Aria Operations

EXPERIENCE DAYS

Bengt Grønås and Kate Rychlic

Cloud Management Specialists

torsdag 30. mars 2023

Introduction

BENGT GRØNÅS

- Senior Solutions Engineer
- 8 years in VMware
- Based in Oslo, Norway
- Covers Nordics and Baltics
- Often a Lab Captain at Vmware Explore / VMworld
- Music production, long travels; hiking, motorcycle, chess
- @bgronas

Kate Rychlik

Senior MultiCloud Management Specialist Solution Architect

Aka. Kasia, Katia, etc

2 years in VMware

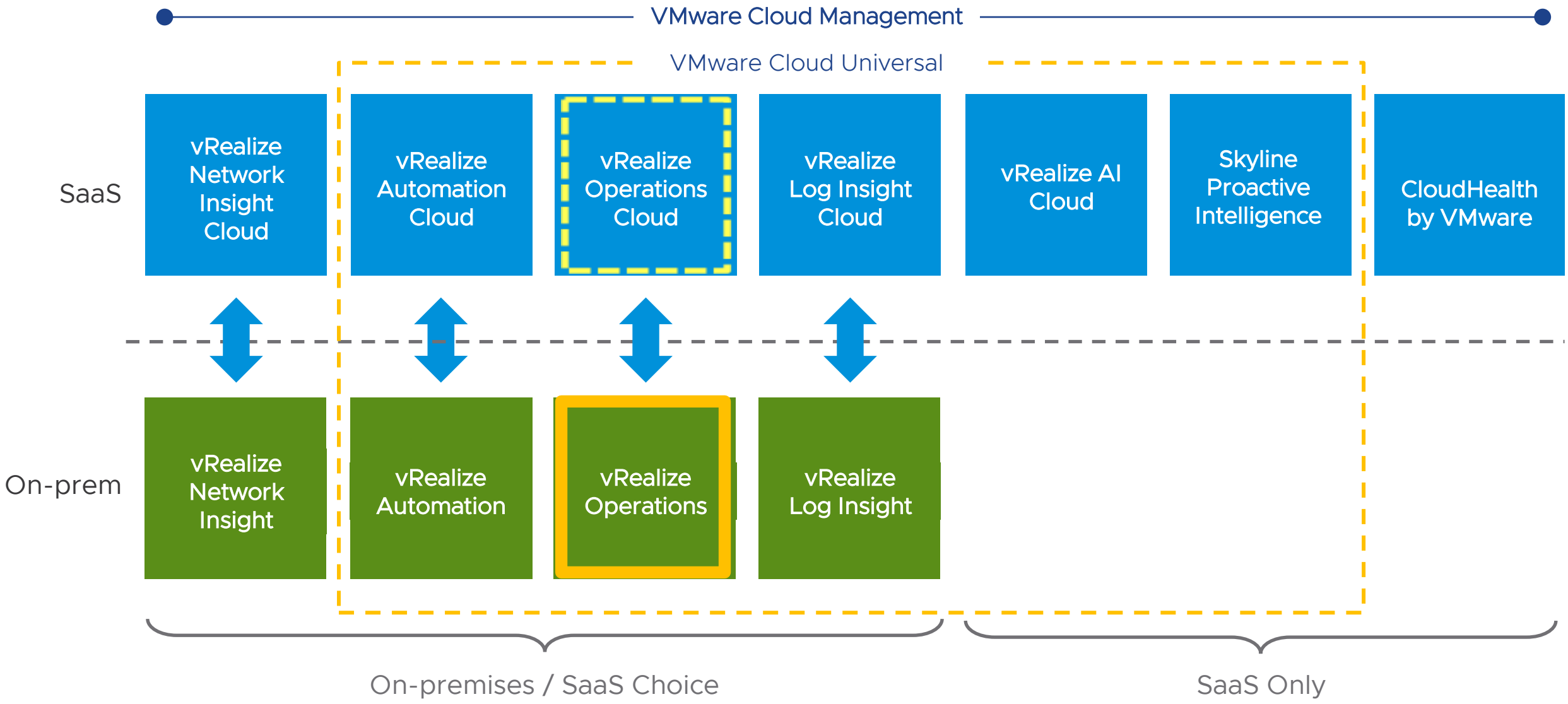
Based in Amsterdam, Netherland

Covers Benelux

Race cars, DIY, skiing, cooking & baking

@krychlik

VMware Cloud Management: vRealize, Skyline, CloudHealth

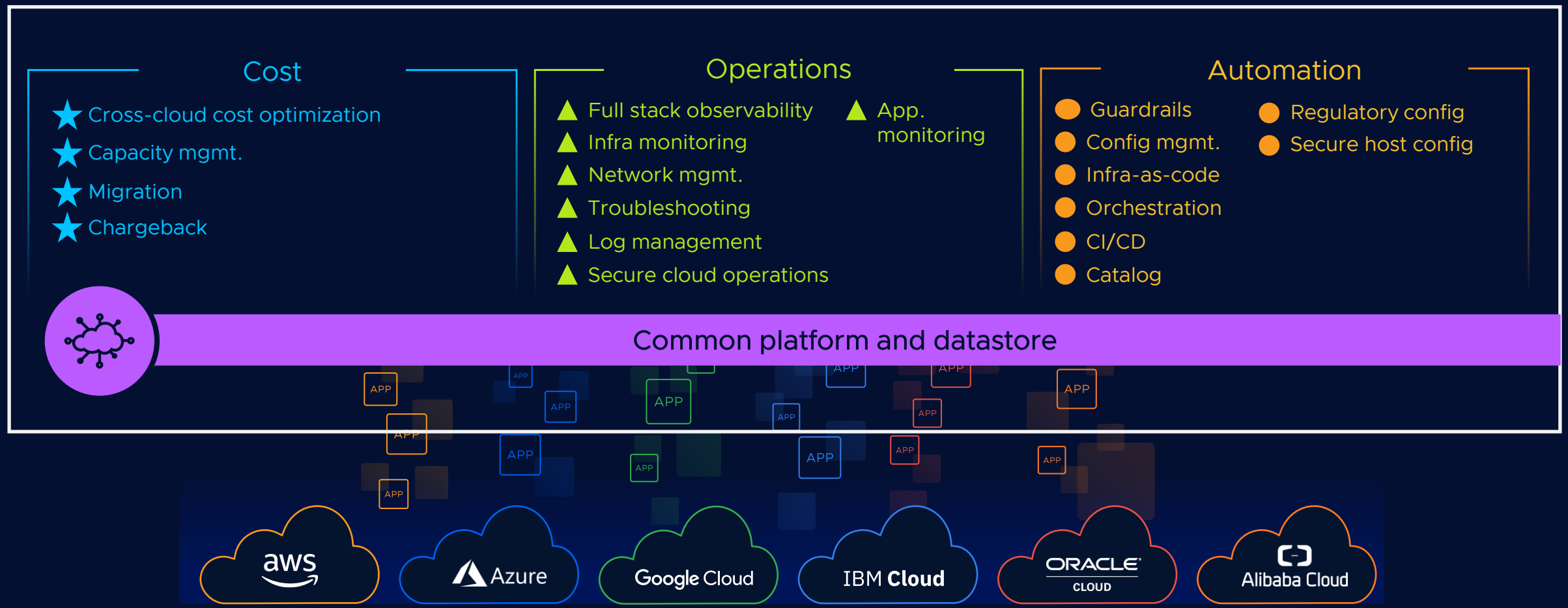


Cloud Management New Family Brand: VMware Aria

Old Name	New Name
Automation	
vRealize Automation / Cloud	VMware Aria Automation
VMware Cloud Assembly	VMware Aria Automation Assembler
VMware Service Broker	VMware Aria Automation Consumption
VMware Code Stream	VMware Aria Automation Pipelines
VMware Cloud Templates	VMware Aria Automation Templates
vRealize Orchestrator	VMware Aria Automation Orchestrator
vRealize Automation SaltStack Config	VMware Aria Automation Config
vRealize Automation SaltStack SecOps	VMware Aria Automation for Secure Hosts
CloudHealth Secure State	VMware Aria Automation for Secure Clouds
Operations	
vRealize Operations / Cloud	VMware Aria Operations
vRealize Log Insight / Cloud	VMware Aria Operations for Logs
vRealize Network Insight / Cloud	VMware Aria Operations for Networks
Tanzu Observability by Wavefront	VMware Aria Operations for Applications
vRealize True Visibility Suite	VMware Aria Operations for Integrations
Cost	
CloudHealth	VMware Aria Cost powered by CloudHealth

Old Name	New Name
Suites	
vRealize Cloud Universal	VMware Aria Universal Suite
vRealize Suite	VMware Aria Suite
vCloud Suite	VMware vCloud Suite
CloudHealth by VMware Suite	Discontinued Name
CloudHealth Partner Platform	Discontinued - see Aria Cost powered by CH
Platform & Cross-Cloud Services	
Project Ensemble	VMware Aria Hub
New	VMware Aria Graph
vRealize Migration Manager	VMware Aria Migration
vRealize Automation Cloud Guardrails	VMware Aria Guardrails
Project Ensemble Insights	VMware Aria Business Insights
Other	
Skyline	VMware Skyline
vRealize Suite Lifecycle Manager	VMware Aria Suite Lifecycle
vRealize Cloud Subscription Manager	VMware Aria Hub Subscription
vRealize AI Cloud	Functionality part of Aria Hub; name discontinued

New approach: integrate to deliver customer outcomes anchored by near real-time map of apps and cloud



Why Aria Operations?

#1 in Operations Management

Powered by AI

Why Aria Operations Cloud?

