VMware vSphere Foundation 5.2

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Q1. What's New with VMware vSphere Foundation (VVF) 5.2?

New features in VMware vSphere Foundation 5.2:

- *Boost Operational Efficiency*
  - *New console experience*
  - *Live Patching for ESX/Flexible Upgrades*
  - *Intelligent alerts enhancements*
- *Accelerate Innovation*
  - *vSphere Kubernetes Service (VKS) -(formerly Tanzu Kubernetes Grid Service) as an independent service*
  - *Local Consumption Interface (LCI)*
  - *Supervisor on vSAN stretched clusters*
- *Supercharge Workload Performance*
  - *Kubernetes Nodes Autoscaling*
  - *vGPU profiles and Distributed Resource Scheduler (DRS) support*
- *Elevate Security*
  - *Single Sign-on across components*
  - *Unified licensing*
  - *Centralized certificate management*

Please reference the respective section in the FAQ document below for additional information.

Q2. When will VMware vSphere Foundation 5.2 be generally available?

VMware vSphere Foundation 5.2 is generally available as of July 23, 2024.

General and Pricing/Packaging

Q3. What is VMware vSphere Foundation?

VMware vSphere Foundation (VVF) is the enterprise workload engine built to optimize the IT infrastructure for organizations of all sizes by boosting operational efficiency, supercharging workload performance, elevating security, and accelerating innovation. It delivers intelligent operations management, purpose-built to enable the best performance, availability, and efficiency from your infrastructure while providing comprehensive visibility and analytics in one place.

Q4. What are the components of VMware vSphere Foundation?

The components of VMware vSphere Foundation are:

- *VMware vSphere Enterprise Plus*
- *VMware vCenter Standard*
- *VMware vSphere Kubernetes Service (formerly Tanzu Kubernetes Grid Service)*
- *VMware Cloud Foundation Operations (formerly Aria Operations and Aria Operations for Logs)*

Q5. What add-ons are available with VMware vSphere Foundation?

The add-on offerings include:

- ***VMware vSAN**: Hyperconverged infrastructure enterprise-class storage*
- ***VMware Live Recovery**: Ransomware and disaster recovery solution*
- ***VMware AVI Load Balancer**: API-first and self-service driven platform providing load balancing app security and application analytics*

Q6. What is VMware Cloud Foundation Operations in VMware vSphere Foundation?

VMware Cloud Foundation Operations in VMware vSphere Foundation is a comprehensive operations management solution that enhances visibility and performance with predictive analytics, monitoring, and logging capabilities.

Q7. How can I purchase VMware vSphere Foundation?

VMware vSphere Foundation can be purchased as a subscription. Consult your Broadcom Sales representative, channel partner, or qualified OEM (Original Equipment Manufacturer) partner for pricing.

Q8. Can I purchase individual components of VMware vSphere Foundation?

No. Customers can only purchase eligible offerings: VMware Cloud Foundation and VMware vSphere Foundation. However, three editions of vSphere can still be purchased, to meet a broad spectrum of customer needs and sizes:

- ***VMware vSphere Essential*** *(vSphere Essential Plus and vCenter Essential)*
- ***VMware vSphere Standard*** *(vSphere Standard and vCenter Standard*
- ***VMware vSphere Foundation*** *(vSphere Enterprise* plus vCenter Standard, VMware Cloud Foundation Operations and vSphere Kubernetes Service)*

vSphere Enterprise Plus is also available as a component of* ***VMware Cloud Foundation*

Q9. Is vSphere + available for purchase?

vSphere + is no longer available for purchase. VMware by Broadcom has simplified previous offerings from 1000 SKUs to 4 bundles, including vSphere Editions listed above.

Q10. What are the incremental feature differences between different editions of VMware vSphere and VMware vSphere Foundation?

Please refer to the VMware vSphere Product Line Comparison sheet for a detailed list of features available with the different editions of vSphere.

Q11. Where can I find additional information?

You can find additional information about VMware vSphere Foundation at the VMware vSphere Foundation Product Page.

Operational Efficiency

Q12. What does the new console experience with VMware Cloud Foundation Operations in VMware vSphere Foundation 5.2 deliver?

The new console experience with VMware Cloud Foundation Operations delivers a unified view of all the components of VMware vSphere Foundation. It enables proactive IT operations management, logging and diagnostic management providing rich visual insights for enhanced management.

Q13. How does VMware vSphere Foundation improve operational efficiency?

VMware vSphere Foundation delivers intelligent operations and advanced analytics through the following features:

- *Compute visibility: Ability to collect performance data across all end-points, from physical to virtual, VMs to Kubernetes clusters to give better SLAs.*
- *VM and container monitoring: Ensure VMs and containers are running properly, monitoring them for performance, availability, and user experience.*
- *AI-driven troubleshooting and remediation: VMware vSphere Foundation provides troubleshooting workbench with machine learning indexing for efficient anomaly detection and faster troubleshooting and root cause analysis of failures.*

Q14. Can VMware vSphere Foundation help in capacity and cost management?

