On Premise OpenShift Container Platform

Deployed, maintained, and managed with HPE GreenLake

HPE and Red Hat Alliance
Over twenty years of partnership

Proven, trusted computing solutions

Industry standard technologies

Comprehensive portfolio of extensible solutions

1,000+ Linux Pro's at HPE

98% of all support calls resolved by HPE

500+ Red Hat accreditations held by HPE staff

HPE Greenlake for Private Cloud Enterprise – Setting the scene…

Why Private Cloud?

- Cloud like consumption without the costs, egress fees, and public cloud lock in

- Control and sovereignty over the location of data

- Run non-Cloud Native applications in a consolidated fashion

- Common pool of infrastructure, standardised and scalable

- Self service and orchestration, allowing IT resources to focus higher up the stack

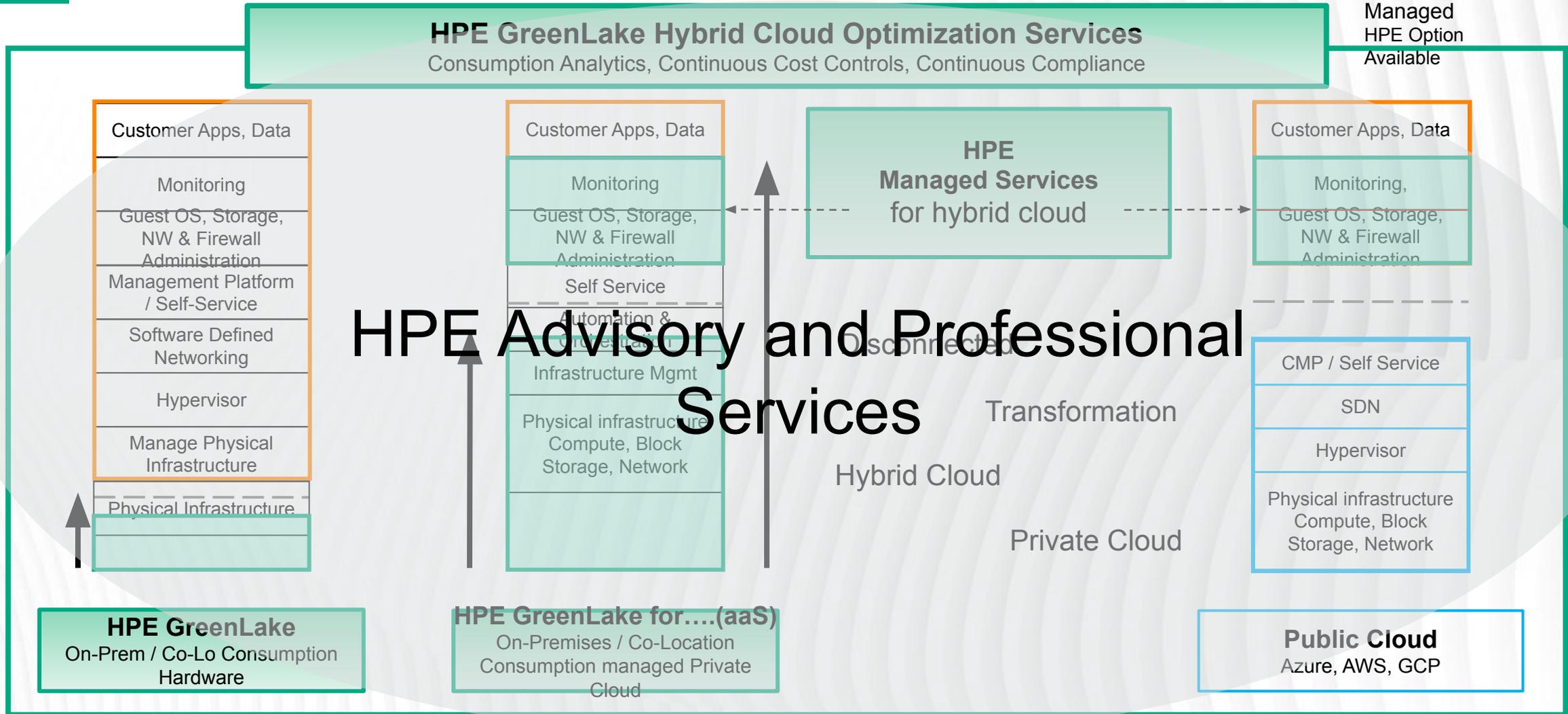# HPE Greenlake for Private Cloud Enterprise – Setting the scene…

