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# **SUSE OpenStack Cloud**

## Private Cloud for Enterprise Business

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# Trends

- ☐ IoT
- ☐ Edge Computing
- ☐ Digital Economy, Digital Technology Platform
- ☐ Blockchain
- ☐ Analytics / Big Data
- ☐ AI, Machine/Deep Learning, Cognitive
- ☐ Micro Services
- ☐ Software Defined \*

- Select 1 out of Infinity



CONFUSED ??





Change is everywhere.

The 4th INDUSTRIAL REVOLUTION is here





There will be winners and losers.  
Dealing with change is the greatest  
threat facing big business.





A full-page background image of a male sprinter in a red and white singlet and black shorts, captured in mid-stride on a blue track. The scene is set at night in a large stadium with bright floodlights illuminating the track and the athlete. The sky is dark and cloudy.

## Businesses need:

- Speed
- Agility
- A lead on the competition

# Top corporate data centre challenges



## Faster response to:

- Needs of the business
- Customer requirements
- Market changes
- Competitive challenges



## Tighter budgets

- Lower TCO
- Faster ROI
- Reduce licence costs
- Rebalance Opex/Capex



## Data Centre Transformation

- Next level of automation
- Manage more with less
- Better utilization
- Resource provisioning & flexibility

# The Cloud is here to help

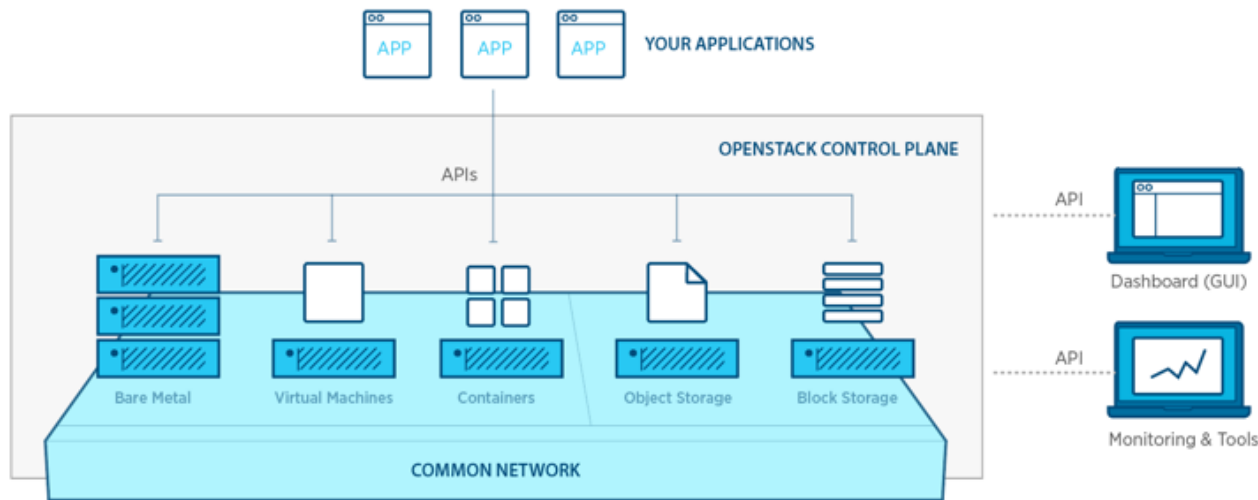
- 95% of businesses now use cloud computing
- 72% of enterprises are using Private Cloud
- “Cloud-first” strategies will become the norm in 2017





# OpenStack

## The Platform For The Next Decade and Beyond



OpenStack provides **one platform to orchestrate bare metal, containers and virtual machines on a single network** allowing users to optimize for their application without creating more silos in their datacenter, and giving service providers advanced capabilities.

# SUSE's history with OpenStack

- Founding member and platinum sponsor of OpenStack Foundation
- First to launch an “enterprise-grade” OpenStack distribution in 2012
- Focused on making SUSE OpenStack Cloud the best private cloud solution for enterprise business



# OpenStack Private Cloud Bridging the Two Worlds of IT

**Agile IT  
(Revolutionary )**

**Traditional IT  
(Evolutionary)**





# SUSE Empowers Transformation



# SUSE OpenStack Cloud

## Delivering the full value of OpenStack



### Traditional IT Evolution

- Rock solid reliability
- Highly available, non-disruptive upgrades
- Business oriented release cycle / longer support
- Widest hypervisor support & interoperability
- Leading enterprise support for entire platform



### Agile IT Revolution

- OpenStack Newton release
- Kubernetes as a Service
- Software defined infrastructure
- Unified storage for production workloads
- Fastest deployment, easy management

# SUSE OpenStack Cloud

## Taking the pain out of OpenStack

"OpenStack is...consistently recognized as overly complex to configure, deploy and upgrade."

