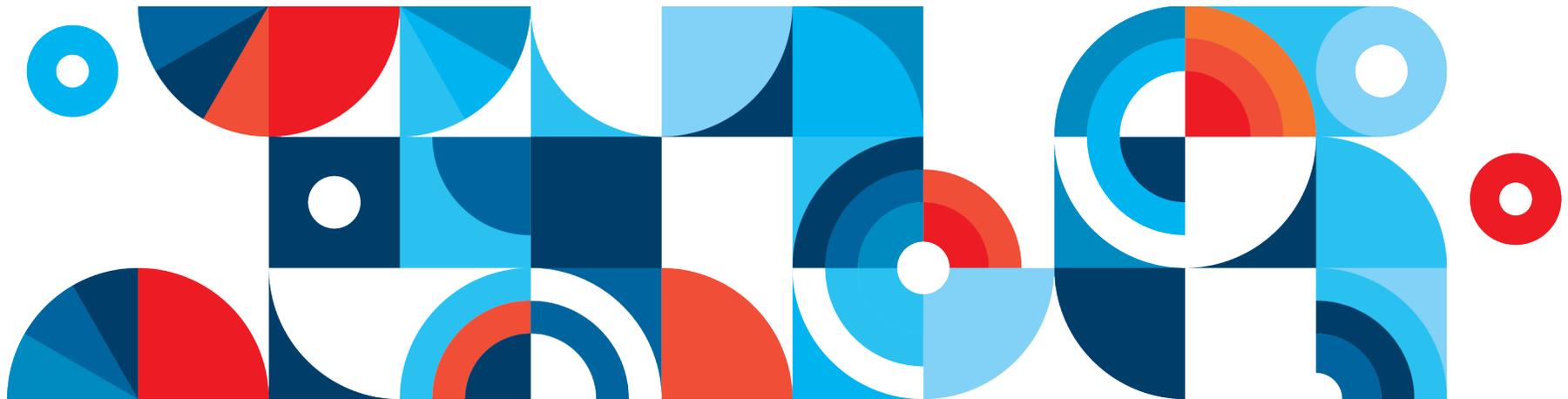


OpenStack Adoption and Lessons Learned from the Insurance and Financial Services Industries

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Agenda

- ❑ Introduction
- ❑ Customer Use Case
- ❑ Impressions and Feedback
- ❑ Lessons Learned
- ❑ Conclusion

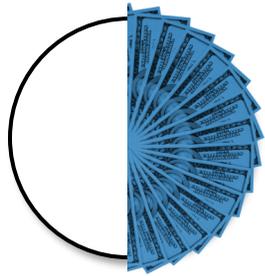
Introduction

Financial Services Sector Introduction

- In IBM Financial Services Sector is the largest of our industry sectors
- Includes banking, financial markets, and insurance industries
- One of the most highly regulated sectors
 - Sarbanes-Oxley
 - Basel II/III
 - Payment Card Industry Data Security Standard (PCI-DSS)
 - Health Insurance Portability and Accountability Act (HIPAA).
- Very large companies with typical enterprise needs

Cloud Computing Opportunities

FSS firms are adopting new computing platforms faster than other industries



Half of financial services companies already use private clouds



>50% of financial services are considering public clouds

Cloud isn't seen as a new IT delivery method, but as a key enabler for business model innovation



