

# Microsoft Dynamics 365 for Operations on-premises Licensing Guide



# Contents

How to License Dynamics 365 for Operations on-premises.....	1
Basic Licensing Requirements .....	1
Licensing Programs .....	6
Availability by Language.....	6
Dynamics 365 for Operations License Types.....	6
Retail.....	9
Custom Entities.....	9
Customization.....	9
Additional Services and Software .....	10
Trials.....	10
Software Assurance .....	10
Product Deployment.....	11
On-Premises Upgrades, Downgrades and Migration.....	11
Links for Additional Information .....	16
Appendix A: Ensuring Accurate Licensing .....	17
Appendix B: Dynamics 365 for Operations Security Roles by User CAL Level.....	18
Appendix C: Operations Customization and Licensing Requirements.....	24
Appendix D: Change Log.....	25

# Using this Guide

Use this guide to improve customers' understanding of how to license Microsoft Dynamics 365 for Operations on-premises. Dynamics 365 for Operation on-premise is the newest version of Microsoft's current ERP on-premises product. Dynamics 365 for Operations on-premises offers choices to license employees who need to use much of the rich functionality in the business application, and other users who consume and share information and complete small or targeted tasks in the application.

This document does not apply to Microsoft Dynamics NAV, Microsoft Dynamics GP, Microsoft Dynamics SL, Microsoft Dynamics AX 2012, Microsoft Dynamics CRM 2016, or prior versions of any of these products. This guide also does not apply to Microsoft Dynamics 365 cloud services, Microsoft Dynamic CRM Online, or Microsoft Dynamics AX cloud. This guide is not intended to influence the customer's purchase decisions on Microsoft Dynamics 365. The examples presented in this guide are illustrative. Microsoft reserves the right to review or update this document at any time without notice.

For help determining the right technology for any given organization, including the license requirements for a specific product or scenario, consult with the customer's Microsoft Dynamics Certified Partner or their Microsoft account team.

This guide does not supersede or replace any of the legal documentation covering use rights for Microsoft products. Specific product license terms are detailed in the Software License Terms (SLT) document, which is available on the Lifecycle Services (LCS) legal [website](#) and the Product Terms (PT) found on the [Volume Licensing website](#).

## How to License Dynamics 365 for Operations on-premises

Dynamics 365 for Operations on-premises utilizes a licensing model that is powerful, flexible, competitive, and optimized for Microsoft's Enterprise Agreement (EA). The EA offers the best value for organizations that want to buy online services and software licenses under one agreement. The EA offers large organizations the ability to license Microsoft online services and software licenses, over a three-year period, with volume discounted prices. Customer have access to up-to-date Microsoft online services with active subscription and rights to the latest versions of Microsoft licensed products when active on Software Assurance.

Dynamics 365 for Operations on-premises is available through multiple licensing programs including EA and Dynamics Price List (DPL).

## Basic Licensing Requirements

For software deployments, Dynamics 365 for Operations on-premises is licensed under the familiar Server + Client Access License (CAL) model, which requires that the customer license the server(s) running the software as well as the users and/or devices that connect to the product.

### Server License

Before a customer runs any instance of the Dynamics 365 for Operations on-premises software, they must obtain a Dynamics 365 for Operations Server license for each of their servers. For each Dynamics 365 for Operations Server license the customer obtains, they may run, at any one time, one instance of the server software in one physical or virtual operating system environment (OSE) on the licensed server. A hardware partition or blade is considered to be a separate server. The server license includes one application object

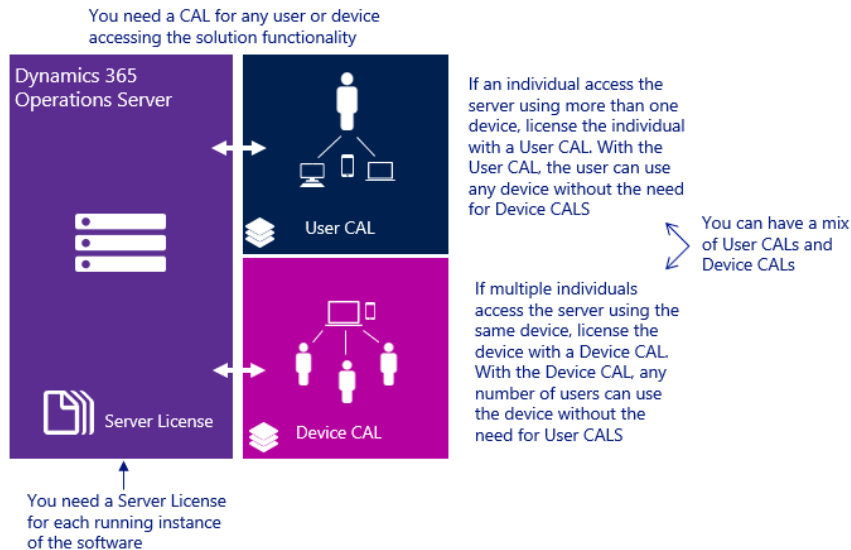
server. If customers want additional application object servers or additional server instances, they may purchase additional Dynamics 365 for Operations Server licenses.

## Client Access Licenses

Dynamics 365 for Operations on-premises customers must purchase CALs for users or devices accessing the Dynamics 365 for Operations Server.

Dynamics 365 for Operations on-premises offers a rich feature set supporting multi-tenant deployments. Users or devices accessing the server software on multi-tenant deployments need to purchase the Dynamics 365 for Operations on-premises CALs. Server licenses with Software Assurance are required to receive the benefit of License Mobility for Software Assurance as described in the Product [Terms](#).

Figure 1 – Server CAL Model



## Reassigning CALs

Named CALs (either User or Device) cannot be shared. CALs can be reassigned only in specific cases as follows:

- Permanently reassigning a CAL from one user or device to another, due to permanent personnel or device replacement.
- Temporarily reassigning a CAL to a temporary worker while the assigned user is absent or to a temporary loaner device while an assigned device is out of order.

## Licensing Requirements for Internal Users

Customers must purchase a CAL for their organization or their affiliates' employees and on-site agents, vendors or contractors who directly or indirectly access the Dynamics 365 for Operations Server software, files, data content, or any Dynamics 365 for Operations on-premises functionality.

"Dynamics 365 for Operations on-premises functionality" is any service or feature of Dynamics 365 for Operations Server software that allows a user to view, manipulate, input, query, or otherwise structure Live Data. "Live Data" is information that, via user action, dynamically writes to, reads from, or synchronizes with Dynamics 365 for Operations Server software.

Internal users are required to have the appropriate CAL, regardless of their direct or indirect connection to the product. See more details about indirect access under the Multiplexing section.

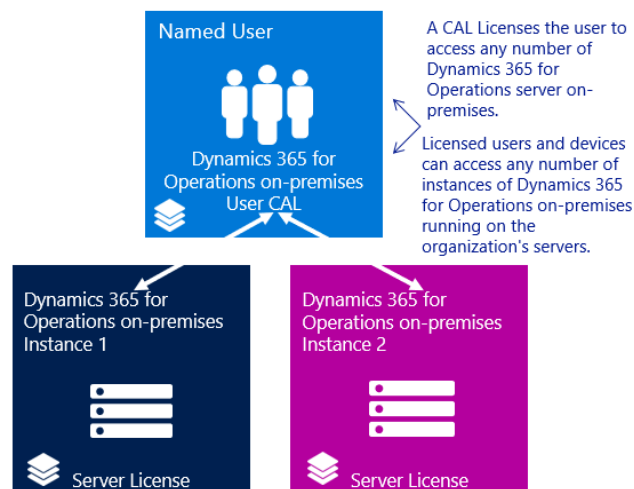
Dynamics 365 for Operations on-premises has two types of CALs:

- **User CALs** are assigned on a “named user” basis, meaning each user requires a separate CAL; User CALs cannot be shared, but an individual with a User CAL may access the service through multiple devices without need for separate Device CALs. Purchasing User CALs might make more sense if the organization’s employees need to have roaming access to the corporate network using multiple devices, or from unknown devices, or if there are simply more users than devices in the organization.
- **Device CALs** grant access to the Dynamics 365 for Operations Server from a device. Any user may access a licensed device without the need for a separate User CAL. The Device CAL has restricted functionality but may make more economic and administrative sense if its organization has employees who share devices, such as for shift-based work.