Benefits of cloud service for cloud alignment

Powered by AI

Aria Operations / Aria Operations Cloud

Key Benefits

Accelerate service & innovation delivery	Reduce time to market and automate infrastructure delivery
Improve agility	No hardware and no maintenance
Increase Flexibility	Reduced risk and CAPEX to OPEX
Scale rapidly	Dynamic and reliable with VMware SRE support
Future Ready	Manage traditional and cloud-native workloads across private, hybrid and multi-cloud environments

Use Cases Unlocked by vRealize Operations

Hyperconverged Infrastructure Operations

Consistent VMware Cloud Operations

App-aware Operations

Integrated Compliance

Unified Public Cloud Monitoring

Initial Recommendations / Quick win

- **Recommendations**. Focus efforts on critical & recent.
- Declutter the environment with **Reclamation**
- VM **RightSizing** –Group Bronze Class VM's. Schedule rightsizing
- Common used dashboards – Good **OOTB** or custom dashboards
- Capacity Planning – Time Remaining. Set up policies on 1 particular cluster for capacity planning.
- Troubleshooting Proactive – Workbench
- Dashboard Folder – List your favs
- Custom Groups for application types etc.
- Adjust cost drivers to improve accuracy. Import env cost reports - Reports
- Showback and Sustainability (Waste Management) Reports to Senior Management + ESG Team
- Config/Compliance Management Reports: NTP, DNS, Power Management
- Integrate Storage Arrays from 3rd Parties – Management Packs
- Capture legacy O/S's using configuration dashboards and reports
- Outbound alert settings
- Change the default email payload to something more user friendly. See - Custom Aria Ops Content
- Change the Home landing page to a more useable dashboard e.g vSphere Inventory
- Skyline Data MP – Feed Security Vulnerabilities to Aria Ops. Send as report to SecOps
- Enable a compliance pack. vSphere Security Guide vs the 100's line excel document = good start!

VMware Cloud Management

Multi-Cloud Franchise

- Cloud Platform
- Cloud Services
- Cloud Management

Cloud Management

- ARIA/vRealize
- Cloud Health
- Skyline

Aria Cloud Management

Products (on-prem & SaaS)

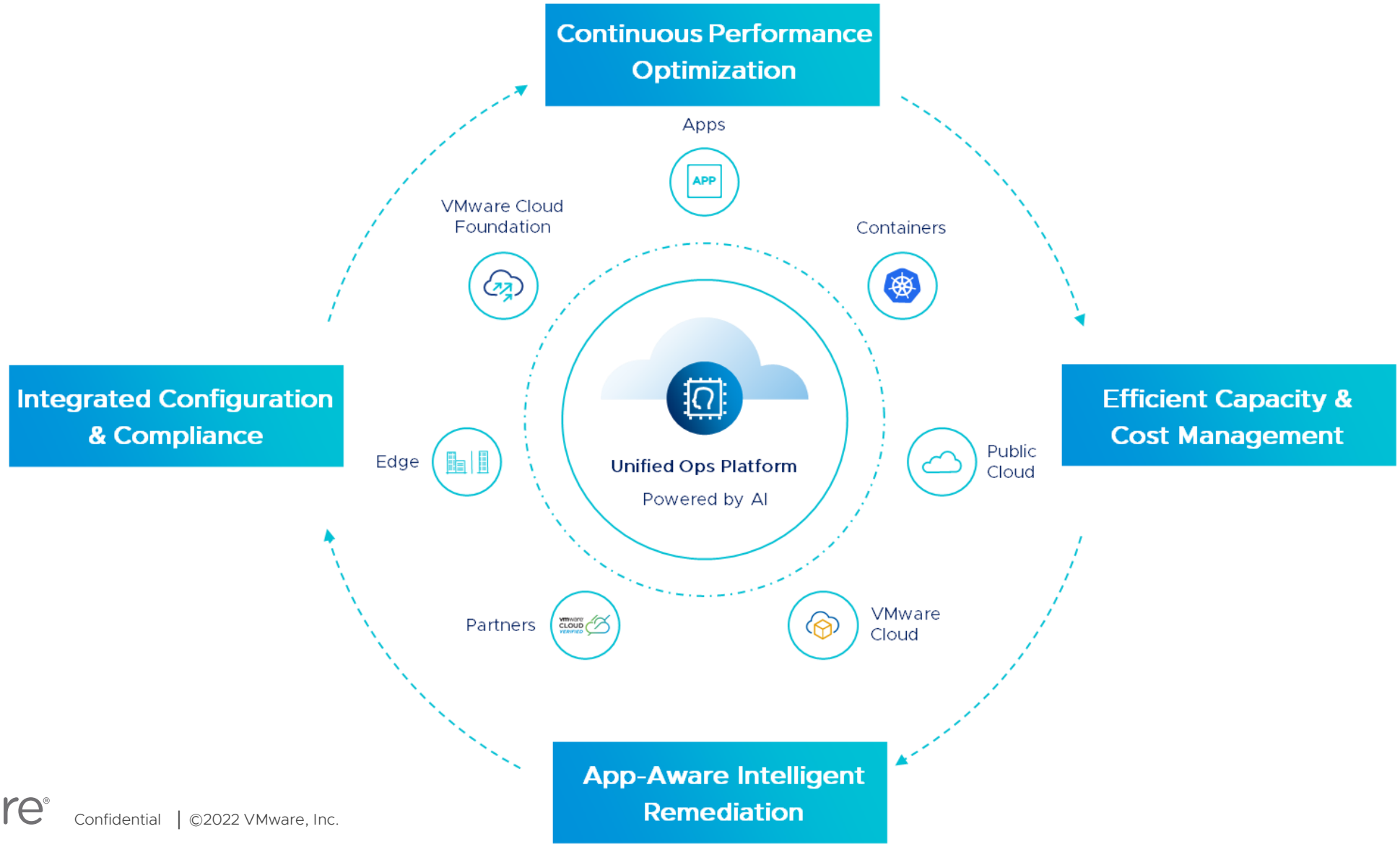
Aria Automation & Aria Automation Cloud	**Aria Operations & Aria Operations Cloud**	vRealize Log Insight & vRealize Log Insight Cloud	vRealize Network Insight & vRealize Network Insight Cloud	vRealize True Visibility

Pricing & Packaging

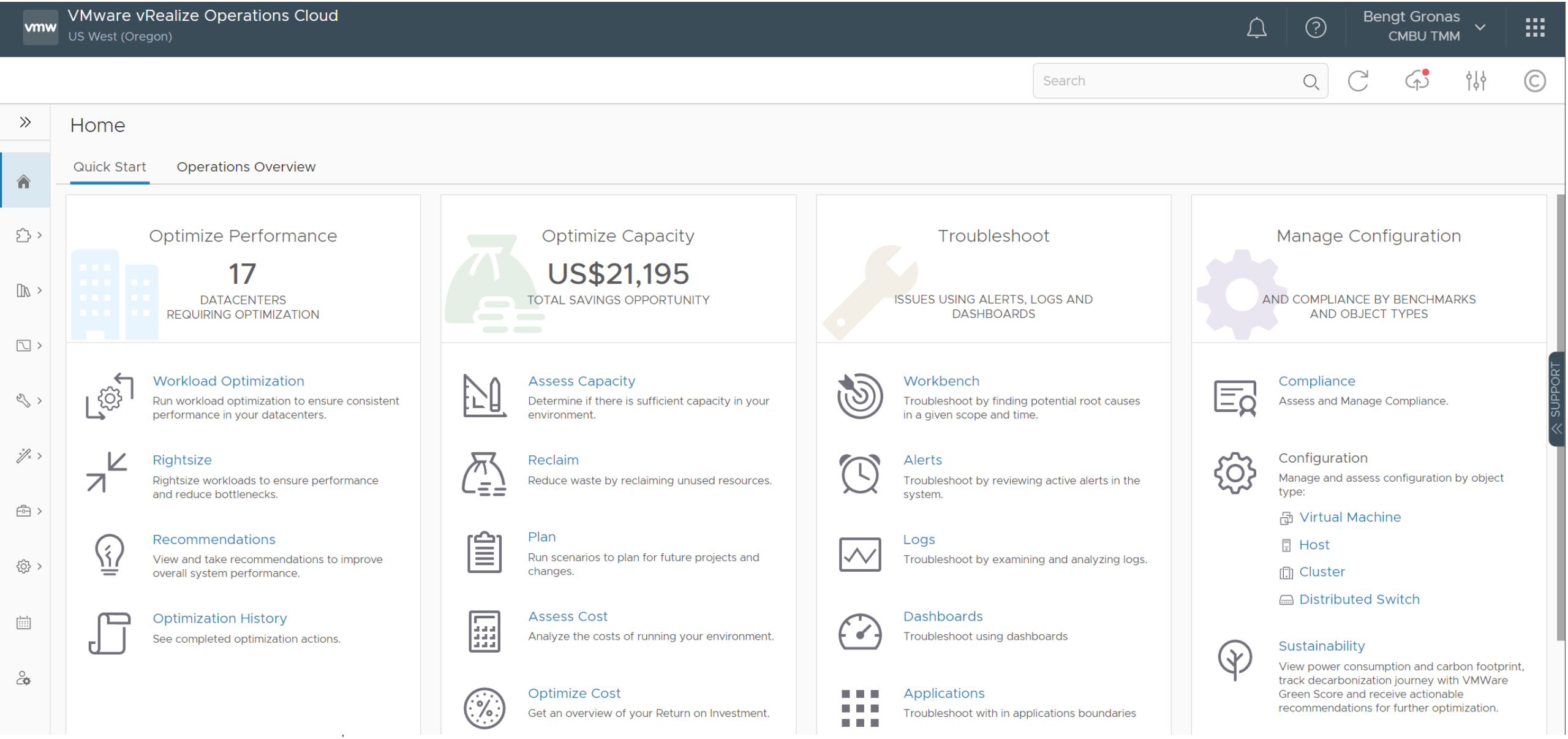
A La Carte	**vRealize Suite** + vCloud Suite w/vRealize Lifecycle Manager	**vRealize Cloud** + vCloud Suite Subscription + VCF Subscription vRealize AI

Self-Driving Operations with vRealize Operations

Powered by AI, from apps to infra, across VMware Cloud and multiple public clouds, on-premises or SaaS



Feature Parity: vRealize Operations / vRealize Operations Cloud



Continuous Performance Optimization

Can I achieve automated resolution of VM performance issues?

