



NETAPP UNIVERSITY

NETAPP CERTIFICATION PROGRAM

Reference Document List

- Version: 4.5
- Date: September 20, 2018

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Most links listed here require that you have a login to netapp.com. If you find that the link is no longer valid, it is recommended that you search for the document name on either netapp.com, the [NetApp Knowledgebase](#), the [NetApp Documentation Center](#) or even by just searching the internet.

Please notify the NetApp Certification Program (ncp@netapp.com) about any broken links so that this document can be updated.

Thank you for your understanding and please contact ncp@netapp.com if you have any questions.

Shortcuts

[NetApp Certified Hybrid Cloud Architect \(NS0-600\)](#)

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[Cisco and NetApp FlexPod Design \(NS0-170\)](#)

[Cisco and NetApp FlexPod Design \(NS0-173\)](#)

[Cisco and NetApp FlexPod Implementation and Administration \(NS0-171\)](#)

[Cisco and NetApp FlexPod Implementation and Administration \(NS0-174\)](#)

[NetApp Certified Data Administrator, ONTAP \(NS0-159\)](#)

[NetApp Certified Implementation Engineer, Data Protection \(NS0-513\)](#)

[NetApp Certified Implementation Engineer – SAN, ONTAP \(NS0-508\)](#)

[NetApp Certified Storage Associate – Hybrid Cloud \(NS0-146\)](#)

[NetApp Certified Storage Installation Engineer, ONTAP \(NS0-181\)](#)

[NetApp Certified Support Engineer \(NS0-192\)](#)

[NetApp Certified Support Engineer - ONTAP Specialist \(NS0-590\)](#)

NetApp Certified Hybrid Cloud Architect (NS0-600)

- Industry/Product Knowledge
- NetApp Cloud Volumes Service for AWS documentation
- Azure NetApp Files Documentation
- Cloud Sync Documentation
- Adopting Hybrid Cloud Becomes a Strategic Imperative (Harvard Business Review Analytics Service Survey)
- NetApp Data Fabric Architecture Fundamentals. WP7218
- Cloud Volumes ONTAP AWS TCO Calculator
- Cloud Volumes ONTAP Azure TCO Calculator
- NetApp StorageGRID Webscal Object-based Storage Software
- Performance Characterization of ONTAP Cloud in Amazon Web Services with Application Workloads
- Performance Characterization of ONTAP Cloud in Azure with Application Workloads
- Cloud Sync Swagger API Documentation
- Getting Started with the Cloud Sync Service
- ONTAP 9 Documentation Center
- Storage as a Service Blueprint for IT Providers (Rich O'Connor and Owen Hughes, NetApp)
- StorageGRID Webscale 11.1 Simple Storage Service Implementation Guide
- Cloud Volumes ONTAP
- Configuration Management
- Provision Storage like a Service Provider with NetApp Service Level Manager (Priya Munshi)
- Cloud Volumes ONTAP managing encryption keys
- The Importance of I/O Density in Delivering Storage as a Service (Eduardo Rivera)
- Bandwidth Pricing Details (Microsoft)
- NetApp AltaVault Cloud Integrate Storage Administration Guide
- Deciding whether to use the Disks and Aggregate Power Guide
- Deciding whether to use the Data Protection Power Guide
- StorageGRID Webscale 11/1 Tenant Administration Guide
- Trident Documentation
- Cloud Docs
- Getting started with SaaS Backup for Office 365
- Storage tiering
- The Cost of Non-Compliance for Financial Service
- Data Governance
- StorageGRID Webscale 11.1 Documentation
- Amazon S3 Storage Classes
- Azure Storage Replication
- NetApp XCP migration tool
- ONTAP Select Deployment guide
- OnCommand Insight Monitoring product page
- FabricPool Best Practices
- The Self Healing Data Fabric
- Edge to Core to Cloud Architecture for AI (Sundar Ranganathan)
- The Phoenix Project: A Novel about IT, DevOps, and Helping Your Business Win (Gene Ki and Kevin Behr)
- Data sovereignty (wikipedia)
- Hadoop on Data Fabric Enabled by NetApp
- A Refresher on Net Present Value (Amy Gallo)
- ONTAP 9.4 Release Notes
- Known limitations for Cloud Volumes ONTAP 9.4
- ITIL Service Design (UK Office of Government Commerce)
- Replication data to and from the cloud
- Manage Encryption Setting for Cloud Volumes ONTAP
- Cloud migration strategy framework (Suledjo Tjahjdi)

NetApp Certified Hybrid Cloud Administrator (NS0-300)

- Industry/Product Knowledge
- NetApp Product Documentation Website (<https://docs.netapp.com>)
- NetApp Cloud Docs, Cloud Manager, Cloud Manager FAQ
- NetApp Community Website (community.netapp.com)
- AWS Documentation Website (docs.aws.amazon.com)
- Cloud Volumes Service for AWS user documentation
- Cloud Docs 1.1
- ONTAP 9 Cluster Management Using OnCommand System Manager
- Fabric Pool Best Practices in ONTAP 9
- Cloud Central website for Cloud Volumes
- Azure NetApp Files Documentation (Microsoft)
- Azure NetApp Files Blog Entry (Andrew Chen)
- Cloud Manager and Cloud Volumes ONTAP Documentation
- NetApp Cloud Docs, Granting permissions when Cloud Manager is not launched from Cloud Central
- Cloud Manager Setup Guide
- StorageGRID Webscale 11.1 Administrator Guide
- NetApp Support Site
- NetApp SolidFire Element OS User Guide Version 10.3
- Performance Characterization of ONTAP Cloud in Amazon Web Services with Application Workloads
- Performance Characterization of ONTAP Cloud in Azure with Application Workloads
- ONTAP 9.4 Data Protection Power Guide
- ONTAP 9.4 Logical Storage Management Guide
- NetApp SANtricity Cloud Connector 3.1 User Guide
- Cloud Volumes ONTAP Getting Started Guide
- Selecting the service level and the quota
- Group and bucket access policies
- Cloud Volumes 9.4 Known Limitations
- Choosing a Replication Policy
- Scheduling Cloud Volumes ONTAP
- Provisioning and Mounting NFS Volumes