Yes, VMware vSphere Foundation helps maximize utilization with minimal cost. Features include:

- *Capacity: Efficient capacity management of the workload resources to apply optimal consolidation, proactive planning, and smart procurement. VMware vSphere Foundation evaluates capacity requirements based on historical resources utilization and real-time predictive projections.*

- *Cost: Visibility of application workload costs based on several attributes such as CPU, memory, server type etc. VMware vSphere Foundation can help reduce costs by identifying unused resources such as powered-off VMs, orphaned disks, obsolete snapshots and idle VMs to claim back capacity waste. Additionally, reclamation workflows streamline and automate the identification and re-allocation of capacity.*

- *Workload Planning: VMware vSphere Foundation provides the ability to define and use 'What-If' scenarios to model proposed changes to capacity, new workloads, or workload migrations.It will check if resources need to be added or removed to support the model as well as provide insight on changes to costs.*

- *Total Cost of Ownership (TCO) with Showback/Chargeback: In VMware vSphere Foundation dashboards show an overview of costs associated with the workloads and the application owners based on actual usage and expenses.*

Q15. What are the lifecycle management enhancements available with VMware vSphere Foundation?

VMware vSphere Foundation lifecycle management features include:

- *VMware ESX Lifecycle Management Service: Enables admins to centrally orchestrate updates across their entire fleet of ESX hosts. With the ESX lifecycle management service, upgrades will require far less time and effort and can be performed more often, allowing customers to stay more secure and take advantage of the latest capabilities of ESX.*

- *Reduced Downtime for vCenter Upgrades: During an upgrade, vCenter downtime is reduced roughly from an hour to just a few minutes. Planned maintenance windows can now be far shorter, enabling more frequent upgrades to benefit from the latest vCenter features in VVF.*

- *Host Configuration at Cluster Level: Manage desired host configuration, compliance, remediation, and security standards seamlessly at a cluster level. Easily copy host configurations for all hosts when new clusters are created.*

Q16. How does Live Patching for ESX in VMware vSphere Foundation 5.2 work?

Live Patching for ESX allows for live updates and the application of patches without rebooting VMs or hosts evacuations, reducing and in some cases eliminating maintenance windows and downtime.

Q17. What are the different types of alert enhancements in VMware vSphere Foundation 5.2?

Intelligent Alert Clustering merges multiple alerts for the same issue into a single consolidated view, reducing the overall volume of alerts. This enables IT administrators to focus more efficiently on critical issues and enable faster troubleshooting and potentially reduced downtime.

vSphere Supervisor Services

Q18. What is the vSphere Kubernetes Service (VKS)?

vSphere Kubernetes Service (VKS) allows consumers such as Dev Ops and Platform Engineering teams to manage consistent, compliant and conformant Kubernetes clusters.

Q19. What is new with vSphere Kubernetes Service (VKS) in VMware vSphere Foundation 5.2?

vSphere Kubernetes Service (VKS) is now an independent service and allows consumers to easily upgrade to the latest Kubernetes releases independent of vSphere releases.

Q20. What is VM Service in VMware vSphere Foundation?

VM Service allows developers to create virtual machines independently from Kubernetes without requiring access to vSphere Client.

Q21. What capabilities does Local Consumption Interface (LCI) provide in VMware vSphere Foundation 5.2?

Local Consumption Interface (LCI) in VMware vSphere Foundation 5.2 is integrated into vSphere Supervisor, providing an admin UI for provisioning, and managing VMs and Kubernetes clusters . The interface supports vSphere Supervisor deployments, including load balancers, and persistent volumes, and self-service access to core infrastructure services.

Performance

Q22. What is autoscaling for Kubernetes in VMware vSphere Foundation 5.2?

Autoscaling in Kubernetes in VMware vSphere Foundation 5.2 automatically adjusts the number of worker nodes in a cluster based on resource demand. This feature allows for scaling down of underutilized nodes and scaling up of nodes as demand increases, ensuring efficient resource utilization and maintaining performance.

Q23. How does VMware vSphere Foundation 5.2 enhance AI workload performance and optimize GPU resources?

VMware vSphere Foundation 5.2 enhances AI workload performance by supporting larger models, reducing training times, and using NVIDIA NVSwitch for high-speed GPU interconnects. It optimizes GPU resources with heterogeneous vGPU profiles for better sharing and GPU-aware Distributed Resource Scheduler (DRS) for efficient utilization.

Q24. What are the GPU enhancements in VMware vSphere Foundation 5.2?

VMware vSphere Foundation 5.2 supports up to 16vGPUs per VM, utilizes NVIDIA NVSwitch, and allows heterogeneous vGPU profiles. It also includes GPU-aware DRS for optimized workload placement and resource utilization.

Q25. How does VMware vSphere Foundation 5.2 enable hosting different types of workloads on a single GPU, and what are the benefits?

VMware vSphere Foundation 5.2 enables hosting different workloads on a single GPU by supporting heterogeneous vGPU profiles, allowing different workloads to be assigned to the same physical GPU. This increases GPU utilization and reduces costs by minimizing workload fragmentation.

Security

Q26. How does VMware vSphere Foundation deliver platform security?

VMware vSphere Foundation delivers platform security through features like secure boot, hardware TPM, and data rest encryption. It ensures access control with single sign-on, multi-factor authentication, and federated identity management.

Q27. What is single sign-on with VMware vSphere Foundation 5.2?

Single sign-on with VMware vSphere Foundation 5.2 allows IT admins to sign in once to any one component of VMware vSphere Foundation and gain access to all integrated components, improving efficiency and security.

Q28. How do customers benefit from a unified licensing model in VMware vSphere Foundation?

The unified licensing model gives customers a single place to manage license keys across deployments, providing a centralized view of license reducing administrative overhead, and improving license tracking accuracy, providing a centralized view of license consumption. This saves time and effort during audits and planning, ensuring more efficient management license entitlements.

Q29. How does certificate management work in VMware vSphere Foundation?

Certificate management includes centralized visibility and monitoring, allowing IT admins to track the status and health of all digital certificates. It automates certificate renewals, revocation, and replacement to ensure validity and compliance without manual intervention.