451 Research Feb 2015

"The value proposition for using a distribution writes itself."

451 Research Q3 2016

SUSE OpenStack Cloud gives you:

- A pre-built solution you can start driving now
- Quality, reliability and performance
- Top class service, maintenance & support
- Excellent value





# SUSE OpenStack Cloud

Answers all the data center challenges

## SUSE OpenStack Cloud delivers:

- Flexibility to respond quickly & easily to new demands
- Increased agility, speed and efficiency
- An elastic platform for increased innovation
- Lower costs, faster ROI
- Greater control and security
- Self-service capabilities
- High quality services



# SUSE OpenStack Cloud Positioning



**SUSE OpenStack Cloud is the open source private cloud solution of choice for enterprise business, designed to:**

- Deliver improved agility, innovation and faster time to value with an enterprise-grade OpenStack private cloud
- Take the pain out of getting the robust, production ready private cloud customers need with fast deployment, easy management and enhanced high availability
- Reduce costs, improve efficiency and maximize choice by enabling IT transformation and leveraging existing infrastructure investments

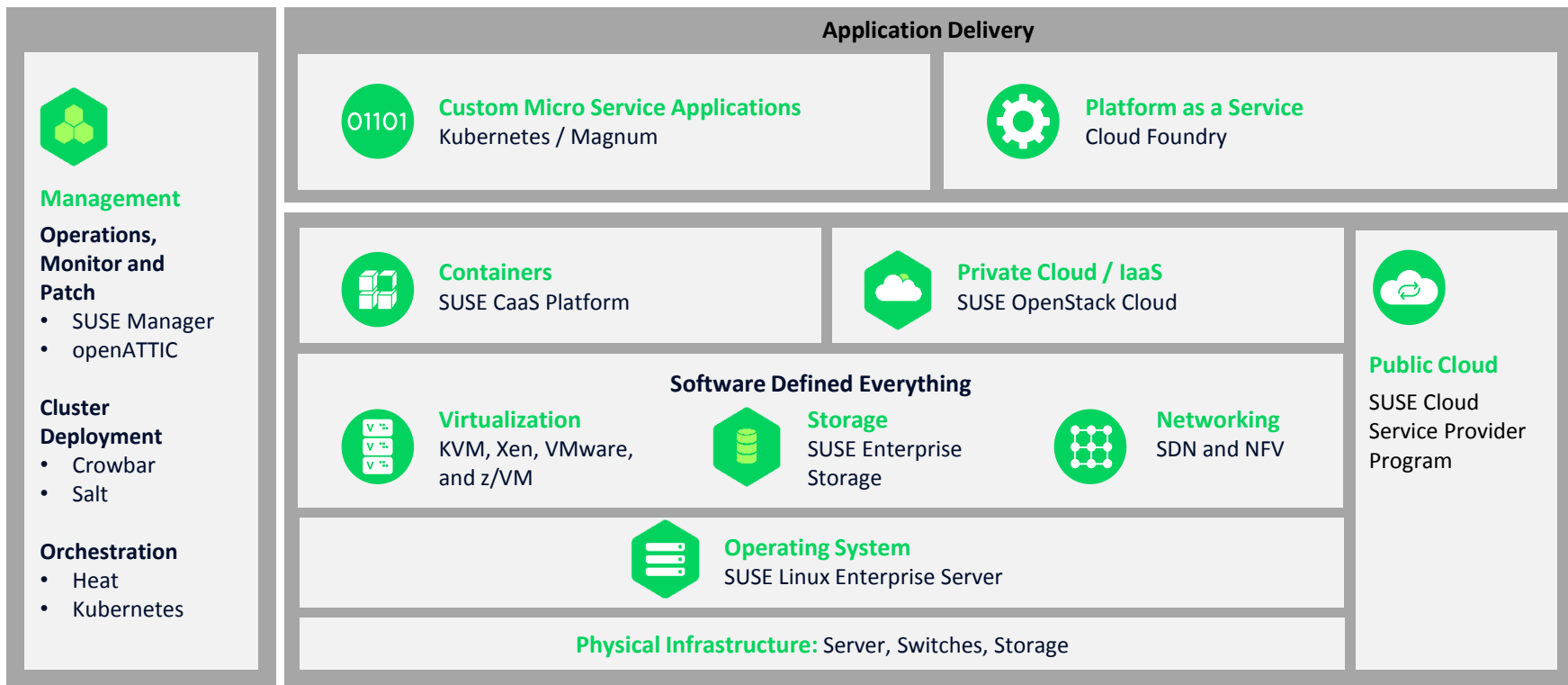
# SUSE Software-Defined Infrastruc



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## Our Open, Flexible Infrastructure Vision







# Private cloud? Don't go it alone.

Get a leg up  
with SUSE  
OpenStack  
Cloud.

