# Build the cloud you need for your business with Dell Private Cloud

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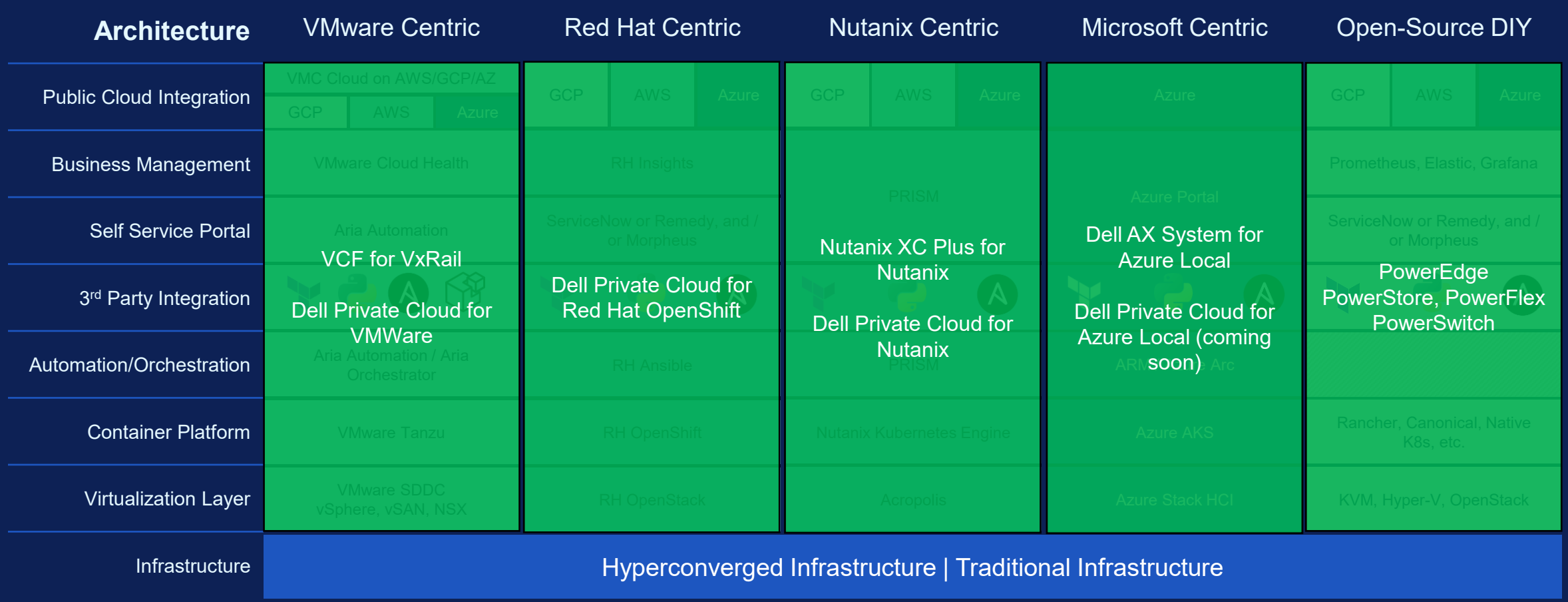
# Cloud architecture options




On-premises | Colo | Managed | Other options

# Dell Private Cloud

# Traditional architectures require tradeoffs

## 3-Tier

Flexible, but complex

- ✓ Independent scaling to match workload needs
- ✓ Efficient and optimized use of resources
- ✓ Flexible to avoid vendor lock-in
- × 3 management points
- × Mixed vendor support
- × Limited automation of tasks

## Hyperconverged

Simple, but locked-in

- ✓ Simple to order, onboard and deploy
- ✓ Automated lifecycle management
- ✓ Streamlined, single stack support
- × Hypervisor lock-in
- × Fixed & inefficient compute and storage scaling
- × High licensing costs

