CloudUT
Infrastructure Management

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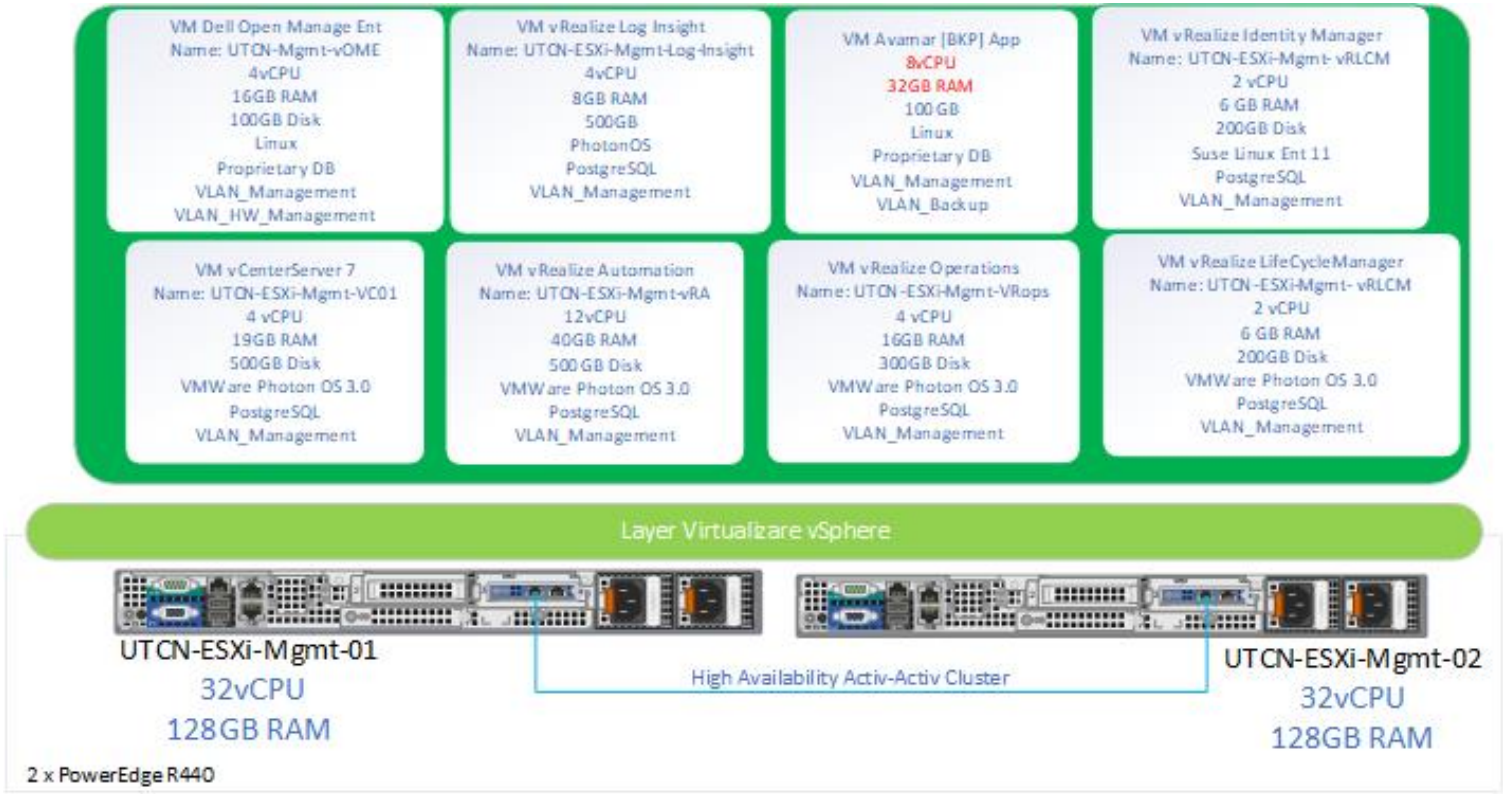
Infrastructure Summary

