

Distributed WorkLoad Generator for Performance/Load Testing Using Emerging Technologies

JMeter as a Service

Vishnu Murty Karrotu

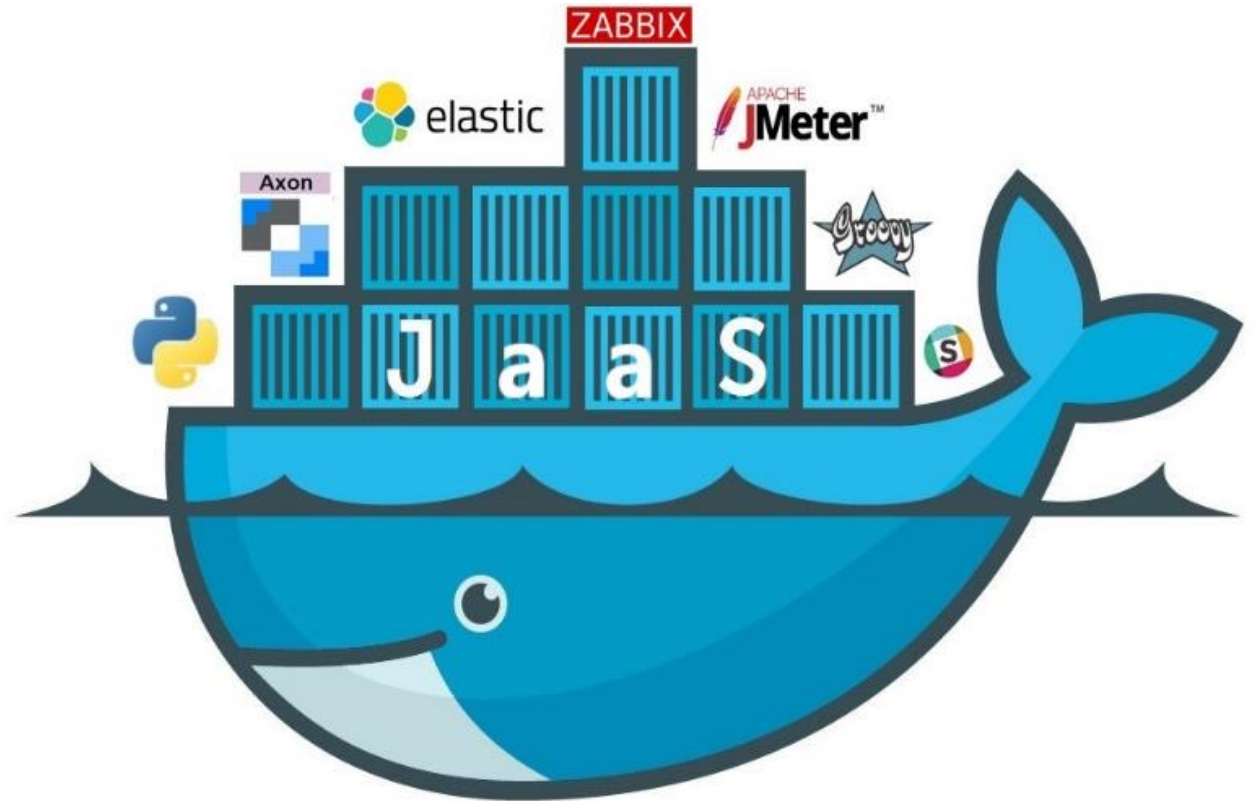
Presenter

- Automation Technologist at Dell Technologies - Infrastructure Solutions Group, is a Masters in Software Systems from BITS Pilani with a total experience of 15+ years in Leading Product Validation and Automation Development efforts. The domains Vishnu has worked on include Server, Storage and System Management Software. Responsible of Delivering Zeno - Continuous Test Automation framework, JAAS(JMeter As A Service) and ICEMAN(Information Collector Monitor Analyzer) Tools.
- 9 Patents Granted by USPTO and 128 Disclosures recognized by Dell Patent Committee.
- Presented Technical papers in Pycon(Python developer forum), STeP-IN, Targeting Quality 2019 and Quality Connect Conferences.



Agenda

- Server Validation Overview
- What is System Test?
- Challenges and Solution
- Technology Stack
- Solution Overview
- What Next?