# Disaggregated infrastructure: A no compromise solution

Combine the **flexibility** of 3-Tier and the **simplicity** of Hyperconverged

## Disaggregated

Flexible and simple

- ✓ Independent scaling to match workload needs
- ✓ Efficient and optimized use of resources
- ✓ Flexible to avoid vendor lock-in
- ✓ Simple to order, onboard and deploy
- ✓ Automated lifecycle management
- ✓ Streamlined, single stack support

# Dell Private Cloud: Accelerate with a no compromise architecture

## Disaggregated Infrastructure

## Flexible + Simple

- Independent scaling to match workload needs
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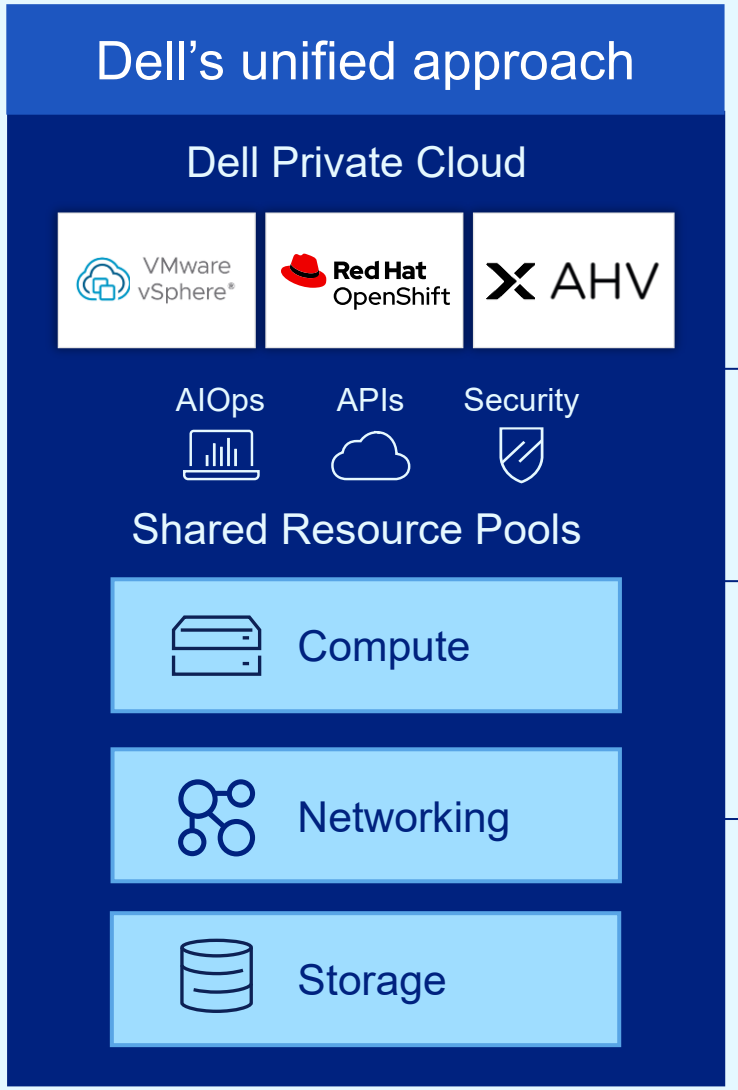