A user or device licensed with a CAL may access any number of instances of Dynamics 365 for Operations Server or earlier versions of the software running on the organization’s servers.

**Note:** Since Dynamics 365 for Operations on-premises may be licensed with a User or Device CAL, only the user or device requires a CAL but not both. If the user of a device is licensed with a CAL, then the device *does not* need a Device CAL. Likewise, if the device is licensed with a Device CAL, then the user *does not* need a CAL. Customers can mix both User and Device CALs.

Figure 2: Accessing multiple instances



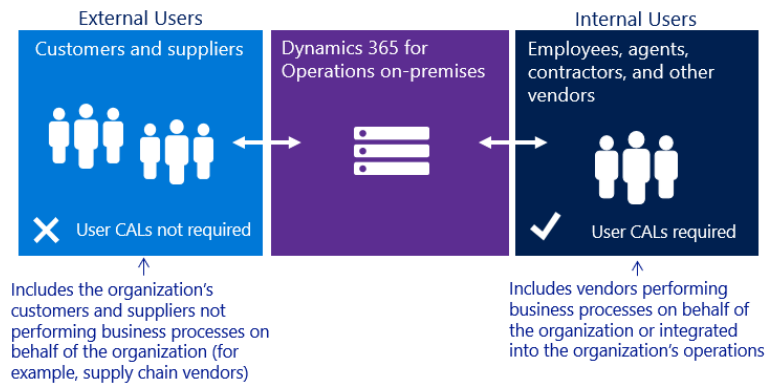
## Licensing Requirements for External Users

External users are end customers and third-party users of the organization or its affiliates and do not require a CAL to access the Dynamics 365 for Operations Server. External user access is included with the Microsoft 365 for Operations Server.

In addition, external users include off-site vendors not on an employee-like relationship with the organization or its affiliates (e.g. IT help desk support vendors serving multiple customer organizations).

However, external user access does not extend to the customer or the customer’s affiliate’s contractors, vendors, or agents providing business processes on the customer’s behalf or using Dynamics 365 to manage any portions of their business. In this sense, the customer may not use Dynamics 365 to provide business process outsourcing services to its clients.

Figure 3: Internal vs. external users



## Multiplexing

Multiplexing refers to the use of hardware or software that a customer uses to pool connections, reroute information, or reduce the number of devices or users that directly access or use Dynamics 365 Operations on-premises software. Multiplexing does **NOT** reduce the number of CALs of any type required to access the Dynamics 365 for Operations on-premises software. Any user or device that accesses Dynamics 365 Operations on-premises software—whether directly or indirectly—must be properly licensed.

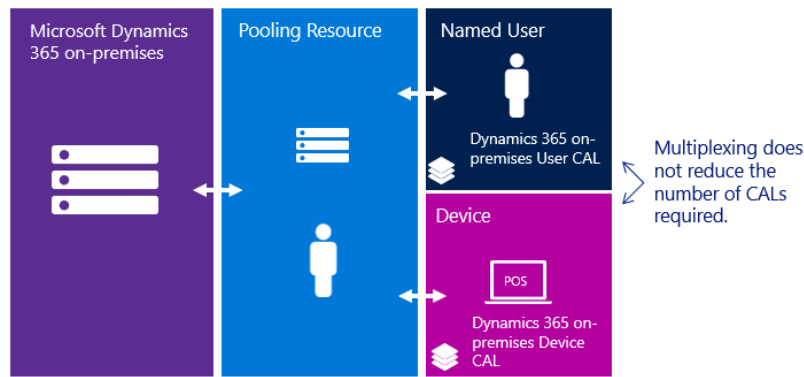
Dynamics 365 for Operations on-premise CALs are required for users or devices that directly input, query, or view data from the Dynamics 365 Operations on-premises software. Similarly, Dynamics 365 for Operations CALs are required for users or devices that input data into, query, or view data from Dynamics 365 for Operations on-premises software through a pooling device. Pooled connections use a non-interactive user account in Dynamics 365 for Operations on-premises that can access the system but only via the web service layer. Internal users and devices accessing Dynamics 365 for Operations on-premises data indirectly through a portal or via an API to a separate software such Microsoft Outlook must also be properly licensed, regardless of if they are set up as a Dynamics 365 for Operations on-premises user in the service, for example:

- Internal users and devices access Dynamics 365 for Operations on-premises data indirectly through a third party application must still be properly licensed for Dynamics 365 for Operations on-premises
- Users or devices that access the software files, data, or content provided by the product that is made available through an automated process require Dynamics 365 for Operations on-premises CALs
- The number of tiers of hardware or software between the Dynamics 365 Operations on-premises server and the users or devices that ultimately use data, software, or functionality does not affect the number of CALs required

For additional information about multiplexing refer to the Microsoft Volume Licensing Brief [Multiplexing—CAL Requirements](#).

**Note:** Licensed users may manually rekey information (when coming from non-licensed users) into the Dynamics 365 Operations Server. This scenario is not considered multiplexing.

Figure 4: Multiplexing



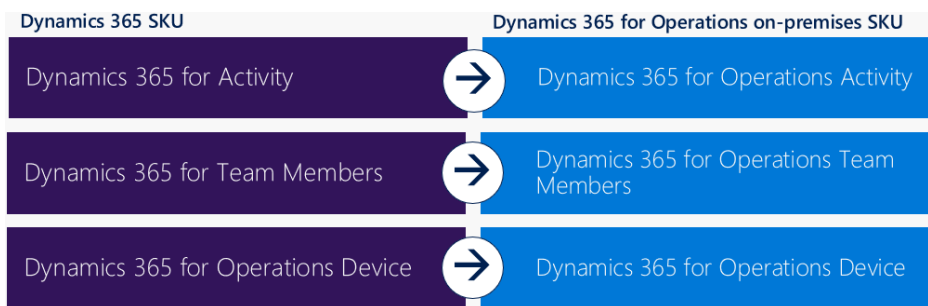
## Dual Use Rights

One of the advantages of Dynamics 365 is dual use rights. This allows customers the option to deploy the server software either in Microsoft’s cloud or in a private on-premises or partner-hosted cloud. In some cases, customers may want to deploy both types of instances simultaneously. This might be done to help with migrating a Dynamics 365 on-premises deployment to Dynamics 365, running private Dev/Test deployments in Microsoft Azure.

Dual Use Rights convey Dynamics 365 for Operations on-premises server license access rights to Dynamics 365 SLs. Dynamics 365 on-premises CALs have no reciprocal rights to access functionality provided exclusively to Dynamics 365 SLs, nor do Dual Use Rights imply equivalent capabilities between Dynamics CALs and Dynamics 365 SLs.

Users or devices licensed with Dynamics 365 User Subscription Licenses (User SLs) have use rights equivalent to a CAL for the purpose of accessing on-premises functionality. With Dynamics 365 the Dynamics 365 for Operations on-premises server license is included with the SLs. Licenses for all supporting servers (e.g., Windows Server and CAL(s)) must be obtained separately.

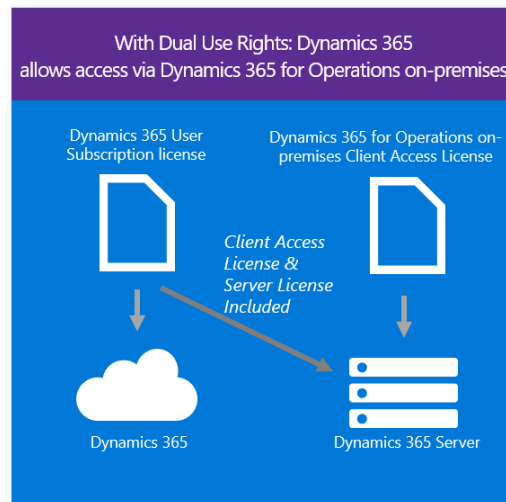
Figure 5: Dynamics 365 for Unified Operations applications Dual Use Rights mapping



Dual Use Rights are conveyed through Dynamics AX2012 R3 and later server licenses, so Dual Use Rights may only be exercised with servers licensed with Dynamics AX 2012 R3 or later. However, customers may use downgrade rights to deploy a qualifying server license with an earlier version of Dynamics AX server and use Dual Use rights to access it with Dynamics 365 User SLs.