[suse.com/smile](http://suse.com/smile)

## SUSE OpenStack Cloud Delivers:

- ✓ Speed
- ✓ Agility
- ✓ A lead on the competition
- ✓ Bridges the Two Worlds of IT

Visit The SUSE Booth  
Win A Gift!

# Welcome to SUSE Booth



# SUSE Super User



PACIFIC TEXTILES HOLDINGS LIMITED  
互太紡織控股有限公司

Pacific Textiles is a leading manufacturer of customised knitted fabrics. With headquarters in Hong Kong and manufacturing operations in Panyu, China, the company employs more than 6,000 people, and has strong relationships with apparel brands worldwide.

**Hubert Tsang**  
**Chief Information Officer**  
**Pacific Textiles Holdings Limited**







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# **OpenStack -- The Foundation for IIoT**

**Hubert Tsang**  
**Chief Information Officer**  
**Pacific Textiles Holdings Limited**



# Agenda

- Company Introduction
- Industry 4.0 vs IIoT vs IoT
- Big Data & OpenStack
- Our OpenStack Journey



PACIF

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知识分享平台

# Company Overview

- **Established in 1997**
- **IPO in 2007 (HKSE: 1382)**
- **~6000 employees**
- **Headquartered in Hong Kong**
- **Production Facilities**
  - **Panyu, China**
  - **Vietnam**
- **Our Differentiators**
  - **Power Generation**
  - **Water Treatment**





PACIF

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# Production Capability

**Knitting – Dyeing – Finishing – Printing**  
**All under the same roof**

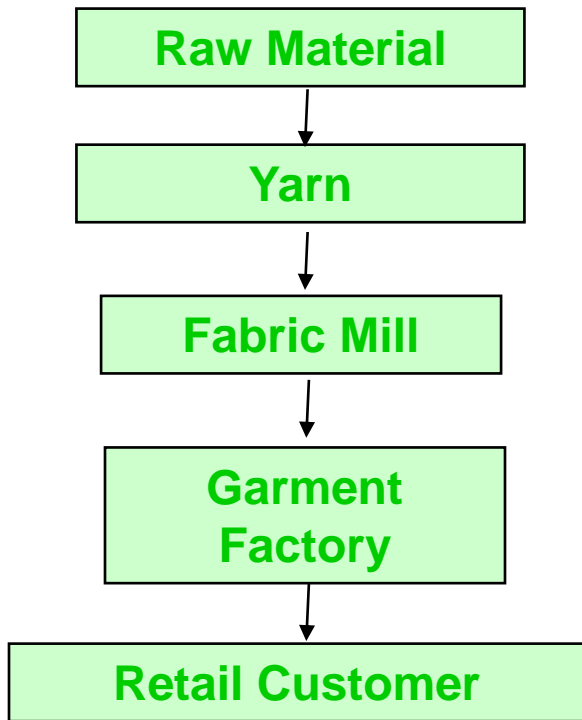


**Production Capacity: 9000 tons/month (20M lbs/month)**  
**30M-35M yards/month**





# Garment Manufacturing Value Chain



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# Our Product & Major Customers