- HARDWARE
  - General Applications Cluster Servers - Dell
    - 10 x R640, 2 x CPU(2x16cores)/Nod = 20 CPU, 512GB/Nod;
  - AI and ML Applications Cluster Servers - Dell
    - 2 x R740, 2 x CPU(2x20cores)/Nod = 4 CPU, 512GB/Nod, 2 x NvidiaV100/Nod;
  - Management Applications Cluster Servers - Dell
    - 2 x R440, 1 x CPU(1x16cores)/Nod = 2 CPU, 128GB/Nod
  - Networking Structure
    - 2 x Management Switch – Dell EMC N1124T
    - 2 x Applications Switch(ToR)– Dell EMC S5246F-ON
  - Storage Structure
    - 1 x Applications Storage – Dell EMC Unity480XT
    - 1 x Backup Storage – Dell EMC Data Domain 6300
  - Power Structure
    - 2 x UPS, 10000VA/UPS – APC SRT10KRMXLI

Infrastructure Summary (cont.)

- SOFTWARE
  - NVidia
    - NVIDIA Grid – GPU;
    - NVIDIA Virtual Computer Server
  - Dell
    - Dell EMC Data Domain DD6300 & Dell EMC DATA PROTECTION SUITE
    - Dell Open Manage
  - VMWare - License
    - Hypervisor ESXi – for each SERVER = 14
    - vSphere 7 Enterprise PLUS – for each CPU = 26
    - vCenter Server Standard – for instance CloudUT = 1
    - vRealize Suite 2019 Enterprise –for each CPU from Applications Cluster = 20

Deployment Management



Management Solution

VM Dell Open Manage

- HARDWARE infrastructure

VM vCenter Server 7

- SOFTWARE and HARDWARE infrastructure

VM Avamar

- BACKUP solution

VM vRealize Automation™

- Enables self-service catalog, governance, provisioning, orchestration
- DevOps-based service delivery from a modern infrastructure automation platform

Management Solution

VM vRealize Operations™

- continuous performance optimization
- efficient capacity management
- proactive planning
- intelligent remediation
- integrated compliance powered by artificial intelligence (AI)

VM vRealize Log Insight™

- centralized log management
- deep operational visibility
- intelligent analytics

VM vRealize Suite Lifecycle Manager™

- comprehensive application lifecycle and content management solution for vRealize Suite
- predictive analytics

VM vRealize Identity Manager

- User Management
- SSO (Single Sign On)

VMware vRealize Orchestrator

- VMware vRealize® Orchestrator™ is a workflow automation solution designed to simplify the automation of complex IT tasks. It integrates seamlessly with Vmware vRealize Suite and VMware vRealize Automation™ to further improve service delivery efficiency, operational management and IT agility.
- The vRealize Orchestrator workflow designer is an easy-to-use, drag-and-drop workflow creator that enables users to produce simple to complex workflows.
- With vRealize Orchestrator workflows and built-in plug-ins, users can easily perform tasks, such as:
  - Assign an IP address from an IP address management tool
  - Generate a work order ticket
  - Update a configuration management database
  - Configure a load balancer
  - Initiate a system backup
- The vRealize Orchestrator Plug-in Software Development Kit (SDK) jump-starts those new to the vRealize Orchestrator plug-in development community.
- vRealize Orchestrator full functionality is only available as part of vRealize Automation (standalone or vRealize Suite Advanced/Enterprise license keys).

Observations

- CloudUT solution type is “Small”;
- CloudUT solution is without High Availability structure
  - HA according to the VMware recommendations;
- Single Point of Failure identification;
- Mission critical application management;
- IT Information Security management;
- CloudUT access policy management;
- Disaster Recovery Solution(DR):
  - Daily Off-Site Backup Synchronization;
  - Daily Backup of virtual machines;
  - Incremental Backup (<10min) of management virtual machines.

Observations (cont.)

- Help Desk for users, including ticketing, according to ISO 20000 – IT Service Management;
- Information Security according to ISO 27000 – IT Information Security Management Systems;
- CloudUT Infrastructure Management according to ITIL – Information Technology Infrastructure Library;

Thank You!

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