Dual Use Rights included with Dynamics 365 SLs are non-perpetual and will expire when the cloud subscription expires.

Figure 6: Dual Use Rights



## Licensing Programs

Dynamics 365 is licensed through the Microsoft Volume Licensing and the Dynamics Price List (DPL). In Volume Licensing, Dynamics 365 is available through:

- Enterprise Agreement
- Enterprise Agreement Subscription
- Service and Cloud Enrollment
- Enrollment for Education Solutions (under the Campus and School Agreement)

Mixing of licenses across different licensing programs on a single tenant is not recommended and could lead to incompatible subscriptions.

Participating in a Volume Licensing program typically involves signing an agreement and/or enrollment, meeting a minimum purchase requirement, and ordering licenses through a Microsoft Reseller. Visit the [Microsoft Volume Licensing website](#) to learn more about how to buy through Volume Licensing, find a reseller partner, and more.

## Availability by Language

Country and language localization availability for Dynamics 365 for Operations on-premises is available [here](#).

## Dynamics 365 for Operations License Types

Dynamics 365 for Operations on-premises simplifies licensing of business applications. The primary licensing is by named user license. Dynamics 365 for Operations on-premises user licenses classify users into two types, "full users" and "additional users".

**Full users** are the users whose work requires use of the feature rich business applications functionality. Examples of full users are sales people, customer service representatives, finance employees, controllers and supply chain managers. These users have been referred to in the past as Pro users or



Power Users. These full users are licensed with a Dynamics 365 for Operations CAL. There is no Plan license for Dynamics 365 for Operations on-premises

**Additional users** often represent a significant percentage of users in an organization and may consume data or reports from line of business systems, complete light tasks like time or expense entry and HR record updates or be heavier users of the system, but not require full user capabilities. These other users are licensed with either Dynamics 365 for Team Members or Dynamics 365 for Operations Activity CALs

There is also Dynamics 365 for Operations **Device CAL** licensing available for shared device scenarios. See the Dynamics 365 for Operations Device section in this document for more information.

## Dynamics 365 for Operations

The Dynamics 365 for Operations CAL includes full read, edit and approval access across the entire ERP product (formerly known as Microsoft Dynamics AX).

Please review [Appendix B](#) for a list of the out of the box Dynamics 365 for Operations roles and their associated user types. For a description of how to create custom roles for Dynamics 365 for Operations and how to license them refer to [Appendix C](#).

## Dynamics 365 for Operations Team Members

The Dynamics 365 for Team Members user CALs are named user CALs designed for users who are not tied to a particular function, but who require basic Dynamics 365 for Operations functionality. The Dynamics 365 for Team Members user CALs include full read access as well as some write access for select light tasks.

This license includes read-only access for all Dynamics 365 for Operations on-premises data as defined in this licensing guide. Unlike the Dynamics 365 online equivalent, this does not include read access to Dynamics 365 (On-premises) or any other on-premises software.

### Team Member use rights for Dynamics 365 for Operations

The Dynamics 365 for Team Members user CAL grants a user the following Dynamics 365 for Operations rights for their own use and not for, or on behalf of, other individuals:

- (i) To record any type of time
- (ii) To record any type of expenses
- (iii) Manage personal information
- (iv) Manage direct employee activities in Human Resources
- (v) Create requisitions
- (vi) Create or edit the items related to the following capabilities: quality control, service orders and departmental budgets
- (vii) Approval of time, expense, invoices

## Dynamics 365 for Operations Activity

The Dynamics 365 for Operations Activity user CAL is a named user intended for users who may be heavy users of the application, but do not require the use rights of a full user. Dynamics 365 for Operations Activity user CAL use rights include all Dynamics for 365 Team Members user CAL user rights as well as the right to:

- (i) Approve all activity related transactions
- (ii) Create or edit the items related to warehousing, receiving, shipping, orders, vendor maintenance, and all budgets

- (iii) Operate a Point-of-Sale (POS) device, store manager device, shop floor device, or warehouse device.

Please review [Appendix B](#) for a list of the out-of-the box Dynamics 365 for Operations roles and their associated user types.

## Dynamics 365 for Operations Device

With the Dynamics 365 for Operations Device CAL multiple users can access through a device to operate a point of sale device, shop floor device, warehouse device or store manager device. A single device can provide any of the following functionality in any combination.

- (i) "Point of Sale Device" means one device located in the Commerce location, used by any individual, for completing customer facing sales of goods or services transactions.
- (ii) "Store Manager Device" means one device located in the Commerce Location, used by any individual, dedicated to performing the following tasks solely for that Commerce Location (i) managing and replenishing inventory, (ii) balancing cash registers and processing daily receipts, (iii) configuring and maintaining menu options displayed by the ISV Devices, (iv) purchasing supplies and services required to run the Commerce Location operations, (v) managing Commerce Location staff, (vi) processing reports required to analyze and manage Commerce Location results, and (vii) managing master data related to Commerce Location operations.
- (iii) "Commerce Location" or "Store" means a physical location (static or itinerant) operated by you when closing goods or services transactions with customers.
- (iv) "Shop Floor Device" means one device used for manufacturing shop-floor functions
- (v) "Shop Floor Functions" means clock-in and clock-out, starting and finishing production jobs (including project activities carried out on the shop floor), reporting progress, materials consumption and completion, viewing documents and instructions related to production jobs, and viewing worker holiday balances.
- (vi) "Warehouse Device" means one device used for Warehousing Functions.
- (vii) "Performing Warehousing Functions" means receiving, putting-away, doing internal stock transfers, picking, packing, capturing product attributes, and shipping goods plus performing inventory count checks in the context of a warehouse management system and posting output and materials consumption against production orders when captured as transfers of raw materials and finished goods between a warehouse and a production line (all other types of transactions are excluded).

**Note:** Dynamics 365 for Operations Device CAL use rights are also available to Dynamics 365 for Operations Activity users. When multiple users who only require these use rights work exclusively on shared devices, generally it will be more cost effective to license those devices with the Dynamics 365 for Operations Device CAL. When a single user utilizes one or more dedicated personal devices, it will be more cost effective to license that user with a Dynamics 365 for Operations Activity CAL.

# Retail

Retail scenarios using Dynamics 365 for Operations on-premises are licensed through a combination of the following:

- Dynamics 365 for Operations Server license
- Dynamics 365 for Operations, Dynamics 365 for Operations Activity and Dynamics for 365 Team Members users CALs
- Dynamics 365 for Operations Device CALs

Please see the use rights above to determine the appropriate licensing for a given server, user or device.

Retail deployments may also utilize the Retail Store Scale Unit, which is a retail server, cloud POS website and channel database deployed locally in a Store. It maintains connectivity with and extends a Dynamics 365 for Operations deployment, providing improved performance, business continuity and hybrid capabilities in the store.

The Retail Store Scale Unit installation and use rights are included with the Dynamics 365 for Operations Server license and may be downloaded and installed at no additional cost. All users and devices accessing the Retail Store Scale Unit must be appropriately licensed. The Retail Store Scale Unit is not available as a standalone license. Required hardware, windows client, or windows server, and SQL licenses must be acquired and licensed separately.

If downgrade rights are utilized to downgrade to Dynamics AX 2012, the Retail Store Server is not an included use right and appropriate licensing must be obtained. Please see the Upgrades, Downgrades, and Migration [section](#) for Dynamics AX mappings.