powered by
**Dell Automation Platform**

supported by
**Dell AIOps**

powered by
**Dell PowerEdge**

powered by
**Dell Storage**

# Dell Private Cloud: High Level Architecture

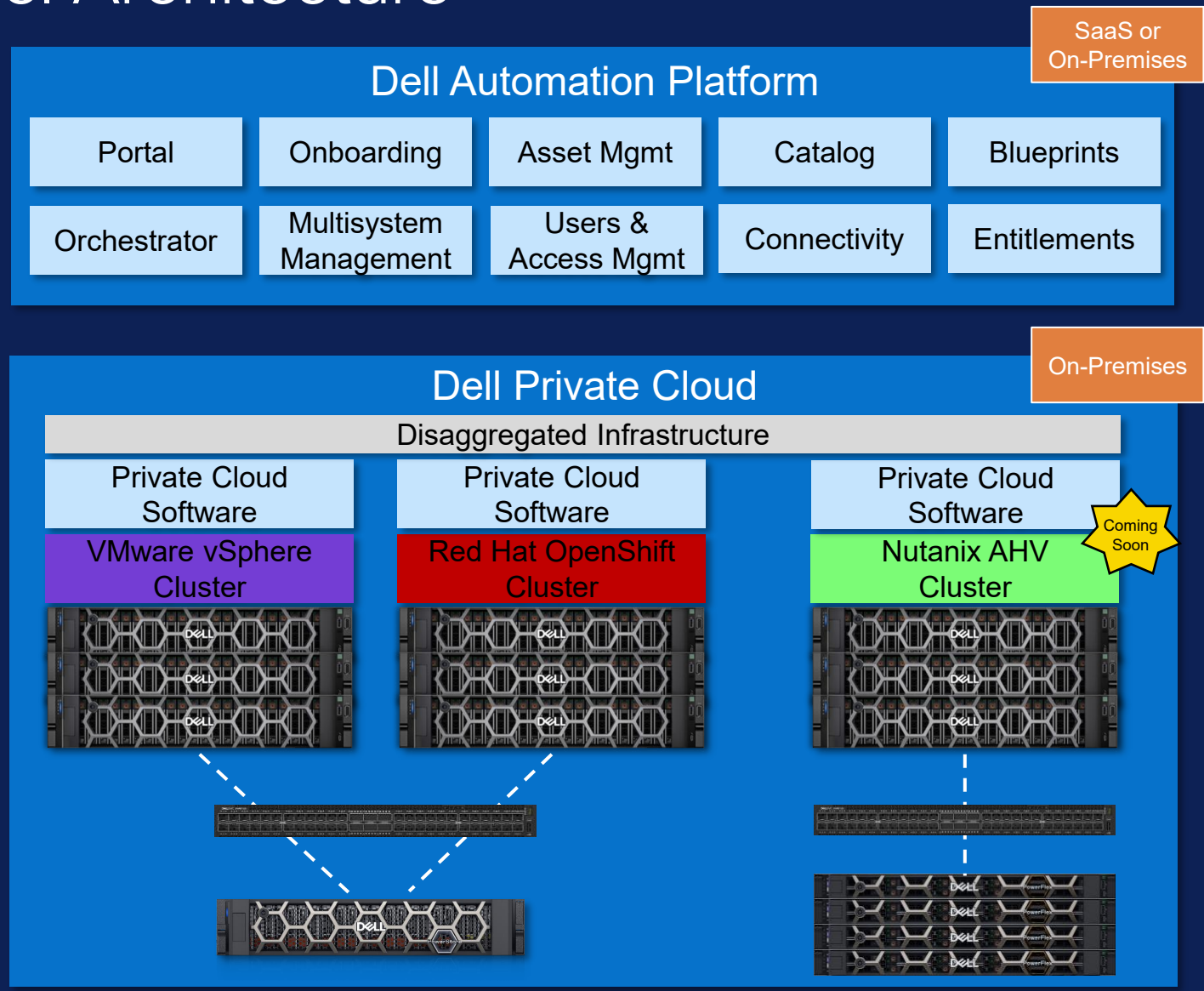
## Delivered through Dell Automation Platform

### Dell Automation Platform

- Secure, zero touch onboarding of infrastructure
- Catalog of Dell-curated blueprints
- Blueprint driven, automated cluster deploy of customer choice of OS with Dell compute & storage
- Decommission and reclaim and reuse compute
- Multisystem management operations (storage upgrades, compute scale up/out, etc)