- [Best Practices in Deploying Cisco Nexus 1000V Series Switches on Cisco UCS B and C Series Cisco UCS Manager Servers White Paper](#)
- [Cabling the private cluster interconnect for NetApp CN1610 switches](#)
- Cisco Data Center Virtual Machine Fabric Extender (VM-FEX)
- Cisco MDS 9000 Family NX-OS Fabric Configuration Guide
- Cisco Nexus 5500 Series NX-OS Software Upgrade and Downgrade Guide, Release 6.0
- Cisco Nexus 5600 Series NX-OS Software Upgrade and Downgrade Guide, Release 7.2(0)N1(1)
- Cisco Nexus 6001 Switch Data Sheet
- Cisco Nexus 7000 Series Switches Data
- [Cisco Nexus 9000 Series NX-OS High Availability and Redundancy Guide](#)
- [Cisco Nexus 9000 Series Switches](#)
- [Cisco NX-OS Licensing Guide](#)
- [Cisco NX-OS Software Virtual PortChannel: Fundamental Concepts 5.0](#)
- Cisco UCS 6300 Series Fabric Interconnect Hardware Installation Guide
- Cisco UCS Manager Configuration Common Practices and Quick-Start Guide
- Cisco UCS Manager GUI Configuration Guide, Release 2.2
- Cisco UCS Manager Web Site
- Cisco UCS Performance Manager Administration Guide, Release 2.0.0
- [Cisco UCS Sizer for Enterprise Applications](#)
- [Cisco UCS Virtual Interface Card 1240 Data Sheet](#)
- [Cisco UCS Virtual Interface Card 1340 Data Sheet](#)
- [Cisco Unified Computing System Ethernet Switching Modes](#)
- [Cisco Validated Design Overview Document](#)
- Classic Network Design Using Cisco Nexus 9000 Series Switches
- Clustered Data ONTAP 8.3 SAN Administration Guide
- Clustered Data ONTAP 8.3 SAN Configuration Guide
- Clustered Data ONTAP 8.3: Logical Storage Management Guide
- Clustered Data ONTAP® 8.3 Cluster Management Using OnCommand® System Manager
- Clustered Data ONTAP® 8.3 Data Protection Guide
- Clustered Data ONTAP® 8.3 Network Management Guide
- [Clustered Data ONTAP® 8.3 Network Management Guide](#)
- Clustered ONTAP 8.3 Commands: Manual Page Reference
- [CN1601 and CN1610 Switch Setup and Configuration Guide](#)
- Config Advisor 4.4 Installation and Administration Guide
- Config Advisor Plug-ins Installation and Administration Guide
- CVD: FlexPod Datacenter with ACI Solutions Guide
- CVD: FlexPod Datacenter with Cisco UCS Mini and VMware vSphere 6.0 with IP-Based Storage
- CVD: FlexPod Datacenter with Citrix XenDesktop/ XenApp 7.7 and VMware vSphere 6.0 for 5000 Seats
- CVD: FlexPod Datacenter with Microsoft Private Cloud Fast Track 4.0 and Cisco Nexus 9000 Series Switches
- CVD: FlexPod Datacenter with NetApp All Flash FAS, Cisco Application Centric Infrastructure, and VMware vSphere Design Guide
- CVD: FlexPod Datacenter with Red Hat Enterprise Linux OpenStack Platform
- CVD: FlexPod Datacenter with VMware 6.0
- CVD: FlexPod Datacenter with VMware vSphere 5.1, Cisco Nexus 7000 Series Switches, and NetApp MetroCluster for Multisite Deployment
- CVD: FlexPod with Cisco UCS Mini Design Guide
- Datasheet: NetApp Management Solutions Suite for VMware vSphere
- [Description: Config Advisor](#)
- [Design Considerations for High Availability and Scalability in Blade Server Environments](#)
- Designing and Deploying a Cisco Unified Computing System SAN Using Cisco MDS 9000 Family Switches
- [FlexPod Data Center with Cisco Nexus 7000 and NetApp MetroCluster for Multisite Deployment](#)
- [FlexPod Data Center with Microsoft Fast Track Private Cloud 3 Design Guide](#)
- FlexPod Datacenter Technical Specifications
- FlexPod Datacenter with Cisco Secure Enclaves
- FlexPod Datacenter with Cisco UCS Mini and VMware vSphere 6.0 with IP-Based Storage

- FlexPod Datacenter with NetApp All Flash FAS, Cisco Application Centric Infrastructure, and VMware vSphere Design Guide
- [FlexPod Datacenter with NetApp All Flash FAS, Cisco Application Centric Infrastructure, and VMware vSphere Design Guide](#)
- FlexPod Datacenter with VMware vSphere 5.1 Update 1 and Cisco Nexus 9000 Application Centric Infrastructure (ACI) Design Guide
- FlexPod Datacenter with VMware vSphere 5.5 Update 1
- FlexPod Datacenter with VMware vSphere 5.5 Update 1 Design Guide
- FlexPod Datacenter with VMware vSphere 6.0 Design Guide
- FlexPod Express with VMware vSphere 6.0: Large Configuration
- FlexPod with Cisco UCS Mini Design Guide
- Industry/Product Knowledge
- iSCSI and FCoE: A Comparison
- [Microsoft Technet - Virtual Machine Live Migration Overview](#)
- NetApp Clustered Data ONTAP 8.3.x and 8.2.x An Introduction
- NetApp FAS2500 Series Datasheet
- NetApp FAS8000 Series Datasheet
- NetApp Hardware Universe
- NVA-0019-DESIGN
- OnCommand Insight Performance Guide
- OpenStack Deployment and Operations Guide
- Set up FCoE Connectivity for a Cisco UCS Blade
- SnapManager for Hyper-V 2.1.1 Installation and Administration Guide
- [Supported SMB 3.0 functionality](#)
- TR-3450 - High-Availability (HA) Pair Controller Configuration Overview and Best Practices
- TR-3884 FlexPod Datacenter Solutions Guide
- TR-4068: VMware vSphere 5 on NetApp Clustered Data ONTAP
- TR-4293 FlexPod Express Technical Specifications
- TR-4333: VMware vSphere 6 on NetApp Clustered Data ONTAP
- TR-4480 All Flash FAS SAN-Optimized Configuration
- [UCS Appliance Port Connectivity and Troubleshooting](#)
- [Unified Computing System Firmware Management Best Practices](#)
- Unified Computing System Technology Design Guide
- vCenter Operations Manager 5.8.5 Getting Started Guide
- vCenter Server Host and Management Guide Release 6.0 Update 2
- [VMware vCenter Server Datasheet -](#)
- VMware vSphere 6.0 Documentation Center
- [VMware vSphere Built On FlexPod With IP-Based Storage](#)
- vSphere Installation and Setup Guide - vSphere 6.0 Update 2
- vSphere Storage Guide, Release 6.0 Update 1
- VXLAN Overview: Cisco Nexus 9000 Series Switches

Cisco and NetApp FlexPod Design (NS0-173)

Note: NS0-170 will go end-of-availability on December 28, 2018.

- Industry/Product Knowledge
- ONTAP 90 SAN Configuration Guide
- ONTAP 90 SAN Administration Guide
- ONTAP 90 Logical Storage Management Guide
- High-Availability Configuration Guide
- ONTAP 90 Network Management Guide
- Interoperability Matrix Tool – IMT
- Best Practices for Scalable SAN
- Datasheet NetApp Converged Systems Advisor
- FlexPod Express with Cisco UCS C-Series and NetApp FAS2500 Series
- FlexPod Datacenter with Microsoft Applications and NetApp AFF A-Series
- FlexPod Express with Microsoft Windows 2016 Hyper-V and FAS2600
- FlexPod Express Technical Specifications
- FlexPod Datacenter Technical Specifications
- Configuring the Fabric Interconnects (Cisco)
- ONTAP 9 Data Protection Power Guide
- FlexPod Datacenter with Docker Enterprise Edition for Container Management (Cisco)
- Design FlexPod Datacenter with NetApp MetroCluster NVA Design Guide
- Cisco UCS Manager Infrastructure Management Guide, Release 3.1 (Cisco)
- NetApp Hardware Universe
- FlexPod Datacenter with VMware vSphere 6.5 NetApp AFF A-Series, and IP-Based Storage
- Assessing Your Converged Infrastructure Options: Five Criteria for Making an Informed Investment
- MDS Command Reference Guide (Cisco)
- ONTAP 9 System Administration Reference
- Configuring IPspaces
- Cisco Nexus 5000 NX-OS Software Configuration Guide (Cisco)
- VMware vSphere Virtual Machine Encryption (white paper, December 2017)
- Cisco UCS Manager (Cisco)
- ONTAP 9 SMB/CIFS Configuration
- Cisco UCS Manager Administration Management Guide 3.1 (Cisco)
- Cisco UCS Manager Troubleshooting Reference Guide (Cisco)
- ONTAP 9 Release Notes
- FlexPod Datacenter with VMware vSphere 6.5 Update 1 and NetApp AFF A-series with Cisco UCS Manager 3.2 Design Guide (Cisco)
- Cisco UCS 6200, 6332, and 6324 Series Configuration Limits for Cisco UCS Manager (Cisco)
- Virtual PartChannel Quick Configuration Guide (Cisco)
- UCS Appliance Port Connectivity and Troubleshooting (Cisco)
- Cisco Nexus 9000 Series NX-OS VXLAN (Cisco)
- Cisco UCS Manager Network Management Guide, Release 3.2 (Cisco)
- vCenter Server and Host Management VMware vSphere 6.5 (VMware)
- FlexPod Datacenter with VMware vSphere 6.5, NetApp AFF A-Series and Fibre Channel
- Cisco UCS Manager Server Management Guide, Release 3.1
- SANtricity Storage Manager 11.42, SANtricity OS 8.40 and SANtricity OS 11.40
- Cisco UCS Manager Getting Started Guide, Release 3.2 (Cisco)
- Cisco UCS Director Data Sheet (Cisco)
- Small Computer System Interface over IP and Fibre Channel over Ethernet: A Comparison (Cisco)
- UCS B-series Teaming & Bonding Options with Cisco VIC Card (Cisco)
- Designing and Deploying a Cisco Unified Computing System SAN Using Cisco MDS 9000 Family Switches (Cisco)
- Cisco UCS 6300 Series Fabric Interconnect Hardware Installation Guide (Cisco)
- All Flash FAS SAN-optimized Configuration
- FlexPod Datacenter with Cisco UCS Mini and VMware vSphere 6.0 with IP-Based Storage (Cisco)
- Red Hat OpenStack Platform 10 Product Guide (OpenStack Team)
- MetroCluster for Clustered Data (Nabile Fares)
- Cisco UCS Central Software

