# **■** NetApp

### **Change Log**

NetApp Solutions

NetApp August 02, 2023

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## **Table of Contents**

NetApp Solutions	Change Log	 	 

# **NetApp Solutions Change Log**

Recent changes to the NetApp Solutions collateral. The most recent changes are listed first.

All Change	All Changes		
Date	Solution Area	Description of change	
07/14/20 23	Data Analytics	Update TR-4947 : Apache Kafka workload with NetApp NFS storage ( AWS FSxN included )	
06/09/20 23	Database	Added new TR-4973: Quick Recovery and Clone of Oracle VLDB with Incremental Merge on AWS FSx ONTAP	
06/08/20 23	Hybrid Cloud	Added GCVE with CVS - Application Consistent Disaster Recovery with NetApp SnapCenter and Veeam Replication	
06/08/20 23	Hybrid Cloud	Added GCVE with CVS - VM Migration to NetApp Cloud Volume Service NFS Datastore on Google Cloud VMware Engine using Veeam Replication feature	
05/23/20 23	Virtualization	Added TR-4400: VMware vSphere Virtual Volumes (vVols) with NetApp ONTAP	
05/19/20 23	Database	Added new TR-4974: Oracle 19c in Standalone Restart on AWS FSx/EC2 with NFS/ASM	
05/16/20 23	Hybrid Multicloud with Red Hat OpenShift	Added new title in the side bar and new content	
05/16/20 23	Hybrid Multicloud with Red Hat OpenShift	Added new content	
05/10/20 23	Hybrid Cloud	Added TR-4955: Disaster Recovery with Azure NetApp Files (ANF) and Azure VMware Solution (AVS)	
05/05/20 23	Database	New TR-4951: Backup and Recovery for Microsoft SQL Server on AWS FSx for ONTAP	
05/04/20 23	Virtualization	Added "What's New with VMware vSphere 8" content	
04/27/20 23	Hybrid Cloud	Added Veeam Backup & Restore in VMware Cloud with AWS FSx for ONTAP	
03/31/20 23	Database	Added Oracle Database Deployment and Protection in AWS FSx/EC2 with iSCSI/ASM	
03/31/20 23	Database	Added Oracle Database Backup, Restore and Clone with SnapCenter Services	
03/29/20 23	Automation	Updated blog "FSx for ONTAP Monitoring and Auto-Resizing using AWS Lambda Function" with options for private/public deployment along with manual/automated deployment options.	
03/22/20 23	Automation	Added blog: FSx for ONTAP Monitoring and Auto-Resizing using AWS Lambda Function	
02/15/20 23	Database	Added PostgreSQL High Availability Deployment and Disaster Recovery in AWS FSx/EC2	
02/07/20 23	Hybrid Cloud	Added blog: Announcing general availability of NetApp Cloud Volumes Service datastore support for Google Cloud VMware Engine	

02/07/20 23	Hybrid Cloud	Added TR-4955: Disaster Recovery with FSx for ONTAP and VMC (AWS VMware Cloud)
01/24/20 23	Database	Added TR-4954: Oracle Database Deployment and Protection on Azure NetApp Files
01/12/20 23	Database	Added blog: Protect your SQL Server workloads using NetApp SnapCenter with Amazon FSx for NetApp ONTAP
12/15/20 22	Database	Added TR-4923: SQL Server on AWS EC2 using Amazon FSx for NetApp ONTAP
12/06/20 22	Database	Added 7 videos for Oracle database modernization in hybrid cloud with Amazon FSx storage
10/25/20 22	Hybrid Cloud	Added link to VMware documentation for FSx ONTAP as an NFS datastore
10/25/20 22	Hybrid Cloud	Added reference to blog for Configuring Hybrid Cloud with FSx ONTAP and VMC on AWS SDDC using VMware HCX
09/30/20 22	Hybrid Cloud	Added solution for Migrating Workloads to FSxN datastore using VMware HCX
09/29/20 22	Hybrid Cloud	Added solution for Migrating Workloads to ANF datastore using VMware HCX
09/14/20 22	Hybrid Cloud	Added links to TCO calculators and simulators for FSxN / VMC and ANF / AVS
09/14/20 22	Hybrid Cloud	Added supplemental NFS datastore option for AWS / VMC
08/25/20 22	Database	Added blog - Modernize your Oracle database operation in hybrid cloud with Amazon FSx storage
07/11/20 23	Data Analytics	Update TR - 4947 : Apache Kafka with FSxN
08/25/20 22	Al	New solution: NVIDIA AI Enterprise with NetApp and VMware
08/23/20 22	Hybrid Cloud	Updated the latest region availability for all supplemental NFS datastore options
08/05/20 22	Virtualization	Added "Reboot Required" information for recommended ESXi and ONTAP settings
07/28/20 22	Hybrid Cloud	Added DR solution with SnapCenter and Veeam for AWS/VMC (guest connected storage)
07/21/20 22	Hybrid Cloud	Added DR solution with CVO and JetStream for AVS (guest connected storage)
06/29/20 22	Database	Added WP-7357: Oracle Database Deployment on EC2/FSx Best Practices
22		
06/16/20 22	Al	Added NVIDIA DGX SuperPOD with NetApp design guide

