Supported products

Well-architected dashboard

NetApp
September 01, 2026

Table of Contents

Supported products

Amazon FSx for NetApp ONTAP

Configuration analysis for Amazon FSx for NetApp ONTAP

The well-architected dashboard in NetApp Console analyzes storage system configurations regularly to determine if any there are any configuration issues with your Amazon FSx for NetApp ONTAP file systems. When issues are found, the dashboard shows you what the issues are and explains what needs to change to ensure your storage systems achieve peak performance, cost efficiency, and compliance with best practices.

Key capabilities include:

- Daily configuration analysis
- Automatic best practice validations for NetApp ONTAP storage systems and partner storage providers
- Proactive observability
- Insights to action

How it works

Workload Factory analyzes your workloads running on supported cloud storage systems deployments daily. The analysis provides well-architected status, insights, and recommendations.

After the daily analysis completes, configurations appear as "optimized" or "not optimized" in the Well-architected dashboard for the deployment. You'll find configuration issues by category and a list of configuration issues and recommendations. You can review the recommendations for configuration issues. Some issues can be fixed automatically by Workload Factory, while others require manual intervention. In this case, Workload Factory provides detailed instructions to help you implement the recommended changes.

You can dismiss the analysis of configurations that do not apply to your environments. This avoids unnecessary alerts and inaccurate optimization results.

You can also create custom rules in plain language to validate your environments against your organization's standards and NetApp best practices. Test rules with a dry run, then schedule them to run across your environments. Learn more about custom rules.

Why it matters

Workload Factory applies best practices to large storage, database, and VMware environments by combining ongoing assessment with recommendation insights and remediation. Automated fixes applied in the NetApp Console reduce human error, ensure uniform management, and preserve performance and reliability across your workload infrastructures.

Analysis requirements

For a complete file system analysis, you must do the following:

- Deploy a NetApp Console agent or associate a link to set up connectivity between the file system and

NetApp Console.

- Grant *view, planning, and analysis* permissions in your AWS account.

  Learn how to grant permissions to an AWS account

Unresolved directive in fsx/configuration-analysis-fsx.adoc - include::_include/fsx-configurations.adoc[]

What's next

Implement well-architected FSx for ONTAP file system configurations

Implement well-architected FSx for ONTAP file system configurations

Using configuration analysis insights and recommendations, leverage NetApp to implement best practices for your FSx for ONTAP file systems. You can easily review the well-architected status, learn about issues with your configurations, take action to improve the architecture of any systems that aren't optimized for reliability, security, efficiency, performance, and cost.

You can also dismiss the analysis of specific storage configurations that don't apply to your storage environment to avoid unnecessary alerts and inaccurate optimization results.

Learn about the configuration analysis and well-architected status.

About this task

The well-architected dashboard analyzes Amazon FSx for NetApp ONTAP file system deployment configurations daily. The daily analysis provides the well-architected status, insights, and recommendations. You can automatically fix configuration issues to meet best practices.

Link or Console agent connectivity allows the well-architected dashboard in the NetApp Console to complete a comprehensive scan of your file systems for issues with performance, data protection, and configurations. This ensures that you receive accurate insights and recommendations for optimizing your FSx for ONTAP file systems.

Storage configuration requirements vary. You can dismiss the analysis of specific configurations that don't apply to your storage environment. This helps you avoid unnecessary alerts and inaccurate optimization results.

Before you begin

- You must grant *operations and remediation* permissions in your AWS account.
- Install a Console agent or Connect to an FSx for ONTAP file system using a link for the most comprehensive analysis of your file system resources.

Fix a configuration issue

You can fix configuration issues for an FSx for ONTAP file system or for selected volumes in a file system. You can select one or more configurations to fix.

Fixing configuration issues can cause instance downtimes or service interruptions. Review each recommendation carefully before fixing a configuration issue.

Steps

1. Log in to the NetApp Console.
2. From the NetApp Console menu, select **Workloads** and then **Well-architected**.
3. From the Well-architected dashboard, select **View** for any configuration.

   Make sure you review the recommendation carefully. The recommendation explains best practices and potential pitfalls of unoptimized configurations.

4. Select to **Fix**.

   When **View and fix** is an option, select the impacted volumes to fix.

5. Review the summary and action items in the dialog to learn what happens if you fix the issue. Some operations can cause instance downtimes or service interruptions.
6. Select **Continue** to fix the configuration issue.

Result

Workload Factory starts the process to fix the issue. Select the account settings menu and then select **Tracker** to view the status of the operation.

