



Capacity FAQs

Active IQ Digital Advisor

netapp-manishc, Reenu Jojo
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Capacity FAQs

How are capacities calculated in Active IQ Digital Advisor?

The capacities in Active IQ Digital Advisor are calculated for cluster and node — excluding root and including Snapshot copies

Capacity	Calculated by adding each aggregate...
Raw Capacity	All Phys (MB/blks) of "SYSCONFIG -R"
Usable Capacity	Kbytes (Allocated) of "DF -A"
Used Capacity (with Reserve)	Used of "DF -A"
Available Capacity	Avail of "DF -A"
Physical Capacity (Actual)	Total Physical Used of "AGGR-EFFICIENCY.XML"
Logical Capacity (Effective)	Logical Size Used by Volumes, Clones, and Snapshot copies in the Aggregate of "AGGR-EFFICIENCY.XML"

For Local tier (Aggregate with Snapshot copies)

Capacity	Calculated by using...
Usable Capacity	Kbytes (allocated) of "DF -A"
Used Capacity (with Reserve)	Used of "DF -A"
Available Capacity	Avail of "DF -A"
Physical Capacity (Actual)	Total Physical Used of "AGGR-EFFICIENCY.XML"
Logical Capacity (Effective)	Logical Size Used by Volumes, Clones, and Snapshot copies in the Aggregate of "AGGR-EFFICIENCY.XML"

For Volume (Volume with Snapshot copies)

Capacity	Calculated by using...
Volume Capacity	Volume Size of "VOLUME.XML"
Used Capacity (with Reserve)	Used Size of "VOLUME.XML"
Available Capacity	Available Size of "VOLUME.XML"
Physical Capacity (Actual)	Total Physical Used of "VOL STATUS -S"
Logical Capacity (Effective)	Logical Used Size of "VOLUME.XML"

What are Physical Capacity (Actual), Logical Capacity (Effective), and Used Capacity (with Reserve)?

- **Physical Blocks Consumed/Physical Capacity Used (Actual)**
 - The amount of space being used for data now (rather than being reserved for future use)
 - Includes space used by aggregate Snapshot copies
 - Space actually consumed or written by the client
- **Logical Capacity (Effective) Logical Data Used**
 - Displays the logical size used in the aggregate
 - The aggregate includes Volumes, Clones, and Snapshot copies.
 - The logical size is computed based on physical usage (real writes) and savings obtained in the aggregate.



It does not include space reserved for future use.

- **Total Data Used/Used Capacity (with Reserve)**
 - The sum of all space used or reserved in the aggregate by volumes, metadata, or Snapshot copies



It includes space reserved for volumes that are of file or volume guarantee type. It includes delayed frees, aggr blog, and metadata in addition to reserves. It shows up as used space until the delayed free blocks are purged. After it is purged, the used space decreases.

Why does added Used Capacity of each volume not match the aggregated Used Capacity at the node level?

Used Capacity at the node level includes space reserved by volumes, metadata, and Snapshot copies. It also includes space reserved for volumes—file or volume guarantee type. Hence, both might not match.

Are Capacities shown in Active IQ Digital Advisor Base 2 or Base 10?

All capacities displayed in Active IQ are Base 2 (divide by 1024) and represent capacities in GiB/TiB. ONTAP storage and other NetApp products also display capacity usage in Base 2.

For StorageGRID, capacities are displayed in Base 10 and the unit of capacity is expressed in TB.

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