### Dell Private Cloud Software

- Private Cloud extension integrated into vCenter, Red Hat Web Console, and Nutanix Prism
- Physical view and health of infrastructure
- Known Good State of hardware and software
- Full stack update of OS, HW, and Dell IP
- Zero Day OS patching with granular system updates
- Drift detection and pre-checks
- Automated payload pre-staging for updates
- Consolidated HW & SW alerts and logs (OS and hardware)
- Dial home with automated SR creation and auto parts dispatch
- Automated add/remove drive
- Node and cluster shutdown
- Role based access controls
- Security Credential Management
- Single point of contact support (ProSupport Plus)



# What makes up Dell Private Cloud

VMWare Example

**Dell Automation Platform**

- Control plane and an orchestrator that manages the Dell infrastructure for Dell Private Cloud
- Deploy the vSphere/OpenShift cluster
- Run the PowerStore system update

**Dell PowerEdge servers** – nodes in the vSphere/OpenShift cluster

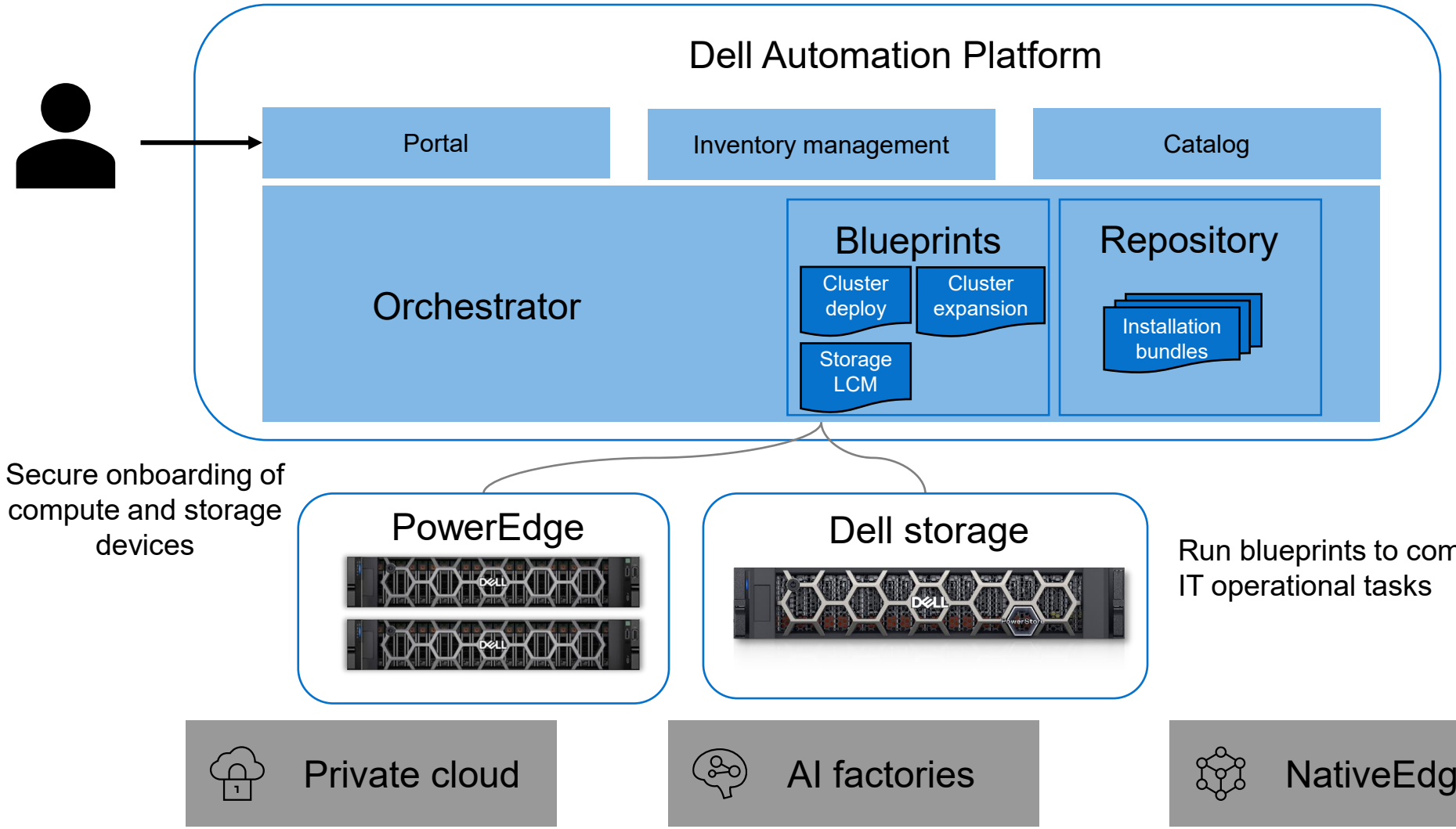
**Dell PowerStore** – provides the primary datastore for the vSphere/OpenShift cluster

