Accelerate digital transformation – OpenCloud powered by SUSE
Case in point – European Energy and Utilities major
Business Requirements

1. Enhanced Competitiveness & Profitability
   - Digital channel
   - Customer experience
   - Mobile IT
   - Real time data insights

2. Increased Productivity & Efficiencies
   - Cost optimization/reduction
   - Agile and scalable IT

3. Improved Control, Visibility and Security
   - Self service
   - 360-degree view and management of data and risk
Business outcomes aligned IT solution

GAIN EFFICIENCY
Innovate with cost savings
- IaaS
- SDS/SDN
- DBaaS

ENHANCE END USER EXP.
Integrate apps, data, & processes
- Platform services – Middleware, data virtualization
  - Analytics platform
  - IoT Platforms

INCREASE AGILITY
Hybrid/ Multi Cloud manage cloud
- Differentiated Hybrid/ Multi cloud management

DRIVE VELOCITY
Build and release modern applications
- PaaS
- CaaS
- Microservices
- Agile DevOps

DELIVER SMART OPERATIONS
Automate & manage IT
- Config Management
- Lifecycle Management
- IaaC
Understanding of requirements

**Application Development & Support**

- Develop and deliver cloud native applications for new requirements
- Architecture Transformation from Monolith to microservices. Migration of Legacy applications to PCF

**End to End Operational Services**

- PCF Operational Service
  - Set-up PCF on premise
  - Provide operational support services for PCF on AWS and on-premise
- Infrastructure Service
  - Set up infrastructure (IaaS) on-premise for PCF installation
  - Provide Operational services to AWS Infrastructure and On-premise Infrastructure
SELF SERVICE MARKET PLACE

Dev Users

Enterprise Users

Browse

Order

Compare

Track

Migrate

Scale

SELF SERVICE MARKET PLACE

IaaS

PCF

CaaSP

Dev Ops

Control Layer - Unified Orchestrator – Hybrid Cloud Manager (HCM)

Software Defined Application Services

On-premise

Extended DC

Hosted

ROBODO

Public Cloud

SD Security and compliance

SD Data Management

SUSE Cloud

Traditional

SDN

SDC

HCI

SD WAN

SDD

Pvt Cloud

SDDC

SDC

IaaS

PaaS

SaaS

BI-MODAL SERVICENXT

Distribution Site

Dashboard & Reporting

Automation

ZTD / ZTO

ITSM Layer

Service Integration & Assurance Management

Service Management

Service Availability & Event Management

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Multicloud Orchestrator

Control Layer - Unified Orchestrator – Hybrid Cloud Manager (HCM)

Software Defined Application Services

On-premise

Extended DC

Hosted

ROBODO

Public Cloud

SD Security and compliance

SD Data Management

Traditional

Software Defined Datacenter

SDS  SDDC  SDN  HCI

SD WAN

Pvt Cloud

SDDC

IaaS  PaaS  SaaS

SDN

HCI
Application services

Dev Users
- Browse
- Compare
- Order
- Track
- Migrate
- Scale

Enterprise Users
- Browse
- Compare
- Order
- Track
- Migrate
- Scale

SELF SERVICE MARKET PLACE
- IaaS
- PCF
- CaaS
- Dev Ops

Control Layer - Unified Orchestrator – Hybrid Cloud Manager (HCM)

Software Defined Application Services

On-premise
- SD Security and compliance
- SD Data Management

Extended DC
- SD WAN
- SDD
- SDM

Hosted
- Pvt Cloud
- Traditional
- SDCC

ROBODO
- SDDC
- HCI

Public Cloud
- IaaS
- PaaS
- SaaS

BI-MODAL SERVICES NXT
- Distribution Site
- Dashboard & Reporting
- Automation
- ZTD / ZTO
- ITSM Layer
- Service Integration & Assurance Management
- Service Management
- Service Availability & Event Management

Self Service Marketplace
Enhancing End user experience

Dev Users
- Browse
- Compare
- Order
- Track
- Migrate
- Scale

Enterprise Users

SELF SERVICE MARKET PLACE
- IaaS
- PCF
- CaaS
- Dev Ops

Control Layer - Unified Orchestrator – Hybrid Cloud Manager (HCM)

Software Defined Application Services
- On-premise
- Extended DC
- Hosted
- ROBODO
- Public Cloud