Who is it for?

- Core value is not in IT Operations

- Relinquish lifecycle (and vulnerability) management admin

- Aiming to reduce complexity

- Wish to preserve capital

HPE Greenlake Cloud Services

HPE Managed

Public Cloud Provider

Customer Managed
HPE Option Available

HPE GreenLake Hybrid Cloud Optimization Services
Consumption Analytics, Continuous Cost Controls, Continuous Compliance

Column 1:
- Customer Apps, Data
- Monitoring
- Guest OS, Storage, NW & Firewall Administration
- Management Platform / Self-Service
- Software Defined Networking
- Hypervisor
- Manage Physical Infrastructure
- Physical Infrastructure

Column 2:
- Customer Apps, Data
- Monitoring
- Guest OS, Storage, NW & Firewall Administration
- Self Service
- Automation & Orchestration
- Infrastructure Mgmt
- Physical infrastructure Compute, Block Storage, Network

HPE Managed Services for hybrid cloud

Column 4:
- Customer Apps, Data
- Monitoring, Guest OS, Storage, NW & Firewall Administration
- CMP / Self Service
- SDN
- Hypervisor
- Physical infrastructure Compute, Block Storage, Network

Disconnected

Transformation

Hybrid Cloud

Private Cloud

HPE Advisory and Professional Services

HPE GreenLake
On-Prem / Co-Lo Consumption Hardware

HPE GreenLake for….(aaS)
On-Premises / Co-Location Consumption managed Private Cloud

Public Cloud
Azure, AWS, GCP

HPE Greenlake for Private Cloud Enterprise – What is it?

Delivery & Operations

- Preconfiguration
- Onsite Installation
- Management Services
- Support Services

Management

- GreenLake Central
- GL PCE Dashboard
- Consumption Analytics

HPE Factory Built Infrastructure
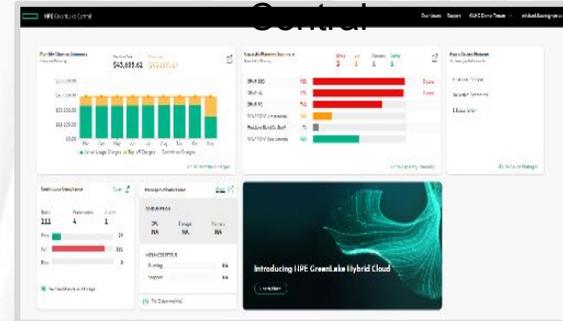

HPE Private Cloud Hardware

- Compute servers
- Storage Array
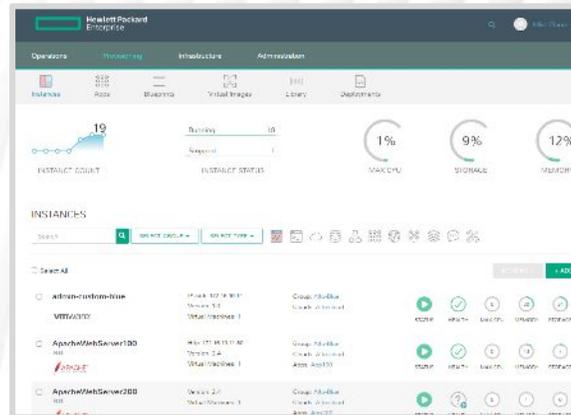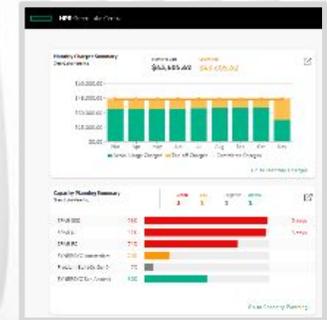- Management cluster
- Network switches

