



License

ONTAP Select

NetApp
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License

Options

Evaluation licenses for ONTAP Select deployments

You can deploy ONTAP Select with an evaluation license or a purchased license. The license you choose must apply to each of the nodes in the ONTAP Select cluster and therefore to the entire cluster. You can use an evaluation license if you want to evaluate ONTAP Select before making the decision to purchase. The evaluation license is included with the ONTAP Select Deploy administration utility and is automatically applied to each ONTAP Select node as part of an evaluation deployment.

To download the ONTAP Select Deploy administration utility, you need the following:

- A registered NetApp Support Site account. If you don't have an account, see [User registration](#).
- To [accept the End User License agreement](#) for an ONTAP Select deployment with an evaluation license.

There are several considerations when deploying and supporting an evaluation cluster:

- You can only use the cluster for evaluation purposes. You must not use a cluster with an evaluation license in a production environment.
- You should use the ONTAP Select Deploy administration utility as follows when configuring each host:
 - Don't supply a serial number
 - Configure to use an evaluation license

Licensing characteristics

The ONTAP Select evaluation license has the following characteristics:

- A production license with storage capacity isn't required
- The node serial number is twenty digits and automatically generated by ONTAP Select Deploy (you don't acquire it directly from NetApp)
- The evaluation period provided by the license can be up to 90 days
- The maximum storage allocated by each node is the same as a production license

Upgrade to a production license

You can upgrade an ONTAP Select evaluation cluster to use a production license. You should be aware of the following restrictions:

- You must use the Deploy administration utility to perform the license upgrade
- You can use a Capacity Tier license, however Capacity Pools licensing isn't supported

- Each node must have enough storage allocated to support the minimum required for a production license, based on the cluster size

See [Convert an evaluation license to a production license](#) for more information.

What's next?

- [Access the ONTAP Select evaluation software](#)
- [Deploy a 90-day evaluation instance of an ONTAP Select cluster](#)

Related information

- [Learn about licenses for production deployments](#)

Production licenses

Learn about ONTAP Select purchased licenses for production deployments

After you determine that ONTAP Select is suitable for your organization, you can purchase the licenses needed to support a production deployment. You must choose either the Capacity Pools or Capacity Tiers licensing model as well as the storage capacity for each deployment.

Common licensing characteristics

The *Capacity Pools* and *Capacity Tiers* licensing models are very different in several respects. However, the two licensing models share several common characteristics, including:

- You must purchase one or more licenses as needed when deploying ONTAP Select in a production environment.
- The storage capacity for a license is allocated in 1 TB increments.
- All platform licensing offerings are supported (standard, premium, and premium XL).
- You should contact your NetApp account team or partner for assistance as needed when acquiring the necessary licenses.
- You must upload the license files to the Deploy administration utility, which then applies the licenses based on the licensing model.
- After installing and applying a license, you can add additional capacity by contacting your NetApp account team or partner to procure an updated license.
- An ONTAP Select node that is initially deployed with a purchased license cannot be converted to an evaluation license.

Capacity Tiers licensing model

There are several characteristics unique to the Capacity Tiers licensing model, including:

- You must purchase a license for each ONTAP Select node.
- The minimum amount you can purchase is 1 TB.
- Each Capacity Tier license has a storage capacity and is locked to a specific node.
- The storage capacity identifies the raw capacity and corresponds to the total allowable size of the data disks available to the ONTAP Select virtual machine.

- NetApp generates a nine-digit license serial number for each ONTAP Select node.
- The storage allocated to a node is perpetual (no renewal required), but you must renew the support contract associated with the license.
- Each ONTAP Select node in an high-availability (HA) pair requires a license that is at least as large as the raw storage attached to the node.
- The node serial number is nine digits and equal to the license serial number.
- You can apply the license file during cluster deployment or within 30 days after creating a cluster.