Dismiss a configuration analysis

Stop a configuration analysis for an FSx for ONTAP file system or for selected volumes. You can restart the analysis when needed.

Dismiss a configuration analysis for a file system

Steps

1. Log in to the NetApp Console.
2. From the NetApp Console menu, select **Workloads** and then **Well-architected**.
3. Under Configurations, identify the configuration that doesn't apply to your environment and then select **Dismiss**.
4. In the Dismiss configuration dialog, select **Dismiss** to stop the configuration analysis.

Dismiss a configuration analysis for a volume

Steps

1. Log in to the NetApp Console.
2. From the NetApp Console menu, select **Workloads** and then **Well-architected**.
3. Under Configurations, identify the configuration to dismiss for selected volumes and then select **View and fix**.
4. Identify the volumes to dismiss from the configuration analysis.
   - For one volume: select the actions menu and then select **Dismiss volume**.
   - For multiple volumes: select the volumes and then select **Dismiss** next to Bulk action.
5. Select **Dismiss** to stop the analysis for the configuration.
6. In the Dismiss volumes dialog, select **Dismiss** to confirm.

Result

The configuration analysis stops for the file system or selected volumes.

You can reactivate the analysis at any time.

Reactivate a dismissed configuration analysis

Reactivate a dismissed configuration analysis at any time. You can select one or more configurations to reactivate.

Reactivate a configuration analysis for a file system

Steps

1. Log in to the NetApp Console.
2. From the NetApp Console menu, select **Workloads** and then **Well-architected**.
3. From the Well-architected dashboard, select **Dismissed configurations**.
4. Identify the configuration you want to reactivate and select **Reactivate**.

Reactivate a configuration analysis for a volume

Steps

1. Log in using one of the console experiences.
2. Select the menu  and then select **Storage**.
3. From the Storage menu, select **Well-architected**.
4. Select **Dismissed configurations**.
5. Identify the volume(s) to reactivate from the configuration analysis.
   - For one volume: select the actions menu and then select **Reactivate volume**.
   - For multiple volumes: select the volumes and then select **Reactivate** next to Bulk action.

Result

The configuration analysis reactivates. Workload Factory runs a new analysis daily.

Cloud Volumes ONTAP

Configuration analysis for Cloud Volumes ONTAP

The well-architected dashboard in NetApp Console analyzes storage system configurations regularly to determine if there are any configuration issues with your Cloud Volumes ONTAP systems. When issues are found, the dashboard shows you what the issues are and explains what needs to change to ensure your storage systems achieve peak performance, cost efficiency, and compliance with best practices.

Key capabilities include:

- Daily configuration analysis
- Automatic best practice validations for NetApp ONTAP storage systems and partner storage providers

- Proactive observability
- Insights to action

How it works

Workload Factory analyzes your workloads running on supported cloud storage systems deployments daily. The analysis provides well-architected status, insights, and recommendations.

After the daily analysis completes, configurations appear as "optimized" or "not optimized" in the Well-architected dashboard for the deployment. You'll find configuration issues by category and a list of configuration issues and recommendations. You can review the recommendations for configuration issues. Some issues can be fixed automatically by Workload Factory, while others require manual intervention. In this case, Workload Factory provides detailed instructions to help you implement the recommended changes.

You can dismiss the analysis of configurations that do not apply to your environments. This avoids unnecessary alerts and inaccurate optimization results.

You can also create custom rules in plain language to validate your environments against your organization's standards and NetApp best practices. Test rules with a dry run, then schedule them to run across your environments. Learn more about custom rules.

Why it matters

Workload Factory applies best practices to large storage, database, and VMware environments by combining ongoing assessment with recommendation insights and remediation. Automated fixes applied in the NetApp Console reduce human error, ensure uniform management, and preserve performance and reliability across your workload infrastructures.

Analysis requirements

For a complete Cloud Volumes ONTAP system analysis, you must deploy a NetApp Console agent to set up connectivity between your systems and the NetApp Console.

You must also establish outbound connectivity to the following endpoints:

- https://api.workloads.netapp.com
- https://ws.workloads.bluexp.netapp.com

Best practices and recommendations for Cloud Volumes ONTAP systems

The well-architected dashboard assesses storage configurations to provide an in-depth view of ONTAP configuration best practices and for compliance with the Azure Well-Architected Framework. The assessment also recommends improvements and fixes.

The well-architected analysis categorizes configurations in the following pillars of the framework: *reliability*, *security*, *operational excellence*, *cost optimization*, and *performance efficiency*.

Reliability

Reliability ensures that workloads perform their intended functions correctly and consistently, even during disruptions.