- [Clustered Data ONTAP 8.3](#)
- [Cisco UCS 5100 Series Blade Server Chassis Data Sheet \(Cisco\)](#)
- [Classic Network Design Using Cisco Nexus 9000 Series Switches \(Cisco\)](#)
- [Cisco UCS Manager Storage Management Guide, Release 3.2 \(Cisco\)](#)
- [Cisco Unified Computing System Ethernet Switching Modes \(Cisco\)](#)
- [SnapCenter Software 4.0 Installation and Setup Guide](#)
- [FlexPod Datacenter FedRAMP Readiness with VMware vSphere 6.0 HyTrust](#)
- [Host requirements for link aggregation for ESXi and ESX \(VMware\)](#)
- [Getting Started with Cisco Application Centric Infrastructure \(ACI\) in the Small-to-Midsize Commercial Data Center](#)
- [Cisco UCS C-Series Server Integration with Cisco UCS Manager 3.1 \(Cisco\)](#)
- [Cisco UCS 6300 Series Fabric Interconnects Data Sheet \(Cisco\)](#)
- [Managing Licenses \(Cisco\)](#)

Cisco and NetApp FlexPod Implementation and Administration (NS0-171)

- [Best Practices Using vSphere Web Client](#)
- [Cabling the private cluster interconnect for FAS80xx systems NetApp](#)
- [Cisco Application Centric Infrastructure](#)
- Cisco FlexPod Datacenter with VMware vSphere 6.0 Design Guide
- [Cisco Nexus 1000V Troubleshooting Guide, Release 4.0](#)
- Cisco Nexus 2000 Fabric Extender Data Sheet
- Cisco Nexus 2000 Series Fabric Extenders Data Sheet
- [Cisco Nexus 5000 Series NX-OS Interfaces Configuration Guide, Release 5.2](#)
- Cisco Nexus 5000 Series NX-OS Layer 2 Switching Configuration Guide, Release 5.1
- Cisco Nexus 5000 Series NX-OS Software Configuration Guide
- [Cisco Nexus 5000 Series Switches](#)
- [Cisco Nexus 5600 Series NX-OS Fibre Channel over Ethernet Configuration Guide, Release 7.x](#)
- Cisco Nexus 5600 Series NX-OS Quality of Service Configuration Guide, Release 7.x
- [Cisco Nexus 7000 Series NX-OS Quality of Service Configuration Guide](#)
- [Cisco Nexus 9000 series switch overview](#)
- Cisco UCS 5108 Server Chassis Installation Guide
- Cisco UCS 6200 Series Fabric Interconnect Hardware Installation Guide
- Cisco UCS 6324 Fabric Interconnect Data Sheet
- [Cisco UCS Central Software](#)
- Cisco UCS Central Software Datasheet
- [Cisco UCS Manager Configuration Common Practices and Quick-Start Guide](#)
- Cisco UCS Manager Firmware Management Guide, Release 3.1
- Cisco UCS Manager GUI Configuration Guide for Cisco UCS Mini, Release 3.0
- Cisco UCS Manager GUI Configuration Guide, Release 2.2
- [Cisco UCS Manager Troubleshooting Reference Guide](#)
- Cisco UCS Performance Manager 2.0 Datasheet
- Cluster Data ONTAP 8.3 Upgrade and Downgrade Guide
- Cluster Data ONTAP Administration Guide
- Cluster Data ONTAP Administration Guide
- [Cluster Management and Interconnect Switches](#)
- Clustered Data ONTAP 8.3 - Commands: Manual Page Reference
- Clustered Data ONTAP 8.3 File Access Management Guide for NFS
- Clustered Data ONTAP 8.3 SVM Root Volume Protection Express Guide
- Clustered Data ONTAP® 8.3 CIFS and NFS Multiprotocol Configuration Express Guide
- Clustered Data ONTAP® 8.3 Commands: Manual Page Reference
- Clustered Data ONTAP® 8.3 Data Protection Guide
- Clustered Data ONTAP® 8.3 Express Setup Guide for 80xx Systems
- Clustered Data ONTAP® 8.3 File Access Management Guide for NFS
- Clustered Data ONTAP® 8.3 High-Availability Configuration Guide
- Clustered Data ONTAP® 8.3 SAN Administration Guide
- Clustered Data ONTAP® 8.3 Commands: Manual Page Reference
- [Commands to display storage subsystem information](#)
- [Config Advisor 3.2 Installation and Administration Guide](#)
- Config Advisor 4.5 Installation and Admin Guide
- Config Advisor Installation Guide 3.2
- [Configuration Guides](#)
- Configure and Verify Maximum Transmission Unit on Cisco Nexus Platforms
- [Create NFS Datastores](#)
- CVD - FlexPod Datacenter with Microsoft Private Cloud Fast Track 4.0 and Cisco Nexus 9000 Series Switches
- CVD - FlexPod Datacenter with VMware vSphere 6.0
- [Express Setup Guide for 80xx Systems](#)
- [FlexPod and FCoE with VPC and NetApp Storage Configuration Example](#)
- [FlexPod Data Center with Cisco Nexus 7000 and NetApp MetroCluster for Multisite Deployment](#)
- [FlexPod Data Center with Microsoft Hyper-V Windows Server 2012 with 7-Mode](#)
- FlexPod Datacenter Technical Specifications