How do I prevent VMs from getting deployed to clusters that are full?

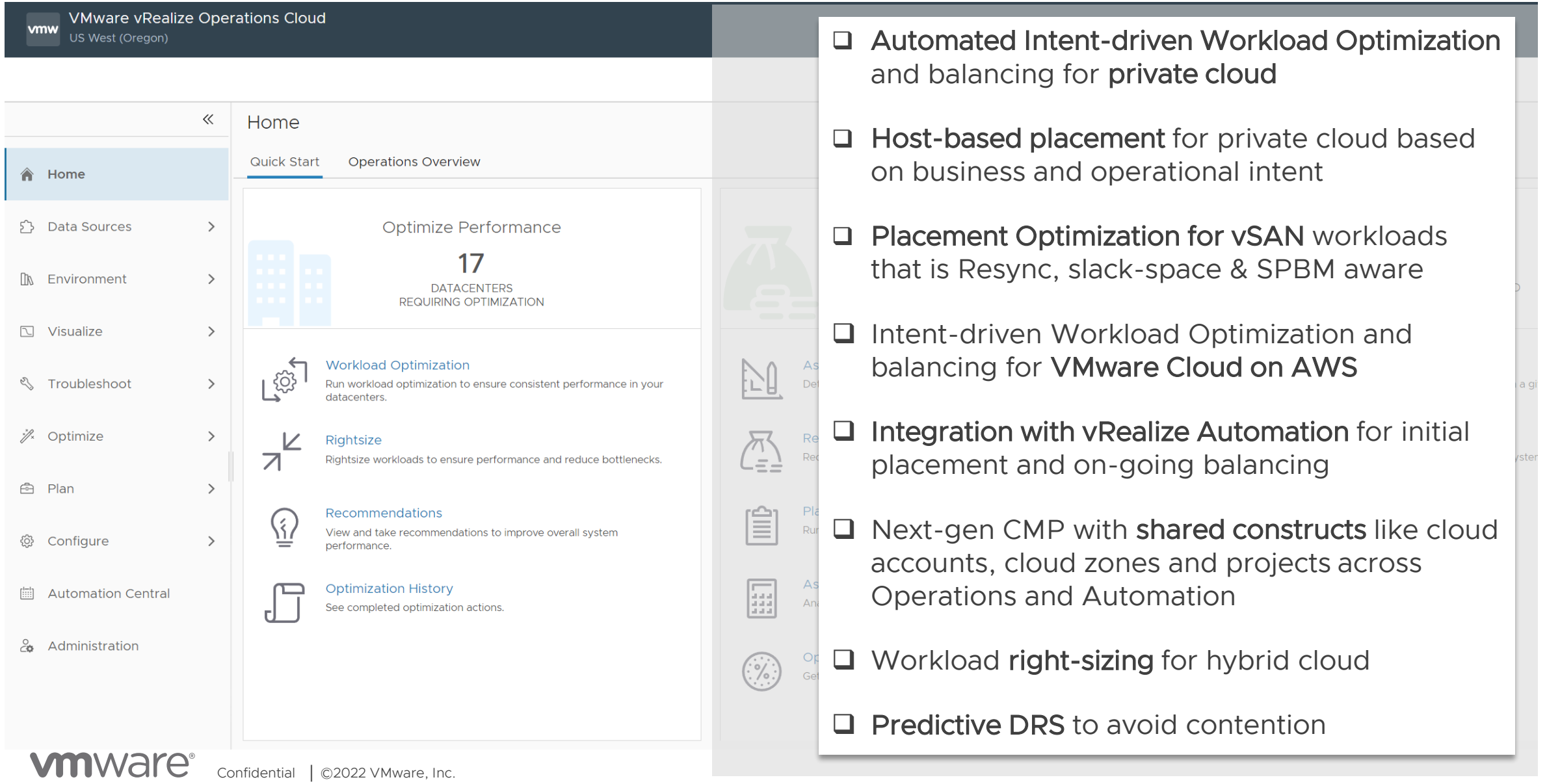
How can I make sure clusters don't get filled beyond target?

Can I learn to predict & avoid contention?

Can I limit VM movement to manage licensing costs?

Can I consolidate and reuse for a new project?

Intent-Driven Continuous Performance Optimization



- ❑ **Automated Intent-driven Workload Optimization** and balancing for **private cloud**
- ❑ **Host-based placement** for private cloud based on business and operational intent
- ❑ **Placement Optimization for vSAN** workloads that is Resync, slack-space & SPBM aware
- ❑ Intent-driven Workload Optimization and balancing for **VMware Cloud on AWS**
- ❑ **Integration with vRealize Automation** for initial placement and on-going balancing
- ❑ Next-gen CMP with **shared constructs** like cloud accounts, cloud zones and projects across Operations and Automation
- ❑ Workload **right-sizing** for hybrid cloud
- ❑ **Predictive DRS** to avoid contention

Optimize & Plan Capacity across Private, Hybrid and Public Clouds

"What is my total capacity and how much is used/remaining"

"How much capacity can I reclaim? Cost?"

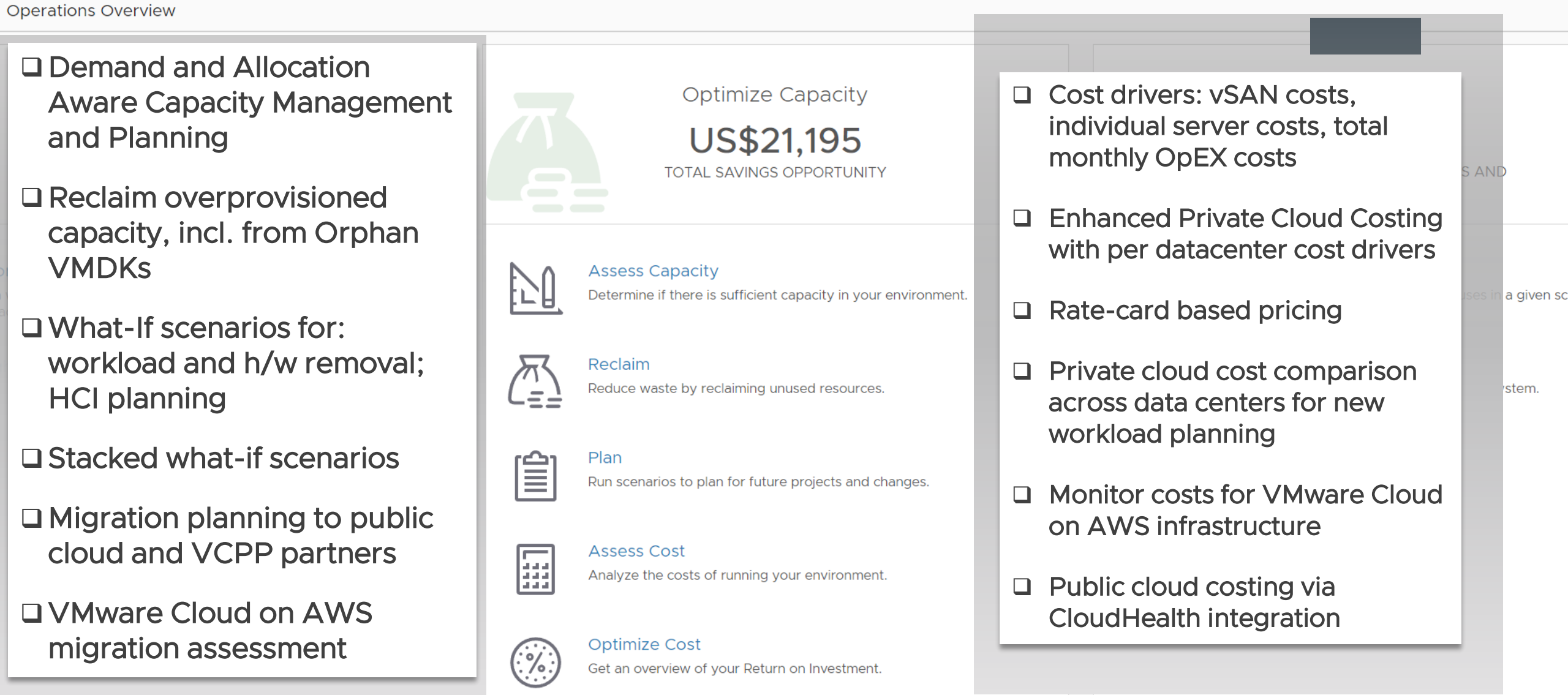
"When will I run out and how much more is needed? Cost?"

"What is the cost of running VMs on private vs hybrid or public cloud?"

"What are the costs and usage in private/ public clouds?"