- **Snapshot policy**

Schedule local snapshots for efficient backup and quick restores. Snapshots are instant, point-in-time images of your volumes.

- **SSD capacity headroom**

  The SSD storage tier capacity should not exceed 80% utilization. This might impact data reads and writes to your capacity pool storage tier and impact the throughput capacity of your system. When capacity runs out, data volumes become read-only. Services trying to write new data also fail.

- **Remote data replication**

  Protect your Cloud Volumes ONTAP data through remote replication. Remote data replication provides disaster recovery capabilities by maintaining synchronized copies of your data in different locations, ensuring business continuity in case of system failures or disasters.

Security

Security emphasizes protecting data, systems, and assets through risk assessments and mitigation strategies.

- **Autonomous Ransomware Protection with AI (ARP/AI)**

  NetApp Autonomous Ransomware Protection with AI (ARP/AI) helps enhance cyber resiliency and protect your volumes from ransomware threats. We recommend enabling ARP/AI for all volumes.

Operational excellence

Operational excellence focuses on delivering the best architecture and business value.

- **Volume capacity headroom**

  We recommend that volume capacity doesn't exceed 80% utilization. This might impact data reads and writes to your application. Volume capacity increases can be manual or automatic using the volume autogrow feature.

- **FlexCache write mode**

  For optimal performance, we recommend the FlexCache write mode that best suits your workload. Write-around mode provides better performance for read-heavy workloads with small files, while write-back mode provides better performance for write-heavy workloads with large files.

- **FlexCache replica size**

  We recommend enabling volume autosize and scrubbing on cache volumes to maintain optimal size and focus the cache on frequently accessed (hot) data for peak efficiency.

- **ONTAP version compliance**

  Upgrade to the latest ONTAP version for full compatibility, support, and access to new features.

Cost optimization

Cost optimization helps you get the most value for your business while keeping costs low.

- **Overprovisioned SSD capacity**

  An overprovisioned SSD capacity tier adds unnecessary costs. We recommend reducing the SSD tier

capacity while maintaining a 20% free space buffer. A decrease operation takes several hours to several days, and other file system operations are unsupported during this time.

- **Cold data tiering**

  Enable cold data tiering to move cold data from the SSD storage tier to lower-cost storage. We recommend applying a tiering policy to every volume. Azure Blob Storage serves as the capacity tier for inactive data.

What's next

Implement well-architected Cloud Volumes ONTAP system configurations

Implement well-architected Cloud Volumes ONTAP system configurations

Using configuration analysis insights and recommendations, leverage NetApp to implement best practices for your Cloud Volumes ONTAP systems running on Microsoft Azure storage. You can easily review the well-architected status, learn about issues with your configurations, and get recommendations to improve the architecture of any systems that aren't optimized for reliability, security, efficiency, performance, and cost.

Learn about the configuration analysis and well-architected status.

About this task

The well-architected dashboard analyzes Cloud Volumes ONTAP system deployment configurations on Microsoft Azure daily. The daily analysis provides the well-architected status, insights, and recommendations.

Link or Console agent connectivity allows the well-architected dashboard in the NetApp Console to complete a comprehensive scan of your Cloud Volumes ONTAP systems for issues with performance, data protection, and configurations. This ensures that you receive accurate insights and recommendations for optimizing your Cloud Volumes ONTAP systems.

Storage configuration requirements vary. You can dismiss the analysis of specific configurations that don't apply to your storage environment. This helps you avoid unnecessary alerts and inaccurate optimization results.

Before you begin

- You must add a Cloud Volumes ONTAP system to NetApp Console to view the well-architected status and recommendations for configuration issues.
- You should deploy a Console agent for the most comprehensive analysis of your system resources.
- Allow outbound network connectivity to the following endpoints:
  - https://api.workloads.netapp.com
  - https://ws.workloads.bluexp.netapp.com

View recommendations for configuration issues

You can view recommendations for configuration issues after the daily analysis completes. Recommendations explain best practices and potential risks of unoptimized configurations. You can also download a CSV file of the recommendations.

Steps

1. Log in to the NetApp Console.
2. From the NetApp Console menu, select **Workloads** and then **Well-architected**.
3. From the Well-architected dashboard, select **View** for any configuration.

   Optionally, select to download a CSV file of the recommendations for all configurations.

4. Review the recommendation.

Fix a configuration issue

You can fix configuration issues for a Cloud Volumes ONTAP system or for selected volumes in a file system. You can select one or more configurations to fix.

The remediation process can cause instance downtimes or service interruptions. Review each recommendation carefully before fixing a configuration issue.