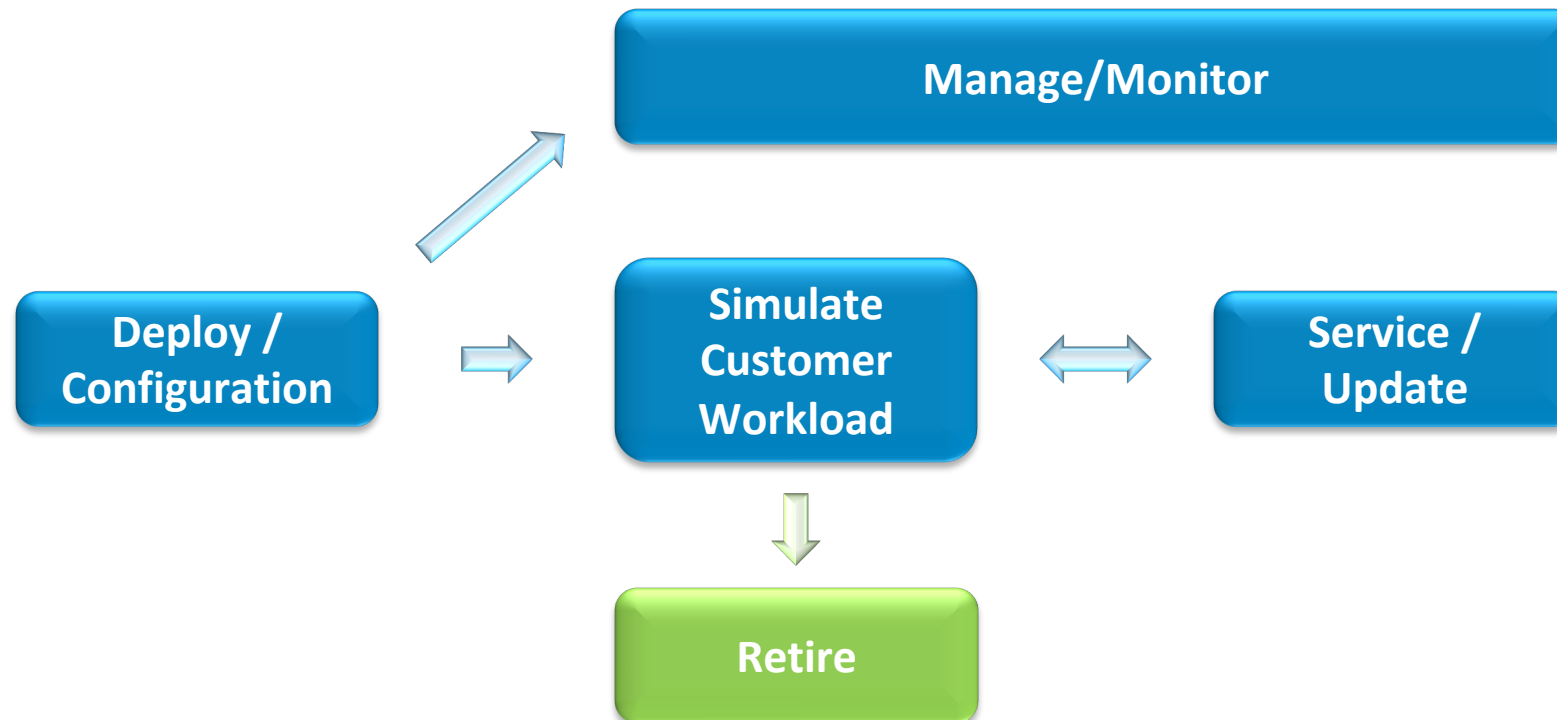
Server Validation Overview

Validate PowerEdge
Solutions



What is System Test?

- Customer-focused validation of Server solutions
- Simulates real world usage with typical applications on Servers



Challenges with Current Load Generation Solutions

- Needs to be installed in local Lab on Proprietary hardware.
- Expensive, Complex, Licensing
- Requires highly specialized performance engineers to Develop Scripts
- Data Analytics and Correlation

Proposed Solution

- JaaS – JMeter as a Service : on-premise cloud.
 - JMeter, Docker, Elasticsearch-Logstash-Kibana(ELK) Stack
 - Axon – UI
 - DellEMC Hardware as Load Generators
- Massively Scalable across Regions/Labs
- Build or incorporate to support new workloads
- Automate and integrate via REST API
- Advanced Dashboards and Visualizations.