Capacity Pools licensing model

There are several characteristics unique to the Capacity Pools licensing model, including:

- You must purchase a license for each shared Capacity Pool.
- The minimum amount you can purchase is 2 TB.
- Each Capacity Pool license has a storage capacity and is locked to a specific License Manager instance within a Deploy administration utility.
- The storage capacity identifies the raw capacity and corresponds to the total allowable size of the data aggregates that you can create in the ONTAP Select virtual machine.
- A nine-digit license serial number is generated by NetApp for each Capacity Pool.
- The storage allocated to a Capacity Pool is valid only for a specific time based on the purchase (renewal required).
- The License Manager generates a twenty-digit node serial number based on the Capacity Pool license serial number.
- All ONTAP Select nodes in a cluster share the same license capacity. This means the license must be large enough to provide for the storage allocated to all nodes in the cluster.
- Each node automatically leases storage capacity for its local data aggregates from a shared Capacity Pool.

What's next?

- [Learn about the platform license offerings for ONTAP Select](#)
- [Learn more about the ONTAP Select Capacity Pools licensing model](#)

Learn about the platform license offerings for ONTAP Select

You can purchase an ONTAP Select Capacity Tier or Capacity Pool license in the standard, premium, or premium XL level. These license offerings determine the capabilities of the hosts where you deploy ONTAP Select.

What a platform license offering provides

A specific license offering determines the capabilities of the hypervisor host in two areas:

- Instance type (CPU, memory)
- Additional features

The license offerings are arranged in an ascending order of capabilities from standard to premium XL. In general, the license option you choose grants you the capabilities of that level and all lower levels. For example, the premium level provides the capabilities of both premium and standard.

The following table compares the capabilities for the standard, premium, and premium XL license offerings.

License supports ...		Standard	Premium	Premium XL
Instance type		Small only	Small or medium	Small, medium, or large
Hard disk drives (HDD) in a ...	Hardware RAID configuration	Yes	Yes	Yes
	vNAS configuration	Yes	Yes	Yes
Solid state drives (SSD) in a ...	Hardware RAID configuration	No	Yes	Yes
	Software RAID configuration	No	Yes	Yes
	vNAS configuration	Yes	Yes	Yes
NVMe drives in a ...	Hardware RAID configuration	No	No	Yes
	Software RAID configuration	No	No	Yes
	vNAS configuration	Yes	Yes	Yes
MetroCluster SDS		No	Yes	Yes



Kernel-Based Virtual Machines (KVM) do not support the large instance type.

Compare hardware support for platform license offerings

The standard, premium, and premium XL license offerings support a wide range of hardware and software. For current information on hardware and software versions, see the [Interoperability Matrix Tool](#).

Core item

Core item type	Description
Host protocols	NFS, SMB/CIFS, iSCSI, and NVMe over TCP
Deployment options	Single node Two-node cluster (HA pair) Four, six, eight, ten, or twelve-node cluster
Supported capacity (per node)	Up to 400TB raw data (ESXi and KVM)

Hardware

Hardware type	Description		
Instance size	Small	Medium	Large
CPU family	Intel Xeon E5-26xx v3 (Haswell) or later	Intel Xeon E5-26xx v3 (Haswell) or later	Intel Xeon E5-26xx v3 (Haswell) or later
ONTAP Select CPU / memory	4 virtual CPUs (vCPUs) / 16GB of RAM	8 vCPUs / 64GB of RAM	16 vCPUs / 128GB of RAM
Host CPU / memory minimum requirements ¹	6 cores / 24GB of RAM	10 cores / 72GB of RAM	18 cores / 136GB of RAM
Network (per node)	Minimum of two 1GbE ports for a single node cluster Minimum of four 1GbE ports for a two-node cluster (HA pair) Minimum of two 10GbE ports for a four, six, eight, ten, or twelve-node cluster		

¹ Assumes two cores and 8GB of RAM for the hypervisor.

Storage type

The following table provides the minimum license type required for the specified storage.

Storage type	Description		
License type	Standard	Premium	Premium XL
Instance size	Small	Small and medium	Small, medium, and large
Local DAS with hardware RAID controller	8 - 60 drives	8 - 60 drives	8 - 60 drives
HDD (SAS, NL-SAS, SATA)	Not applicable	4 – 60 drives	4 – 60 drives
SSD (SAS)	Not applicable	4 – 60 drives (SSD only)	4 – 60 drives (SSD only)
Local DAS with software RAID	Not applicable	Applicable	4 - 14 drives (NVMe only)

External arrays ¹	Datastores hosted on external arrays are connected through FC, FCoE, iSCSI, and NFS (NFS isn't supported for KVM). These datastores provide high availability and resilience.
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¹ External array protocol support reflects networked storage connectivity.