Steps

1. Log in to the NetApp Console.
2. From the NetApp Console menu, select **Workloads** and then **Well-architected**.
3. From the Well-architected dashboard, select **View** for any configuration.

   Make sure you review the recommendation carefully. The recommendation explains best practices and potential pitfalls of unoptimized configurations.

4. Select to **Fix**.

   When **View and fix** is an option, select the impacted volumes to fix.

5. Review the summary and action items that appear in the dialog to learn what happens if you fix the issue. Some operations can cause instance downtimes or service interruptions.
6. Select **Continue** to fix the configuration issue.

Result

Workload Factory starts the process to fix the issue. Select the account settings menu and then select **Tracker** to view the status of the operation.

Dismiss a configuration analysis

Stop a configuration analysis for a Cloud Volumes ONTAP system or for selected volumes. You can restart the analysis when needed.

Dismiss a configuration analysis for a system

Steps

1. Log in to the NetApp Console.
2. From the NetApp Console menu, select **Workloads** and then **Well-architected**.
3. From the Well-architected dashboard, select **View** for any configuration.
4. Under Configurations, identify the configuration that doesn't apply to your environment and then select **Dismiss**.
5. In the Dismiss configuration dialog, select **Dismiss** to stop the configuration analysis.

Dismiss a configuration analysis for a volume

Steps

1. Log in to the NetApp Console.
2. From the NetApp Console menu, select **Workloads** and then **Well-architected**.
3. From the Well-architected dashboard, select **View** for any configuration.
4. Under Configurations, identify the configuration to dismiss for selected volumes and then select **View and fix**.
5. Identify the volumes to dismiss from the configuration analysis.
   - For one volume: select the actions menu and then select **Dismiss volume**.
   - For multiple volumes: select the volumes and then select **Dismiss** next to Bulk action.
6. Select **Dismiss** to stop the analysis for the configuration.
7. In the Dismiss volumes dialog, select **Dismiss** to confirm.

Result

The configuration analysis stops for the system or selected volumes.

You can reactivate the analysis at any time.

Reactivate a dismissed configuration analysis

Reactivate a dismissed configuration analysis for a Cloud Volumes ONTAP system at any time. You can select one or more configurations to reactivate.

Reactivate a configuration analysis for a system

Steps

1. Log in to the NetApp Console.
2. From the NetApp Console menu, select **Workloads** and then **Well-architected**.
3. Select **Dismissed configurations**.
4. Identify the configuration you want to reactivate and select **Reactivate**.

Reactivate a configuration analysis for a volume

Steps

1. Log in to the NetApp Console.
2. From the NetApp Console menu, select **Workloads** and then **Well-architected**.
3. Select **Dismissed configurations**.
4. Identify the volume(s) to reactivate from the configuration analysis.
   - For one volume: select the actions menu and then select **Reactivate volume**.
   - For multiple volumes: select the volumes and then select **Reactivate** next to Bulk action.

Result

The system reactivates the configuration analysis. A new analysis occurs daily.

Google Cloud NetApp Volumes

Configuration analysis for Google Cloud NetApp Volumes

The well-architected dashboard in NetApp Console analyzes storage system configurations regularly to determine if there are any configuration issues. When issues are found, the dashboard shows you what the issues are and explains what needs to change to ensure your storage systems achieve peak performance, cost efficiency, and compliance with best practices.

Key capabilities include:

- Daily configuration analysis
- Automatic best practice validations for NetApp ONTAP storage systems and partner storage providers
- Proactive observability
- Insights to action

Analysis requirements

For a complete storage pool analysis, you must do the following:

- Add your Google Cloud NetApp Volumes system to NetApp Console.
- Grant *view, planning, and analysis* permissions in your Google Cloud account.

  Learn how to grant permissions to a Google Cloud account

Best practices and recommendations for storage workloads

Workload Factory assesses storage configurations against storage and ONTAP best practices and the Google Cloud Well-Architected Framework. The assessment also recommends improvements.

The well-architected analysis categorizes configurations in the following pillars of the framework: *reliability*, and *operational excellence*.

Reliability

Reliability ensures that workloads perform their intended functions correctly and consistently, even when there are disruptions.

- **Snapshot policy**

  Schedule local snapshots for efficient backup and quick restores. Snapshots are instant, point-in-time images of your volumes.

- **SSD capacity headroom**

  Workload Factory recommends keeping SSD tier usage at 80% or less. Some workloads may require additional capacity headroom and lower utilization targets. As usage exceeds the recommended headroom, the risk of performance slowdowns and service issues increases—especially if capacity isn't expanded in time. You can dismiss it for one or more storage pools and reactivate it later if needed.