Key Technologies

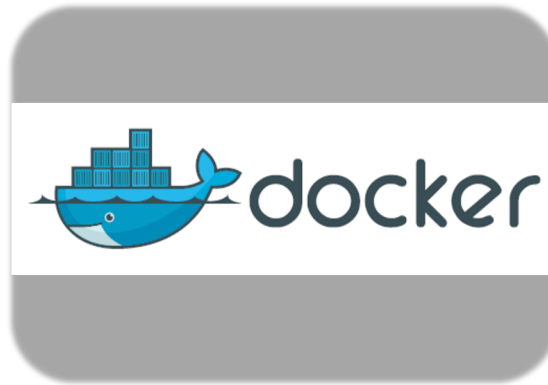


Supports many types of
load tests

Platform-independent
tool

Full multithreading
framework

Open Source Software

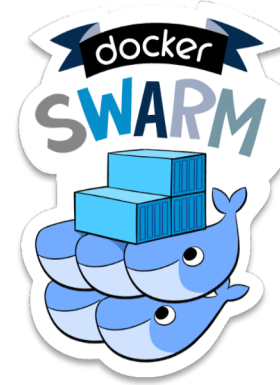


Portable

Disposable

Resource-efficient

Open Source



Cluster management and
Orchestration

Cluster of Docker nodes

Load balancing

RESTful API



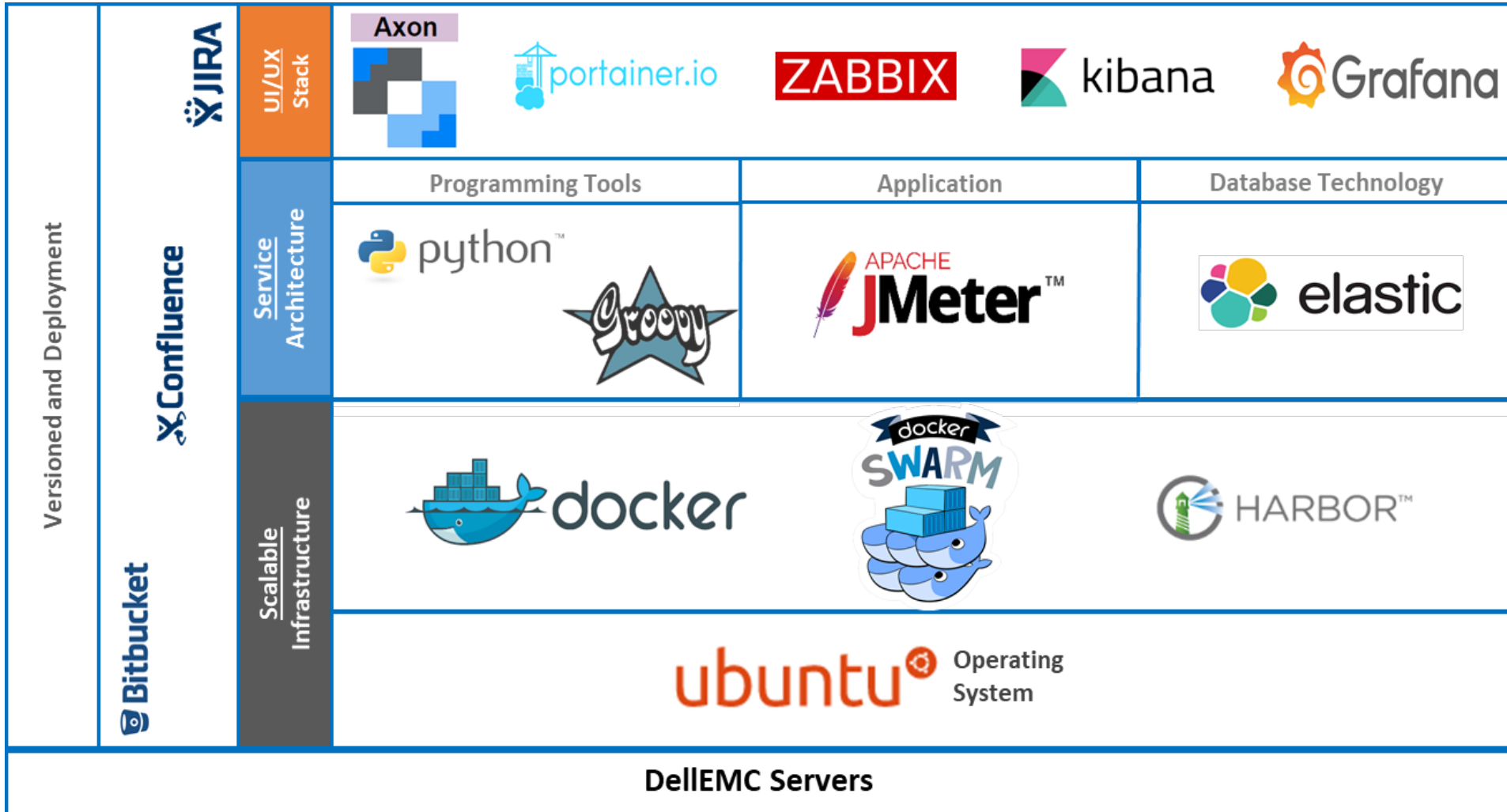
Flexible and Powerful

Distributed real-time