- [FlexPod Datacenter with NetApp All Flash FAS, Cisco Application Centric Infrastructure, and VMware vSphere](#)
- FlexPod Datacenter with NetApp All Flash FAS, Cisco Application Centric Infrastructure, and VMware vSphere Design Guide
- FlexPod Datacenter with VMware vSphere 5.5 Update 1
- FlexPod Datacenter with VMware vSphere 5.5 Update 1 and Cisco Nexus 9000 Series Switches Design
- [FlexPod Datacenter with VMware vSphere 6.0](#)
- FlexPod Deployment Guide
- [FlexPod for VMware Deployment Model](#)
- FlexPod with Infrastructure Automation
- [How Flash Pools work](#)
- [How to: Cisco UCS firmware upgrade](#)
- [Install Hyper-V and create a virtual machine](#)
- [Installing the NetApp® NFS Plug-in 1.1.0 for VMware® VAAI](#)
- [Managing Virtual Machines](#)
- Multipathing Configuration for Software iSCSI Using Port Binding
- NetApp Cluster Data ONTAP Installation Workshop
- NetApp Clustered Data ONTAP 8.3 - Network Management Guide
- [NetApp Clustered Data ONTAP 8.3 - Physical Storage Management Guide](#)
- [NetApp Clustered Data ONTAP 8.3.x and 8.2.x](#)
- [NetApp Flash cache](#)
- [NetApp Hardware Universe](#)
- NetApp Host Multipath Strategy
- NetApp KB 1015099 - How to setup SVM/CIFS for Hyper-V over SMB
- [NetApp OnCommand Insight](#)
- [NetApp ONTAP: Data Protection](#)
- [NetApp Storage Subsystem - Technical FAQ](#)
- [Network Management Guide](#)
- Nexus 5000 NPIV FCoE with FCoE NPV Attached UCS Configuration Example
- OnCommand Performance Manager 2.1 Installation and Administration Guide
- OnCommand System Manager Data sheet
- [Power Management for Blades and Power Capping](#)
- [Renaming a virtual machine and its files in VMware ESXi and ESX](#)
- [Roles for LIFs](#)
- SnapManager 2.1.1 for Hyper-V Installation and Admin Guide
- [Technical Overview of Virtual Device Contexts](#)
- [Thin Provisioning – What's The Scoop?](#)
- TR-4015 - SnapMirror Configuration and Best Practices Guide for Clustered Data ONTAP
- TR-4129 - Namespaces in Clustered Data ONTAP
- TR-4333 - VMware vSphere 6 on NetApp Clustered Data ONTAP - Best Practices using vSphere Web Client
- TR-4505 - NetApp All Flash FAS Overview Data ONTAP 8.3.2
- [UCS with VMware ESXi End-to-End Jumbo MTU Configuration Example](#)
- [Understanding and Configuring Cisco UCS Maintenance Policy](#)
- [Verifying sufficient free disk space for an ESX/ESXi virtual machine](#)
- [Virtual Port Channel Operations](#)
- [Virtual PortChannel Quick Configuration Guide](#)
- Virtual Storage Console 6.2 for VMware vSphere - Installation and Administration Guide
- [vmk0 management network MAC address is not updated when NIC card is replaced or vmkernel has duplicate MAC address](#)
- vSphere Installation and Setup
- vSphere Networking Guide ESXi 6.0 Update 2
- [vSphere Storage](#)
- vSphere Storage Guide - ESXi 6.0

Cisco and NetApp FlexPod Implementation and Administration (NS0-174)

Note: NS0-171 will go end-of-availability on December 28, 2018.

- Industry/Product Knowledge
- NVA FlexPod Express with VMware 6.0 Large Configuration (Karthick Radhakrishnan, Arvind Ramakrishnan)
- FAS26xx Series Systems Installation and Setup Instructions
- Cisco UCS Manager GUI Configuration Guide, Release 1.3 (Cisco)
- FlexPod Express with Microsoft Windows 2016 Hyper-V and FAS2600 (Melissa Palmer, Lindsey Street)
- Technical Overview of FlexPod Solutions
- FlexPod Datacenter with VMware vSphere 6.5 UI and Cisco ACI 3.1 (John George, Dave Derry)
- FlexPod Datacenter Technical Specifications TR-4036 (Lindsey Street, Melissa Palmer, Karthick Radhakrishnan)
- Cisco UCS Manager GUI Configuration Guide, Release 2.2 (Cisco)
- Specs sheet B200mx (Cisco)
- Testing VMkernel network connectivity with the vmkping command (vmware)
- FlexPod Datacenter with VMware vSphere 6.5 Update 1 and NetApp AFF A-series with Cisco UCS Manager 3.2 Design Guide (Cisco)
- FlexPod Datacenter with VMware vSphere 6.5 Update 1 and NetApp AFF A-series with Cisco UCS Manager 3.2 Design Guide (Cisco)
- Installation and Setup Instructions AFF A300 System
- Cisco Application Centric Infrastructure Data Sheet (Cisco)
- FlexPod Datacenter with IP-Based Storage using VMware vSphere 6.5 Update1, NetApp AFF A-Series, and Cisco UCS Manager 3.2 (Ramesh Isaac, Melissa Palmer, John George, Aaron Kirk)
- Software Download by Cisco (Cisco)
- Cisco ACI Multi-Site Hardware Requirements Guide (Cisco)
- ACI Reference Design RD-03, Rev. 1 (Cisco)
- FlexPod Express with Cisco UCS Mii and VMware vSphere 5.5 with IP-Based Storage (Cisco)
- FAQ: Vservers/SVMs
- FlexPod Datacenter with Fibre Channel Storage using VMware vSphere 6.5 Update1, NetApp AFF A-series, and Cisco UCS Manager 3.2 (Cisco)
- FlexPod SolidFire with Red Hat OpenStack Platform Design Guide (Cisco)
- Cisco Nexus 9000 Series NX-OS Software Upgrade and Downgrade Guide (Cisco)
- Cisco UCS Manager Server Management Guide, Release 3.2 (Cisco)
- FlexPod Express Technical Specifications – TR-4293
- FlexPod Datacenter Technical Specifications – TR-4036
- ONTAP 9 Network Management Guide
- Cisco UCS Fabric Interconnect 6454 Data Sheet (Cisco)
- UCS Hardware and Software Compatibility (Cisco)
- Cisco Unified Computing System Adapters (Cisco)
- FlexPod Datacenter with IP-Based Storage using VMware vSphere 6.5 Update1, NetApp AFF A-Series, and Cisco UCS Manager 3.2
- NetApp Converged Systems Advisor
- ONTAP 9 SAN Administration Guide
- Installing the NetApp NFS Plug-in 1.1.2 for VMware VAAI
- How to modify the home port and/or home node of an existing clustered ONTAP logical interface serving a SAN/block protocol
- Cisco UCS Power Tool Suite (Cisco Community)
- VMware vSphere with ONTAP (Karl L. Konnerth)
- FlexPod Datacenter with IP-Based Storage using VMware vSphere 6.5 Update1, NetApp AFF A-Series, and Cisco UCS Manager 3.2
- FlexPod Datacenter with VMware vSphere 6.5, NetApp AFF A-Series and IP-Based Storage (Cisco)
- NetApp Hardware University
- Workflow Automation 4.2 Documentation Center
- ONTAP 9 High Availability Configuration Guide
- FlexPod Datacenter with Microsoft Hyper-V Windows Server 2016 Arvind Ramakrishnan
- FlexPod Express with VMware vSphere 6.0U2, NetApp E-Series and Cisco UCS Mini (Arvind Ramakrishnan)
- Virtual Storage Console, VASA Provider, and Storage Replication Adapter for VMware vSphere Deployment and Setup Guide for 7.2 Release
- Clutter Management Using OnCommand System Manager
- Cisco UCS 6324 Fabric Interconnect Data Sheet (Cisco)
- NetApp Converged Systems Advisor
- vSphere Virtual Machine Administration (VMware)
- UCS B-Series Blade Server Software (Cisco)
- Best Practices for Scalable SAN (Michael Peppers)

NetApp Certified Data Administrator, ONTAP (NS0-159)

Note: These documents and the exam encompass ONTAP up to version 9.3.

