



# License

## ONTAP Select

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# License

## Options

### Evaluation licenses

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.

### Licensing characteristics

The ONTAP Select evaluation license has the following characteristics:

- A production license with storage capacity is not required
- The node serial number is twenty digits and automatically generated by ONTAP Select Deploy (you do not 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

### Upgrading 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
- License upgrade is only supported with ONTAP Select 9.5P1 using Deploy 2.11 or later
- A capacity tier license can be used, however capacity pools licensing is not supported
- Each node must have enough storage allocated to support the minimum required for a production license, based on the cluster size

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

### 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 tiers or capacity pools licensing model as well as the

storage capacity for each deployment.

### **Common licensing characteristics**

The *capacity tiers* and *capacity pools* 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.
- 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.
- All platform licensing offerings are supported (standard, premium, 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.
- Both nodes in an HA pair must have the same storage and license capacity.
- 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.
- A nine-digit license serial number is generated by NetApp for each ONTAP Select node.
- The storage allocated to a node is perpetual (no renewal required).
- 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.
- 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 node serial number is twenty digits and is generated by the License Manager based on the capacity pool license serial number.
- Each node automatically leases storage capacity for its local data aggregates from a shared capacity pool.

For more details on the capacity pools licensing model, see the *Capacity pools licensing model* for more information.

## Understanding the platform license offerings

You can purchase an ONTAP Select capacity tier or capacity pool license in one of three platform capacity levels. These license offerings determine the capabilities of the hosts where you deploy ONTAP Select.

### What a platform license offering provides

A specific license offering defines and restricts 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.

### Standard

The standard offering provides the following capabilities:

- Small instance type only
- Hard disk drives (HDD) only
- Local hardware RAID controller only
- vNAS

### Premium

The premium offering provides the following capabilities:

- Small or medium instance type
- Hard disk drives (HDD) or Solid state drives (SSD)
- Local hardware RAID controller or software RAID
- vNAS
- MetroCluster SDS

#### **Premium XL**

The premium XL offering provides the following capabilities:

- Small, medium, or large instance type.
- Hard disk drives (HDD) or Solid state drives (SSD)
- Local hardware RAID controller or software RAID.
- vNAS
- MetroCluster SDS



The large instance type (using the premium XL license) is only supported on VMware ESXi.

## **Capacity pools licensing model**

### **Operational details**

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 is a software component introduced with ONTAP Select 9.5 using ONTAP Select Deploy 2.10. LM 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  
This page is displayed when you first sign in to Deploy. You can also display the page by clicking the drop down box at the top right of the page and selecting Getting Started. The LLID is displayed in the Add Licenses section.
- Administration  
Click the **Administration** tab at the top of the page, then click **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. A lease obtained from a previous request that is still valid can be used, or a new lease can be requested 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.

### Returning 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

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 nnnnnnnnn



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

Each section of the node serial number is described in the following table, from left to right.

Section	Description
'999'	Constant three-digit value reserved by NetApp.
pppppppppp	Variable nine-digit license serial number assigned to the capacity pool by NetApp
nnnnnnnnn	Variable eight-digit value generated by the License Manager for each node using the capacity pool



Attention: When opening a case with NetApp support involving a node that uses a capacity pool license, you cannot provide the full twenty-digit node serial number. Instead, you must provide the nine-digit capacity pool license serial number. You can derive the license serial number from the node serial number as shown above. Skip the first three digits of the node serial number ('999') and extract the next nine digits (pppppppppp).

### Deployment restrictions for 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 all nodes in a cluster must be managed by the same Deploy instance.

### **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.

## **Comparing capacity pools and capacity tiers licensing**

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

	<b>Capacity tiers</b>	<b>Capacity pools</b>
License serial number	Nine digits generated by NetApp and assigned to a node	Nine digits generated by NetApp and assigned 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 (renewed required)
Lease duration for data aggregate	Not applicable One hour to seven days	Node serial number

## Summary of benefits

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.

And because the capacity is anchored in a central pool, 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.

## Purchase

### Workflow when purchasing a 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



## Acquiring a 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 node by NetApp. Before attempting to acquire a license file, you should wait at least twenty four hours after the shipped date of your purchase order.

### *About this task*

You must perform this task for each ONTAP Select node requiring a capacity tier license.

### *Steps*

1. Access the ONTAP Select license site using a web browser:

<https://register.netapp.com/register/getlicensefile>

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 same page, including the **Product Serial #**, which is the serial number for the ONTAP Select node.
5. Click **Submit**.
6. After the request has been validated, select the delivery method for the license.

You can click 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.

## Acquiring a 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. Before attempting to acquire a license file, you should wait at least twenty four hours after the shipped date of your purchase order.

### *About this task*

You must perform this task for each capacity pool used by the ONTAP Select nodes.

### *Steps*

1. Access the NetApp Support Site using a web browser and sign in.
2. Click **Products** at the top and then click **Software Licenses**.
3. Type the license serial number for the capacity pool and click **Go!**.
4. On the license details page, navigate to the **Product Details** column.
5. Click **Get NetApp License File** on the appropriate row.
6. Type the License Lock ID for your ONTAP Select Deploy instance and click **Submit**.
7. Select the appropriate delivery method and click **Submit**.
8. Click **OK** on the delivery confirmation window.

### *After you finish*

You must upload the license file to the Deploy administration utility before the capacity pool can be used by an ONTAP Select node.

## **ONTAP features enabled by default**

ONTAP Select offers full support for most ONTAP functionality, except those features that have hardware-specific dependencies.

ONTAP Select automatically licenses several features for each node when you deploy a cluster.

### **Included features**

The following features are included and licensed by default:

- NFS
- CIFS
- iSCSI
- SnapMirror
- SnapVault
- FlexClone

- SnapRestore
- NetApp Volume Encryption
- Deduplication and compression
- ONTAP multitenancy capability
- NetApp Volume Encryption (non-restricted countries only)

### **Separately licensed features**

You must acquire a separate license for any other features, including:

- SnapLock Enterprise
- FabricPool
- Data Availability Service
- FlexCache (zero cost)
- SyncMirror (zero cost)
- MetroCluster SDS (ONTAP Select premium license offering)



You do not need a FabricPool license when utilizing StorageGRID Webscale.

### *Related information*

- [Comparing ONTAP Select and ONTAP 9](#)

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