Search and Analytics
Engine

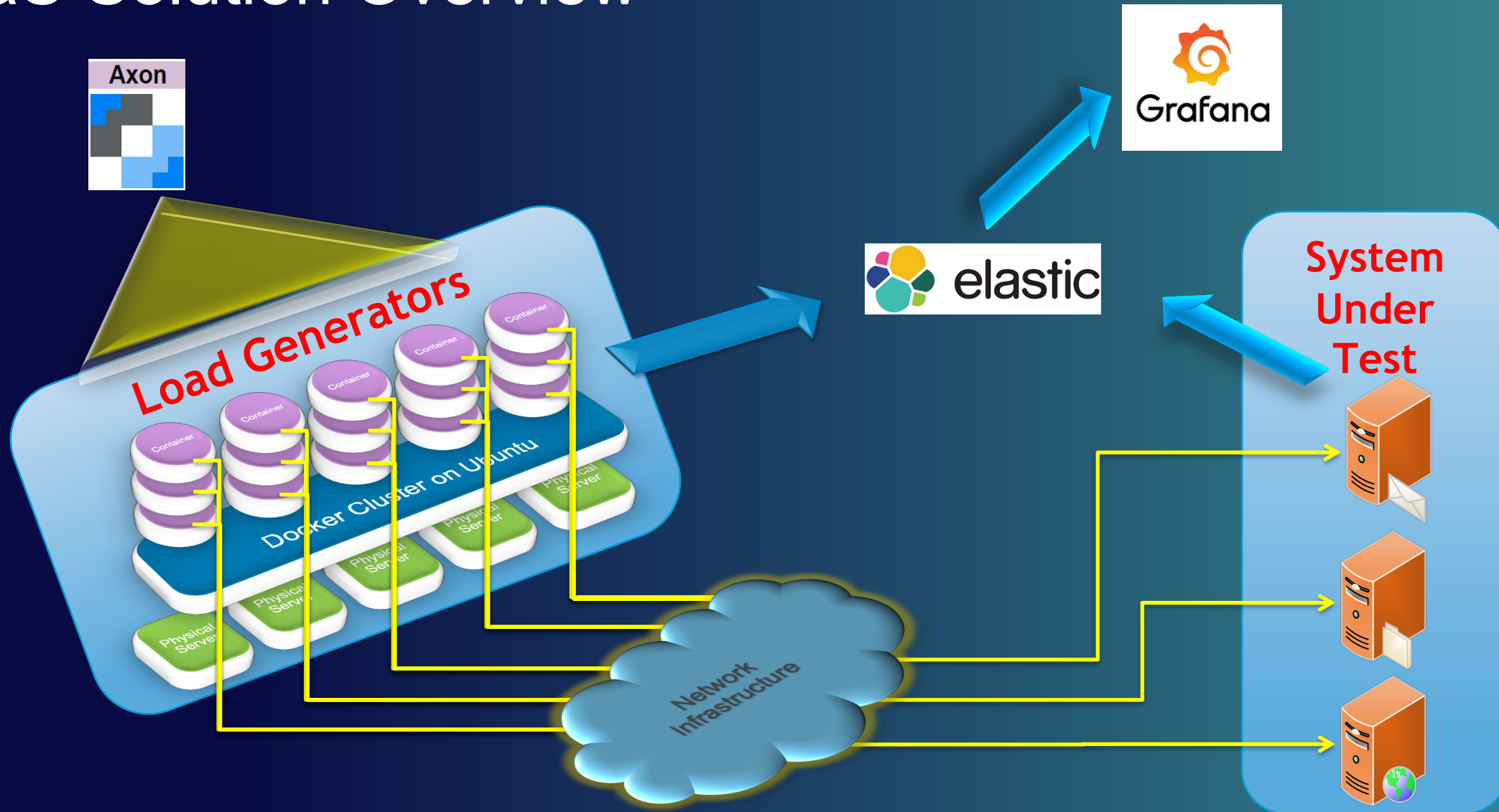
Schema free & RESTful
API

Open Source Software

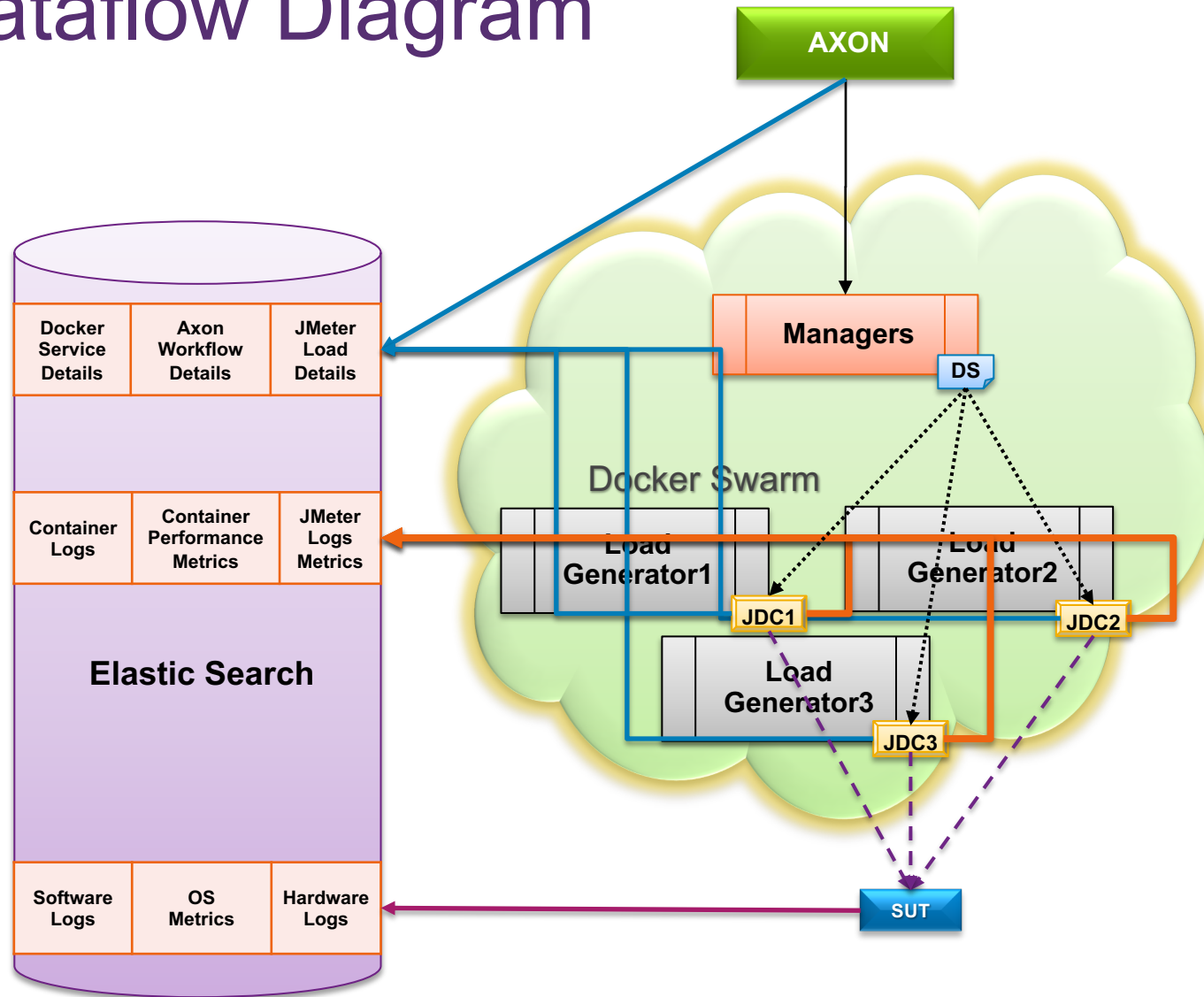
JaaS - Technology Stack



JaaS Solution Overview