06/07/20 22	Hybrid Cloud	Updated AVS region support to match public preview announcement / support
06/07/20 22	Data Analytics	Added link to NetApp EF600 with Splunk Enterprise solution
06/02/20 22	Hybrid Cloud	Added list of region availability for NFS datastores for NetApp Hybrid Multicloud with VMware
05/20/20 22	Al	New BeeGFS Design and Deployment guides for SuperPOD
04/01/20 22	Hybrid Cloud	Organized content of Hybrid Multicloud with VMware solutions: landing pages for each hyperscaler and inclusion of available solution (use case) content
03/29/20 22	Containers	Added a new TR: DevOps with NetApp Astra
03/08/20 22	Containers	Added a new video demo: Accelerate Software Development with Astra Control and NetApp FlexClone Technology
03/01/20 22	Containers	Added new sections to NVA-1160: Installation of Astra Control Center via OperatorHub and Ansible
02/02/20 22	General	Created landing pages to better organize content for Al and Modern Data Analytics
01/22/20 22	Al	Added TR: Data movement with E-Series and BeeGFS for Al and analytics workflows
12/21/20 21	General	Created landing pages to better organize content for Virtualization and Hybrid Multicloud with VMware
12/21/20 21	Containers	Added a new video demo: Leverage NetApp Astra Control to Perform Post-mortem Analysis and Restore Your Application to NVA-1160
12/06/20 21	Hybrid Cloud	Creation of Hybrid Multicloud with VMware content for virtualization environment and guest connected storage options
11/15/20 21	Containers	Added a new video demo: Data Protection in CI/CD pipeline with Astra Control to NVA-1160
11/15/20 21	Modern Data Analytics	New content: Best Practices for Confluent Kafka
11/02/20 21	Automation	AWS Authentication Requirements for CVO and Connector Using NetApp Cloud Manager
10/29/20 21	Modern Data Analytics	New content: TR-4657 - NetApp hybrid cloud data solutions: Spark and Hadoop
10/29/20 21	Database	Automated Data Protection for Oracle Databases
10/26/20 21	Database	Added blog section for enterprise applications and database to NetApp solutions tile. Added two blogs to Database blogs.
10/18/20 21	Database	TR-4908 - Hybrid Cloud Database Solutions with SnapCenter