Operational excellence

Operational excellence focuses on delivering the most optimal architecture and business value.

- **Volume capacity headroom**

  Workload Factory recommends keeping volume usage under 80% to reduce the risk of running out of space. If a volume grows faster than expected, you might need to expand it quickly. This can increase the risk of application impact, especially with sudden or spiky growth. This risk is lower when you use thin provisioning and automatic capacity management. You can dismiss it for one or more volumes and reactivate it later if needed.

What's next

Implement well-architected Google Cloud NetApp Volumes configurations

Implement well-architected Google Cloud NetApp Volumes configurations

Using configuration analysis insights and recommendations, leverage NetApp to implement best practices for your Google Cloud NetApp Volumes storage pools running on Google Cloud storage. You can easily review the well-architected status, learn about issues with your configurations, and get recommendations to improve the architecture of any storage pools that aren't optimized for reliability, security, performance, and cost.

Learn about the configuration analysis and well-architected status.

About this task

NetApp analyzes Google Cloud NetApp Volumes storage pool deployments in Google Cloud daily. The daily analysis provides the well-architected status, and insights and recommendations to help you understand configuration issues so that your storage pools meet best practices.

After the daily analysis completes, the dashboard displays the total number of well-architected resources, the number of resources in a critical state, and the number of resources in a warning state. Configurations are categorized by the pillars of the well-architected framework: reliability, operational excellence, cost optimization, performance efficiency, and security. The dashboard also includes a table that lists all configurations, the well-architected status of those configurations, the severity, category, resource type (volume or storage pool), impacted resources, and the option to view the recommendation when the configuration is not optimized.

Before you begin

- You must add a Google Cloud NetApp Volumes storage pool to NetApp Console to view the well-architected status and recommendations for configuration issues.

View recommendations for configuration issues

You can view recommendations for configuration issues after the daily analysis completes. Recommendations explain best practices and potential risks of unoptimized configurations. You can also download a CSV file of the recommendations.

Steps

1. Log in to the NetApp Console.

2. From the NetApp Console menu, select **Workloads** and then **Well-architected**.
3. From the Well-architected dashboard, select **View** for any configuration.

   Optionally, select to download a CSV file of the recommendations for all configurations.

4. Review the recommendation.

Dismiss a configuration analysis

Stop a configuration analysis for a Google Cloud NetApp Volumes storage pool or for selected volumes. You can restart the analysis when needed.

Dismiss a configuration analysis for a storage pool

Steps

1. Log in to the NetApp Console.
2. From the NetApp Console menu, select **Workloads** and then **Well-architected**.
3. From the Well-architected dashboard, select **View** for any configuration.
4. Under Configurations, identify the configuration that doesn't apply to your environment and then select **Dismiss**.
5. In the Dismiss configuration dialog, select **Dismiss** to stop the configuration analysis.

Dismiss a configuration analysis for a volume

Steps

1. Log in to the NetApp Console.
2. From the NetApp Console menu, select **Workloads** and then **Well-architected**.
3. From the Well-architected dashboard, select **View** for any configuration.
4. Under Configurations, identify the configuration to dismiss for selected volumes and then select **View**.
5. Identify the volumes to dismiss from the configuration analysis.
   - For one volume: select the actions menu and then select **Dismiss volume**.
   - For multiple volumes: select the volumes and then select **Dismiss** next to Bulk action.
6. Select **Dismiss** to stop the analysis for the configuration.
7. In the Dismiss volumes dialog, select **Dismiss** to confirm.

Result

The configuration analysis stops for the storage pool or selected volumes.

You can reactivate the analysis at any time.

Reactivate a dismissed configuration analysis

Reactivate a dismissed configuration analysis at any time. You can select one or more configurations to reactivate.

Reactivate a configuration analysis for a storage pool

Steps

1. Log in to the NetApp Console.
2. From the NetApp Console menu, select **Workloads** and then **Well-architected**.
3. Select **Dismissed configurations**.
4. Identify the configuration you want to reactivate and select **Reactivate**.

Reactivate a configuration analysis for a volume

Steps

1. Log in to the NetApp Console.
2. From the NetApp Console menu, select **Workloads** and then **Well-architected**.
3. Select **Dismissed configurations**.
4. Identify the volume(s) to reactivate from the configuration analysis.
   - For one volume: select the actions menu and then select **Reactivate volume**.
   - For multiple volumes: select the volumes and then select **Reactivate** next to Bulk action.

Result

The system reactivates the configuration analysis. A new analysis occurs daily.

Copyright information

Trademark information