## Custom Entities

Dynamics 365 for Team Members and higher provide the right to use custom entities. Custom entities may be based on entities included in Dynamics 365 for Operations on-premises, or created by a customer or partner. Rights to create or replicate new custom entities are not included with Dynamics 365 for Team Members.. If the custom entity is based on or replicates the functionality of entities included in Dynamics 365 for Operations on-premises, or if the entity links to entities included in Dynamics 365 for Operations on-premises, then users accessing the custom entity must also be licensed to access the included or replicated entity. For example, users creating an entity that replicates the cases entity for a ticketing system would still require the user to be licensed for cases. In other words, customizations may only be performed against entities users are licensed to access.

## Customization

Customizations may be based on security roles included in Dynamics 365 for Operations on-premises or created by a customer or partner. If the customization is based on or replicates the functionality of security roles included in Dynamics 365 for Operations on-premises or if the entity links to security

roles included in Dynamics 365 for Operations on-premises, then users accessing the customization must also be licensed to access the included or replicated security role.

Please review [Appendix C](#) for more details about customization use rights.

## Additional Services and Software

Microsoft offers additional services and software that work in tandem with Dynamics 365 for Operations on-premises, including Unified Service Desk.

### Unified Service Desk

Unified Service Desk for Microsoft Dynamics 365 (USD) consolidates numerous communication channels (such as phone, chat, email, and social media) and relevant services into a single interface to enable greater efficiency and productivity.

USD is not available as a standalone license. USD software is installed and run locally on the user's device. The use rights expire upon expiration of the qualifying User SL subscription term or Software Assurance subscription. Only licensed users may use the software. USD installation rights are included with Dynamics 365 for CALs.

### Other Product Licenses

Please refer to the Dynamics 365 for Operations on-premises implementation guide for documentation on technical requirements for running Dynamics 365 for Operations on-premises. Licenses for 365 for Operations on-premises do not include licenses for other products that may be required for the customer's installation; product licensing rights for these must be established separately.

View Implementation Guide and System Requirements for Dynamics 365 for Operations on-premises on [TechNet](#). The [Microsoft License Advisor Tool](#) can help determine the licenses needed.

## Trials

Trials for Dynamics 365 for Operations on-premises are available. Requests for the trial environment can be made by sending email request to [daxcf@microsoft.com](mailto:daxcf@microsoft.com). Include company account number and company name in the request. The trial environments are to be used for evaluation purposes only (not production use). A customer owned/managed Azure subscription is required to deploy the trial environments to the cloud. A local VM is also available for downloaded from the Lifecycle Services project.

## Software Assurance

Software Assurance includes a core set of benefits to help improve workforce productivity, streamline software deployment, and reduce costs. A distinctive set of benefits, such as new software versions, planning services, 24x7 phone and Web support, training, and more—all designed to help the customer get the most from their organization's Volume Licensing purchase.

When you purchase Dynamics 365 for Operations on-premises through the Enterprise Agreement, Enterprise Subscription Agreement or Enrolment for Education Solutions, Software Assurance is included with your licenses.

The customer's specific Software Assurance benefits vary according to the Volume Licensing program. Refer to the resources and tools below to learn more about the Software Assurance benefits available to their organization.

To learn more about the Software Assurance benefits for Dynamics 365 for Operations on-premises customers, visit <https://www.microsoft.com/en-us/licensing/licensing-programs/software-assurance-default.aspx> to view an interactive benefit chart detailing the benefits of the Software Assurance benefits for Dynamics 365 for Operations on-premises or <https://www.microsoft.com/en-us/licensing/licensing-programs/software-assurance-default.aspx#tab=3> to check customers benefits post-purchase.

## Product Deployment

For details around existing customer migration options please see the Dynamics 365 for Operations on-premises Transition Guide document.

### Software Fulfillment

The Volume Licensing Service Center (VLSC) is an online platform made to make managing the customer's Microsoft Volume Licensing agreements simple. Within the VLSC, the customer can access their licensing information, view agreements and purchases for their organization, and access licensing summaries of all entitlements by product and version. The customer can also view all assigned product keys and download products in the VLSC.

Customers who have licensed Dynamics 365 (Online) who do not have access to VLSC, but would like to leverage Dual Use Rights for a hybrid deployment may obtain the software through CustomerSource or PartnerSource.

### License Keys and Product Activation

To download a customer's Dynamics 365 for Operations on-premises license file from PartnerSource Business Center, follow these steps:

1. Log on to PartnerSource Business Center
2. Click Specific Customer Information
3. Enter search information in the Customer Lookup form to search for the customer, and then click Search
4. Click the Company Name of the customer searched for in step 3. This opens up Customer Summary
5. Under Registered Products on the Customer Summary page, click Registration Keys
6. Select version 07 in the Request and Display License Keys For Version field
7. Click Display License Keys
8. On the Request License Keys page, select Download Current License/Registration Key
9. Click Save As in the File Download dialog box, select the folder to download the license file in the Save As dialog box and then click Save

**Note:** If the customer cannot see Registration keys in PartnerSource Business Center they will need to ensure that their PartnerSource Business Center Profile has "Can See Registration Keys" set to yes.

## On-Premises Upgrades, Downgrades and Migration

### License Upgrade Path for Volume Licensing (VL)

Customers who are current on their Software Assurance Plan as of June 1, 2017 are entitled to upgrade the licenses from Dynamics AX 2012 R3 to Dynamics 365 for Operations on-premises as shown below upon renewal.

### Qualifying Licenses purchased before March 31, 2017

Customers who purchased Qualifying Licenses before March 31, 2017 may upgrade to and use the the following Migration License.

Qualifying License(s)	Migration License(s)
Dynamics AX Enterprise CAL (User)	Dynamics 365 for Operations On-premises CAL, or Dynamics 365 for Operations Activity On-premises CAL, or Dynamics 365 for Operations Device On-premises CAL
Dynamics AX Enterprise CAL (Device)	Dynamics 365 for Operations On-premises CAL, or Dynamics 365 for Operations Device CAL
Dynamics AX Functional CAL (User)	Dynamics 365 for Operations On-premises CAL, or Dynamics 365 for Operations Activity On-premises CAL, or Dynamics 365 for Operations Device On-premises CAL
Dynamics AX Functional CAL (Device)	Dynamics 365 for Operations On-premises CAL, or Dynamics 365 for Operations Device CAL
Dynamics AX Task CAL (User)	Dynamics 365 for Operations On-premises CAL, or Dynamics 365 for Team Members On-premises CAL, or Dynamics 365 for Operations Device On-premises CAL
Dynamics AX Task CAL (Device)	Dynamics 365 for Operations Activity On-premises CAL, or Dynamics 365 for Operations Device CAL
Dynamics AX Self Serve CAL (User)	Dynamics 365 for Team Members On-premises CAL
Dynamics AX Self Serve CAL (Device)	Dynamics 365 for Team Members On-premises CAL
Dynamics AX Server	Dynamics 365 for Operations Server
Dynamics AX Store Server	NA

### Qualifying Licenses purchased after April 1, 2017

Customers who purchased Qualifying Licenses after April 1, 2017 may upgrade to and use the the following Migration License.

Qualifying License(s)	Migration License(s)
Dynamics AX Enterprise CAL (User)	Dynamics 365 for Operations On-premises CAL, or Dynamics 365 for Operations Activity On-premises CAL
Dynamics AX Enterprise CAL (Device)	Dynamics 365 for Operations On-premises CAL, or Dynamics 365 for Operations Device CAL
Dynamics AX Functional CAL (User)	Dynamics 365 for Operations On-premises CAL, or Dynamics 365 for Team Members On-premises CAL
Dynamics AX Functional CAL (Device)	Dynamics 365 for Operations Activity On-premises CAL
3 Dynamics AX Task CAL (User)	1 Dynamics 365 for Operations Activity On-premises CAL
Dynamics AX Task CAL (User)	Dynamics 365 for Team Members On-premises CAL
3 Dynamics AX Task CAL (Device)	1 Dynamics 365 for Operations Device CAL
2 Dynamics AX Task CAL (Device)	1 Dynamics 365 for Operations Activity On-premises CALs
Dynamics AX Self Serve CAL (User)	Dynamics 365 for Team Members On-premises CAL
Dynamics AX Self Serve CAL (Device)	Dynamics 365 for Team Members On-premises CAL
Dynamics AX Server	Dynamics 365 for Operations Server
Micosoft Dynamics AX Store Server	NA

## License Upgrade Path for Dynamics Price List (DPL)

Customers who are current on their Software Assurance Plan as of June 1, 2017 are entitled to upgrade the licenses from Dynamics AX 2012 R3 to Dynamics 365 for Operations on-premise as shown below upon renewal.