Efficient Capacity and Cost Management

- ❑ Demand and Allocation Aware Capacity Management and Planning
- ❑ Reclaim overprovisioned capacity, incl. from Orphan VMDKs
- ❑ What-If scenarios for: workload and h/w removal; HCI planning
- ❑ Stacked what-if scenarios
- ❑ Migration planning to public cloud and VCPP partners
- ❑ VMware Cloud on AWS migration assessment

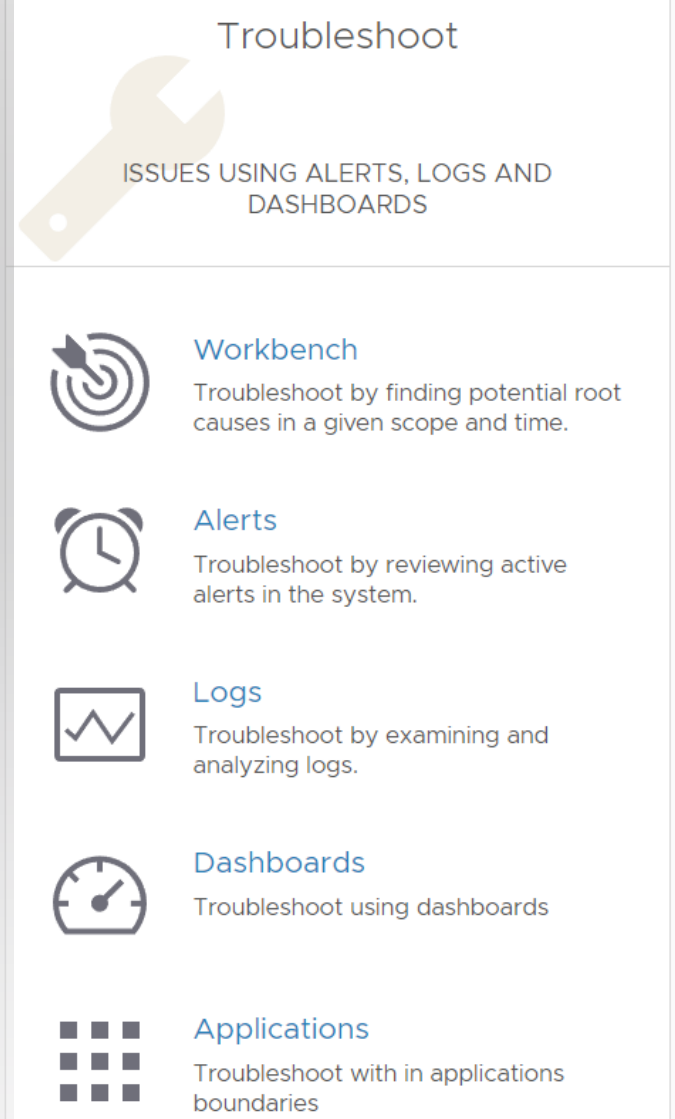


- ❑ Cost drivers: vSAN costs, individual server costs, total monthly OpEX costs
- ❑ Enhanced Private Cloud Costing with per datacenter cost drivers
- ❑ Rate-card based pricing
- ❑ Private cloud cost comparison across data centers for new workload planning
- ❑ Monitor costs for VMware Cloud on AWS infrastructure
- ❑ Public cloud costing via CloudHealth integration

Intelligent Remediation

Intelligent Remediation

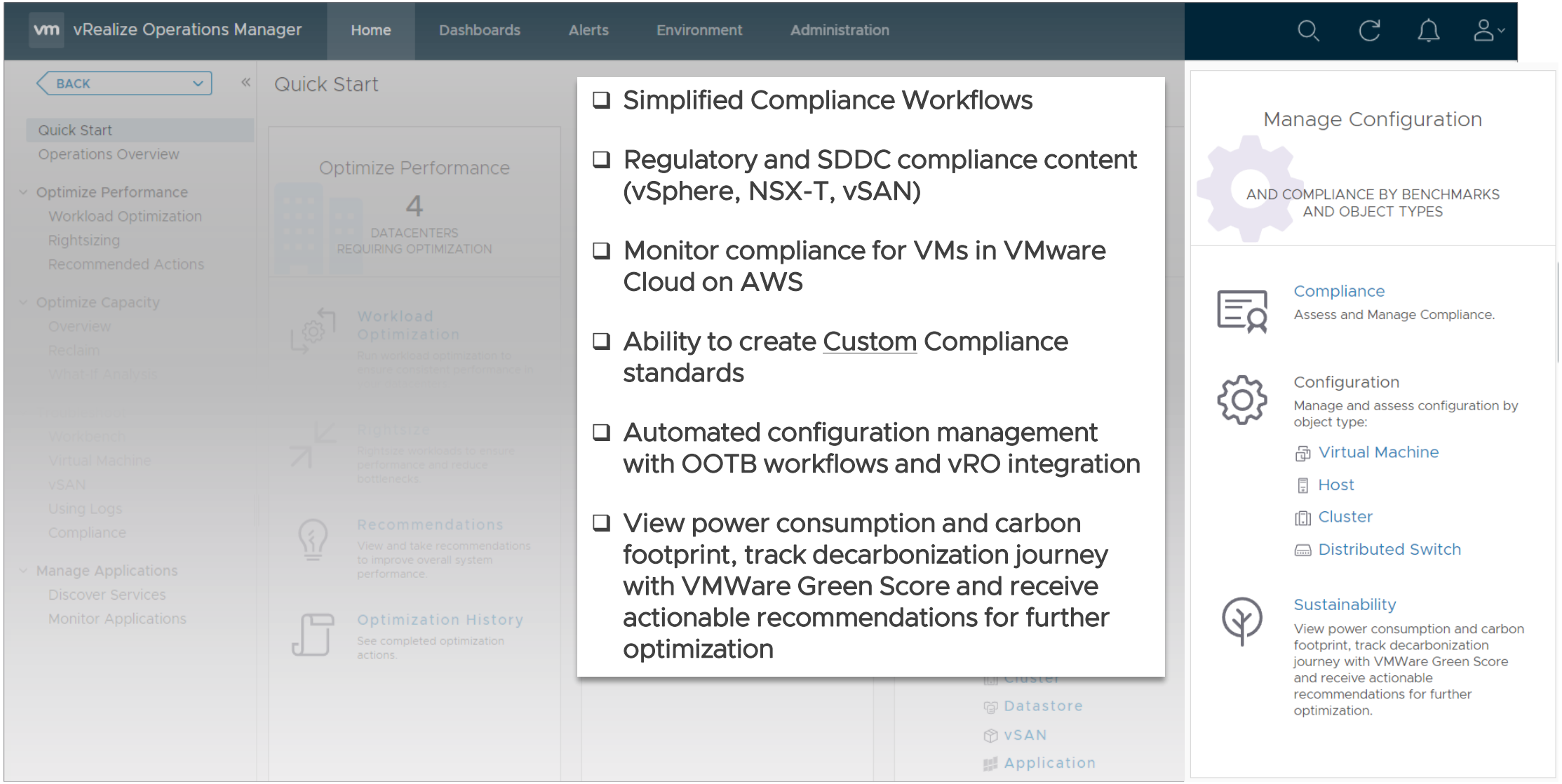
- ❑ Troubleshooting Workbench for expediated root cause analysis
- ❑ Kubernetes monitoring including vSphere 7 with Tanzu discovery, monitoring, troubleshooting, capacity management; support for Openshift, EKS, AKS, GKE, and downstream “Kubernetes anywhere”
- ❑ Line of sight from apps to Infra, including (cloud-exclusive) APM tool integration and near real-time monitoring
- ❑ Simplified alert creation, dashboard mgmt, consistent navigation & summary pages
- ❑ Metric Correlation (including logs-as-metrics and log/metric correlation) and Super Metrics workflows for faster troubleshooting
- ❑ OOB application monitoring (20 total) via Telegraf agents and custom script execution
- ❑ Native Service Discovery with support for top-n processes and one-time script execution



- ❑ AWS, Azure, and GCP monitoring, including capacity management for AWS
- ❑ vRealize Network Insight integration (including app discovery)
- ❑ vRealize Log Insight integration
- ❑ Service Now integration
- ❑ Slack integration
- ❑ Enhancement to management packs – SDDC, Cloud Pod, Container/PKS , vRO, NSX-T, VxRail, SNMP etc
- ❑ Enhanced insights via Skyline

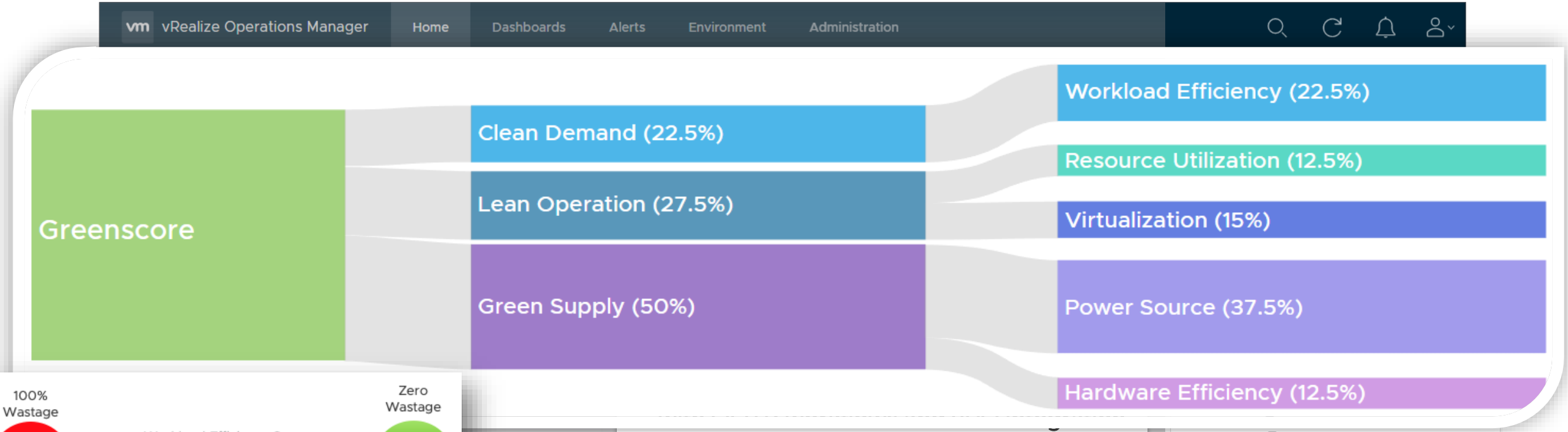
Integrated Compliance, Configuration, and Sustainability

