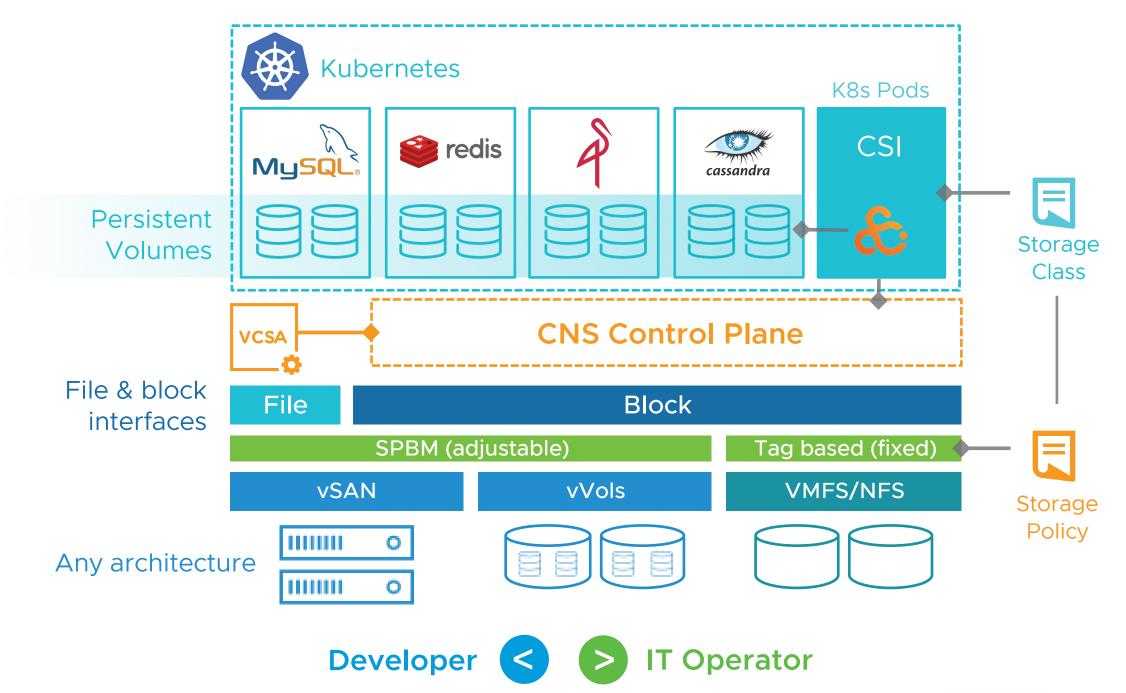
Cloud Native Storage in VMware vSphere and VMware vSAN

Fully integrated platform for modern Kubernetes applications on vSphere

Container environments are high-churn, highly dynamic environments. Tens, hundreds, even thousands of containers can be created and deleted every hour. Managing storage for these as they spin up and down manually is impossible.

With Cloud Native Storage in vSphere and vSAN, storage provisioning for container workloads is automated. Developers get what they need, when they need it. IT operators can run, monitor, and manage the storage for both containers and virtual machines on the same platform.





Enable developer self-service and high velocity scaling

1

- Dynamic and automatic provisioning of persistent volumes for stateful applications without admin involvement
- Access to multiple storage classes that fit application needs with flexibility to adjust later
- Persistent volumes automatically scale when applications scale
- Use the Kubernetes APIs and console: you don't have to understand the nitty gritty details of storage infrastructure to consume it!

2 Maintain enterprise governance and security

- One-to-one mapping between storage classes and Storage Policy Based Management (SPBM) storage policies that IT operators are using to manage VMs today¹, including storage policies that enable encryption of persistent volumes
- Full visibility and unified management of volumes for both VMs and containers across all vSAN, vVols, and VMFS/NFS supporting both block and file services
- Workload centric storage management: define storage policies and limits/quotas once for a namespace, and let developers self-serve to consume storage within the defined boundaries²
- Use familiar VMware interfaces: you don't have to learn Kubernetes command lines to manage Kubernetes!