### Qualifying Licenses purchased before March 31, 2017

Customers who purchased Qualifying Licenses before March 31, 2017 may upgrade to and use the the following Migration License.

Qualifying License(s)	Migration License(s)
Enterprise User CAL (Named User)	Dynamics 365 for Operations (Named User), or Dynamics 365 for Operations Activity (Named User)
Enterprise Device CAL (Device)	Dynamics 365 for Operations (Named User), or Dynamics 365 for Operations Device (Device)
Functional User CAL (Named User)	Dynamics 365 for Operations (Named User), or Dynamics 365 for Operations Activity (Named User)
Functional Device CAL (Device)	Dynamics 365 for Operations (Named User), or Dynamics 365 for Operations Device (Device)
Task User CAL (Named User)	Dynamics 365 for Operations Activity (Named User), or Dynamics 365 for Team Members (Named User)
Task Device CAL (Device)	Dynamics 365 for Operations Device (Named User), or Dynamics 365 for Operations Activity (Named User)
Self Serve User CAL (Named User)	Dynamics 365 for Team Members (Named User)
Self Serve Device CAL (Device)	Dynamics 365 for Team Members (Named User)
Dynamics AX 2012 Server	Dynamics 365 for Operations Server
1 Standard Commerce Core Server (2 Pack)	4 Dynamics 365 for Operations Server
AX Store Server	NA

### Qualifying Licenses purchased after April 1, 2017

Customers who purchased Qualifying Licenses after April 1, 2017 may upgrade to and use the the following Migration License.

Qualifying License(s)	Migration License(s)
Enterprise User CAL (Named User)	Dynamics 365 for Operations (Named User), or Dynamics 365 for Operations Activity (Named User)
Enterprise Device CAL (Device)	Dynamics 365 for Operations (Named User), or Dynamics 365 for Operations Device (Device)
Functional User CAL – Limited Upgrade (Named User) effective May 1, 2017	Dynamics 365 for Operations Activity (Named User), or Dynamics 365 for Team Members (Named User)
Functional Device CAL – Limited Upgrade (Device) effective May 1, 2017	Dynamics 365 for Operations Activity (Named User)
3 Task User CAL – Limited Upgrade (Named User)	1 Dynamics 365 for Operations Activity (Named User) , or 1 Dynamics 365 for Team Members (Named User)
3 Task Device CAL – Limited Upgrade (Device)	1 Dynamics 365 for Operations Device (Device), or
2 Task Device CAL – Limited Upgrade (Device)	1 Dynamics 365 for Operations Activity (Named User)
Self Serve User CAL (Named User)	Dynamics 365 for Team Members (Named User)
Self Serve Device CAL (Device)	Dynamics 365 for Team Members (Named User)
Dynamics AX 2012 Server	Dynamics 365 for Operations Server
1 Standard Commerce Core Server (2 Pack)	4 Dynamics 365 for Operations Server
Store Server	NA

Customers who license Dynamics 365 for Operations on-premises as of June 1, 2017 are entitled to downgrade the software from Dynamics 365 for Operations on-premise server to Dynamics AX 2012 R3 server.

## License Downgrade Path for Dynamics Price List (DPL)

Qualifying License(s)	Migration License(s)
Dynamics 365 for Operations (Named User)	Enterprise User CAL (Named User), or Enterprise Device CAL (Device)
Dynamics 365 for Activity (Named User)	Functional User CAL – Limited Upgrade (Named User), or Functional Device CAL – Limited Upgrade (Device)
Dynamics 365 for Operations Device (Device)	3 Task Device CAL – Limited Upgrade (Device)
Dynamics 365 for Team Members (Named User)	Self Serve User CAL (Named User), or Self Serve Device CAL (Device)
Dynamics 365 for Operations Server	Dynamics 2012 Server
4 Dynamics 365 for Operations Server	1 Standard Commerce Core Server (2 Pack)
Dynamics 365 for Operations Activity	Store Server

## Transitioning from On-Premises to Cloud Deployment

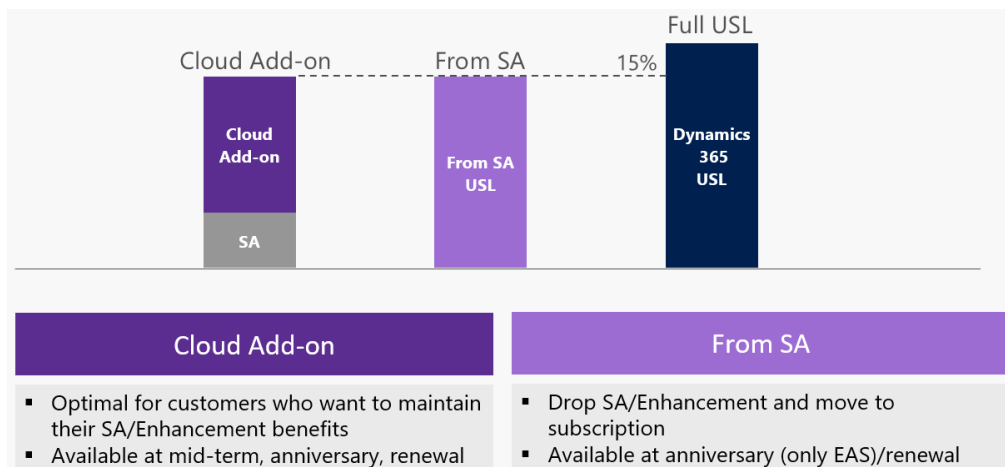
If the customer has Dynamics 365 for Operations on-premises CALs covered by active Software Assurance (SA), they can add access to Dynamics 365 (Online) two different ways: via cloud Add-on or From SA User Subscription Licenses. Both options are designed to recognize customer investments in on-premises licenses by providing a standard discount from the full Dynamics 365 (Online) price while obtaining these non-perpetual rights to the online service for the agreement term. Both options include Dual Use Rights for hybrid deployments.

The license rights for a particular Add-on or From SA User SL are identical to those of equivalent Full User Subscription License (Full USL).

Device CALs purchased as part of an Enterprise Agreement or Enrollment qualify for these User Add-On or From SA options on a 1:1 basis: One Device CAL qualifies for one From SA or Add-on User SL.

From SA option is available for purchase through the Microsoft Volume Licensing Enterprise Agreement, Enterprise Subscription Agreement and Enrollment for Education Solutions (under a Campus and School Agreement) programs.

Add-on option is available for purchase through the Microsoft Volume Licensing Enterprise Agreement, Enterprise Subscription Agreement, Microsoft Product and Service Agreement, and Enrollment for Education Solutions (under a Campus and School Agreement) programs.





## Dynamics 365 Cloud Add-on

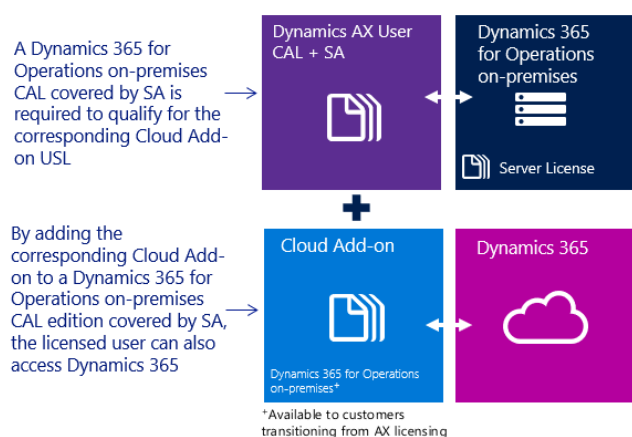
Dynamics 365 add-ons to move to cloud are ideal for customers who are not ready to move entirely to the cloud, or are in the middle of their agreement. The Cloud Add-on gives credit for the customer's ongoing SA payments.