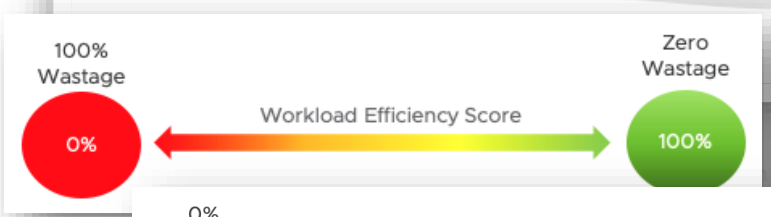
Integrated Compliance & Configuration

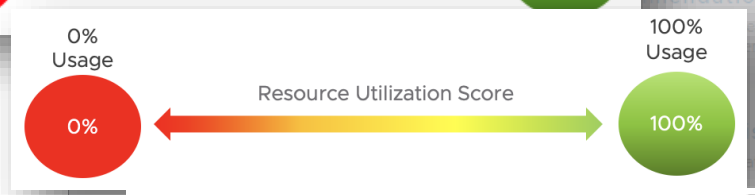


SUSTAINABILITY

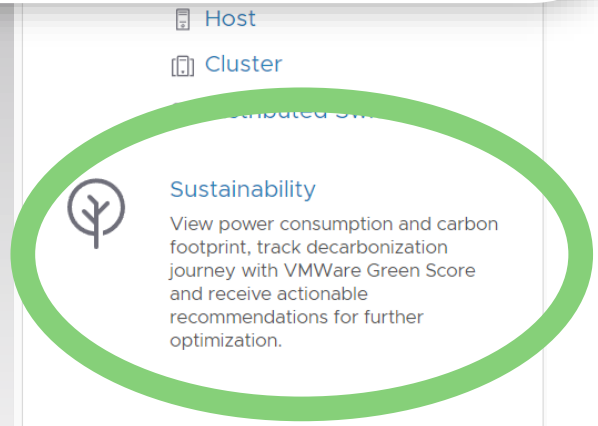
Vmware Green Score







- View power consumption and carbon footprint, track decarbonization journey with VMWare Green Score and receive actionable recommendations for further optimization

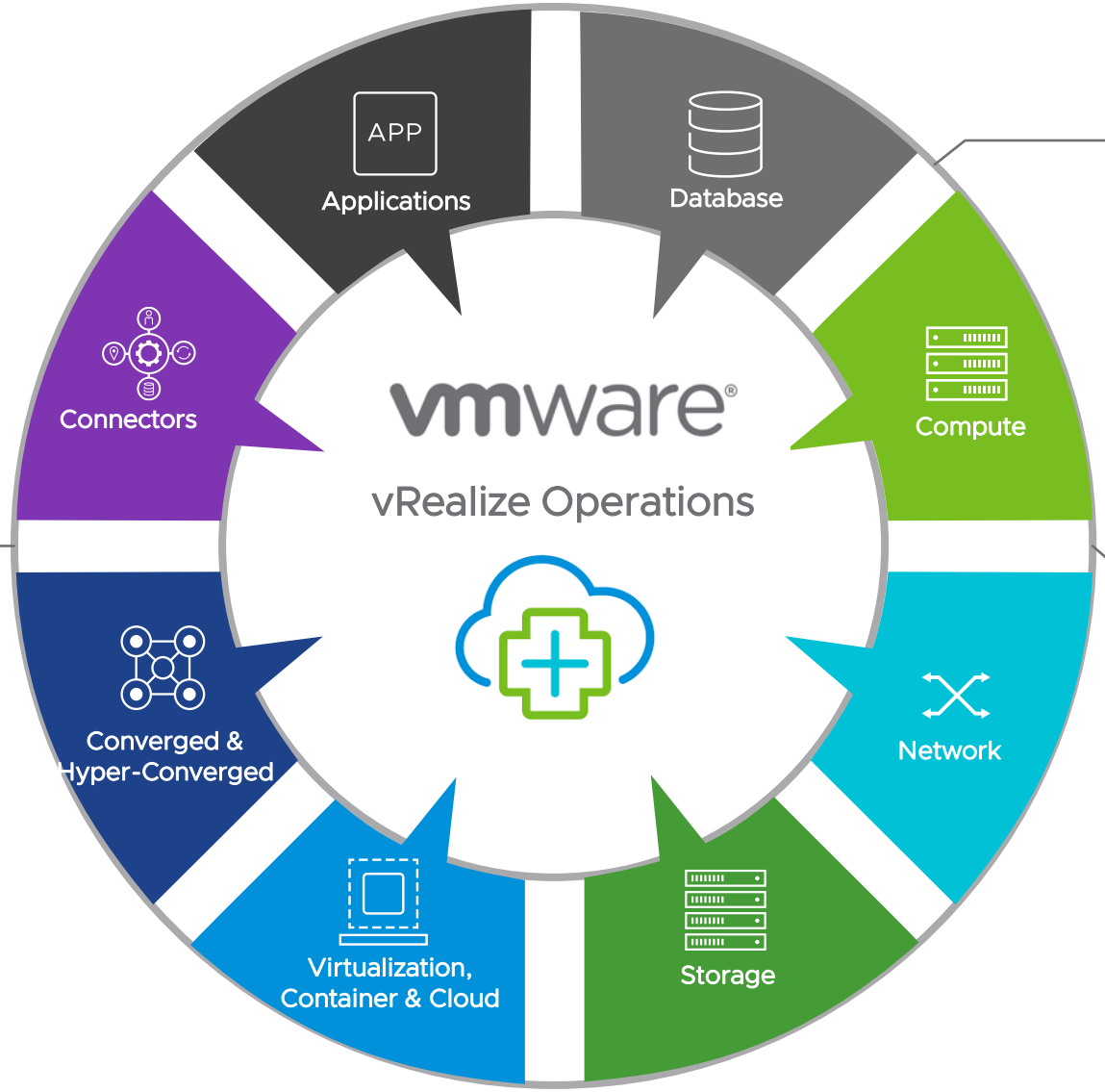


https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references#smartphones

https://blogs.vmware.com/management/2022/11/vmware-green-score-in-aria-operations-formerly-vrealize-operations.html

vRealize True Visibility Suite

Attain data depth & context in a single view, with relationship-aware monitoring integrations



End-to-end visibility

Provide value through a unified view, integrating data from your datacenter infrastructure and applications to create a cohesive monitoring strategy.

Collaborative Management

With the ability to aggregate operations data from the leading server, storage, compute and database applications, vRealize becomes single source of truth for multiple IT teams.

Relationship-Aware Monitoring

Quickly assess the state-of-affairs and gain a deeper understanding of how one piece of the stack might be affecting another.

Extending vRealize Operations

Adding the vRealize True Visibility Suite

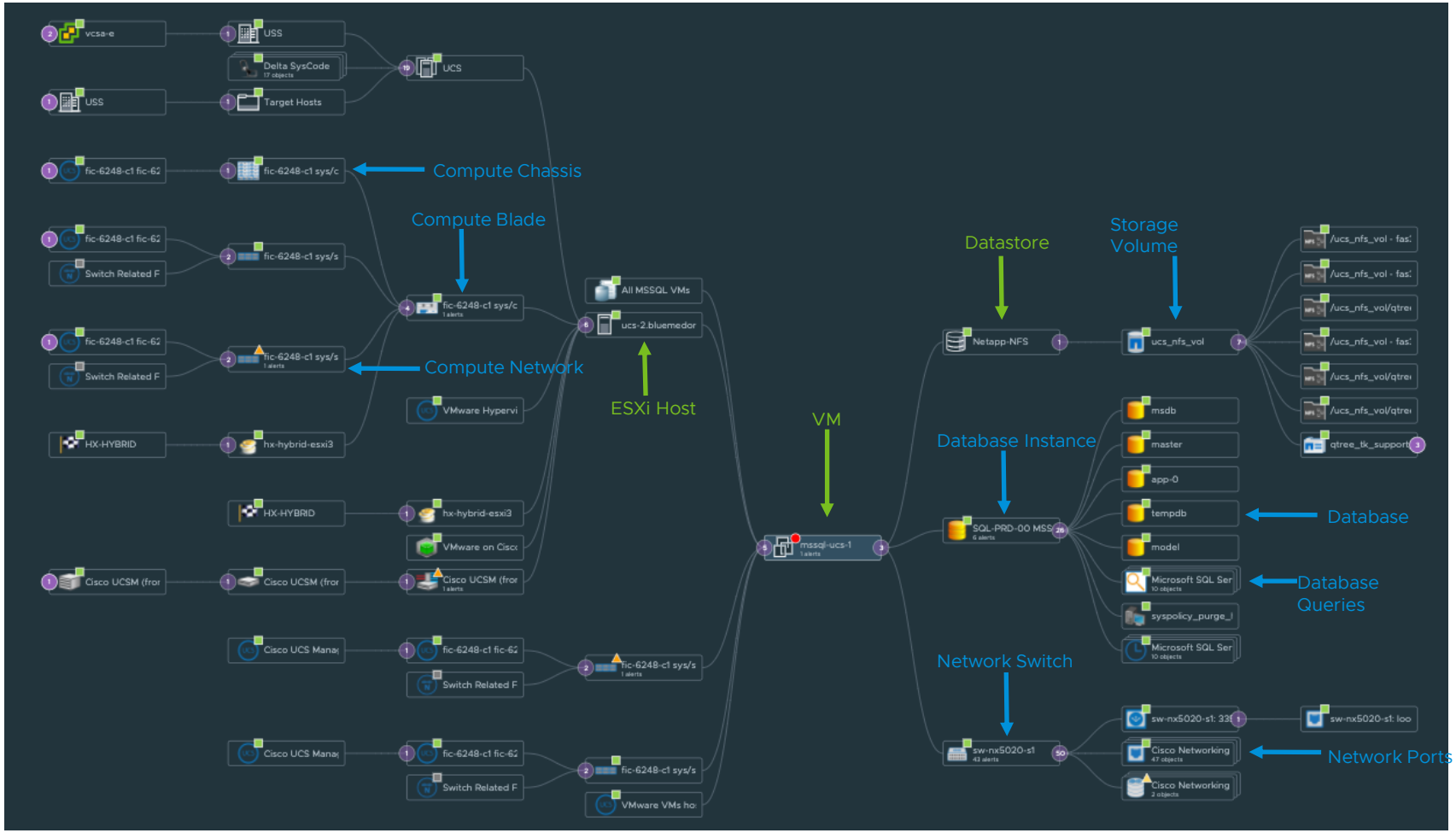
vRealize Operations

- Application-aware monitoring across SDDC and multiple clouds
- Cloud planning, capacity optimization and compliance
- Automated and proactive workloads management

vRealize True Visibility Suite

- Deeper root cause analysis
- Wider collaboration for hybrid cloud management
- Full stack resource dependency mapping