Benefits in Action: Accelerate App Development with Scalable Storage Provisioning

©		2 2 10 - 100			8-90.eng.vmware.com		Mr. Datasteer M	Itworks Linked vCenter Server Systems	•	• @		
VM / VMDK policy profile		 It test-yee-1519773596-540 It test-yee-	Detablines y monto congree permasona observers notas a clasera y Datablines Datablines Datablines Container volume					Circle Content and the ayounts		VM / VMDK	/ VMDK policy profile	
Policy	Value	buld-ob.eng.vmware buld-storage61 eng.v buld-storage61 eng.v datastoret datastoret datastoret(1)	Volume name pvmongo pvmongo-2	Y Type Y File File	Ariction biz-intelligence App A	Detestore vsanDatastore vsanDatastore	♥ Compliance status ♥	Volume ID Y 10725600-1801-1168-81a1-0050568e3cc9 10725600-1801-1168-81a1-0050568e3cc8		Policy	Value	
Availability	FTT = 2	distatore1(2) distatore1(2) distatore1(3) sonthers.ong.vmotr tet+-upu-51972399-5 State-Vpu-51972399-5	pvmongo-3 pvmongo-4 pvmongo-5	File File File	NACCON fe-analysis App A NACCON fe-analysis App B Tair toronal App A	vsanDatastore vsanDatastore vsanDatastore	out dated ormplant ormplant ormplant	1d725e00-1801-1149-81ai-0050563e3cc7 1d725e00-1801-1149-81ai-0050563e3cc6 1d725e00-1801-1149-81ai-0050568e3cc5		Availability	FTT = 2	
Capacity reservation	40G	🗍 venOstatore	pvmongo-6 pvmongo-7 pvmongo-8 pvmongo-9 pvmongo-10	File File Block Block	Ter turned (App 8) environmet sandox environment sandox environment sandox environment sandox	text-sps-1519173591-54 SharedVmfs-1 SharedVmfs-1 SharedVmfs-1 vsanDatastore	1921 O compliant O compliant O compliant O compliant O compliant	14726e00-1801-186-8481-005056843c3 14726e00-1801-186-8481-005056843c3 14726e00-1801-186-8481-005056843c2 14726e00-1801-186-8481-005056843c1 14726e00-1801-186-8481-005056843c0		Capacity reservation	40G	
IOPS Limits	1000						510 of 140 container volume	s < 1 = 4 5 6 = 14 >	\mathbf{Z}	IOPS Limits	1000	
Polic	Recent Tasks Alarms						*		Polic	y Gold		



IT Operators monitor volumes within vCenter



Improve efficiency with a consistent operating model for cloud native storage supporting any vanilla Kubernetes distribution

- Better traceability and faster troubleshooting with consistent labeling of volumes for developers and IT operators, delivering a common language between dev and ops teams
- Consistent operating model for cloud native storage with support for any vanilla Kubernetes distributions
- True hybrid cloud experience with vSAN native services in AWS, Microsoft Azure, and IBM Cloud, which leverage the same tools and processes as users' private clouds



3

Call to Action: Learn more about Cloud Native Storage in vSphere and vSAN at vmware.com/products/cloud-native-storage

1. This feature is available when vSAN or vVols is used as the storage backend.

2. This feature is available when Cloud Native Storage in vSphere and vSAN is used with vSphere with Tanzu or VMware Cloud Foundation with Tanzu.

vmware[®]

VMware, Inc. 3401 Hillview Avenue Palo Alto CA 94304 USA Tel 877-486-9273 Fax 650-427-5001 vmware.com Copyright © 2020 VMware, Inc. All rights reserved. This product is protected by U.S. and international copyright and intellectual property laws. VMware products are covered by one or more patents listed at vmware.com/go/patents. VMware is a registered trademark or trademark of VMware, Inc. and its subsidiaries in the United States and other jurisdictions. All other marks and names mentioned herein may betrademarks of their respective companies. Item No: VMW Cloud Native Storage Infographic 5/20