1 in 3

Driver for cloud was the creation of new revenue streams

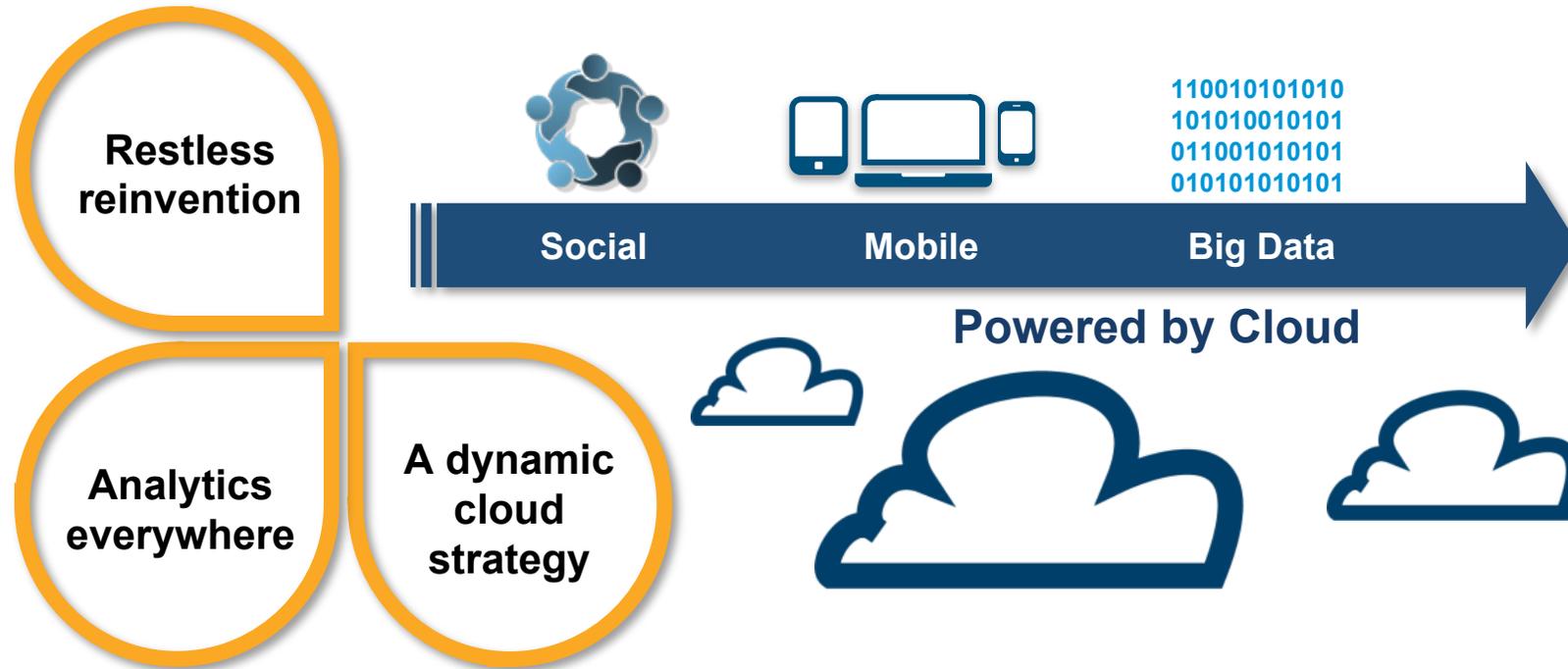


36%

CAGR through 2016 for the insurance industry

Opportunity exists for OpenStack in the sector

IBM Cloud Labs



- Leading IBM cloud engagements and technology for a decade
 - Started from data center automation – led to developing IBM’s public and private cloud solutions.
- Helping customers realize the potential of Cloud computing

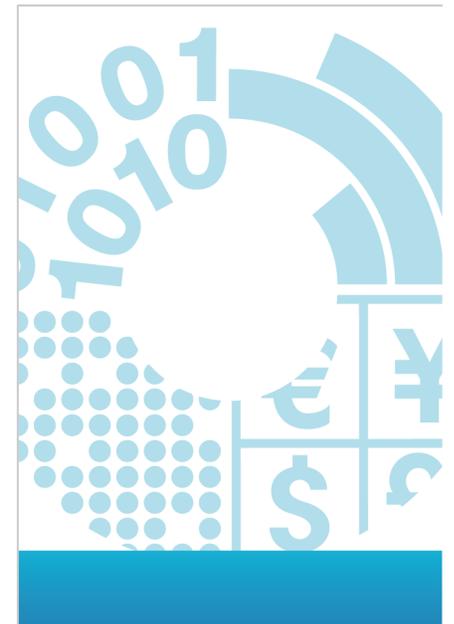
Insurance Industry Customer Use Case

Insurance Industry Customer

The customer is a large American insurance company that is looking to deploy a cloud solution that will allow them to service both internal and external customers.