GreenLake Central

GreenLake Central

Consumption Analytics

Provisioning Dashboard

Consumption Model

Container on bare metal , per physical core

Container on VM, per vCPU

Bare metal – physical cores, physical memory

Virtual machines – virtual cores (vCPU), virtual memory

Block Storage (allocated GB)
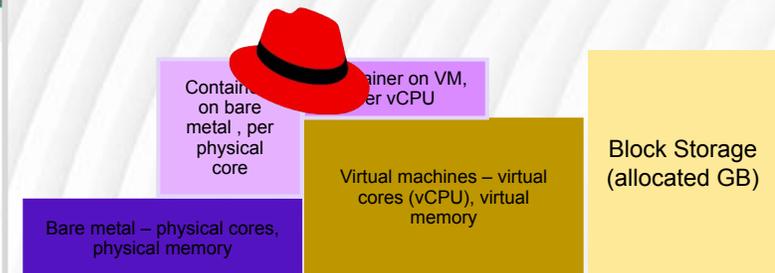
Complete Private Cloud

HPE GreenLake for Private Cloud Enterprise: Building Blocks

Available for expansion
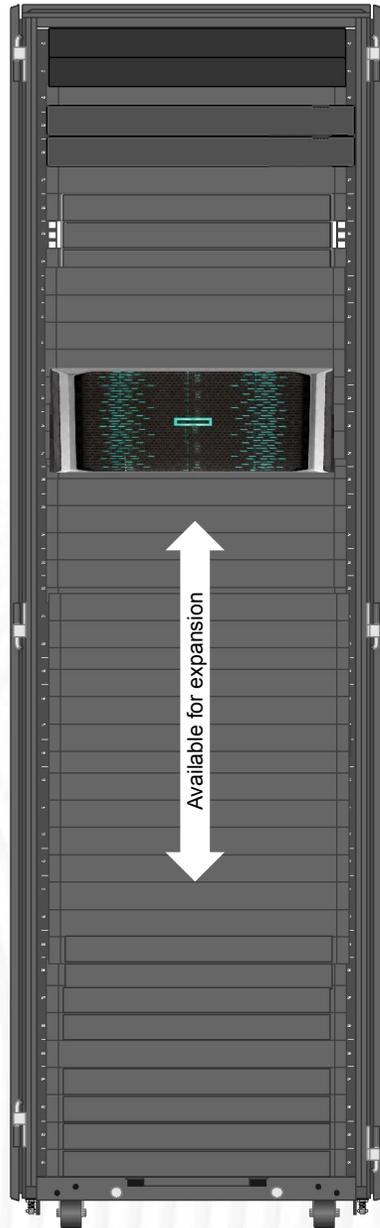
Production Network Module (2) HPE Aruba 8325-32Q (Leaf/Border)