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JCPenney

KOHL'S

Walmart

H&M



UNDER ARMOUR

Calvin Klein

UNI  
QLO

GAP

MARKS &  
SPENCER



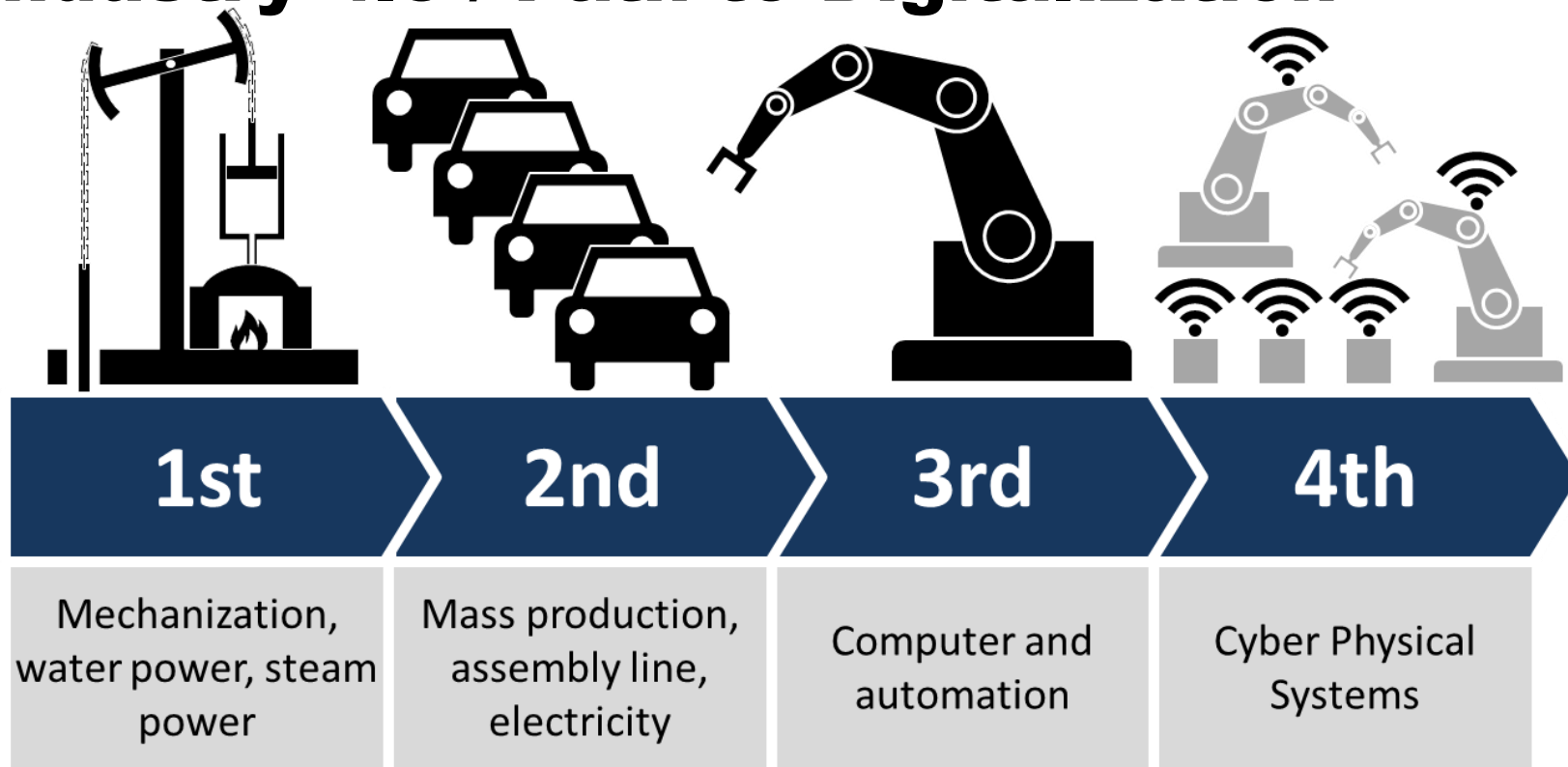
Triumph

MAIDENFORM

VICTORIA'S SECRET



# Industry 4.0 / Path to Digitalization



# Internet of Things

- **IoT >> IIoT >> Industry 4.0**
- **IIoT = IoT + Sensors + Actuators**
  - **Smart Homes/Grids/Cities**
- **Industry 4.0 = IIoT for Manufacturing**



# Industry 4.0 Design Principles

- **Interoperability:** The ability of machines, devices, sensors, and people to connect and communicate with each other
- **Information transparency:** The ability of information systems to create a virtual copy of the physical world by enriching digital plant models with sensor data
- **Technical assistance:**
  - The ability to support humans by aggregating and visualizing information – decision making
  - The ability to physically support humans by conducting a range of tasks that are unpleasant, too exhausting, or unsafe for their human co-workers
- **Decentralized decisions:** The ability for system to make decisions and to perform tasks as autonomously as possible



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# Big Data Platform



# Big Data Platform



Coincidentally, OpenStack Sahara easily provisions these Big Data platforms

# What have we done?

- OpenStack on Ceph deployed
  - Using SUSE OpenStack Cloud & SUSE Enterprise Storage
  - Lower environments for traditional applications migrated to OpenStack
  - VMware in the process of being retired
  - Orchestration via SUSE Manager (SaltStack)
- In process
  - Ruggedizing deployment
    - Neutron
    - Ceph – Remote Office Branch Office (ROBO) scenarios
  - Use autoyast to automatically deploy new nodes
  - Move production environment to OpenStack

# Next Steps?

- Industry 4.0
  - Move existing data collection/analysis into Hadoop/Spark
  - Auto scaling of Hadoop nodes w/Mistral
- Experiment with Agile Apps / DevOps
  - Containers: Kubernetes (part of SUSE OpenStack Cloud)
  - FaaS: OpenWhisk vs. AWS Lambda
- Cloud Management Platform – Hybrid Cloud?
- Infrastructure as Code
- Fully Software Defined Data Center (SDDC)





# THANK YOU