Goals

- Grow their business into new areas – shift to “Service Provider”
- Realize the benefits of cloud computing
 - Improved efficiency
 - Greater productivity
 - Faster time to market



Considerations

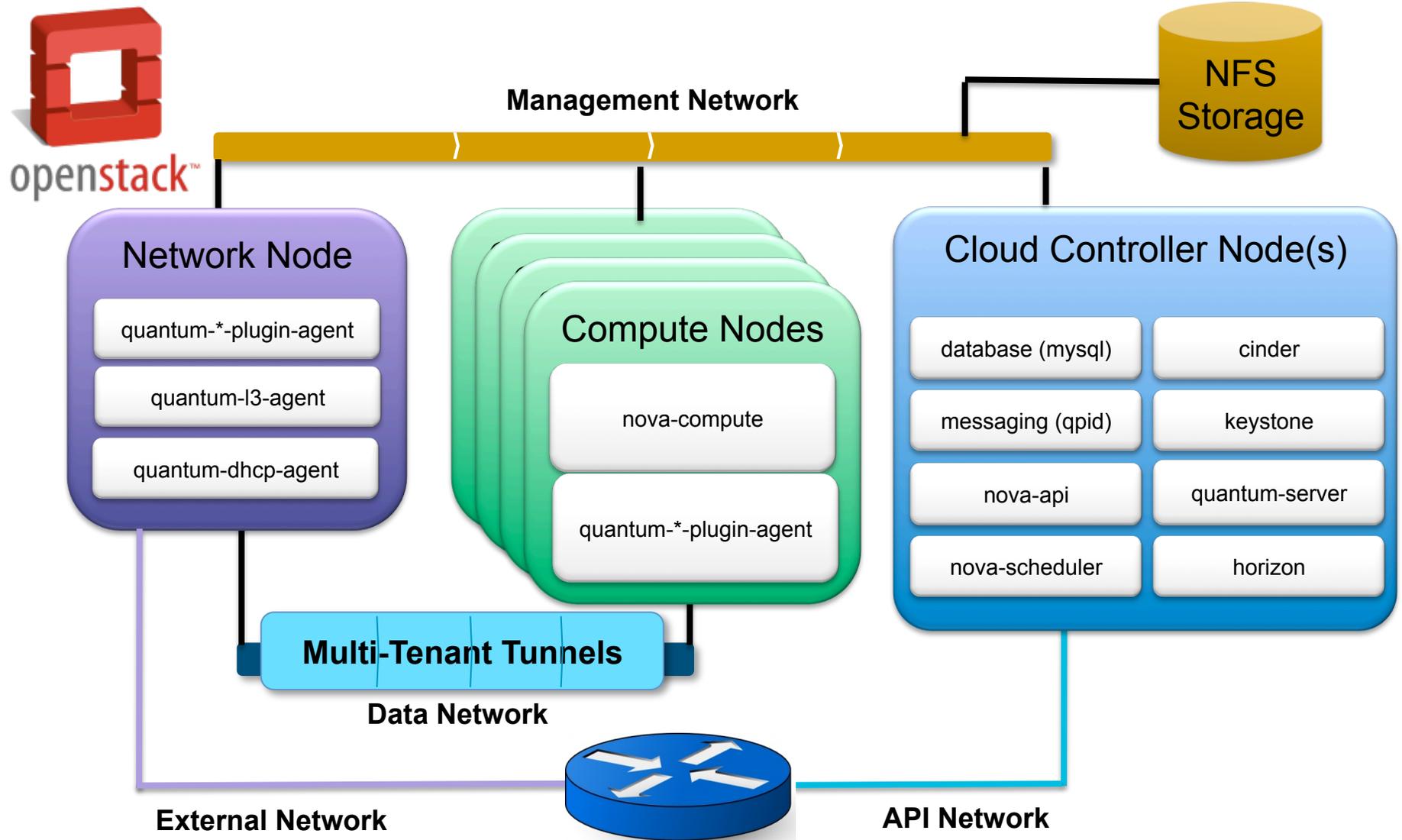
Regulatory Compliance

- HIPAA – Isolation and access control requirements
- Sarbanes-Oxley – Logging and auditing requirements
- PCI-DSS – Encryption, monitoring, and security requirements