Management Network Module (2) HPE Aruba 6300M

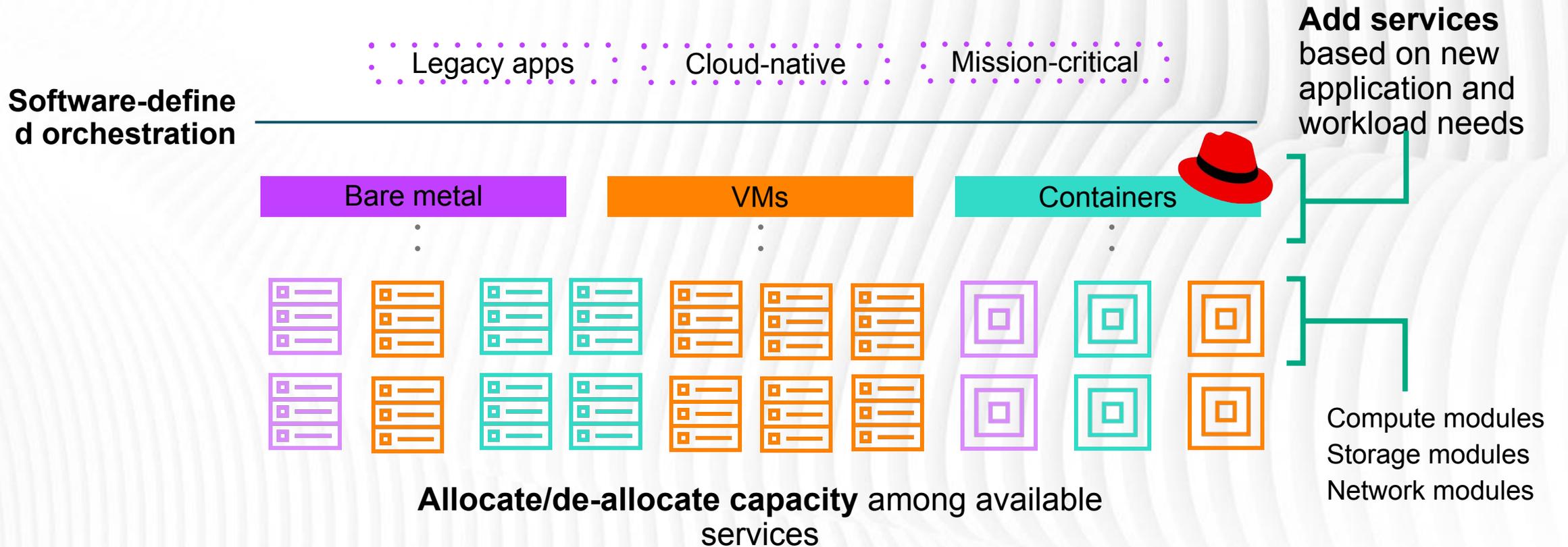**Control Plane** (3) HPE ProLiant DL325 Gen10+

Storage Module HPE Alletra 6K

Workload Compute Modules
Compute Modules: select instance types (minimum 4)

A common pool of technology with multi-workload support

Rebalance capacity as your workload requirements
change – always optimizing for requirements and TCO

Add services
based on new
application and
workload needs

Legacy apps   Cloud-native   Mission-critical

**Software-define
d orchestration**

Bare metal   VMs   Containers

Compute modules
Storage modules
Network modules

Allocate/de-allocate capacity among available
services

Simplify and optimize your move to containers

HPE GreenLake for Private Cloud Enterprise is a complete as-a-service solution designed to help you:

Innovate faster and adapt more quickly to change

Increase operational efficiencies

Improve security

Manage and quantify total solution spend

Gain financial transparency that directly associates
cost to consumption

Unleash the value of your data

Automation: Integrations & Infrastructure as Code

HashiCorp

IaC framework helps the customer provision and manage resources using automation and DevOps principles

IaC implemented via HashiCorp Terraform

Accessible to HPE GreenLake users and service clients

Red Hat Ansible Automation Platform

HPE GreenLake integrates with an existing Ansible repository of playbooks

Run Ansible Playbooks on one or all VMs
in the inventory group

Run Ansible Playbooks as Tasks or Workflows on VM Instances

Progress Chef Infra / puppet

Integration of Progress® Chef® Infra® servers for the configuration management of workload VMs

Integration of Puppet Masters for the configuration management of workload VMs

ServiceNow®

Supports CMDB integration and approval workflow

HPE GreenLake plugin allows service catalog items to be provisioned through ServiceNow® portal