VMware vRealize® True Visibility™ Suite



Open source telegraf support

Self-Service data collection supporting 200+ applications

sudo dnf -y install telegraf

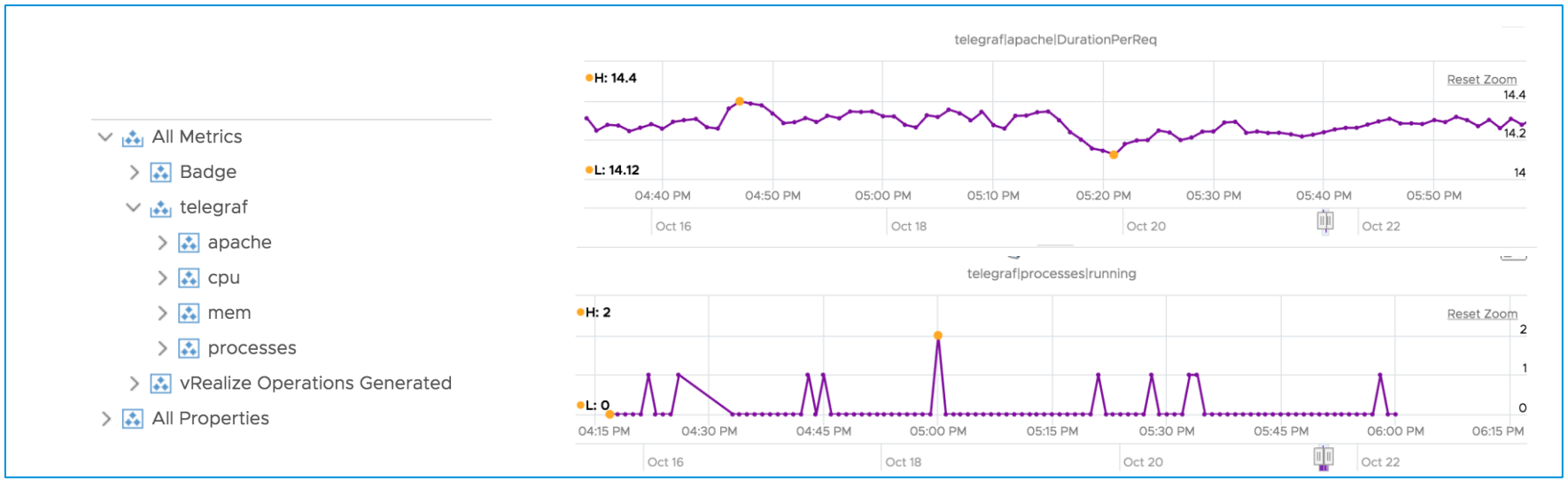
Input Plugins

Cloud proxy

```
# Read metrics about cpu
[[inputs.cpu]]

# Read metrics about mem
[[inputs.mem]]

[[inputs.tomcat]]
[[inputs.apache]]
[[inputs.processes]]
```

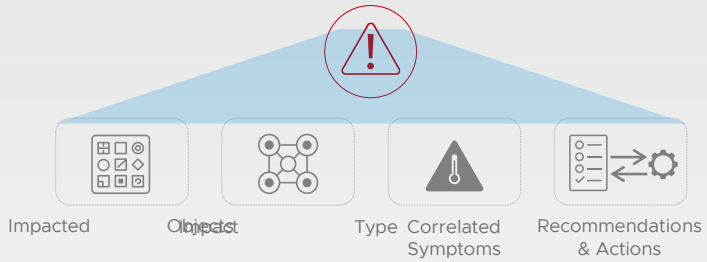


Enhanced visibility with predictive alerts, dashboard and reports

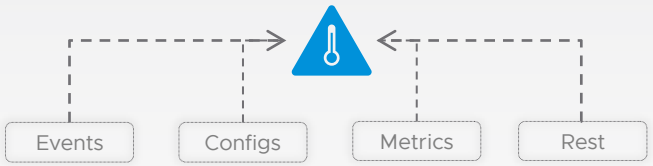
Increase monitoring efficiency with key operational tools

ALERTS

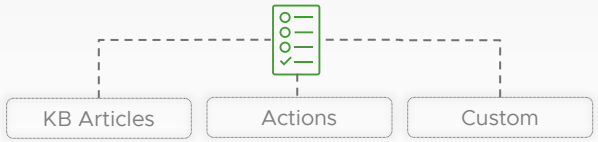
Alert Definitions



Symptoms



Recommendations



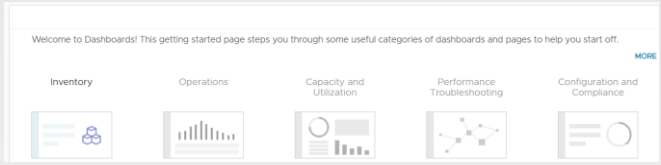
Actions

Curated Python Actions

Curated/Custom vRO Workflows

DASHBOARDS

Dashboards



Helps visualize data through out of box and custom dashboards

Widgets & Views

40+ Interactive Widgets & 100+ customized views with data transformation capabilities

Dashboard Sharing

Dashboard sharing with internal & external teams

vRealize Operations Sample Exchange

Explore and download community created content for custom dashboard samples as well as workflows that car Orchestrator Management Pack.
Log in to sample exchange using your MyVMware credentials to submit requests for new samples, contribute yo propose a sample as a solution for open requests.

Community curated dashboard samples through GitHub

REPORTS

Report Templates

50+ Out of box report templates covering multiple use cases

Inventory | Configuration | Compliance
Capacity | Utilization | Performance
Optimization | Other Solutions | Custom

PDF | CSV

Data Transformation

Multiple views for excel like capabilities to transform data and present them within report templates