SD Security and compliance

SD Data Management
- SUSE Cloud
  - Traditional
    - CEPH
    - SDC
    - SDN
    - HCI
  - SD WAN
  - SDD
  - Pvt Cloud
  - Traditional
  - SDDC
  - HCI
  - IaaS
  - PaaS
  - SaaS

BI-MODAL SERVICES NEXT
- Distribution Site
- Dashboard & Reporting
- Automation
- ZTD / ZTO
- ITSM Layer
- Service Integration & Assurance Management
- Service Management
- Service Availability & Event Management
Simplified and sustained IT

Dev Users

Enterprise Users

Browse

Compare

Order

Track

Migrate

Scale

SELF SERVICE MARKET PLACE

IaaS

PCF

CaaS

Dev Ops

BI-MODAL SERVICENXT

Distribution Site

Dashboard & Reporting

Automation

ZTD / ZTO

ITSM Layer

Service Integration & Assurance Management

Service Management

Service Availability & Event Management

Control Layer - Unified Orchestrator – Hybrid Cloud Manager (HCM)

Software Defined Application Services

On-premise

Extended DC

Hosted

ROBODO

Public Cloud

SD Security and compliance

SD Data Management

SUSE Cloud

Traditional

SDC

CEPH

SDN

HCI

SD WAN

Pvt Cloud

SDDC

IaaS

PaaS

SaaS

SD SDD

Traditional

SDDC

HCI
Approach for operationalization
# Operations framework

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AppAnywhere – Phase 2
AppAnywhere - Container Ecosystem

Container Ecosystem

- Platform as a Service
- Service mesh
- Orchestration / Management
- Log monitoring
- Monitoring
- App monitoring
- Infra monitoring
- Log Management
- Stateful Applications
- AI/ML
- Image registry & management
- Developer tools
- Reliability Engineering
- Identity Management

- Data Fabric
- DMaaS
- Chaos Engineering
- CI/CD
- Big data
- Networking
- Security
- Rack scale Design
- Load balancer
- DNS
- Ansible
- Chef
- Terraform

- SuSE CaaSP
- Pivotal Container Service / PCF
- Wipro OpenApp
Scope of the engagement is as follows:

**Setup Container as a Service (CaaS) Platform**

Integrate the CaaS platform with the eco-system in the current environment i.e.

- Integrate with SUSE Enterprise CEPH Storage for the Container Persistent storage capability
- Integrate with LDAP
- Services & Routes for Container communication
AppAnywhere – Solution stack

- **Active - Active Controller Cluster**
  - **OpenStack Controller 1**
    - Controller Services
    - Controller Services
  - **OpenStack Controller 2**
    - Controller Services
    - Controller Services

- **DC1**
  - **OpenStack Admin Node**
  - **Nova Compute - SLES**
    - Availability Zone 1
    - Pivotal Cloud Foundry (DC1 and DC2)

- **DC2**
  - **Nova Compute - SLES**
    - Availability Zone 2
  - **Nova Compute - SLES**
    - Availability Zone 3
    - SUSE CaaS (DC2)
AppAnywhere architecture – Powered by SUSE CaaSP

- Orchestration (Kubernetes)
- Services (e.g. Deployment Dashboard)
- Persistent Storage (SUSE CEPH)
- Networking
- Registry
- Security
- Logging
- Automation (Salt + Cloud Init) Configuration & Management
- Container Runtime & Packaging
- SUSE MicroOS (Container Host OS)
- SUSE Cloud
Containerization approach

**Setup & Validate**
- Install the latest version of SUSE CaaS
- Validate to ensure it is running

**Define Container**
- Create file with the required commands which has inputs on what goes on in the environment inside container
- Create app specific files on the same folder

**Validate Application**
- Run automated regression suite
- Build, Ship & Run the app

**Deploy the application**
- Run the containerized application on
- On SUSE OpenStack Cloud

**Setup Stacks**
- A group of inter-related services that share dependencies and can be orchestrated & scaled together are stacks
- Add new services to container compose file & re-deploy

**Scale Application**
- Create container, compose file for pulling image built earlier, define replicas, restart logic if container fails etc
- Setup Cluster, Deploy the app on the cluster
Summarizing

With Wipro & SUSE, Client has...

- got a head start to IT transformation by adopting fully validated and engineered SDx solution
  - *Increase productivity and efficiencies*

- been able to pilot business aligned offerings customized to their env.
  - Deliver digital – *Enhance competitiveness*

- been able to leverage *early access to Wipro’s engineering initiatives*
  - Aligned to client’s road map
Thank you for your time