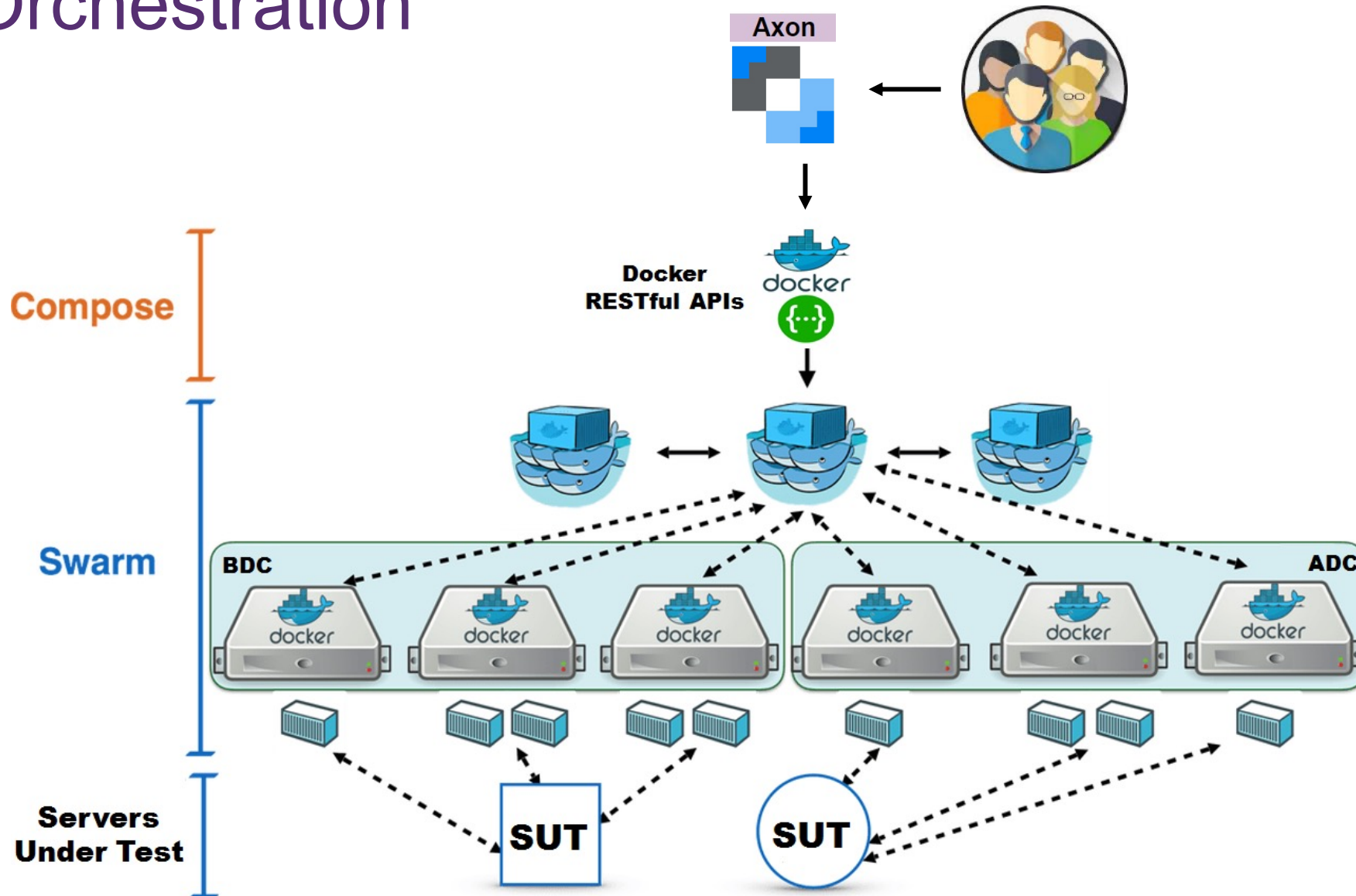


JaaS Dataflow Diagram



DS : Docker Service
JDC : JMeter Docker Container
SUT : System Under Test

JaaS Orchestration



Current Supported Workloads



Web Workloads



File Workloads