10/14/20 21	Virtualization	Added parts 1-4 of NetApp with VMware VCF blog series
10/04/20 21	Containers	Added a new video demo: Workload Migration using Astra Control Center to NVA-1160
09/23/20 21	Data Migration	New content: NetApp Best Practices for NetApp XCP
09/21/20 21	Virtualization	New content or ONTAP for VMware vSphere Administrators, VMware vSphere automation
09/09/20 21	Containers	Added F5 BIG-IP load balancer integration with OpenShift to NVA-1160
08/05/20 21	Containers	Added a new technology integration to NVA-1160 - NetApp Astra Control Center on Red Hat OpenShift
07/21/20 21	Database	Automated Deployment of Oracle19c for ONTAP on NFS
07/02/20 21	Database	TR-4897 - SQL Server on Azure NetApp Files: Real Deployment View
06/16/20 21	Containers	Added a new video demo, Installing OpenShift Virtualization: Red Hat OpenShift with NetApp
06/16/20 21	Containers	Added a new video demo, Deploying a Virtual Machine with OpenShift Virtualization: Red Hat OpenShift with NetAppp
06/14/20 21	Database	Added solution: Microsoft SQL Server on Azure NetApp Files
06/11/20 21	Containers	Added a new video demo: Workload Migration using Astra Trident and SnapMirror to NVA-1160
06/09/20 21	Containers	Added a new use-case to NVA-1160 - Advanced Cluster Management for Kubernetes on Red Hat OpenShift with NetApp
05/28/20 21	Containers	Added a new use-case to NVA-1160 - OpenShift Virtualization with NetApp ONTAP
05/27/20 21	Containers	Added a new use-case to NVA-1160- Multitenancy on OpenShift with NetApp ONTAP
05/26/20 21	Containers	Added NVA-1160 - Red Hat OpenShift with NetApp
05/25/20 21	Containers	Added blog: Installing NetApp Trident on Red Hat OpenShift – How to solve the Docker 'toomanyrequests' issue!
05/19/20 21	General	Added link to FlexPod solutions
05/19/20 21	Al	Converted Al Control Plane solution from PDF to HTML
05/17/20	General	Added Solution Feedback tile to main page

05/11/20 21	Database	Added automated deployment of Oracle 19c for ONTAP on NFS
05/10/20 21	Virtualization	New video: How to use vVols with NetApp and VMware Tanzu Basic, part 3
05/06/20 21	Oracle Database	Added link to Oracle 19c RAC Databases on FlexPod DataCenter with Cisco UCS and NetApp AFF A800 over FC
05/05/20 21	Oracle Database	Added FlexPod Oracle NVA (1155) and Automation video
05/03/20 21	Desktop Virtualization	Added link to FlexPod Desktop Virtualization solutions
04/30/20 21	Virtualization	Video: How to use vVols with NetApp and VMware Tanzu Basic, part 2
04/26/20 21	Containers	Added blog: Using VMware Tanzu with ONTAP to accelerate your Kubernetes journey
04/06/20 21	General	Added "About this Repository"
03/31/20 21	Al	Added TR-4886 - Al Inferencing at the Edge: NetApp ONTAP with Lenovo ThinkSystem Solution Design
03/29/20 21	Modern Data Analytics	Added NVA-1157 - Apache Spark Workload with NetApp Storage Solution
03/23/20 21	Virtualization	Video: How to use vVols with NetApp and VMware Tanzu Basic, part 1
03/09/20 21	General	Added E-Series content; categorized AI content
03/04/20 21	Automation	New content: getting started with NetApp solution automation
02/18/20 21	Virtualization	Added TR-4597 - VMware vSphere for ONTAP
02/16/20 21	Al	Added automated deployment steps for AI Edge Inferencing
02/03/20 21	SAP	Added landing page for all SAP and SAP HANA content
02/01/20 21	Desktop Virtualization	VDI with NetApp VDS, Added content for GPU nodes
01/06/20 21	Al	New solution: NetApp ONTAP AI with NVIDIA DGX A100 Systems and Mellanox Spectrum Ethernet Switches (Design and Deployment)
12/22/20 20	General	Initial release of NetApp Solutions repository
	Analytica	
AI / Data A	Analytics	