Report Sharing

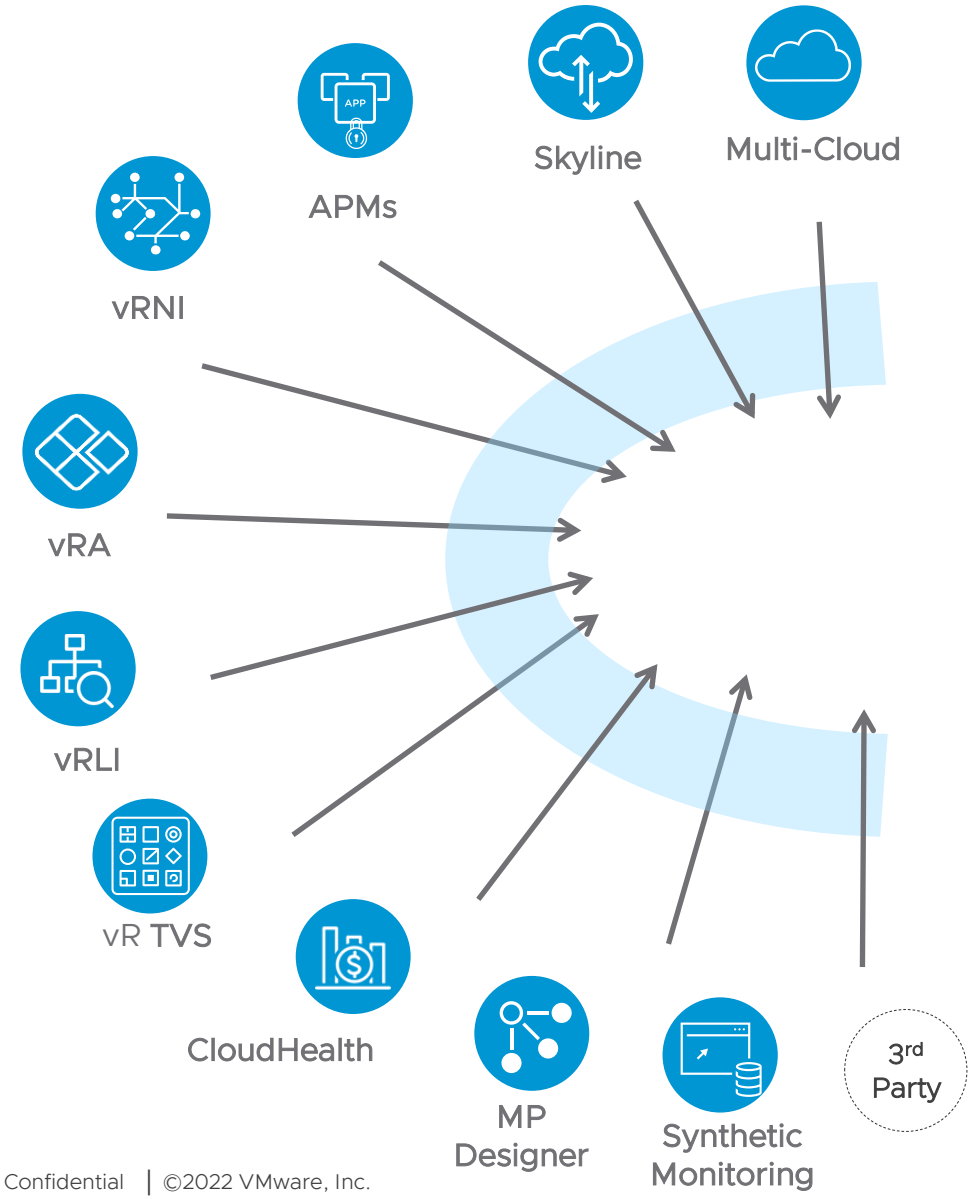
Report Generation

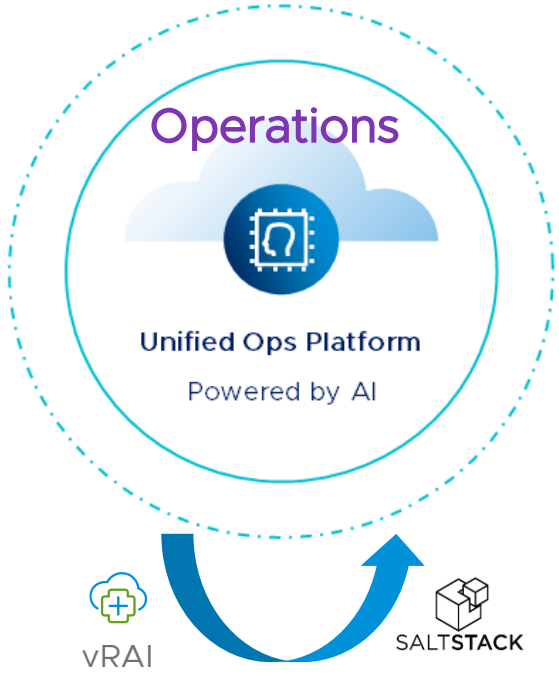
Manual
Scheduled
Rest API

Report Sharing

Email
Network Share
Rest API

Connecting to Aria Operations

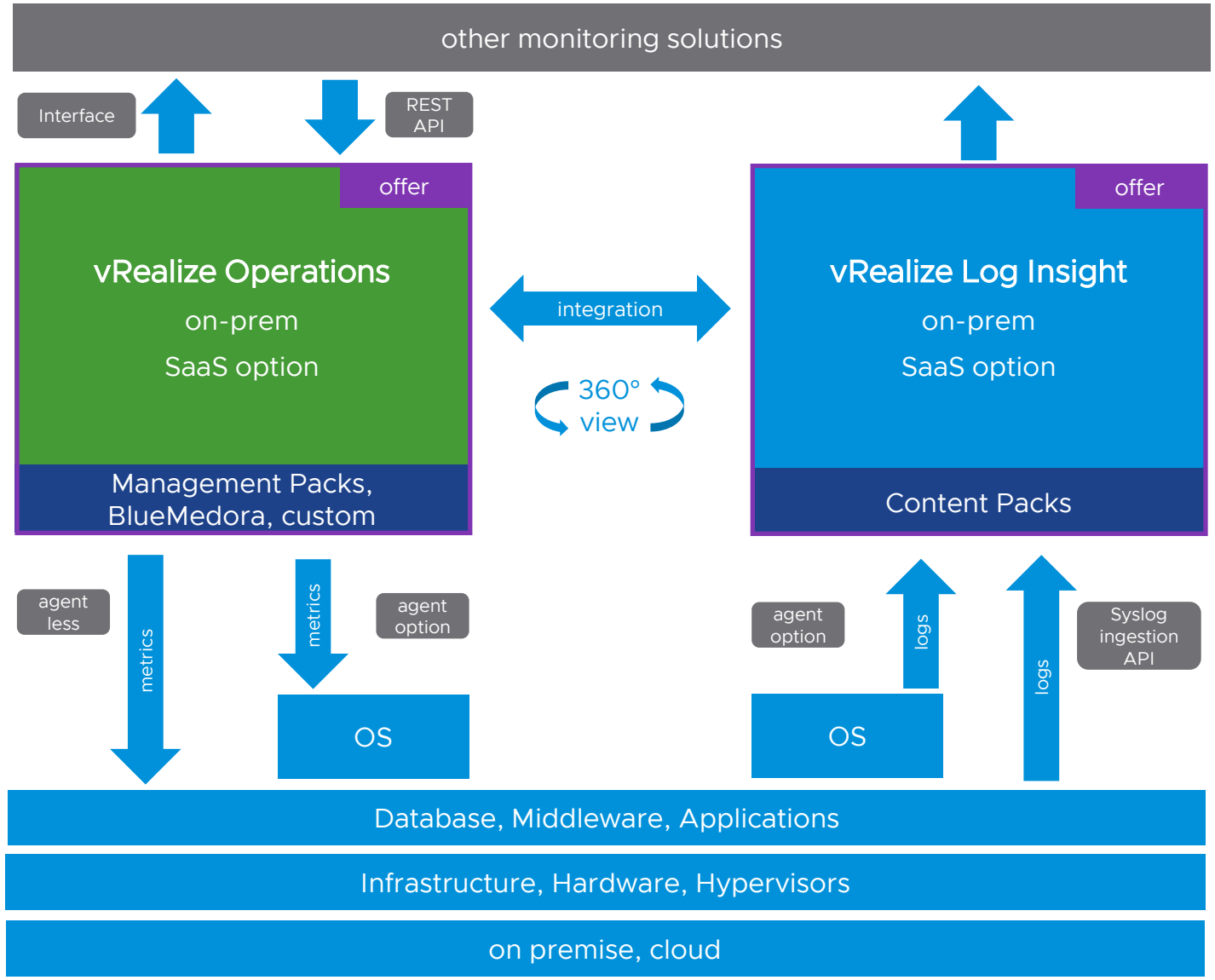




With Log Insight

Infrastructure Monitoring with Application Visibility

Consumer: Infrastructure Operations



Aria Operations and Aria **Automation** Integration

Public Cloud Deployments

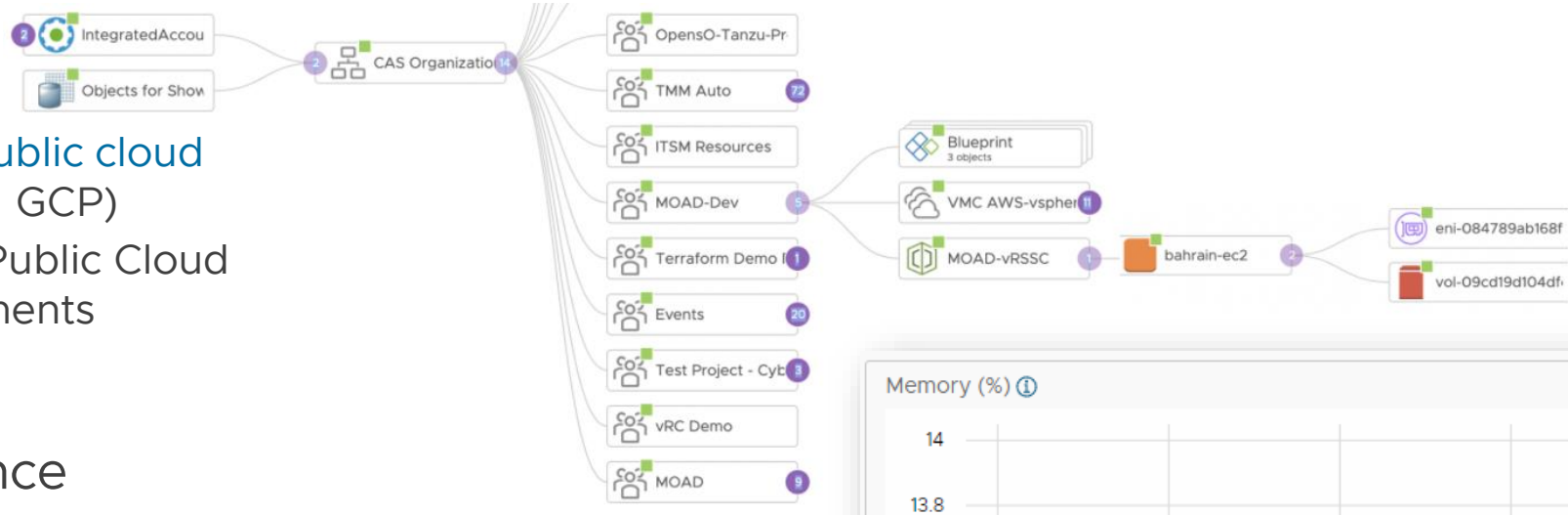
- Extend capabilities to public cloud resources (AWS, Azure, GCP)
- OOTB Dashboards for Public Cloud Resources and Deployments

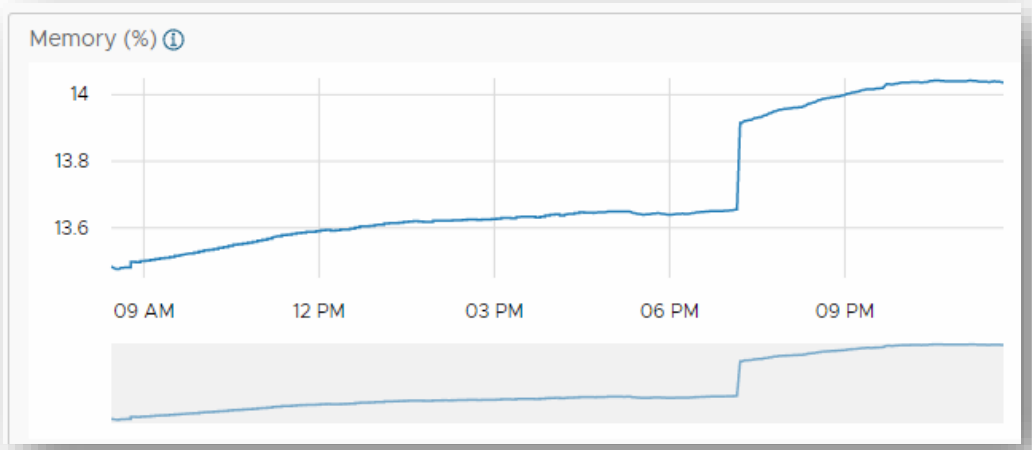
Partial Deployments

- Costing, performance metrics, optimization recommendations in vRA

Project Level Limits

- Visibility to vRA Project Limits
- Alerts can be created for resource utilization or cost as limits approach