The Cloud Add-on model includes two parallel commitments:

1. A new or existing Software Assurance commitment that the customer will continue to maintain and renew
2. An additional Cloud Add-on license commitment that provides rights to the Dynamics 365 Online service

The Add-on User SL must be used for the same user of the User CAL. The User SL cannot be subsequently transferred to another user unless the corresponding CAL is also transferred to the new user.

Figure 7: Dynamics 365 Cloud Add-on



## Dynamics 365 From SA

Dynamics 365 From SA offers are ideal for customers who are ready and able to entirely drop SA and move licensing to the cloud.

These licenses are designed for current Microsoft customers who want to transition to the cloud and are licensed to on-premises products. From SA USLs recognize the on-premises investment and thus are offered at a discounted price for customers. To purchase From SA USLs, customers must have fully paid qualifying licenses, namely the corresponding on-premises licenses from which the customer is transitioning or more than 3 years of a qualifying software subscription license. The qualifying licenses are detailed in the Product Terms.

From SA is available at anniversary or renewal (only at renewal for EAS).

## Links for Additional Information

Resource	Internal Link	External Link	Partner Link
Dynamics 365	<a href="https://microsoft.sharepoint.com/sites/Infopedia_G01/Pages/Dynamicshub.aspx">https://microsoft.sharepoint.com/sites/Infopedia_G01/Pages/Dynamicshub.aspx</a>	<a href="https://dynamics.microsoft.com/en-us/">https://dynamics.microsoft.com/en-us/</a>	<a href="https://mbs.microsoft.com/partnersource/northamerica/products/365Enterprise">https://mbs.microsoft.com/partnersource/northamerica/products/365Enterprise</a>
Dynamics 365 Licensing & Pricing	<a href="https://microsoft.sharepoint.com/sites/Infopedia_G01/Pages/Dynamicshub.aspx#Dynamics%20365:pricing">https://microsoft.sharepoint.com/sites/Infopedia_G01/Pages/Dynamicshub.aspx#Dynamics%20365:pricing</a>	<a href="https://dynamics.microsoft.com/en-us/pricing/">https://dynamics.microsoft.com/en-us/pricing/</a>	<a href="https://mbs.microsoft.com/partnersource/northamerica/pricing-ordering/licensing-policies/Dyn365PricingandLicensing">https://mbs.microsoft.com/partnersource/northamerica/pricing-ordering/licensing-policies/Dyn365PricingandLicensing</a>
Dynamics AX Licensing Guide	<a href="http://aka.ms/s201h6">http://aka.ms/s201h6</a>		
Dynamics CRM Online Licensing Guide	<a href="https://mbs.microsoft.com/customersource/global/CRM/learning/documentation/user-guides/CRM-Online-Licensing-Guide">https://mbs.microsoft.com/customersource/global/CRM/learning/documentation/user-guides/CRM-Online-Licensing-Guide</a>		
Dynamics AX 2012 Licensing Guide	<a href="http://aka.ms/dujkm">http://aka.ms/dujkm</a>		
Dynamics CRM 2016 Licensing Guide	<a href="http://aka.ms/kn26ux">http://aka.ms/kn26ux</a>		
Dynamics 365 On-premises Licensing Guide	<a href="https://microsoft.sharepoint.com/sites/infopedia/pages/layouts/kcdoc.aspx?k=g01kc-1-20258">https://microsoft.sharepoint.com/sites/infopedia/pages/layouts/kcdoc.aspx?k=g01kc-1-20258</a>		<a href="https://mbs.microsoft.com/Files/public/365/Dynamics365EnterpriseEditionOnPremisesLicensingGuide.pdf">https://mbs.microsoft.com/Files/public/365/Dynamics365EnterpriseEditionOnPremisesLicensingGuide.pdf</a>
Dynamics 365 for Operations on-premises Licensing guide	<a href="https://mbs.microsoft.com/Files/public/365/DynamicsOperationsOnPremEnterprise.pdf">https://mbs.microsoft.com/Files/public/365/DynamicsOperationsOnPremEnterprise.pdf</a>		
Dynamics Blog	<a href="https://community.dynamics.com/b/msftdynamicsblog">https://community.dynamics.com/b/msftdynamicsblog</a>		
Microsoft Volume Licensing	<a href="http://www.microsoft.com/licensing">www.microsoft.com/licensing</a>		
Software Assurance	<a href="http://www.microsoft.com/licensing/software-assurance/default.aspx">http://www.microsoft.com/licensing/software-assurance/default.aspx</a>		
Microsoft License Advisor	<a href="http://www.microsoft.com/licensing/mla/default.aspx">http://www.microsoft.com/licensing/mla/default.aspx</a>		
Dynamics 365 Support	<a href="https://dynamics.microsoft.com/en-us/support/plans/">https://dynamics.microsoft.com/en-us/support/plans/</a>		
CustomerSource	<a href="https://mbs.microsoft.com/customersource/">https://mbs.microsoft.com/customersource/</a>		
PartnerSource	<a href="https://mbs.microsoft.com/partnersource/">https://mbs.microsoft.com/partnersource/</a>		
Partner Center	<a href="https://partnercenter.microsoft.com/en-us/pcv/dashboard/overview">https://partnercenter.microsoft.com/en-us/pcv/dashboard/overview</a>		
Microsoft Download Center	<a href="http://www.microsoft.com/downloads">http://www.microsoft.com/downloads</a>		
Cloud Solution Provider Program (CSP)	<a href="https://mspartner.microsoft.com/en/us/Pages/solutions/cloud-reseller-overview.aspx">https://mspartner.microsoft.com/en/us/Pages/solutions/cloud-reseller-overview.aspx</a>		

# Appendix A: Ensuring Accurate Licensing

Dynamics customers have asked for easier ways to implement Software Asset Management (SAM) across their organization, because they realize that SAM can help them:

- streamline IT resources and improve visibility and control of the customer's environment now and in the future,
- increase awareness of the organization's overall software purchasing needs and better work with software vendors to meet those needs, and
- get greater insight into how to manage the organization's assets, helping them to make more informed decisions to reduce risk and plan for the future.

To help the customer navigate through the product flexibility and its impact on licensing, we have created a report within the application that looks at all of the Menu Items associated to each user directly accessing Dynamics 365 for Operations Server and computes the assigned number of users by user type. The customer is responsible for determining the number and CAL level of third party users directly accessing Dynamics 365 for Operations Server and subtracting these users from the report generated by the system. The customer is also responsible for determining the number and CAL level of internal users indirectly accessing Dynamics 365 for Operations Server and manually adding these users to the report generated by the system.

By comparing this to the customer's license purchase information from the Volume Licensing Service Center (if purchasing through Volume Licensing) or CustomerSource (if purchasing through BVL), the customer can identify discrepancies in their licenses. A customer not currently on a plan can get their license purchase information by contacting their partner.

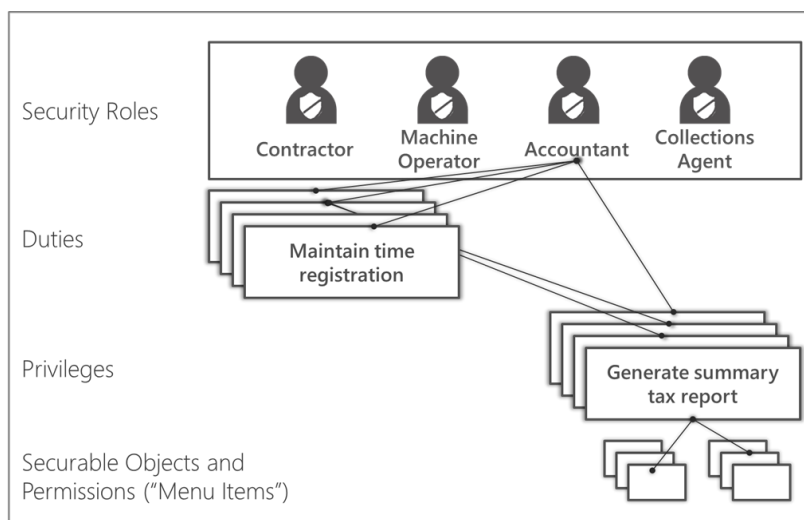
The customer is advised to check licensing by running the report whenever they make a change, but are required to run the report at least annually per the Software License Terms. the customer may voluntarily share the results of the Usage Report with Microsoft or any other third party, but are not required to do so. Running the report before and after changing Roles, security, and user permissions will help confirm the impact of changes to the license requirements.