07/14/20 23	Data Analytics	Update TR-4947 : Apache Kafka workload with NetApp NFS storage ( AWS FSxN included )
07/11/20 23	Data Analytics	Update TR - 4947 : Apache Kafka with FSxN
08/25/20 22	Al	New solution: NVIDIA AI Enterprise with NetApp and VMware
06/16/20 22	Al	Added NVIDIA DGX SuperPOD with NetApp design guide
06/07/20 22	Data Analytics	Added link to NetApp EF600 with Splunk Enterprise solution
05/20/20 22	Al	New BeeGFS Design and Deployment guides for SuperPOD
02/02/20 22	General	Created landing pages to better organize content for Al and Modern Data Analytics
01/22/20 22	Al	Added TR: Data movement with E-Series and BeeGFS for Al and analytics workflows
11/15/20 21	Modern Data Analytics	New content: Best Practices for Confluent Kafka
10/29/20 21	Modern Data Analytics	New content: TR-4657 - NetApp hybrid cloud data solutions: Spark and Hadoop
05/19/20 21	Al	Converted AI Control Plane solution from PDF to HTML
03/31/20 21	Al	Added TR-4886 - Al Inferencing at the Edge: NetApp ONTAP with Lenovo ThinkSystem Solution Design
03/29/20 21	Modern Data Analytics	Added NVA-1157 - Apache Spark Workload with NetApp Storage Solution
02/16/20 21	Al	Added automated deployment steps for AI Edge Inferencing
01/06/20 21	Al	New solution: NetApp ONTAP AI with NVIDIA DGX A100 Systems and Mellanox Spectrum Ethernet Switches (Design and Deployment)

### **Hybrid Multicloud**

Date	Solution Area	Description of change
06/08/20 23	Hybrid Cloud	Added GCVE with CVS - Application Consistent Disaster Recovery with NetApp SnapCenter and Veeam Replication
06/08/20 23	Hybrid Cloud	Added GCVE with CVS - VM Migration to NetApp Cloud Volume Service NFS Datastore on Google Cloud VMware Engine using Veeam Replication feature
05/10/20 23	Hybrid Cloud	Added TR-4955: Disaster Recovery with Azure NetApp Files (ANF) and Azure VMware Solution (AVS)

21	Hybrid Cloud  Ilticloud with Red Hat OpenShi	Creation of Hybrid Multicloud with VMware content for virtualization environment and guest connected storage options
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12/21/20 21	General	Created landing pages to better organize content for Virtualization and Hybrid Multicloud with VMware
04/01/20 22	Hybrid Cloud	Organized content of Hybrid Multicloud with VMware solutions: landing pages for each hyperscaler and inclusion of available solution (use case) content
06/02/20 22	Hybrid Cloud	Added list of region availability for NFS datastores for NetApp Hybrid Multicloud with VMware
06/07/20 22	Hybrid Cloud	Updated AVS region support to match public preview announcement / support
06/10/20 22	Hybrid Cloud	Added AVS with ANF native datastore overview and DR with JetStream
07/21/20 22	Hybrid Cloud	Added DR solution with CVO and JetStream for AVS (guest connected storage)
07/28/20 22	Hybrid Cloud	Added DR solution with SnapCenter and Veeam for AWS/VMC (guest connected storage)
08/23/20 22	Hybrid Cloud	Updated the latest region availability for all supplemental NFS datastore options
09/14/20 22	Hybrid Cloud	Added supplemental NFS datastore option for AWS / VMC
09/14/20 22	Hybrid Cloud	Added links to TCO calculators and simulators for FSxN / VMC and ANF / AVS
09/29/20 22	Hybrid Cloud	Added solution for Migrating Workloads to ANF datastore using VMware HCX
09/30/20 22	Hybrid Cloud	Added solution for Migrating Workloads to FSxN datastore using VMware HCX
10/25/20 22	Hybrid Cloud	Added reference to blog for Configuring Hybrid Cloud with FSx ONTAP and VMC on AWS SDDC using VMware HCX
10/25/20 22	Hybrid Cloud	Added link to VMware documentation for FSx ONTAP as an NFS datastore
02/07/20 23	Hybrid Cloud	Added TR-4955: Disaster Recovery with FSx for ONTAP and VMC (AWS VMware Cloud)
02/07/20 23	Hybrid Cloud	Added blog: Announcing general availability of NetApp Cloud Volumes Service datastore support for Google Cloud VMware Engine
04/27/20 23	Hybrid Cloud	Added Veeam Backup & Restore in VMware Cloud with AWS FSx for ONTAP

