

HOW TO READ THE MAXIMUM VALUES TABLE

Platform maximum values
listed by platform model

Clustered Data ONTAP 8.2, 8.2.1 Maximum Configurations Guide														
Small-Sized Clusters (4 nodes)														
Category	Description	Scope	Code Enforced	Scales by Scope	7-Mode	Platform Agnostic	Cluster Maximum							
								FA52220	FA52240	FA53160	FA53170	FA53210	FA53240	
								Platform Maximum	Platform Maximum	Platform Maximum	Platform Maximum	Platform Maximum	Platform Maximum	
Core	Maximum number of nodes - NAS	N/A	N/A	N/A	N/A	N/A	4	82,821	82,821	82,821	82,821	82,821	82,821	
		Node	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A
		File	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Cluster	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A

Platform-specific maximum values as they relate to the scope column

HOW SCOPE APPLIES TO CLUSTER AND PLATFORM MAXIMUM VALUES

The HA pair, node, and any subnode row of scope, along with the code enforced, scales by scope, 7-Mode, and platform-agnostic columns in the same row, apply to the various platform maximum value column entries located to the right of the cluster column

Category	Description	Scope	Code Execution Scope	7-Mode	Platform Agnostic	Cluster Maximum	Platform Maximum
					Supported Data ONTAP Versions 2.3		Platform Maximum
WAF	Maximum number of FlexCache® volumes	N/A	N/A	N/A	N/A	150	150
		Node	Yes	N/A	Yes	Yes	150
		HA Pair	Yes	Yes	N/A	Yes	250
		Cluster	Yes	Yes	N/A	Yes	250
WAF	Maximum number of concurrent DataMotion™ for Volumes (vol move) operations	N/A	N/A	N/A	N/A	25	25
		Node	Yes	N/A	Yes	Yes	25
		HA Pair	No	No	Yes	Yes	25
		Cluster	No	No	Yes	Yes	25

"N/A" in the cluster maximum column indicates that the maximum value is not a cluster resource, whereas any number that is specified in this field indicates that the maximums/objects are tracked as a cluster resource

UNDERSTANDING SCALES BY SCOPE FOR AN HA PAIR

YES: If the HA pair row Scales by Scope column is "yes," the platform maximum value entry for the HA pair row is double that of the node row, indicating that the node maximum value is doubled in fallover.

Category	Description	Scope	Config Enforcement	Scales by Scope	Y-Mode	Platform Agnostic	Cluster Maximum	Platform Maximum
		N/A	N/A	N/A	N/A	Supported Data ONTAP Versions only		82,823
WAF	Maximum number of FlexCache® volumes	Node	Yes	Yes	Yes	Yes	3,400	100
		HA Pair	Yes	Yes	Yes	Yes		200
		Cluster	Yes	Yes	No	Yes		200
WAF	Maximum number of concurrent DataLator™ for Volumes (vol move) operations	Node	N/A	N/A	N/A	Yes	0	25
		HA Pair	Yes	Yes	Yes	Yes	0	25
		Cluster	No	No	Yes	Yes	0	25

NO: If the HA pair row Scales by Scope column is "no," the platform maximum value entry for the HA pair row is the same as that of the node row, indicating that the node maximum value is not doubled in failover.

UNDERSTANDING SCALES BY SCOPE FOR A CLUSTER

YES: If the cluster row Scales by Scope column is "yes," the cluster maximum value entry scales in relation to the maximum number of nodes supported for the cluster

Category	Description	Scope	Core Information	Scales by Scope	7-Mode	Platform Agnostic	Cluster Maximum	Platform Maximum
								FA 56080
								Platform Maximum
								62,831
WAF	Maximum number of FlexCache® volumes	N/A	N/A	N/A	N/A	Supported Data ONTAP® Versions	2,400	N/A
		Node	Yes	Yes	Yes	Yes		100
		FlexCache	Yes	Yes	Yes	Yes		200
		Cluster	Yes	Yes	Yes	Yes		200
WAF	Maximum number of concurrent DataLotion™ for Volumes (vol move) operations	N/A	N/A	N/A	N/A	Yes	25	N/A
		Node	No	No	No	Yes		25
		FlexCache	No	No	Yes	Yes		25
		Cluster	No	No	Yes	Yes		25

NO: If the cluster row Scales by Scope column is "no," the cluster maximum value entry does not scale based on the maximum number of nodes supported for the cluster

NOTES AND CAVEATS

Maximum values in this document represent the maximum value supported by NetApp in any configuration.

Consult additional technical documentation (technical reports and more) for operational guidance, best practices, and recommendations for specific application or performance-sensitive environments.

The primary resource affected by maximum values is system memory. As a result, all sizing and design considerations around maximum values must consider overall impact to available system memory.

Special attention must be paid to maximum values that are not code enforced, because in many cases there is no warning that a maximum value will be or has been exceeded.

Special consideration must be given to maximum values that have related or equivalent maximum values in 7-Mode, because the context of how the maximum values apply may have changed, or the maximum values may be lower (or higher) than it was in 7-Mode. For example, 7-Mode uses `qtree` policies, whereas clustered Data ONTAP uses both `qtree` policies and rules; although they are named the same in both ONTAP versions, the specific implementation is different.

For node maximum values that do not scale across HA failover (HA pair and node maximum values are the same), NetApp recommends operating at half of the defined maximum value (not required) on a per-node basis to make sure that maximum values are not exceeded in failover. It is possible to operate at any distribution between the two nodes in the HA pair, so long as in failover the remaining node does not exceed the defined maximum value.

Clustered Data ONTAP platform mixing rules (link below) take precedence in all cases. Each sized cluster now includes "primary platforms" and "mixable platforms" entries that define which platforms are able to be mixed together based on the defined platform mixing rules. When mixing platforms across different-sized clusters, the cluster maximum values for the specific size of cluster apply, while the individual subnode, node, and HA pair maximum values continue to apply based on the platform model being used.

Clustered Data ONTAP Platform Mixing Rules

<https://fieldportal.netapp.com/Core/DownloadDoc.aspx?documentID=93126&contentID=125939>

The maximum values listed in this document are valid only through the expiration date that is listed to the right of the main title bar. After expiration, visit the NetApp Field Portal to obtain the latest version of the maximum configurations document.

Future releases of this document will expand clustered Data ONTAP maximum values information into additional feature and functional areas. Additionally, existing maximum values will be revised and expanded.



Clustered Data ONTAP 8.3.x Maximum Configurations: Release 3.0

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