# Appendix B: Dynamics 365 for Operations Security Roles by User CAL Level

## Overview of Security Roles

Providing users with access to the product functionality is done by assigning each user one or more Security Roles. Dynamics 365 for Operations Security Roles combine meaningful packages of product functionality and access rights required to perform actions relevant to that role.

Figure 8: Assigning a Security Role to a user provides access to product functionality



To make it easier to understand the licenses required, each Dynamics 365 for Operations Security Role has a pre-determined user type. When the customer assigns Security Roles to users, they then know what User CAL those users require.

For example, in a manufacturing organization, the Accountants and Field Service Technicians require different use rights. By assigning those user groups to the appropriate Security Role, they get the functionality they need, and the customer knows the User CAL type that is required.

### Notes:

- Customers can assign multiple Security Roles to one user, in which case the highest User CAL type required covers all the user rights.
- Customers have the flexibility to configure or customize Security Roles. This may impact the license required for the new/modified Security Roles. Please refer to the [Appendix C](#) for more information about how such customization can impact licensing requirements.

# Out of the box security roles for Dynamics 365 for Operations

Role	Security Role Description	Team Members	Activity	United Operations Plan or Talent
<b>Talent</b>				
Contractor	Worker in contractor relationship with legal entities	●	●	●
Employee	Worker in employment relationship with legal entities	●	●	●
Pending worker	Worker in pending employment relationship with legal entities	●	●	●
Manager	Supervisor in reporting relationship with subordinates	●	●	●
Compensation and benefits manager	Documents compensation and benefit events, responds to compensation and benefit inquiries and records the financial consequences of compensation and benefit events			●
FMLA administrator	Information and functionality around managing employees who are out an FMLA leave			●
Human resource assistant	Documents human resource events and responds to human resource inquiries			●
Human resource manager	Periodically reviews human resource process performance and enables the human resource process			●
Payroll administrator	Documents payroll events, responds to payroll inquiries and records the financial consequences of payroll events			●
Payroll manager	Authorizes activity in the payroll process			●
Recruiter	Documents recruiting events, responds to recruiting inquiries and records the financial consequences of recruiting events			●
Training manager	Documents training events, responds to training inquiries and records the financial consequences of training events			●
Role	Security Role Description	Team Members	Activity	United Operations Plan or Retail
<b>Retail</b>				
Retail warehouse clerk	The retail warehouse clerk performs picking, receiving, and stock counting in a store or warehouse	●	●	●
Retail store manager	The retail store manager performs store management functions at the store, such as managing sales reports, inventory movements, and inventory counts		●	●
Retail warehouse manager	Manages order picking, shipping and receiving for retail channels		●	●
Retail catalog manager	At the head office, the retail catalog manager maintains and publishes retail catalogs			●
Retail merchandising manager	At the head office, the retail merchandising manager maintains and replenishes retail products and assortments			●
Retail operations manager	At the head office, the retail operations manager is responsible for all non-merchandising operations, such as configuring stores, registers, and staff			●
Retail service	Retail service account			●
Retail store IT	Performs retail point of sale client configuration and installation at the retail store level			●
Role	Security Role Description	Team Members	Activity	United Operations Plan
<b>C-Suite</b>				
Chief executive officer	Reviews the financial and operational performance		●	●
Chief financial officer	Reviews the financial performance		●	●

Role	Security Role Description	Team Members	Activity	United Operations Plan
<b>Budgeting</b>				
Budget contributor	Create, update and approve departmental budget plans.	●	●	●
Budget clerk	Documents budget events and responds to budget inquiries		●	●
Budget manager	Reviews budget process performance and enables the budget process			●
<b>Financials and Accounting</b>				
Positive pay clerk	Document accounts payable positive pay events	●	●	●
Accountant	Documents accounting events and responds to accounting inquiries			●
Accounting manager	Reviews accounting, customer invoice, vendor invoice, and payment process performance and enables those processes			●
Accounting supervisor	Reviews accounting process performance and enables the accounting process			●
Accounts payable centralized payments clerk	Documents accounts payable centralized payment events and responds to centralized payment inquiries			●
Accounts payable clerk	Documents vendor invoice events and responds to vendor inquiries			●
Accounts payable manager	Reviews vendor invoice process performance and enables the vendor invoice process			●
Accounts payable payments clerk	Documents accounts payable payment events and responds to payment inquiries			●
Accounts receivable centralized payments clerk	Documents accounts receivable centralized payment events and responds to centralized payment inquiries			●
Accounts receivable clerk	Documents customer invoice events and responds to customer inquiries			●
Accounts receivable manager	Reviews customer invoice process performance and enables the customer invoice process			●
Accounts receivable payments clerk	Documents accounts receivable payment events and responds to payment inquiries			●
Auditor	This role is designed for in-house or external auditors. It provides read-only access to a majority of the system. It is also used for audit policy management			●
Collections agent	Documents collections events and responds to collections inquiries			●
Collections manager	Reviews collections process performance and enables the collections process			●
Financial controller	Reviews all accounting process performance and enables those processes			●
Tax accountant	Documents fiscal events and responds to fiscal inquiries			●
Tax engine developer	Create and manage taxable document model mappings.			●
Tax engine functional consultant	Create and manage generic tax engine components (taxable document and tax document)			●
Treasurer	Documents treasury events and responds to treasury inquiries			●

Role	Security Role Description	Team Members	Activity	United Operations Plan
<b>Project Management</b>				
Project manager, Public sector	Inquire into Purchase order to invoice progress for public sector	●	●	●
Project timesheet delegate	Enables creation and approval of project timesheets	●	●	●
Project timesheet user	Enables creation and approval of project timesheets	●	●	●
Project assistant	Documents project accounting process events and responds to project accounting process inquiries		●	●
Project manager	Documents the project forecast/budget events and responds to project forecast/budget inquiries. Maintains project accounting master information and responds to project accounting master information inquiries. Authorizes project accounting process events		●	●
Resource manager	Maintains project resource tasks		●	●
Project accountant	Maintains project accounting policies			●
Project supervisor	Enables and reviews the project accounting process			●
<b>Procurement</b>				
Vendor contact	Views and responds to purchase orders through Vendor Collaboration, for the vendor accounts where the user is a contact person	●	●	●
Buying agent	Documents purchase events and responds to purchase inquiries		●	●
Vendor account manager	Documents vendor events and responds to vendor inquiries		●	●
Purchasing agent	Documents request for quotation events and responds to request for quotation inquiries. Documents purchasing events and responds to purchasing inquiries. Maintains purchasing agreements and vendor master information			●
Purchasing agent - Public Sector	Documents request for quotation events and responds to request for quotation inquiries. Documents purchasing events and responds to purchasing inquiries			●
Purchasing manager	Reviews purchasing process performance and enables the purchasing process. Maintains purchasing agreements and vendor master information			●
<b>Sales</b>				
Sales clerk	Documents sales events and responds to sales inquiries		●	●
Sales representative	Documents sales events and responds to sales inquiries		●	●
Sales manager	Reviews sales process performance and enables the sales process			●
<b>Customer Service</b>				
Customer service representative	Documents customer service events and responds to customer service inquiries.		●	●
Customer service manager	Reviews customer service process performance and enables the customer service process			●
<b>Marketing</b>				
Marketing coordinator	Produces and distributes marketing materials			●
Marketing manager	Manages product marketing			●