- Industry/Product Knowledge
- Copy-Based Transition Guide For Transitioning to ONTAP

- Copy-Free Transition Guide For Transitioning to ONTAP
- 7-Mode Transition Tool - Installation and Setup Guide
- SAN Host Transition and Remediation Guide
- Commands: Manual Page Reference for ONTAP 9.2
- Commands: Manual Page Reference for ONTAP 9.3
- FlexArray Virtualization Implementation Guide for Third-Party Storage
- FlexArray Virtualization Implementation Guide for NetApp E-Series Storage
- FlexArray Virtualization Installation Requirements and Reference
- Inventory Collect Tool 3.3.1 Host and Storage Information Collection Guide
- MetroCluster IP Installation and Configuration Guide
- MetroCluster Service and Expansion Guide
- Tiebreaker Software 1.2 Installation and Configuration Guide
- 7-Mode Data Transition Using SnapMirror Technology
- Administrator Authentication and RBAC Power Guide
- Antivirus Configuration Guide
- Archive and Compliance Using SnapLock Technology Power Guide
- Cluster Expansion Express Guide
- Cluster Peering Express Guide
- Command Map for 7-Mode Administrators
- Data Protection Tape Backup and Recovery Guide
- Disks and Aggregates Power Guide
- EMS Configuration Express Guide
- FC Configuration for ESXi® using VSC Express Guide
- FC Configuration for Red Hat Enterprise Linux Express Guide
- FC Configuration for Windows Express Guide
- FC SAN Optimized AFF Setup Guide
- Fabric-attached MetroCluster Installation and Configuration Guide
- High-Availability Configuration Guide
- Infinite Volumes Management Guide
- Logical Storage Management Guide
- MetroCluster Management and Disaster Recovery Guide
- NFS Configuration for ESXi® using VSC Express Guide
- NFS Client Configuration with VAAI for ESX Express Guide
- NFS Configuration Express Guide
- NFS Configuration Power Guide
- NFS Reference
- Network Management Guide
- Performance Management Power Guide
- Performance Monitoring Express Guide
- SAN Administration Guide
- SAN Configuration Guide
- SMB/CIFS Configuration Express Guide
- SMB/CIFS Configuration Guide for Microsoft Hyper-V and SQL Server
- SMB/CIFS Reference
- SMB/CIFS and NFS Auditing and Security Tracing Guide
- SMB/CIFS and NFS Multiprotocol Configuration Express Guide
- ONTAP 9 SVM Disaster Recovery Express Guide
- ONTAP 9 SVM Disaster Recovery Preparation Express Guide
- ONTAP 9 SVM Root Volume Protection Express Guide
- Stretch MetroCluster Installation and Configuration Guide
- System Administration Reference
- Upgrade Express Guide
- Upgrade and Revert/Downgrade Guide
- Using All Flash FAS with ONTAP Software
- Volume Disaster Recovery Express Guide
- Volume Backup Using SnapVault Express Guide

- Volume Disaster Recovery Preparation Guide
- Volume Move Express Guide
- Volume Restore Using SnapVault Express Guide
- iSCSI Configuration for ESXi using VSC Express Guide
- iSCSI Configuration for Red Hat Enterprise Linux Express Guide
- iSCSI Configuration for Windows Express Guide
- Cluster Management Using OnCommand System Manager
- Cluster Management Workflows for OnCommand System Manager
- Cluster and SVM Peering Power Guide
- ONTAP 9 Command Reference Manual
- Commands: Manual Page Reference for ONTAP 9.3
- ONTAP 9 Concepts
- Data Protection Power Guide
- NDMP Configuration Express Guide
- ONTAP 9 NetApp Encryption Power Guide
- ONTAP 9 Release Notes
- SMB/CIFS Configuration Power Guide
- SNMP Configuration Express Guide
- Scalability and Performance Using FlexGroup Volumes Power Guide
- Software Setup Guide
- SolidFire to ONTAP Backup Power Guide
- T10.org Thin Provisioning
- Cluster Management Using OnCommand System Manager
- ONTAP Select 9 Installation and Cluster Deployment Guide
- NFS Reference
- TR-4476: NetApp Data Compression, Deduplication and Data Compaction Data ONTAP 8.3.1 and Later
- OnTap Select Product Architecture and Best Practices
- Hardware Universe HWU
- Workflow Guide for Managing Cluster Health
- Installation and Cabling Guide For DS460C, DS224C and DS212C
- Migrating to a two-node cluster with Cisco Nexus 3132Q-V
- BR8952: Break Fix: Troubleshooting Workflow: DC not responding (CIFS)
- TR-4598: FabricPool Best Practices
- OnCommand Unified Manager 7.2 Workflow Guide for Managing Cluster Performance
- SVM Disaster Recovery Preparation Express Guide
- Learning About Cloud Manager and ONTAP Cloud
- Multifactor Authentication in ONTAP 9.3: Best Practices and Implementation Guide
- Workflow Guide for Managing Cluster Performance
- Interoperability Matrix Tool
- Stretched MetroCluster Installation and Configuration Guide
- Migrating from a switchless cluster to a switched Cisco® Nexus 5596, Nexus 5020, or Nexus 5010 cluster environment

NetApp Certified Implementation Engineer, Data Protection (NS0-513)

Note: These documents and the exam encompass ONTAP up to version 9.3.

- Industry/Product Knowledge
- Data Protection Power Guide

- NDMP Configuration Express Guide
- Archive and Compliance Using SnapLock Technology Power Guide
- ONTAP 9 Concepts
- NetApp Encryption Power Guide
- SolidFire to ONTAP Backup Power Guide
- MetroCluster IP Installation and Configuration Guide
- Disks and Aggregates Power Guide
- TR-4598: FabricPool Best Practices
- Tiebreaker Software 1.21 Installation and Configuration Guide
- Fabric-attached MetroCluster Installation and Configuration Guide
- MetroCluster Management and Disaster Recovery Guide
- ONTAP_9_SVM_Disaster_Recovery_Express_Guide.pdf
- ONTAP_9_SVM_Disaster_Recovery_Preparation.pdf
- TR-4648 Security in the Cloud: The NetApp Private Storage for Cloud Solution
- Data Protection Guide for VMs and Datastores Using the SnapCenter Plug-in for VMware vSphere
- NetApp Cloud Docs Deploying ONTAP Cloud, Planning Your Configuration, Choosing a License Type
- Commands: Manual Page Reference for ONTAP 9.3
- Logical Storage Management Guide
- SAN Administration Guide
- Data Protection Power Guide
- Cluster Management Using OnCommand System Manager
- TR-3920: CommVault IntelliSnap for NetApp Solution Overview
- Volume Backup Using SnapVault Express Guide
- Infinite Volumes Management Guide
- Scalability and Performance Using FlexGroup Volumes Power Guide
- OnCommand Unified Manager 7.3 Workflow Guide for Managing Cluster Health
- SnapCenter Software 4.0 Administration Guide
- TR-4476: NetApp Data Compression, Deduplication and Data Compaction
- TR-4526: Compliant WORM Storage Using NetApp Snaplock
- FlexPod Datacenter with NetApp MetroCluster NVA Design Guide
- MetroCluster 8.2.1 Best Practices for Implementation
- OnCommand Workflow Automation 4.1 Workflow Developers Guide
- Managing Clustered Data ONTAP Using GUI
- Volume Disaster Recovery Preparation Express Guide
- Hardware Universe
- Interoperability Matrix Tool
- Volume Restore Using SnapVault Express Guide
- Data Fabric Solution for Cloud Backup Workflow Guide
- ONTAP 9 SMB/CIFS Reference
- Virtual Storage Console, VASA Provider, and Storage Replication Adapter for VMware vSphere
- TR-4517: ONTAP Select Product Architecture
- TR-4015: SnapMirror Configuration and Best Practices Guide for ONTAP 9.1, 9.2
- SnapCenter Software 4.0 Data Protection Guide for Microsoft SQL Server

NetApp Certified Implementation Engineer – SAN, ONTAP (NS0-508)

Note: These documents and the exam encompass ONTAP up to version 9.3.

