online video and audio technology. Flumotion services include acquisition, encoding, automated archiving, multi-format transcoding. Flumotion also provides a cloud-based transcoding service, LiveTranscoding.com, which converts a single live stream into multiple output streams in real-time. LiveTranscoding.com allows content providers and event organizers to reach all devices without making major investments in hardware, software, upgrades, and maintenance. The SaaS solution adapts to the needs of each client, as it can be upgraded or downgraded on a monthly basis. An online portal gives clients real-time control over all their live streams, while providing optimized settings for each combination of format, device, and codec. The company uses SoftLayer’s Bare Metal Cloud option, which is specifically designed for workloads with high input/output. Due to the CPU-intensive nature of the service, the company requires as many CPU cores as possible. Bare Metal Cloud is highly customizable, provisioned in 5–15 minutes, and the perfect solution for LiveTranscoding.com.
Workload Detail

- High I/O intensity, Predictable QOE
- Flexibility to add additional servers/cloud instances
- High availability / security
- Extensible API for Archiving
- Platform Computing

Use Cases for Industry

- Audience Insight
- Evaluating Campaign Effectiveness

Softlayer Drivers

- High I/O intensity
- Predictable QOE
- Flexibility to add additional servers/cloud instances
- High availability / security

Case Studies

A movie studio wanted to utilize social media to understand audience reactions, in real-time, for two film trailers aired during the Super Bowl. After spending roughly $3.5M in ad time for each spot, they needed fast and rich feedback to judge the ad’s effectiveness as well as shape ongoing marketing campaigns.

To generate usable business insight from social media, it was not enough to simply track online “buzz”, but required advanced semantic analysis to decipher billions of posts to understand what was being said, who was saying it and why. A Big Data solution was developed and deployed in the cloud to analyze over 1 Billion social media conversations in order to:

- Extract conversations about the film and their competition
- Determine positive and negative sentiment, overall and for specific elements like the cast, plot, soundtrack and special effects as well summarize what audiences did or didn’t like
- Isolate segmentation and demographics details as well as interests such as “avid movie-goers” or “comic book fans” and the specific sentiment of those segments
- Identify those intending to see the film in theaters
- Identify the most influential participants and whether they were advocating or deterring others from seeing the films

Many competitors offer basic social media sentiment analysis, but IBM’s ability to offer multi-dimensional drill down into segmentation and preferences, and to do so in near real-time, is a potential game changer that creates unique value for marketers industry-wide.
Social Business Applications

Workload Detail

• High I/O intensity/Load balancing
• Integrated dedicated servers and cloud instances
• Storage services for files and media

Use Cases for Industry

Softlayer Drivers

• High I/O intensity
• Predictable QOE
• Flexibility to add additional servers/cloud instances
• High availability / security

Case Studies

AMC Theatres needed to attract and retain the right people to provide excellent customer service to drive concession sales and cut down on high turnover rates. In addition, AMC didn’t have the right tools in place to effectively measure employee engagement and leadership effectiveness.

AMC turned to Kenexa to study fit in order to find the right candidates who would thrive in the culture of the organization, and to generate leads to find more qualified workers. Kenexa used its Employment Engagement Survey to study AMC’s culture, and then custom-built an assessment solution for general managers. Kenexa also introduced its applicant tracking system to help AMC find candidates who could thrive in its culture.

Theaters led by managers who most closely aligned with the “fit” strategy increased profits per customer by 1.2 percent, which translated into millions of extra dollars of net income.

• AMC discovered certain individuals were much more likely to provide a quality guest service experience for its customers.
• Concession sales were significantly higher at theaters that were run by a top-performing general manager.
• Overall turnover rates at AMC dropped 43 percent, from 127 to 84, during a five-year span.
• AMC, through Kenexa’s applicant tracking system, increased candidate leads from 250,000 in 2006 to 1.4 million in a two-year period.
Workload Detail

- High I/O intensity, Predictable QOE
- Scale cloud instances in minutes
- High performing load balancers for variable demand
- Worklight

Use Cases for Industry

- Live Events streaming
- Second Screen applications

Softlayer Drivers

- High I/O intensity
- Predictable QOE
- Scale cloud instances in minutes
- High performing load balancers for variable demand
- Worklight

Case Studies

Sporting occasions like the Masters Golf Tournament are by nature unpredictable. A sudden event can generate a sudden burst of activity and interest, and quickly overwhelm unprepared infrastructure. The IBM Events team uses its own private cloud technology to adapt to that demand as needed. New servers can be provisioned quickly and workloads can be moved around uninterrupted to adjust to changing demand. IBM’s cloud can predict, based on many different factors, when more people may be checking in on the Web, their iPads or phones, and dynamically provision resources.

The iPad app developed with Worklight feature an impressive 360-degree panoramic view of different spots on the course that takes advantage of the device’s gyroscope capability. Turn it around and you can better understand from the point of view of the player you happen to be watching on TV at that moment the degree of difficulty of the shot he’s trying to make.
Workload Detail

• High I/O intensity, Predictable QOE

• Elasticity of offering

• Promotion via cloud of application lifecycle

• Dev Ops

Use Cases for Industry
Dev / Test Cloud

Softlayer Drivers

• High I/O intensity
• Predictable QOE
• Elasticity of offering
• Promotion via cloud of application lifecycle
• Dev Ops

Case Studies

The Digital Media Initiative is a transformation program within the BBC to move from a video tape & analogue based distributed business to a fully digital and online one. IBM is responsible for the Enterprise Archive component, named Enterprise Media & Metadata Management (EM3).

The BBC Digital Media Initiative (DMI) Enterprise Media and Metadata Management (EM3) project utilized IBM's development and system testing (dev/test) capabilities on the IBM Dev/Test cloud.
Use Cases for Industry
E-business platform to serve new and existing customers with the latest in coupon, discount, multi-storefront, promotion, or campaign functionality.

Softlayer Drivers
- High I/O intensity
- Predictable QOS
- Rapid expansion to meet market demand
- Integrated dedicated servers and cloud instances

Case Studies
Cengage Learning implemented an Online Retail Store and ran into the following issues:
- Changing product portfolio with acquisitions
- Not many merchandising options on old portal
- No promotional ads capabilities
- Limited Global Reach / Regional Presence
- Lack of Data for Analytics
- Emerging competition
- Traditional Shopping Experience to users

A Smarter Commerce Solution was developed to put Cengage’s customer in the center of their business engagement. Students were now able to enjoy a One Stop Shopping experience where they could browse, purchase/rent, view and access study material all in one place. The smarter commerce solution also offered a wide range of discounted product purchase options and operates in Global Markets with regional products.