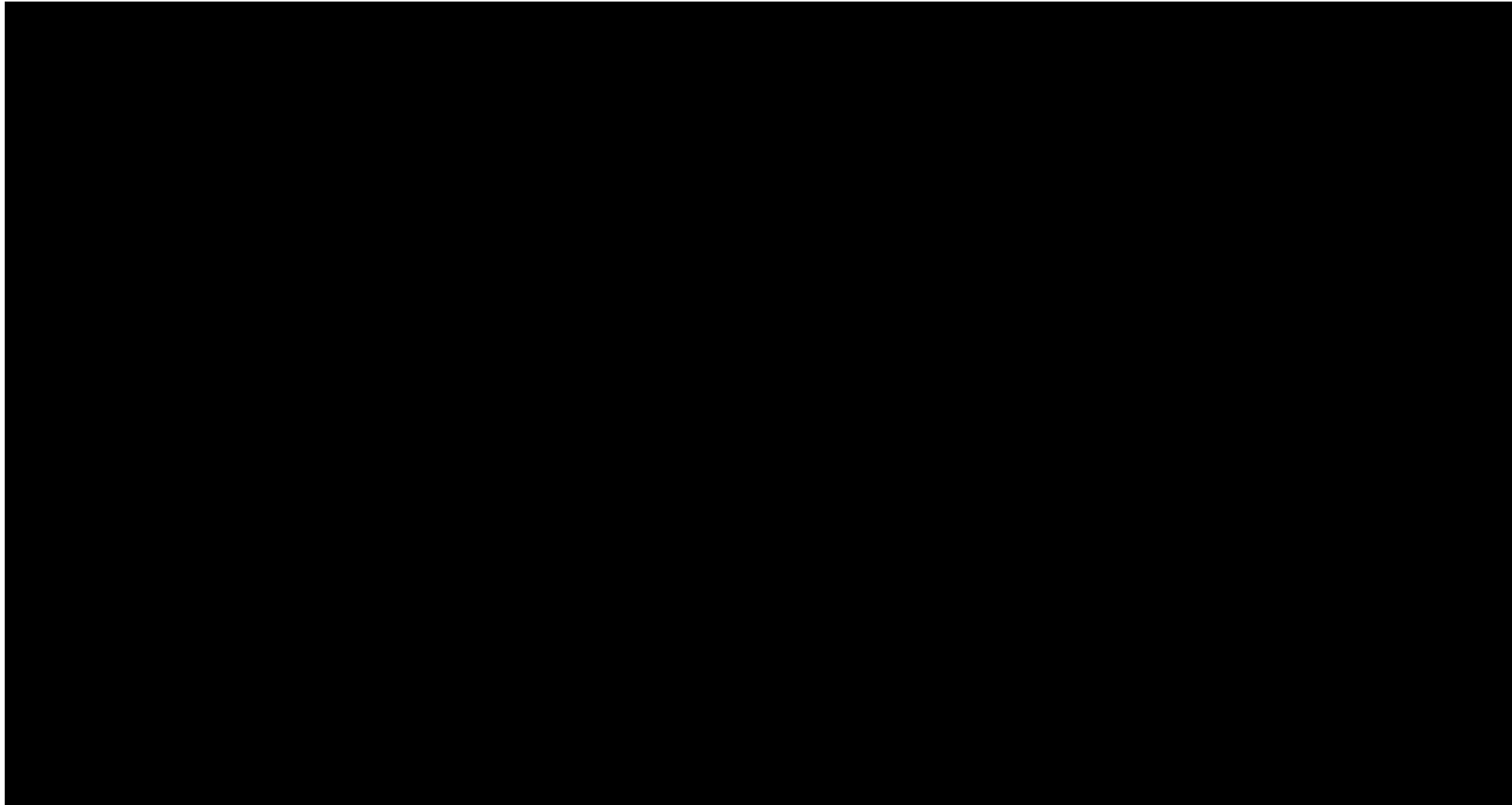
Mail Workloads



ORACLE

Database Workloads

Demo



What Next?



VERSION CONTROL
TECHNOLOGY

JAAS@DELL.COM



TensorFlow



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