Enterprise Integration

- User management – Enterprise directory integration, administrative roles, and user permissions
- Networking – VLANs and Security
- Leverage existing procedures and resources – Scripts, virtual machines, and processes

Pilot Implementation – OpenStack Folsom



Customer Impressions and Feedback

What Customer Liked

- ❑ Modular, REST-based architecture
- ❑ The API is well documented and expansive
- ❑ Architecture of virtual firewalls and security groups
- ❑ KVM performance
- ❑ Compatible with enterprise monitoring solutions
- ❑ Multiple floating IPs can be assigned to a single VM
- ❑ Existing automation scripts can be used with minor modifications



Active Community

What Could be Improved (OpenStack Folsom)

- ❑ Configuring HA is complex and manual
- ❑ No built in backup/recovery
- ❑ Active Directory integration is not standard
- ❑ More granular control of administrative permissions
- ❑ Administrative accounts are not isolated to a tenant
- ❑ More built in monitoring capabilities
- ❑ Networking configuration should be more automated

Lessons Learned

Important to Integrate with Existing Environments

- Integrate with existing user authentication and authorization services
- Integrate with existing networking and storage infrastructure
- Leverage existing procedures and script/code libraries

In Havana IBM has delivered improvements to ...

- Keystone that allow for greater integration into AD and LDAP user



- Security
- Security
- Security
- ... Security

Looking to Grow Beyond Internal Customers

- ❑ See the cloud as a new potential source of revenue
- ❑ Looking to become cloud service providers

In Havana IBM has delivered improvements to ...

- ❑ Ceilometer that make it possible for administrators to track cloud usage



Conclusion

Conclusion

- The insurance industry is predicted to grow to one of the largest industries for Cloud
- IBM is committed to making OpenStack a success
 - Keystone enhancements to LDAP, Active Directory integration, Transport Layer Security support, OAuth extensions, and federated identity
 - Ceilometer adoption of the Distributed Management Task Force's (DMTF) Cloud Auditing Data Federation standard
 - Improvements in testing and continuous integration
 - Upgrade enhancements that facilitate moving from Grizzly to Havana
- Understanding the unique requirements of the industry will allow OpenStack to take advantage of the opportunity





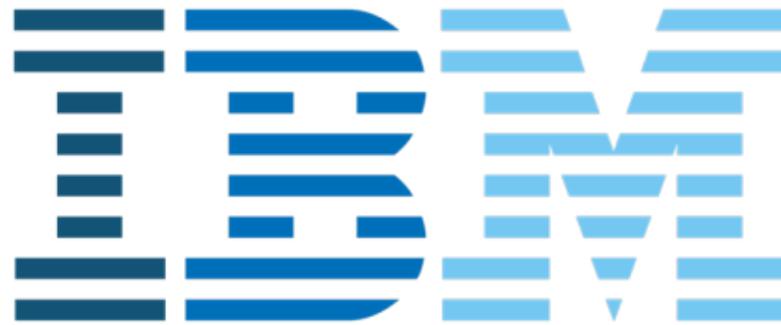
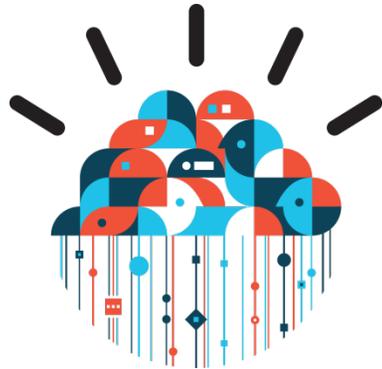
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