**Blueprints** – a build scheme and declarative representation of an environment, which includes infrastructure, applications, and their configuration which the Orchestrator automates

**Dell Private Cloud VM** – delivers the value-added Dell Private Cloud management experience

- Extension to vCenter UI or OpenShift Web Console for Physical Views, lifecycle management, and serviceability capabilities
- Hardware Support Manager plugin to update PowerEdge firmware on a cluster update

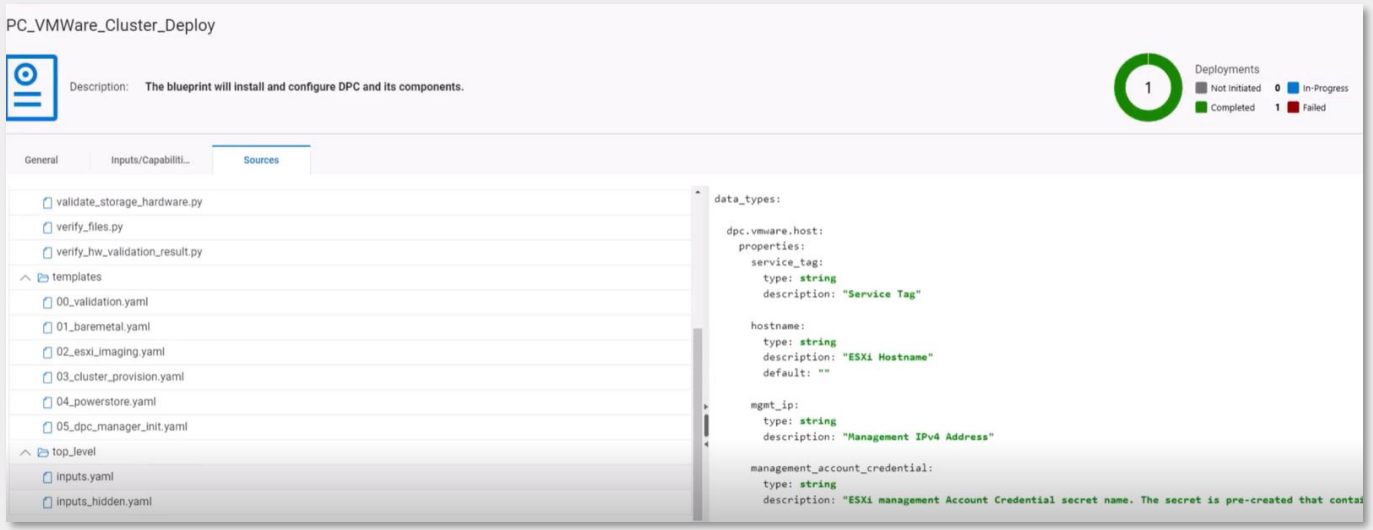
# Dell Automation Platform architecture



# What is a blueprint?

## Build scheme that the Orchestrator automates:

- Defines resources and their connections between each other
- Makes declarative statements to execute configuration operation based on user-provided inputs
- Outputs a sequence of steps that can be automated to complete a complex operation