- Industry/Product Knowledge
- Commands: Manual Page Reference for ONTAP 9.3
- SAN Administration Guide
- SAN Configuration Guide
- FlexArray Virtualization Implementation Guide for Third-Party Storage

- FC Configuration for ESXi® using VSC Express Guide
- FC Configuration for Red Hat Enterprise Linux Express Guide
- FC Configuration for Windows Express Guide
- FC SAN Optimized AFF Setup Guide
- iSCSI Configuration for ESXi using VSC Express Guide
- iSCSI Configuration for Red Hat Enterprise Linux Express Guide
- iSCSI Configuration for Windows Express Guide
- Logical Storage Management Guide
- High-Availability Configuration Guide
- Network Management Guide
- Performance Management Power Guide
- Performance Monitoring Express Guide
- ONTAP SVM Root Volume Protection Express Guide
- Volume Move Express Guide
- Cluster Management Using OnCommand System Manager
- System Administration Reference
- IMT FAQ
- OneCollect 1.3 Installation and Setup Guide
- Hardware Universe
- SAN Migration Using Foreign LUN Import
- NetApp Interoperability Matrix Tool
- ONTAP Select 9 Installation and Cluster Deployment Guide for VMware using ONTAP Select Deploy 2.7
- SnapCenter Software 4.0 Installation and Setup Guide
- Cisco Nexus 9000 Series NX-OS FCoE Configuration Guide, Release 7.x
- Planning your ONTAP Cloud configuration
- Linux Unified Host Utilities 7.1 Release Notes
- Active IQ... But Wait, There's More!
- Brocade SAN Health
- Fabric-attached MetroCluster Installation and Configuration Guide
B
- Windows® Unified Host Utilities 7.1 Installation Guide
- Brocade SAN Design and Best Practices Guides
- OnCommand Manager Application
- Cloud Manager and ONTAP Cloud Documentation
- Active IQ User Guide
- Ethernet Storage Best Practices
- ONTAP 9 Cluster Administration
- Linux® Unified Host Utilities 7.1. Installation Guide
- T11 – Fiber Channel Interfaces
- SAS Disk Shelves Installation and Cabling Guide For DS460C, DS224C, and DS212C
- ONTAP 9.3 EMS Event Catalog
- TR-4476 - NetApp Data Compression, Deduplication and Data Compaction Data
- Disks and Aggregates Power Guide
- TR-4517 - ONTAP Select Product Architecture and Best Practices
- Data Protection Power Guide

NetApp Certified Storage Associate – Hybrid Cloud (NS0-146)

- [Getting started with AWS](#)
- [Cloud Fundamentals](#)
- [OnCommand Cloud Manager 3.0 Installation and Setup Guide](#)
- [NetApp Private Storage for Cloud](#)
- [OnCommand Cloud Manager 3.0 Storage System Management Guide](#)
- [Managing the Hybrid Cloud](#)
- [Cloud ONTAP](#)
- [ONTAP Cloud 9.0 for Amazon Web Services](#)
- [Changing the password for ONTAP Cloud](#)
- [ONTAP Cluster Fundamentals](#)
- [ONTAP SAN Fundamentals](#)
- [Clustered Data ONTAP System Administration Guide](#)
- [Clustered Data ONTAP Software Setup Guide](#)
- [Data Networks Fundamentals](#)
- [Flash Fundamentals](#)
- [Installation and Setup Guide](#)
- [Virtualization](#)
- [The VMkernel Networking Layer](#)
- [Regions and availability zones](#)
- [Introduction to NetApp Products](#)
- [Logical Storage Management Guide](#)
- [NetApp Configuration and Administration Basics](#)
- [NetApp Data Fabric for Hybrid Cloud](#)
- [NetApp Private Storage for Cloud](#)
- [Network Working Group RFC 3721 iSCSI Naming convention](#)
- [SNIA Storage Management Initiative Specification](#)
- [Storage Fundamentals](#)
- [Technical Overview of AltaVault Technology](#)
- [Technical Overview of OnCommand Management Solutions for Clustered Data ONTAP](#)
- [Technical Overview of StorageGRID Webscale](#)
- [Understanding root-data partitioning](#)
- [Virtualization Technology Fundamentals](#)

NetApp Certified Storage Installation Engineer, ONTAP (NS0-181)

- [Additional tasks after installing and testing an ONTAP configuration with array LUNs](#)
- [Advanced Drive Partitioning FAQ](#)
- [AFF A300 Systems: Installation and Setup Instructions](#)
- [Broadcast-domain configured with ports from multiple VLANs](#)
- [Clustered Data ONTAP 8.3: Express Setup Guide for 80xx Systems](#)
- [CN1601 and CN1610 Switch Setup and Configuration Guide](#)
- [Completing the cluster setup worksheet](#)
- [Config Advisor 5.0: Quick Start Guide](#)
- [Configuring failover settings on a LIF](#)
- [Configuring iSCSI protocol on SVMs](#)
- [Converting from RAID-DP to RAID-TEC](#)
- [Creating a cluster](#)
- [DataMotion for Volumes: NetApp clustered Data ONTAP 8.2 and 8.3](#)
- [Decommissioning the old system](#)
- [Evaluation Licenses](#)
- [Factory configuration default values](#)
- [FAS26xx Series Systems Installation and Setup Instructions](#)
- [Hardware Universe](#)
- [How to modify flow control on cluster LIF in clustered Data ONTAP](#)
- [How to perform a disruptive head upgrade \(head swap\) for clustered Data ONTAP](#)
- [How to run diagnostics using the sldiag command on the interconnect for FAS32xx and FAS62xx](#)
- <http://npulse.netapp.com/npulse/cdp.xwic>
- [In-Band ACP Setup and Support](#)
- [Industry/Product Knowledge](#)
- [Installation and Cabling Guide: For DS460C, DS224C, and DS212C](#)
- [Installation and Setup Instructions FAS2552 Systems](#)
- [Installing FASTPATH software and RCFs on a NetApp cluster switch](#)
- [Installing NX-OS software and RCFs on Cisco® Nexus 3132Q-V cluster switches](#)
- [Installing the 16-port Cisco unified port expansion module in Nexus 5596 cluster switches](#)
- [Interface group types](#)
- [License types and licensed method](#)
- [Managing AutoSupport](#)
- [Managing clusters](#)
- [Managing the cluster time \(cluster administrators only\)](#)
- [Migrating to a two-node switched cluster with NetApp CN1610 cluster switches](#)
- [NetApp 10G Cluster-Mode Switch Installation Guide](#)
- [NetApp CN1610 Cluster Switch Software Download Instructions](#)
- [NetApp CN1610 Switch Administrator's Guide](#)
- [NetApp Global Services Contacts](#)
- [NetApp ONTAP 9 Documentation Center](#)
- [NetAppDocs 3.1P1](#)
- [Netbooting and setting up ONTAP on the new controller module](#)
- [Network Interfaces on your storage system](#)
- [ONTAP 9 Concepts](#)
- [ONTAP 9 Release Notes](#)
- [ONTAP 9: System Administration Reference](#)
- [ONTAP® 9: EMS Configuration Express Guide](#)
- [Recommended Data ONTAP releases on the NetApp Support Site](#)
- [Requirements for cabling HA pair](#)
- [Requirements for using AutoSupport](#)
- [SAS cabling issue: Both SAS connections from one controller go to the same shelf](#)
- [SAS Disk Shelves- Installation and Cabling Guide: For DS460C, DS224C, and DS212C](#)
- [SAS Disk Shelves- SAS and ACP Cabling Guide: For DS4243, DS2246, DS4486, and DS4246](#)
- [Software Licenses](#)