Role	Security Role Description	Team Members	Activity	United Operations Plan
<b>Field Service</b>				
Field service technician	Visits customers in the field to perform service orders		●	●
Service dispatcher	Organizes the service technicians and prioritizes service orders		●	●
Service delivery manager	Reviews and enables the service order process			●
<b>Transportation</b>				
Transportation coordinator	Enables inbound, outbound, rating, routing, and handling of transportation process			●
Transportation logistics manager	Set up, maintain, and configure the network planning that are used in transportation management processes			●
<b>Manufacturing</b>				
Lean waterspider	Responds to inventory needs on the production line	●	●	●
Time registration user	Worker enabled to use advanced features for time registration	●	●	●
Machine operator	Works on production orders and makes registrations in Manufacturing execution		●	●
Shop supervisor	Reviews the time registration process and maintain corrections. Authorizes production feedback registrations and responds to inquiries from production		●	●
Production manager	Reviews the production plan and ensures the proper resources are available			●
Production planner	Schedules and plans productions			●
Production supervisor	Enables the production process. Ensures the day-to-day execution of orders/jobs so Machine operators know what to work on, who is available and can respond to the main requests from Machine operator			●
<b>Distribution</b>				
Receiving clerk	Documents receiving operation events and responds to warehouse receiving operation inquiries		●	●
Shipping clerk	Documents shipping operation events and responds to warehouse shipping operation inquiries		●	●
Warehouse worker	Documents warehouse operation events and responds to warehouse operation inquiries		●	●
Materials manager	Enables and reviews processes, maintains master data, and responds to inquiries within logistics and material management			●
Warehouse manager	Enables and reviews processes, authorizes recordings, maintains master data, and responds to inquiries within warehouse management			●
Warehouse planner	Plans and authorizes warehouse work. Maintains warehouse planning master information and responds to warehouse work planning inquiries			●
<b>Cost Accounting</b>				
Cost object controller	Monitors monetary and non-monetary performance of assigned cost objects	●	●	●
Cost accountant	Implements dimensions, policies, and reporting structures according to the strategy set by the Cost accounting manager			●
Cost accountant clerk	Performs repetitive tasks aligned with predefined policies and reporting structures			●
Cost accounting manager	Sets the overall strategy for how cost accounting is performed in the Enterprise			●
Inventory accountant	Documents costs, inventory valuations, and cost accounting events. Responds to costs, inventory valuations, and cost accounting events inquiries			●
Inventory accountant clerk	Authorizes and maintains costs, inventory valuations, and cost accounting calculations. Responds to costs, inventory valuations, and cost accounting inquiries			●



Role	Security Role Description	Team Members	Activity	United Operations Plan
<b>Engineering</b>				
Product designer	Designs new and modifies existing BOM structures			●
Product design manager	Reviews and authorizes product BOM structures			●
Process engineer	Defines processes to make new products			●
Process engineering manager	Reviews and authorizes new production processes			●
<b>Quality Control</b>				
Quality control clerk	Documents quality control events and responds to quality control inquiries	●	●	●
Quality control manager	Enables and reviews processes, maintains master data, and responds to inquiries within quality control			●
<b>Administrator</b>				
System user	System role for all users	●	●	●
Data management operation user	Provides access to all data management workspace menu items. Note that this role does not control access to any of the entity privileges that are required to actually perform the data operation. As such this role can be assigned to any other application role for users that require access to specific entity sets or can be added to any custom roles where users can simply only perform data activities for a restricted set of entities	●	●	●
Data management administrator	Super user for the data management activities in the system. In addition to the capabilities of the DataManagementMigrationUser and DataManagementOperationsUser, this role provides access to the DataManagementITWorkspace - an operational workspace to monitor all data management activities			●
Data management migration user	User that controls permission to all entities in the system. This role is extended in all models where entities exist and need to be provisioned for data management activities for users. The current pattern is to create - per Entity View and Maintain privileges and then add it to the entity's category bound View and Maintain duties defined in that model. These duties are all part of the DataManagementMigrationUser extension that will be defined in the model.			●
Electronic reporting developer	Maps database to adversary data models			●
Electronic reporting functional consultant	Maps data models to formats			●
System administrator	System Administrator role for Dynamics AX			●
System document branding administrator	Controls access to the Document Branding Management forms			●
Security administrator	Maintains user and security setup in Dynamics AX, grants the ability to create and maintain security roles, duties, and privileges and the ability to assign users to roles, define role assignment rules, and maintain data security policies			●
Information technology manager	Maintains servers and software for Dynamics AX. Maintains and configures settings for batch servers, load balancing, databases, Enterprise Portal, Services, and Workflow			●

Note: Management Reporter functionality is included in the Dynamics 365 Unified Operations Plan. To get the use rights, the Management Reporter Designers require an Operations Application and Management Reporter Viewers require a Team Member.

# Appendix C: Operations Customization and Licensing Requirements

Dynamics 365 for Operations is fully customizable to provide customers with the right experience for every user. Dynamics 365 for Operations has over 10,000 Menu Items which are mapped to the three user types. To make it faster and easier to deploy the product and determine licensing requirements, these Menu Items are associated with certain Security Roles.

The required CAL for a given user is determined by the highest user type classification of the Menu Items to which the user will have access. For example, if the customer assigns an Accountant to a Role that includes access to a Menu Item classified as "Operations App", then that person requires a full user CAL. Menu items that are classified at the "Team Members" level are available to all users to which the customer has assigned a Team Members user or higher level user.

For an even better fit in their organizations, customers can change which actions may be performed by specific individuals or Roles. When customizing, it is important to remember that the license required is determined by the highest-level Menu Item to which that individual has access.

## Notes:

- Roles in Dynamics 365 for Operations are not the same as job titles.
- "Menu Item" means an object that allows users to display or view a form, sub-form, or URL in a browser application; run a task that triggers a system class, function, workflow or web-action initiated by a user; or cause an output in the product or a separate device.

Menu Items are classified at one of the User types. Users with a given CAL have access to each Menu Item classified at—or below—that User CAL type.

## Assigning Multiple Roles to a Single User

The straight forward way to customize which actions a specific employee may perform in Dynamics 365 for Operations is by assigning multiple Roles to that employee. For example, an employee could be assigned both the Customer Service Rep and the Field Technician Roles and could therefore perform actions associated with both Roles. In this case, the employee would still only need a single user CAL. Since the Customer Service Rep Role is designated at a higher user type level (full user CAL) than the Field Technician Role (Team Members), the employee would only need the Dynamics 365 for Operations user CAL to perform actions associated with both Roles.

## Changing Menu Items Associated with a Role

Another way to customize what actions users may perform is by changing which Menu Items are associated with a Role. For example, if a customer wants everyone who is assigned the Field Technician Role to be able to also approve posting of service orders (which is designated as an Operations user level action), then they can customize the Role to include the "Approve posting of service order" Menu Item. Because the required CAL is determined by the highest level action the user may perform, all users assigned to the Field Technician Role would then require the full User CAL.

## Changing Menu Items Associated with an Individual

Further, customers may assign specific actions to specific users. Following the example above if the customer has 20 employees assigned to the Field Technician Role and wants to allow only five of those employees the ability to approve posting of service orders, they may assign the "posting of service order" Menu Item to those five individuals. Those five individuals would then require full user CAL, while the remaining 15 employees assigned to the Field Technician Role would require the Team Members user CAL.

## Creating Menu Items

Partners and customers may also create Menu Items to fit specific customer scenarios. When doing so, those new Menu Items must be mapped to the User CAL type that best matches the type of use based on the definitions of user CALs found in this document.

## Appendix D: Change Log

Page	Topic	Change	Action	Date
12 & 13	Upgrade Path	Correction	Changed "Qualifying Licenses purchased before" from March 30 to March 31	January 2019
19-23	Security Role Table	Update	New format	December 2018
9	Retail	Added		December 2018
Various	Cosmetic	Changes		December 2018
various	Branding	Updated	Rebranding – remove Enterprise and edition from software name	April 2018
various	General	Reformat		April 2018
8	Device (iv and vi)	Clarified	"One device dedicated.." changed to "one device used for.."	April 2018
7	Retail	Clarified	Retail deployments are not supported in Dynamics 365 for Operations on-premises. Customers who need retail capabilities need to license Dynamics 365 for Operations on-premises and downgrade to AX 2012 R3.	February 2018

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