## Construction of a blueprint

- Dell tests and validates blueprints to support Dell Private Cloud deployments
- YAML file written in TOSCA (The Topology and Orchestration Specification for Cloud Applications)

## Blueprints for Dell Private Cloud including:

- Cluster deploy
- Cluster expansion
- PowerStore update

# Dell Private Cloud – Licensing Overview

## Dell Automation Platform

| | |
|---|---|
| Platform License | No-cost subscription added to sales order |

## Dell Private Cloud

| | |
|---|---|
| Private Cloud Software | Subscription, licensed per PowerEdge node<br>Licenses are portable between Private Clouds |

## Disaggregated infrastructure

| | |
|---|---|
| PowerEdge | Requires iDRAC Enterprise or Datacenter license per node |
| Dell Storage | Use standard storage licensing (e.g. PowerStore, PowerFlex)<br>No additional Private Cloud licenses required |

## VMware

Bring your own license (no Broadcom approval required)

| | |
|---|---|
| vSphere cluster | Any ELA, VCSP, Omnissa bundle, or perpetual license, VVF and VCF* subscription (vSphere Enterprise Plus minimum) |
| vCenter Server | Customer-managed vCenter with licensing |

*VCF licensing can be used but VCF is not currently deployed or managed with Dell Private Cloud

## Red Hat

Bring your own subscription

| | |
|---|---|
| OpenShift cluster | OpenShift Container Platform Plus, OpenShift Container Platform, OpenShift Kubernetes Engine (OKE), OpenShift Virtualization Engine (OVE) |
| OpenShift add-on subscriptions (optional) | Advanced Cluster Management for Kubernetes (ACM) for OKE, ACM for OVE, AI Accelerator, Red Hat OpenShift AI, Ansible |

# Specs for Dell Private Cloud

## With Dell Automation Platform

### Dell Automation Platform Orchestrator

| | |
|---|---|
| Virtual Appliance | 16 vCPU cores<br>32GB memory<br>2TB capacity<br>SUSE Linux Enterprise 15 |

### Disaggregated infrastructure

| | | | |
|---|---|---|---|
| PowerEdge | R670 or R770<br>1 or 2 socket Intel Xeon Scalable CPUs (16+ cores)<br>BOSS-N1 (2x 960GB M.2 configured for RAID 1)<br>iDRAC Enterprise or Data Center license<br>OCP 3.0 and PCIe<br>GPU support | PowerStore | ‘000 |