- [Software Version Support](#)
- [Step-by-step guide to configuring new NetApp installations using the ConfigBuilder tool](#)
- [Storage Subsystem Configuration Guide](#)
- [Storage Virtual Machines](#)
- [Support Case Submittal Process Quick Reference Guide](#)
- [Support for triple parity RAID protection](#)
- [Using aggregate relocation to upgrade controller hardware on a pair of nodes running ONTAP 9.x](#)
- [What is a Service Processor and how do I use it?](#)

NetApp Certified Support Engineer (NS0-192)

Note: These documents and the exam encompass ONTAP up to version 9.3.

- Industry/Product Knowledge
- Copy-Based Transition Guide For Transitioning to ONTAP
- Copy-Free Transition Guide For Transitioning to ONTAP
- Installation and Setup Guide
- SAN Host Transition and Remediation Guide
- FlexArray Virtualization Implementation Guide for NetApp E-Series Storage
- FlexArray Virtualization Implementation Guide for Third-Party Storage
- FlexArray Virtualization Installation Requirements and Reference
- Host and Storage Information Collection Guide
- MetroCluster IP Installation and Configuration Guide
- MetroCluster Service and Expansion Guide
- Tiebreaker Software 1.2 Installation and Configuration Guide
- 7-Mode Data Transition Using SnapMirror Technology
- Administrator Authentication and RBAC Power Guide
- Antivirus Configuration Guide
- Archive and Compliance Using SnapLock Technology Power Guide
- Cluster Expansion Express Guide
- Cluster Peering Express Guide
- Command Map for 7-Mode Administrators
- Data Protection Tape Backup and Recovery Guide
- Disks and Aggregates Power Guide
- EMS Configuration Express Guide
- FC Configuration for ESXi® using VSC Express Guide
- FC Configuration for Red Hat Enterprise Linux Express Guide
- FC Configuration for Windows Express Guide
- FC SAN Optimized AFF Setup Guide
- Fabric-attached MetroCluster Installation and Configuration Guide
- High-Availability Configuration Guide
- Infinite Volumes Management Guide
- Logical Storage Management Guide
- MetroCluster Management and Disaster Recovery Guide
- NFS Client Configuration for ESX Express Guide
- NFS Client Configuration with VAAI for ESX Express Guide
- NFS Configuration Express Guide
- NFS Configuration Power Guide
- NFS Reference
- Network Management Guide
- Performance Management Power Guide
- Performance Monitoring Express Guide
- SAN Administration Guide
- SAN Configuration Guide
- SMB/CIFS Configuration Express Guide
- SMB/CIFS Configuration Guide for Microsoft Hyper-V and SQL Server
- SMB/CIFS Reference
- SMB/CIFS and NFS Auditing and Security Tracing Guide
- SMB/CIFS and NFS Multiprotocol Configuration Express Guide
- SVM Disaster Recovery Express Guide
- SVM Disaster Recovery Preparation
- SVM Root Volume Protection Express Guide
- Stretch MetroCluster Installation and Configuration Guide
- System Administration Reference
- Upgrade Express Guide
- Upgrade and Revert/Downgrade Guide
- Using All Flash FAS with ONTAP Software

- Volume Backup Using SnapVault Express Guide
- Volume Disaster Recovery Express Guide
- Volume Disaster Recovery Preparation Express Guide
- Volume Move Express Guide
- Volume Restore Using SnapVault Express Guide
- iSCSI Configuration for ESXi using VSC Express Guide
- iSCSI Configuration for Red Hat Enterprise Linux Express Guide
- iSCSI Configuration for Windows Express Guide
- Cluster Management Using OnCommand System Manager
- Cluster Management Workflows for OnCommand System Manager
- Cluster and SVM Peering Power Guide
- Commands: Manual Page Reference for ONTAP 9.0
- Commands: Manual Page Reference for ONTAP 9.1
- Commands: Manual Page Reference for ONTAP 9.2
- Commands: Manual Page Reference for ONTAP 9.3
- Concepts
- Data Protection Power Guide
- NDMP Configuration Express Guide
- NetApp Encryption Power Guide
- Release Notes
- SMB/CIFS Configuration Power Guide
- SMB/CIFS Configuration Express Guide
- Scalability and Performance Using FlexGroup Volumes Power Guide
- Software Setup Guide
- SolidFire to ONTAP Backup Power Guide
- T10.org Thin Provisioning
- ONTAP Select 9 Installation and Cluster Deployment Guide
- NFS Reference
- TR-4476: NetApp Data Compression, Deduplication and Data Compaction Data ONTAP 8.3.1 and Later
- Ontap Select Product Architecture and Best Practices
- Hardware Universe HWU
- Workflow Guide for Managing Cluster Health
- Installation and Cabling Guide For DS460C, DS224C and DS212C
- Migrating to a twonode cluster with Cisco Nexus 3132Q-V
- BR8952: Break Fix: Troubleshooting Workflow: DC not responding (CIFS)
- TR-4598: FabricPool Best Practices
- OnCommand Unified Manager 7.2 Workflow Guide for Managing Cluster Performance
- Learning About Cloud Manager and ONTAP Cloud
- Multifactor Authentication in ONTAP 9.3: Best Practices and Implementation Guide
- Workflow Guide for Managing Cluster Performance
- Interoperability Matrix Tool
- Migrating from a switchless cluster to a switched Cisco® Nexus 5596, Nexus 5020, or Nexus 5010 cluster environment
- NetApp Knowledge Base
- Physical Storage Management Guide
- OnCommand Unified Manager Performance Advisor Administration Guide
- TR-4080: Best Practices for Scalable SAN
- TR-4211: Storage Performance Primer
- Using Aggregate Relocation to Upgrade Controller Hardware
- SnapDrive® 7.1 for Windows® Administration Guide
- Snap Drive 7.1 for Windows Installation Guide
- SnapDrive for Windows for Clustered Data ONTAP Used in SAN Environments, December 2015
- SnapDrive for Windows for Clustered Data ONTAP Used in SAN Environments, December 2014
- System Administration Reference
- SnapCenter Software 4.0 Concepts Guide
- SnapManager® 7.2.2 for Microsoft® SQL Server® Installation and Setup Guide
- SnapCenter Software 4.0 Data Protection Guide For Microsoft SQL Server

- NetApp KB: How to collect performance data when Perfstat8 fails by using preset files and manual data collection
- TR-3966: NetApp Data Compression and Deduplication Deployment and Implementation Guide
- KB: What is deswizzler or deswizzling?
- OnCommand Workflow Automation 4.1 Workflow Developer's Guide
- Service Guide for DS460C, DS224C and DS212C
- TR-3832: Flash Cache Best Practice Guide
- ONTAP 9.2 EMS Event Catalog
- System-Level Diagnostics Guide
- Data ONTAP 8.2 System Administration Guide For 7-Mode
- Datasheet: OnCommand Unified Manager and Performance Manager
- Unsupported ONTAP 9 Features