HPE GreenLake for Private Cloud Enterprise revolutionizes the customer experience

Leader **Innovation**

"I want to have **flexible IT** to **rapidly deploy any app** in production to drive revenue and control cost"

- Experience consistent with public cloud
- Flexible, adaptable systems ready for any app, production ready from a trusted partner
- Pre-built, managed so you can focus IT resources on business needs

IT Director **Control**

"I want to **manage resources** and **provide developers access** to their isolated servers, VMs or Kubernetes clusters quickly, in a **safe and secure** manner"

- Reduce complexity and enhance standardization
- Reduce time between request to provision and access cloud resources at scale
- Easy instance or cluster management to accelerate access delegation to developers
- Minimize risks with consistent governance

Developer **Self-service**

"I want to have **access to my workspace fast** and have **flexibility to choose** from a variety of OS/containerised app stacks"

- Ensure consistent deployment and app configuration
- Reduce manual tasks
- Enable faster and consistent application deployment
- Integrate to Dev/Ops toolchain

HPE GreenLake for Private Cloud Enterprise revolutionizes the customer experience
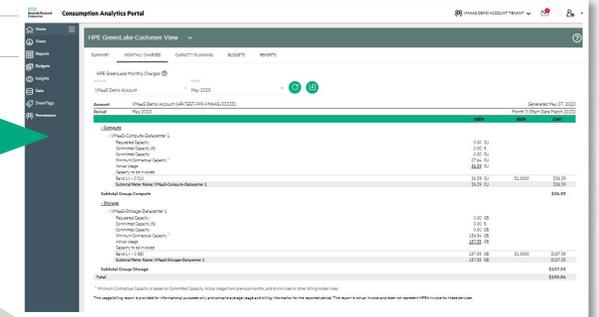

Create and manage RH OCP clusters

View costs and usage of RH OCP resources
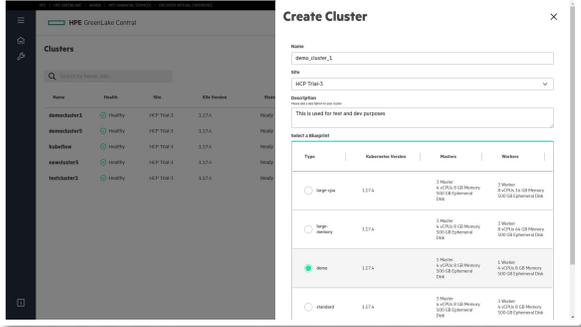
IT Director

Creates and maintains

Blueprints

Deploy containerized apps

Forecast capacity of RH OCP resources

Leader

Developer

Metered costs and usage
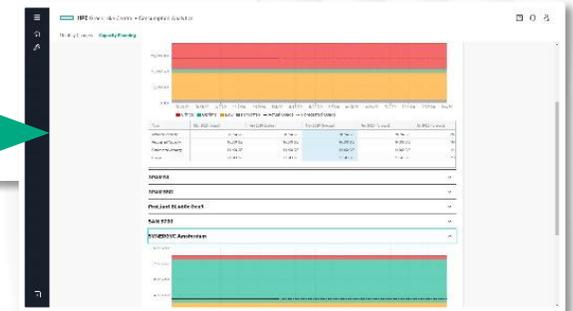
HPE GreenLake for Private Cloud Enterprise: SLAs

Bare-metal instances in a single site

99%

Monthly uptime percentage	Percentage of monthly bill for the affected instance
Less than 99% but equal to or greater than 95%	10%
Less than 95% but equal to or greater than 90%	25%
Less than 90%	100%