05/16/20 23	Hybrid Multicloud with Red Hat OpenShift	Added new title in the side bar and new content
05/16/20 23	Hybrid Multicloud with Red Hat OpenShift	Added new content

#### Virtualization

Date	Solution Area	Description of change
05/23/20 23	Virtualization	Added TR-4400: VMware vSphere Virtual Volumes (vVols) with NetApp ONTAP
05/04/20 23	Virtualization	Added "What's New with VMware vSphere 8" content
08/05/20 22	Virtualization	Added "Reboot Required" information for recommended ESXi and ONTAP settings
04/01/20 22	Hybrid Cloud	Organized content of Hybrid Multicloud with VMware solutions: landing pages for each hyperscaler and inclusion of available solution (use case) content
12/21/20 21	General	Created landing pages to better organize content for Virtualization and Hybrid Multicloud with VMware
10/14/20 21	Virtualization	Added parts 1-4 of NetApp with VMware VCF blog series
09/21/20 21	Virtualization	New content or ONTAP for VMware vSphere Administrators, VMware vSphere automation
05/10/20 21	Virtualization	New video: How to use vVols with NetApp and VMware Tanzu Basic, part 3
05/03/20 21	Desktop Virtualization	Added link to FlexPod Desktop Virtualization solutions
04/30/20 21	Virtualization	Video: How to use vVols with NetApp and VMware Tanzu Basic, part 2
04/26/20 21	Containers	Added blog: Using VMware Tanzu with ONTAP to accelerate your Kubernetes journey
03/23/20 21	Virtualization	Video: How to use vVols with NetApp and VMware Tanzu Basic, part 1
02/18/20 21	Virtualization	Added TR-4597 - VMware vSphere for ONTAP
02/01/20 21	Desktop Virtualization	VDI with NetApp VDS, Added content for GPU nodes

#### **Containers**

Date	Solution Area	Description of change
03/29/20 22	Containers	Added a new TR: DevOps with NetApp Astra

03/08/20 22	Containers	Added a new video demo: Accelerate Software Development with Astra Control and NetApp FlexClone Technology
03/01/20 22	Containers	Added new sections to NVA-1160: Installation of Astra Control Center via OperatorHub and Ansible
12/21/20 21	Containers	Added a new video demo: Leverage NetApp Astra Control to Perform Post-mortem Analysis and Restore Your Application to NVA-1160
11/15/20 21	Containers	Added a new video demo: Data Protection in CI/CD pipeline with Astra Control to NVA-1160
10/04/20 21	Containers	Added a new video demo: Workload Migration using Astra Control Center to NVA-1160
09/09/20 21	Containers	Added F5 BIG-IP load balancer integration with OpenShift to NVA-1160
08/05/20 21	Containers	Added a new technology integration to NVA-1160 - NetApp Astra Control Center on Red Hat OpenShift
06/16/20 21	Containers	Added a new video demo, Installing OpenShift Virtualization: Red Hat OpenShift with NetApp
06/16/20 21	Containers	Added a new video demo, Deploying a Virtual Machine with OpenShift Virtualization: Red Hat OpenShift with NetAppp
06/11/20 21	Containers	Added a new video demo: Workload Migration using Astra Trident and SnapMirror to NVA-1160
06/09/20 21	Containers	Added a new use-case to NVA-1160 - Advanced Cluster Management for Kubernetes on Red Hat OpenShift with NetApp
05/28/20 21	Containers	Added a new use-case to NVA-1160 - OpenShift Virtualization with NetApp ONTAP
05/27/20 21	Containers	Added a new use-case to NVA-1160- Multitenancy on OpenShift with NetApp ONTAP
05/26/20 21	Containers	Added NVA-1160 - Red Hat OpenShift with NetApp
05/25/20 21	Containers	Added blog: Installing NetApp Trident on Red Hat OpenShift – How to solve the Docker 'toomanyrequests' issue!
05/10/20 21	Virtualization	New video: How to use vVols with NetApp and VMware Tanzu Basic, part 3
04/30/20 21	Virtualization	Video: How to use vVols with NetApp and VMware Tanzu Basic, part 2
04/26/20 21	Containers	Added blog: Using VMware Tanzu with ONTAP to accelerate your Kubernetes journey
03/23/20 21	Virtualization	Video: How to use vVols with NetApp and VMware Tanzu Basic, part 1
Enterprise	Apps and DB	