Software

Software type	Description
Hypervisor support (VMware)	VMware vSphere 9.0
	VMware vSphere 8.0GA and updates 1 through 3
	VMware vSphere 7.0GA and updates 1 through 3C
Hypervisor support (KVM)	Red Hat Enterprise Linux 64-bit (KVM) 10.1, 10.0, 9.7, 9.6, 9.5, 9.4, 9.3, 9.2, 9.1, 9.0, 8.8, 8.7, and 8.6
	Rocky Linux (KVM) 10.1, 10.0, 9.7, 9.6, 9.5, 9.4, 9.3, 9.2, 9.1, 9.0, 8.9, 8.8, 8.7, and 8.6
Management software	NetApp Active IQ Unified Manager management suite
	ONTAP Select Deploy Utility
	SnapCenter (optional)

What's next?

[Learn about purchasing an ONTAP Select license](#)

Capacity Pools licensing model

Operational details for ONTAP Select Capacity Pools licensing model

The Capacity Pools licensing model is different from the Capacity Tiers model. Instead of a dedicating storage capacity to each individual node, the storage capacity is allocated to a pool and shared among many nodes. Additional components and processes have been created to support the Capacity Pools model.

License Manager

The License Manager runs as a separate process within each instance of the Deploy administration utility. Some of the functions provided by LM include:

- Generate a unique twenty-digit serial number for each node based on the Capacity Pool license serial number
- Create leases for capacity from the shared Capacity Pools based on requests from the ONTAP Select nodes
- Report pool usage information through the Deploy user interface

Lease characteristics

The storage allocated for every data aggregate at a node using a Capacity Pool license must have an associated lease. The node requests a storage lease and if the capacity is available, the License Manager responds with a lease. Each lease has the following explicit or implicit attributes:

- License Manager

Every ONTAP Select node is associated with one License Manager instance

- Capacity Pool

Every ONTAP Select node is associated with one Capacity Pool

- Storage allocation

A specific capacity value is assigned in the lease

- Expiration date and time

Leases have a duration of between one hour and seven days depending on the user configuration.

License Lock ID

Each instance of the License Manager, and therefore each corresponding Deploy utility instance, is identified with a unique 128-bit number. This number is combined with the nine-digit Capacity Pool license serial number to lock the pool to a specific License Manager instance (which is effectively a Deploy instance). You must provide both values at the NetApp support site as part of generating the NetApp License File (NLF).

You can determine the License Lock ID for your Deploy instance using the web user interface in the following ways:

- Getting Started page

Deploy displays this page when you first sign in. You can also open the drop down box at the top right of the page and select **Getting Started** to display this page. The LLID displays in the Add Licenses section.

Select the **Administration** tab at the top of the page, then select **Systems** and **Settings**.

Basic lease operations

An ONTAP Select node must locate or request a valid capacity lease every time a data aggregate is created, expanded, or changed. You can use a lease obtained from a previous request that is still valid, or you can request a new lease if needed. The following steps are taken by the ONTAP Select node to locate a Capacity Pool lease:

1. If an existing lease is located at the node, it is used as long as all of the following are true:
 - Lease has not expired
 - Storage request for the aggregate does not exceed the lease capacity
2. If an existing lease cannot be located, the node requests a new lease from the License Manager.

Return storage capacity to a Capacity Pool

Storage capacity is allocated from a Capacity Pool as needed and each new request can reduce the available storage in the pool. Storage capacity is returned to the pool in several situations, including:

- Lease for a data aggregate expires and is not renewed by the node
- Data aggregate is deleted



If an ONTAP Select virtual machine is deleted, any active leases remain in effect until they expire. When this occurs, the capacity is returned to the pool.

Node serial numbers for ONTAP Select Capacity Pools licensing model

With the Capacity Tiers licensing model, the nine-digit node serial number is the same as the license serial number assigned to the node. However, the serial numbers assigned to nodes using the Capacity Pools licensing model have a different format.