NetApp Certified Support Engineer – ONTAP Specialist (NS0-590)

- [Advanced performance analysis presentation at Insight](#)
- [After re-seating or replacing an IOM shelf module shelf serial numbers are displayed instead of shelf IDs in sysconfig -a](#)
- [Alert LED turned ON a Shelf without any other observed fault or DC UNDER VOLTAGE messages](#)
- [Antivirus Solution Guide for Clustered Data ONTAP: McAfee](#)
- [AutoSupport Message: Health Monitor Process CSHM](#)
- [AutoSupport Message: MAXIMUM EXITS THRESHOLD OF A PROCESS MANAGED BY SPM IS REACHED](#)
- [AutoSupport Message: ROOT VOLUME NOT WORKING PROPERLY: RECOVERY REQUIRED](#)
- [Broadcast-domain configured with ports from multiple VLANs](#)
- [Can I upgrade a controller without moving its volumes?](#)
- [Clustered Data ONTAP 8.3: Network Management Guide](#)
- [Clustered Data ONTAP cluster interconnect issues between HA pairs](#)
- [Clustered Data ONTAP® 8.3 File Access Management Guide for NFS](#)
- [Creating an Infinite Volume with small constituents](#)
- [df reports incorrect information while running Infinite Volume Space Accounting](#)
- [DS4243, DS2246, DS4486, and DS4246 Disk Shelf SAS and ACP Cabling Guide](#)
- [Enabling or disabling pNFS](#)
- [Enabling Storage Efficiency on transitioned volumes from 7MTT](#)
- [FAQ: ADR FS/ADR Engine/BRE performance issues](#)
- [FAQ: CPU utilization in Data ONTAP: Scheduling and Monitoring](#)
- [FAQ: Handling watchdog resets](#)
- [FAQ: Troubleshooting LACP port channel/ interface groups](#)
- [FCP/FCoE LIF reports operationally down](#)
- [File Access Management Guide for CIFS](#)
- [FlexVol: Flexible, Efficient File Volume Virtualization in WAFL](#)
- [General HA issues in clustered Data ONTAP](#)
- [High Protocol Latency on FAS 25xx with clustered Data ONTAP for remote LIF traffic](#)
- [How to assess disk-level response times](#)
- [How to collect additional information from FAS22xx/ FAS32xx/ FAS62xx/FAS8xxx series storage systems for panics related to NMI/ Watchdog/ Uncorrectable Machine Check events](#)
- [How to collect data for an RCA of a SAN event that occurred in the past](#)
- [How to collect performance data when Perfstat8 fails by using preset files and manual data collection](#)
- [How to collect rolling pktt trace files \(from clustered Data ONTAP 8.3.2 \)](#)
- [How to configure DNS per SVM for versions later than clustered Data ONTAP 8.2.1](#)
- [How to give a client full control to a junctioned volume over NFS, but no access \(not even read access\) to the root volume of a vserver](#)
- [How to move mroot to a new root aggregate in a single node cluster](#)
- [How to replace a disk drive in AFF configurations](#)
- [How to troubleshoot network issues in clustered Data ONTAP](#)
- [How to troubleshoot the 'Autolocation' feature in Clustered Data ONTAP](#)
- [How to verify Windows fibre channel configurations with multipathing I/O \(MPIO\)](#)
- [Identifying CIFS latency in clustered Data ONTAP due to a client's vsan server](#)
- [INTERNAL: Troubleshooting Workflow: Mroot recovery process](#)
- [List of supported privileges](#)
- [MCC Config Advisor FCVI port setting errors](#)
- [MetroCluster fabric FCVI port reset](#)
- [Name Services Best Practices Guide](#)
- [Name services fail due to multiple default gateways with the same metric](#)
- [Network access might be disrupted by incorrect routing configuration in clustered Data ONTAP](#)
- [New Cluster Filer is being Set up The Root Volume is Damaged](#)
- [NFS Best Practice and Implementation Guide](#)
- [OEM: A node is out of quorum](#)
- [OEM: Cannot log into the Cluster Mode node using admin as the user ID](#)
- [OEM: Network interface show reports: This table is currently empty](#)

- [OEM: RAID Error Propagation in Data ONTAP 7.3.1- FAQ](#)
- [OEM: What protocol errors are given to clients by RAID Error Propagation?](#)
- [ONTAP 9 CIFS and NFS Multiprotocol Configuration Express Guide](#)
- [ONTAP 9 CIFS reference](#)
- [ONTAP 9 Concepts](#)
- [ONTAP 9 Infinite Volumes Management Guide](#)
- [ONTAP 9: Logical Storage Management Guide](#)
- [Overflow of waflliron](#)
- [Performance degradation due to misbehaving disk](#)
- [Restoring databases from other SQL Server backups](#)
- [SAN configuration guide](#)
- [SAS adapter connected to misconfigured SAS domain](#)
- [SAS Disk Shelves](#)
- [SAS: Shelf ID is not set or is in conflict with an existing shelf](#)
- [scsiblade.out.of.quorum error seen immediately after giveback completes](#)
- [Services Partners: CLAM Functionality in clustered Data ONTAP and how it determines nodes to be out of CLAM quorum](#)
- [SERVICES PARTNERS: Host performs excessive Active Non-Optimized Path IO in Data ONTAP 8.3](#)
- [Services Partners: PANIC: nested machine check exception detected on CPU #, no core dump will be generated PCI NMI](#)
- [Services Partners: RAID Error Propagation and RAID Error Propagation Tools - FAQ](#)
- [Services Partners: Troubleshooting Workflow: The mgwd process fails to run](#)
- [Services Partners: WAFL inconsistent: volume xxxx has a corrupted user data block](#)
- [Simultaneous loss of both node mailbox disks causes system disruption](#)
- [Snapshot autodelete fails on deduped volumes when dedupe is running](#)
- [Storage auto-reclamation does not occur](#)
- [Storage Performance Primer Clustered Data ONTAP 8.3](#)
- [TCP Congestion Control](#)
- [The Write-Anywhere-File-Layout \(WAFL\)](#)
- [Troubleshooting CIFS or SMB Access Denied](#)
- [Troubleshooting Workflow: CIFS Authentication failures](#)
- [Troubleshooting Workflow: MHost RDB apps out of quorum](#)
- [Troubleshooting Workflow: Most common issues with multi-domain search for usermapping](#)
- [Troubleshooting Workflow: Not enough aggregates to create an Infinite Volume](#)
- [Troubleshooting Workflow: Staging volume full for onbox CIFS auditing](#)
- [Troubleshooting Workflow: Stale file handle error \(NFSv3 and NFSv4\)](#)
- [Troubleshooting Workflow: Takeover not possible](#)
- [Troubleshooting Workflow: User and the user group displayed as 'nobody' in NFS v4](#)
- [Troubleshooting Workflow: vol move command failure](#)
- [Troubleshooting Workflow: vol move start command failure](#)
- [Unable to join a second node to cluster with error: Remote ping test failed](#)
- [VPD mismatch on DS4243, DS4246, and DS2246](#)
- [What are the important changes to RAID scrub in Data ONTAP 8.3.x?](#)
- [What is a MailBox disk?](#)
- [What is CIFS Max Multiplex and how to increase maximum number of simultaneous outstanding Windows client requests that a controller allows?](#)
- [What is deswizzler or deswizzling?](#)
- [Why do NFSv4 and NFSv4.1 I/O stop while a takeover/giveback, an aggregate relocation occur, or a Vfiler Migration?](#)
- [Why is a warning displayed when attempting to create one or more data volumes in the root aggregate in Data ONTAP Cluster-Mode?](#)