VM instances in a single site

99.5%

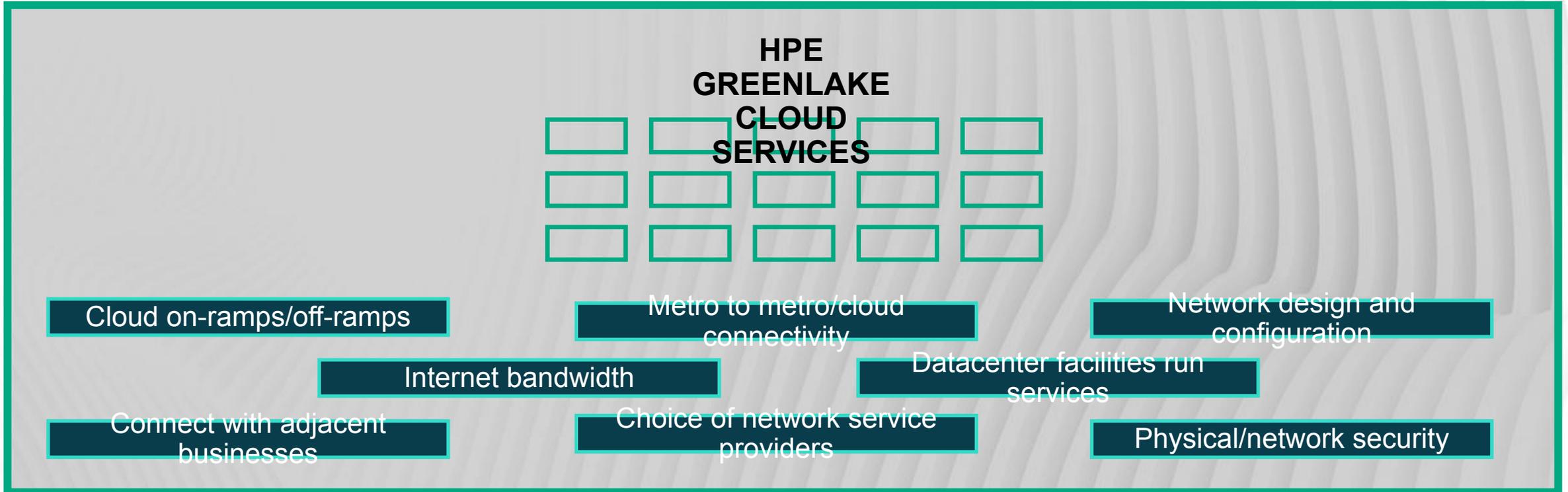| Monthly uptime percentage	Percentage of monthly bill for the affected instance
Less than 99.5% but equal to or greater than 99%	10%
Less than 99% but equal to or greater than 95%	25%
Less than 90%	100%

Container clusters in a single site

99.9%

Monthly uptime percentage	Percentage of monthly bill for the affected instance
Less than 99.9% but equal to or greater than 99%	10%
Less than 99% but equal to or greater than 95%	25%
Less than 90%	100%

GreenLake for Co-Location

HPE GREENLAKE CLOUD SERVICES

Cloud on-ramps/off-ramps

Metro to metro/cloud connectivity

Network design and configuration

Internet bandwidth

Datacenter facilities run services

Connect with adjacent businesses

Choice of network service providers

Physical/network security

CyrusOne®

EQUINIX®

DIGITAL REALTY™

Trust HPE and Red Hat to deliver the benefits you need to succeed with containers

A complete curated solution

ISV best practice architectures out of the box, that are fully built, validated and tested by HPE

Faster time to value

Using standardized HPE servers, storage, and network solutions deployed with Red Hat software

Simplified IT

With implementation, support, monitoring, operations and hardware management handled by HPE.

Convenient pay-per-use billing

Based on metered usage; includes units of measure for compute, storage, and Red Hat software

Native Tooling

Ability to use native tooling and existing scripts while also gaining the benefits of the GreenLake Platform

Cloud-like flexibility

Keeping costs under control and your data wherever you want it.

Resources and next steps

Discover HPE GreenLake by visiting the homepage

Access the resources to find out more about PCE

Get hands-on with the platform with our Test Drives

Hewlett Packard Enterprise | Red Hat

Thank you