The serial number of a node using Capacity Pools licensing has the following format:

999 ppppppppp nnnnnnnn



Spaces have been added for clarity, but are not part of the actual serial number.

The following table describes each section of the node serial number from left to right.

Section	Description
'999'	Constant three-digit value reserved by NetApp.
ppppppppp	Variable nine-digit license serial number assigned to the Capacity Pool by NetApp
nnnnnnnn	Variable eight-digit value generated by the License Manager for each node using the Capacity Pool



When opening a case with NetApp support involving a node that uses a Capacity Pool license, you must provide the nine-digit Capacity Pool license serial number. You cannot provide the full twenty-digit node serial number. You can derive the license serial number from the node serial number by skipping the first three digits of the node serial number ('999') and extracting the next nine digits (ppppppppp).

Deployment restrictions for ONTAP Select Capacity Pools licensing

The restrictions that apply when using the Capacity Pool licensing model are presented below.

Consistent licensing model per cluster

All of the nodes within a single ONTAP Select cluster must use the same licensing model, either Capacity Tiers or Capacity Pools. You cannot mix the licensing types for the nodes within a single cluster.

All nodes in a cluster use the same License Manager instance

All the nodes with a Capacity Pool license in an ONTAP Select cluster must use the same License Manager instance. Because there is one instance of License Manager within each Deploy instance, this restriction is a

restatement of the existing requirement that the same Deploy instance must manage all nodes in a cluster.

One Capacity Pool per node

Each node can lease storage from exactly one Capacity Pool. A node cannot use two or more pools.

Same pool for nodes in an HA pair

Both nodes in a single HA pair must lease storage from the same Capacity Pool. However, different HA pairs within the same cluster can lease storage from different pools managed by the same License Manager.

Storage license duration

You must choose a license duration when acquiring the storage license from NetApp. For example, a license could be valid for one year.

Data aggregate lease duration

When an ONTAP Select node requests a storage lease for a data aggregate, the License Manager provides a lease for a specific duration based on the configuration of the Capacity Pool. You can configure the lease duration for each pool between one hour and seven days. The default lease duration is 24 hours.

Static IP address assigned to Deploy

You must assign a static IP address to the Deploy administration utility when Capacity Pools licensing is used.

Summary of benefits for ONTAP Select Capacity Pools licensing

There are several benefits when using the Capacity Pools licensing model instead of the Capacity Tiers licensing model.

More efficient use of storage capacity

When using Capacity Tiers licensing, you allocate a fixed storage capacity to each node. Any unused space cannot be shared with the other nodes and is effectively wasted. With Capacity Pools licensing, each node only consumes the capacity it needs, based on the size of the data aggregates.

Capacity is anchored in a central pool where it can be shared among many nodes in your organization.

Significantly reduced administrative overhead resulting in lower cost

If you use Capacity Tier licenses, you must obtain and install a license for each node. When using Capacity Pools, there is one license for each shared pool. This can dramatically reduce the administrative overhead and result in lower cost.

Improved usage metrics

The Deploy web user interface provides enhanced usage information for the Capacity Pools. You can quickly determine how much storage is used and available in a Capacity Pool, which nodes are using storage from a pool, and what pools a cluster is allocating capacity from.

Compare ONTAP Select Capacity Tiers and Capacity Pools licensing

The following table compares the two production licensing models supported by ONTAP Select.

	Capacity Tiers	Capacity Pools
License serial number	NetApp generates nine digits and assigns them to a node	NetApp generates nine digits and assigns them to a Capacity Pool
License lock	Locked to ONTAP Select node	Locked to License Manager instance
License duration	Perpetual (no renewal required)	Fixed duration based on purchase (renewal required)
Lease duration for data aggregate	Not applicable	One hour to seven days
Node serial number	Nine digits and equal to license serial number	Twenty digits and generated by License Manager
Support	Add-on and time-limited	Included and co-termed
License types	Standard, premium, premium XL	Standard, premium, premium XL
Evaluation license available	Yes	Yes
Evaluation to production upgrade	Yes	No
ONTAP Select virtual machine resize (small to medium, medium to large)	Yes	Yes
Enforcement: license expired	N/A	Yes (no grace period)
Minimum license	1 TiB	2 TiB
Maximum managed space	400 TiB per node	400 TiB per node

Purchase a license

Workflow when purchasing an ONTAP Select license

The following workflow illustrates the process of purchasing and applying a license for your ONTAP Select deployment. When purchasing a license, you must select the licensing model and storage capacity.