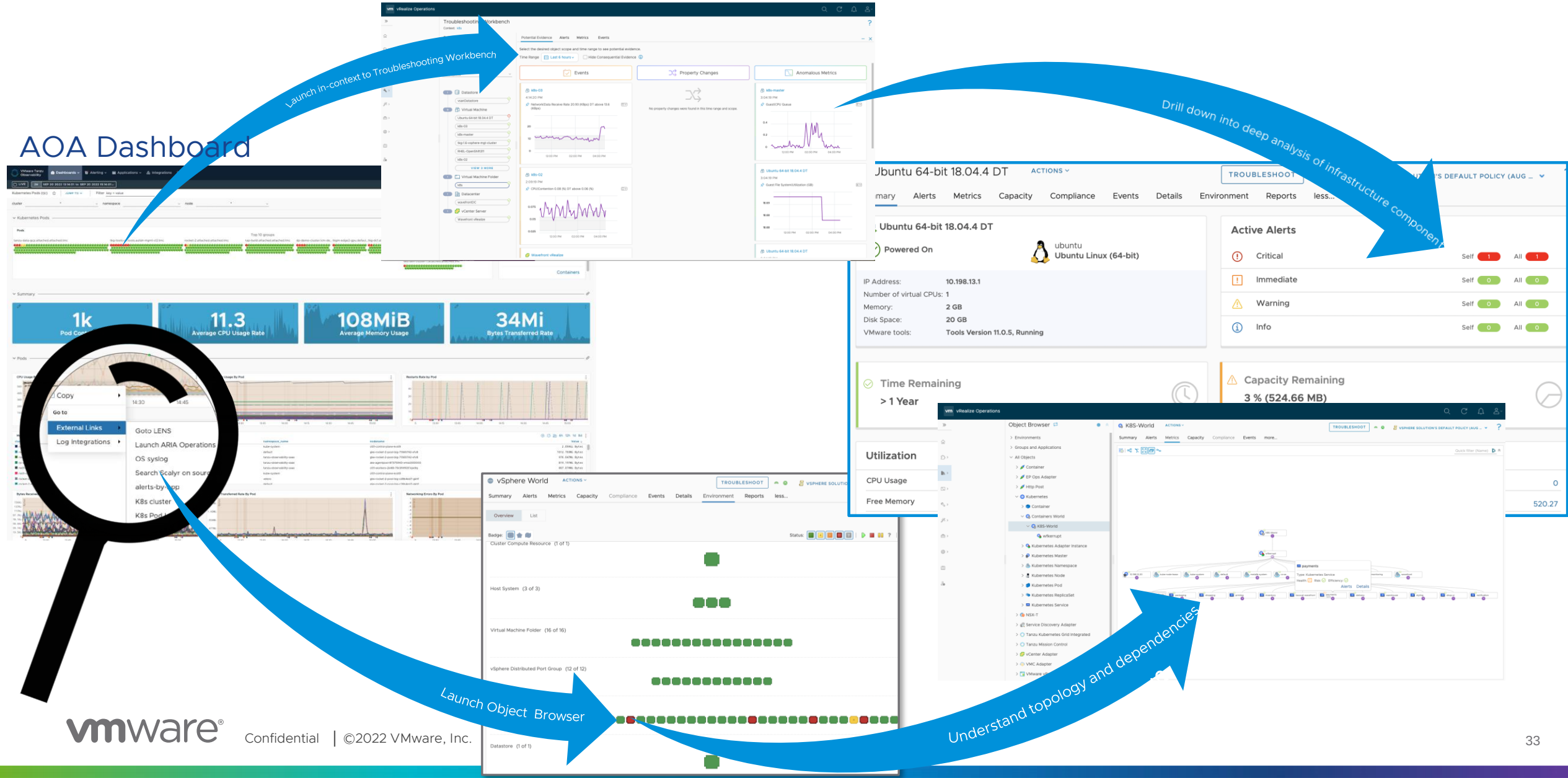
Rightsizable VMs RIGHT SIZE

	Status	VM	Allocated CPU (vCPUs)	Recommended CPU (vCPUs)	Allocated Memory (MB)	Recommended Memory (MB)
●	Oversized	SRV-OSL-T3-063	2	2	4,096	3,072
○	Oversized	SRV-OSL-T3-071	2	2	4,096	3,072

Deep Troubleshooting Paths

Aria Operations for Applications – Aria Operations

AOA Dashboard



The same application, two perspectives

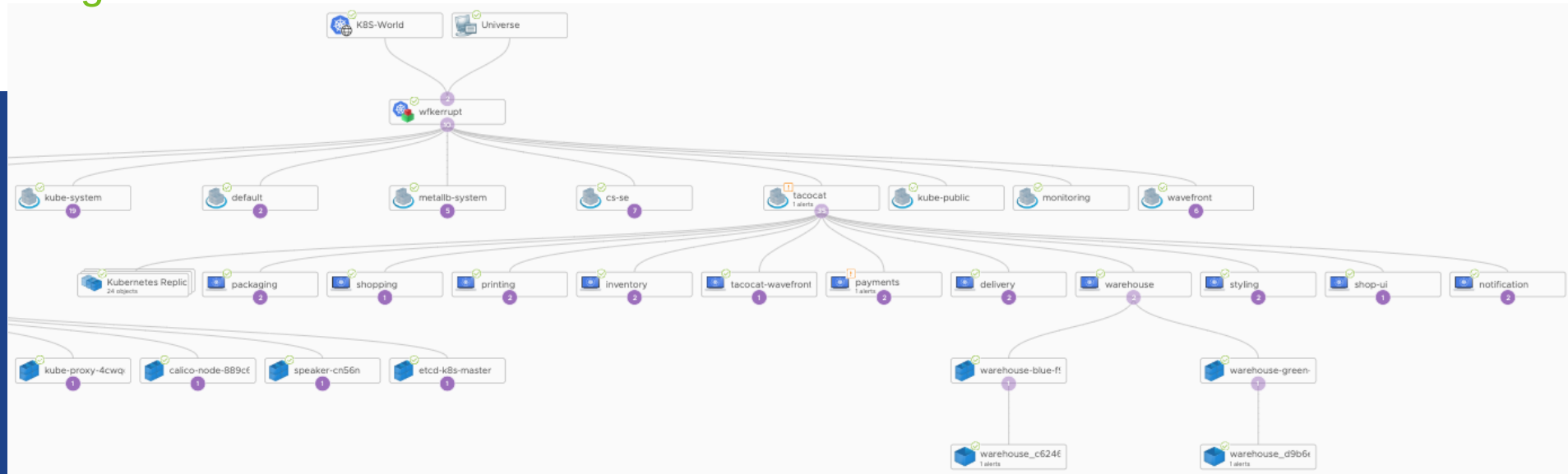
Observability from all angles

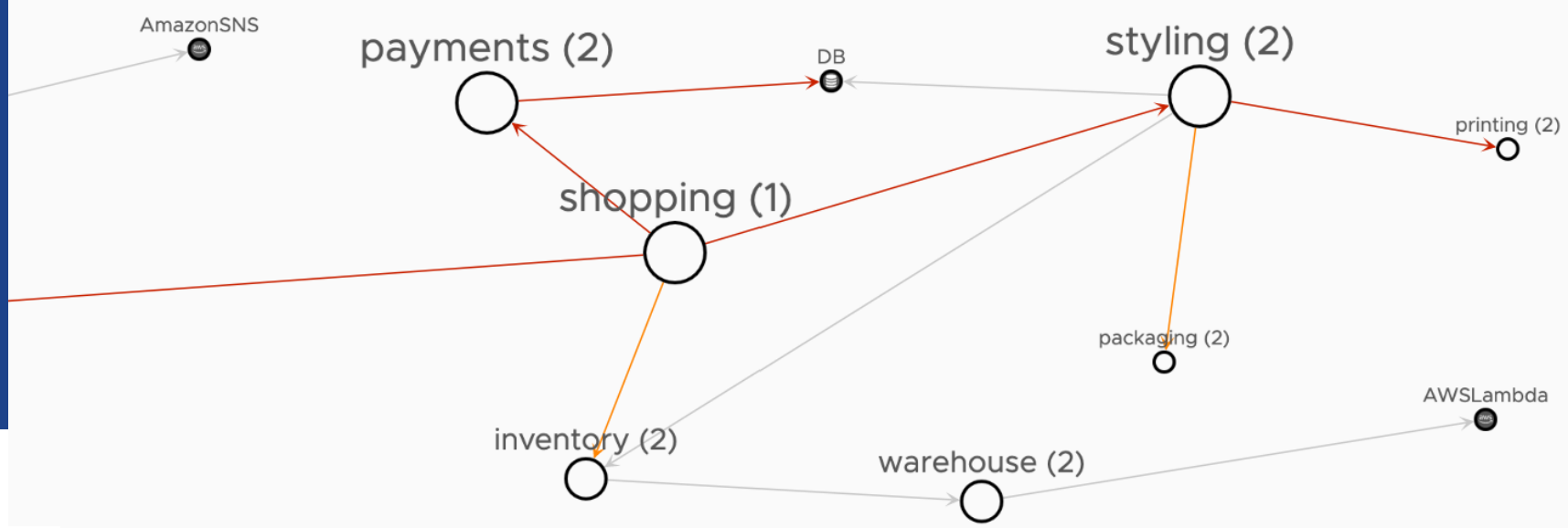
Aria Operations (AO)

- Topology
- Health
- Capacity
- Compliance

Aria Operations for Apps (AOA)

- App discovery
- Throughput
- Latency
- Error rate
- Correlation





Q&A

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Account information

HOL-2201-01-CMP student check-in – LET'S GO!!!

Name: holadmin

(VMware identity manager)

Password: VMware1!