Date	Solution Area	Description of change
06/09/20 23	Database	Added new TR-4973: Quick Recovery and Clone of Oracle VLDB with Incremental Merge on AWS FSx ONTAP
05/19/20 23	Database	Added new TR-4974: Oracle 19c in Standalone Restart on AWS FSx/EC2 with NFS/ASM
05/05/20 23	Database	New TR-4951: Backup and Recovery for Microsoft SQL Server on AWS FSx for ONTAP
03/31/20 23	Database	Added Oracle Database Deployment and Protection in AWS FSx/EC2 with iSCSI/ASM
03/31/20 23	Database	Added Oracle Database Backup, Restore and Clone with SnapCenter Services
02/15/20 23	Database	Added PostgreSQL High Availability Deployment and Disaster Recovery in AWS FSx/EC2
01/24/20 23	Database	Added TR-4954: Oracle Database Deployment and Protection on Azure NetApp Files
01/12/20 23	Database	Added blog: Protect your SQL Server workloads using NetApp SnapCenter with Amazon FSx for NetApp ONTAP
12/15/20 22	Database	Added TR-4923: SQL Server on AWS EC2 using Amazon FSx for NetApp ONTAP
12/06/20 22	Database	Added 7 videos for Oracle database modernization in hybrid cloud with Amazon FSx storage
08/25/20 22	Database	Added blog - Modernize your Oracle database operation in hybrid cloud with Amazon FSx storage
06/29/20 22	Database	Added WP-7357: Oracle Database Deployment on EC2/FSx Best Practices
10/29/20 21	Database	Automated Data Protection for Oracle Databases
10/26/20 21	Database	Added blog section for enterprise applications and database to NetApp solutions tile. Added two blogs to Database blogs.
10/18/20 21	Database	TR-4908 - Hybrid Cloud Database Solutions with SnapCenter
07/21/20 21	Database	Automated Deployment of Oracle19c for ONTAP on NFS
07/02/20 21	Database	TR-4897 - SQL Server on Azure NetApp Files: Real Deployment View
06/14/20 21	Database	Added solution: Microsoft SQL Server on Azure NetApp Files
05/11/20 21	Database	Added automated deployment of Oracle 19c for ONTAP on NFS
05/06/20 21	Oracle Database	Added link to Oracle 19c RAC Databases on FlexPod DataCenter with Cisco UCS and NetApp AFF A800 over FC

05/05/20 Oracle Database 21	Added FlexPod Oracle NVA (1155) and Automation video
02/03/20 SAP 21	Added landing page for all SAP and SAP HANA content



For more information on SAP and SAP HANA updates, refer to the "Update History" content present for each of the solutions in the SAP Solutions Repository.

### **Data Protection and Data Migration**

Date	Solution Area	Description of change
10/29/20 21	Database	Automated Data Protection for Oracle Databases
09/23/20 21	Data Migration	New content: NetApp Best Practices for NetApp XCP

#### **Solution Automation**

Date	Solution Area	Description of change
03/29/20 23	Automation	Updated blog "FSx for ONTAP Monitoring and Auto-Resizing using AWS Lambda Function" with options for private/public deployment along with manual/automated deployment options.
03/22/20 23	Automation	Added blog: FSx for ONTAP Monitoring and Auto-Resizing using AWS Lambda Function
11/02/20 21	Automation	AWS Authentication Requirements for CVO and Connector Using NetApp Cloud Manager
10/29/20 21	Database	Automated Data Protection for Oracle Databases
07/21/20 21	Database	Automated Deployment of Oracle19c for ONTAP on NFS
05/11/20 21	Database	Added automated deployment of Oracle 19c for ONTAP on NFS
03/04/20 21	Automation	New content: getting started with NetApp solution automation

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