The exact process varies based on whether you are using a Capacity Tier or Capacity Pool license:

Nine-digit license serial number

Serial number applies to either a node (Capacity Tiers) or a storage pool (Capacity Pools)

License Lock ID

You must have the License Lock ID for your Deploy instance when using a Capacity Pool license

Licensing web site

You obtain a Capacity Tier and Capacity Pool license at different web sites

Purchase a license for the nodes or capacity pools through NetApp or a NetApp partner.



Extract the serial numbers from the email received from NetApp or at the NetApp Support site.



Enter a serial number or serial number with License Lock ID at the NetApp licensing site.



Either download the license file or extract it from the email received from NetApp.

More
licenses?

Yes

No

Upload the license files to the Deploy utility to establish storage capacity for the nodes or pools.

What's next?

Learn about the considerations for sizing an ONTAP Select license:

- [Capacity Tiers license](#)
- [Capacity Pools license](#)

Related information

[Learn about managing ONTAP Select licenses](#)

Capacity Tiers

Considerations for sizing an ONTAP Select Capacity Tiers license

The Capacity Tiers license is based on the underlying disk capacity managed by each ONTAP Select node and not the usable capacity of the node, HA-pair, or cluster. Each Capacity Tiers license is assigned to an individual node serial number for a specified capacity and requires an accompanying support contract.

The licensed capacity for a Capacity Tiers license is in full TiB amounts, with a minimum of 1 TiB. You calculate the licensed capacity by multiplying the amount of usable space by the overhead factor. The overhead factor differs between a single-node and multi-node (HA-pair based) clusters:

- Overhead factor for single-node clusters is 1.13
- Overhead factor for multi-node clusters is 2.67

Calculate the licensed capacity based on the usable space to ensure you have enough for your deployment.

Description	Single node	HA pair
Usable space	10 TiB	5 TiB per node 10 TiB for HA pair
Licensed space	12 TiB $(10 \times 1.13 = 11.3, \text{ round up to next full TiB})$	Two 14 TiB licenses $(5 \times 2.67 = 13.35, \text{ round up to next full TiB})$
Maximum usable space per node Note: The maximum managed space per node or HA pair is 400 TiB	353 TiB $(400 / 1.13)$	Per node in a HA pair: <ul style="list-style-type: none">• 74 TiB $[(400 / 2) / 2.67]$ Per HA pair in a multi-node cluster: <ul style="list-style-type: none">• Two-node: 148 TiB (2×74)• Four-node: 296 TiB (4×74)• Six-node: 444 TiB (6×74)• Eight-node: 592 TiB (8×74)

What's next

Acquire a Capacity Tier license for ONTAP Select

Acquire an ONTAP Select Capacity Tier license

When using Capacity Tiers licensing, you need to acquire a license file for each ONTAP Select node. The license file defines the storage capacity for the node and is locked to the node through the unique nine-digit serial number assigned by NetApp.

Before you begin

- You must have the nine-digit license serial number assigned to the ONTAP Select node by NetApp.
- You should wait at least 24 hours after the shipped date of your purchase order before acquiring a license file.
- You have reviewed the [considerations for sizing a Capacity Tiers license](#).

About this task

You must perform this task for each ONTAP Select node requiring a Capacity Tiers license.

Steps

1. [Access the ONTAP Select license site](#).
2. Sign in using your NetApp account credentials.
3. On the **License Generator** page, select the desired license offering from the dropdown box.
4. Fill in the remaining fields on the **License Generator** page, including the **Product Serial #**.

The "product serial #" is the serial number for the ONTAP Select node.
5. Select **Submit**.
6. After the request has been validated, select the delivery method for the license.

You can select either **Download License** or **Email License**.

7. Confirm that you received the license file based on your selected delivery method.

After you finish

You must upload the license file to the Deploy administration utility before it can be applied to an ONTAP Select node.