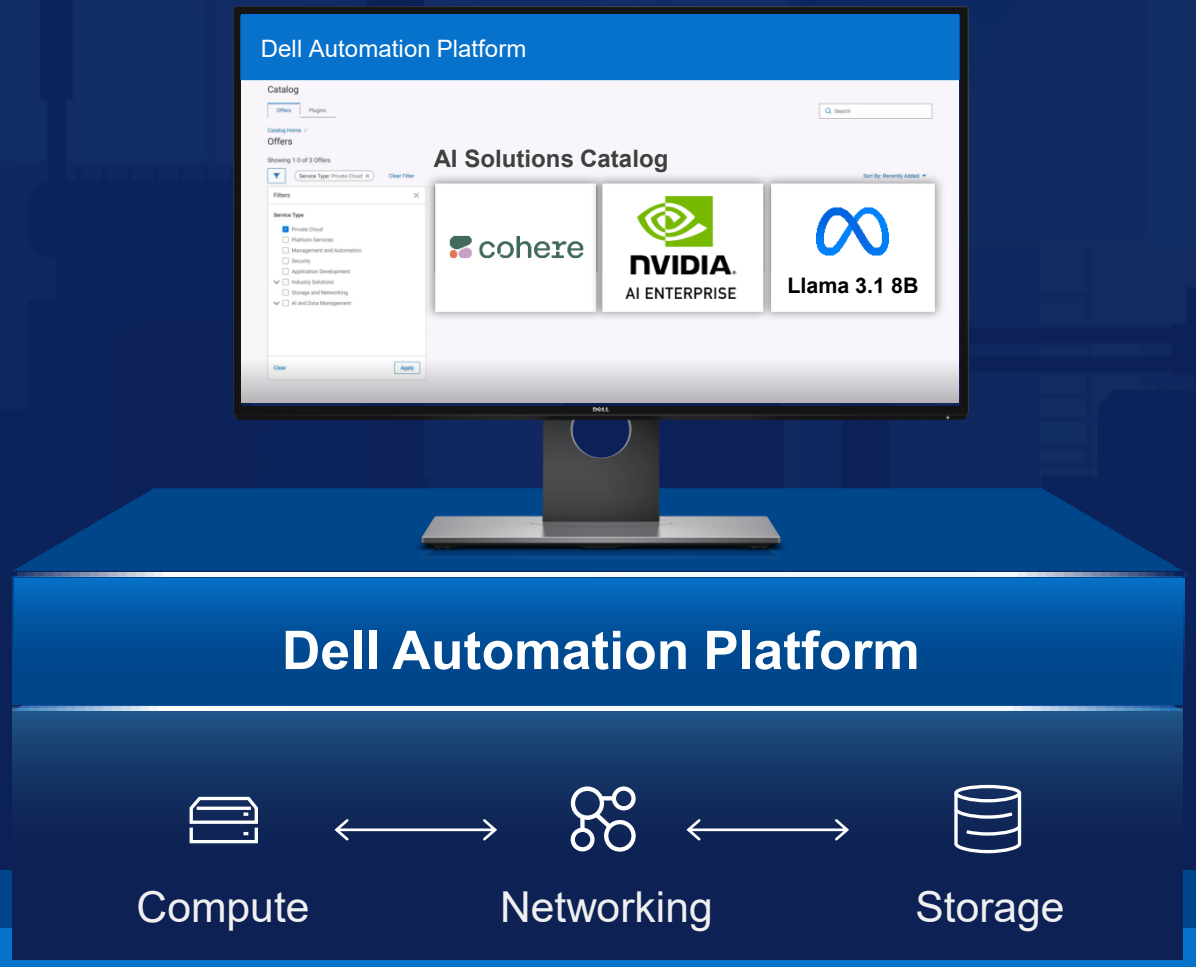
### Bring Your Own Networking

### OpenShift deployment

| | |
|---|---|
| OpenShift cluster requirements | Cluster size – 3 minimum<br>Cluster deployment– all nodes have homogeneous hardware configuration<br>Networking – 10GbE minimum<br>Software – Red Hat OpenShift 4.19 |

# Dell AI Factory

## Simplify deployment of AI Solutions




## Faster time to value, lower risk

- A **catalog of optimized solutions** from Dell and our network of partners
- **Simplify** AI deployments with validated and optimized configurations for your system
- **Automated deployment** of AI solutions reduces time, effort, and mistakes
- **Optimized hardware** with GPU accelerated compute
- **Accelerate AI outcomes** from strategy to scalable operations with Dell Services

# Dell NativeEdge

Full-stack solution purpose-built for the edge and distributed data centers


## Innovate wherever you operate

- **Centralize operations:** No local IT skillset required with zero-touch deployment and automated lifecycle management
- **Enhance security:** Safeguard data, applications, and infrastructure with a zero-trust framework
- **Adapt to any environment:** Support VMs and containers with flexible and scalable configuration options
- **Reduce costs**: Boost efficiency through automation, streamlined management, and low entry cost
- **Optimize for AI:** Orchestrate AI workloads and frameworks with ease using pre-validated blueprints

Less than
**1 min.**
to deploy infrastructure and applications[1]

Up to
**68%**
time savings by automating edge application orchestration[1]

The world's
**Most Secure**
edge operations[2]

*1 Enterprise Strategy Group by TechTarget Technical Validation commissioned by Dell Technologies, "Dell NativeEdge - Edge Operations Software Platform," February 2025.*

*2 Based on Dell Technologies internal analysis, May 2025.*

# Thank you