Capacity Pools

Considerations for sizing an ONTAP Select Capacity Pools license

The licensed capacity for a Capacity Pool license is in full TiB amounts, with a minimum of 2 TiB. You calculate the licensed capacity by multiplying the amount of usable space by the overhead factor. The overhead factor differs between a single-node and multi-node (HA-pair based) clusters:

- Overhead factor for single-node clusters is 1.13
- Overhead factor for multi-node clusters is 2.67

You need to calculate the licensed capacity based on the usable space to ensure you have enough for your

deployment.

Description	Single-node	HA pair or mix of HA and single-node
Usable space	20 TiB	10 TiB per single-node cluster 20 TiB for HA pair
Licensed space	23 TiB ($20 \times 1.13 = 22.6$, round up to next full TiB)	54 TiB ($20 \times 2.67 = 53.4$, round up to next full TiB)
Maximum usable space per node Note: The maximum managed space per node or HA pair is 400 TiB	353 TiB ($400 / 1.13$)	Per single-node cluster: 74 TiB [$(400 / 2) / 2.67$] Per HA pair cluster: 148 TiB (2×74)

What's next

[Acquire a Capacity Pools license for ONTAP Select](#)

Acquire an ONTAP Select Capacity Pool license

You must acquire a license file for each Capacity Pool used by the ONTAP Select nodes. The license file defines the storage capacity and expiration for the pool. It is locked to the License Manager through a combination of the unique license serial number assigned by NetApp and the License Lock ID associated with the Deploy instance.

Before you begin

- You must have the nine-digit license serial number assigned to the Capacity Pool by NetApp.
- You should wait at least 24 hours after the shipped date of your purchase order before acquiring a license file.
- You have reviewed the [considerations for sizing a Capacity Pools license](#).

About this task

You must perform this task for each Capacity Pool used by the ONTAP Select nodes.

Steps

1. Log in to the [NetApp Support site](#).
2. Select **Systems > Software Licenses**.
3. Type the license serial number for the Capacity Pool and select **Go!**.
4. On the license details page, navigate to the **Product Details** column.
5. Select **Get NetApp License File** on the appropriate row.
6. Type the License Lock ID for your ONTAP Select Deploy instance and select **Submit**.
7. Select the appropriate delivery method and select **Submit**.

8. Select **OK** on the delivery confirmation window.

After you finish

You must upload the license file to the Deploy administration utility before an ONTAP Select node can use the Capacity Pool.

ONTAP Select support for ONTAP features

ONTAP Select supports most ONTAP features. Many of the ONTAP features are licensed automatically for each node when you deploy a cluster. However some features require a separate license.



ONTAP features that have hardware-specific dependencies are generally not supported with ONTAP Select.

ONTAP features automatically enabled by default

The following ONTAP features are supported with ONTAP Select and licensed by default:

- Autonomous Ransomware Protection (ARP) (manual updates)
- CIFS
- Deduplication and compression
- FlexCache
- FlexClone
- iSCSI
- NDMP
- NetApp Volume Encryption (non-restricted countries only)
- NFS
- NVMe over TCP
- ONTAP multitenancy capability
- ONTAP S3
- S3 SnapMirror
- SnapMirror
- SnapMirror cloud
- SnapRestore
- SnapVault
- Storage VM disaster recovery (SVM DR)



ONTAP Select supports SVM DR as both a source and destination with a maximum of 16 relationships. SVM DR support is limited to the use of the source ONTAP version to versions +2. For example, the ONTAP Select 9.12.1 source can connect to destination ONTAP versions 9.12.1, 9.13.1, or 9.14.1.

ONTAP features that are separately licensed

You need to acquire a separate license for any ONTAP feature that is not enabled by default, including:

- FabricPool
- MetroCluster SDS (ONTAP Select premium license offering)
 - For ONTAP Select 9.16.1 and earlier, SnapLock Select Enterprise (including tamperproof snapshot locking) is available from the [NetApp Support Site](#).
 - SnapLock Compliance is not supported for ONTAP Select.
 - You do not need a FabricPool license when utilizing StorageGRID.

Related information

- [Comparing ONTAP Select and ONTAP 9](#)
- [NetApp ONTAP Master License Keys](#)

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