

Installing SYSPRO Avanti

SYSPRO 8

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 **SYSPRO™**

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SYSPRO Avanti Installation

Exploring

Where it fits in?

SYSPRO Web UI (Avanti) is SYSPRO's web-based software offering. *Avanti* (an Italian word meaning forward or ahead) is designed to run SYSPRO's applications in the private or public cloud, but can also be deployed on-premise.

SYSPRO Web UI (Avanti) can be used in parallel with the **SYSPRO Desktop** version, allowing you to use either version to complete the same task - they both use the same user credentials and concurrency licensing models.

Guide scope

This installation guide covers the aspects that pertain to the installation of **SYSPRO Web UI (Avanti)** using the **SYSPRO Installer Application**.

View the **SYSPRO Installer** topic on the **SYSPRO Help and Reference** website for more information.

SYSPRO Web UI (Avanti) Architecture

SYSPRO Web UI (Avanti) is built using modern web technologies and technically has the following characteristics:

- **SYSPRO Web UI (Avanti) is a single-page application (SPA)**

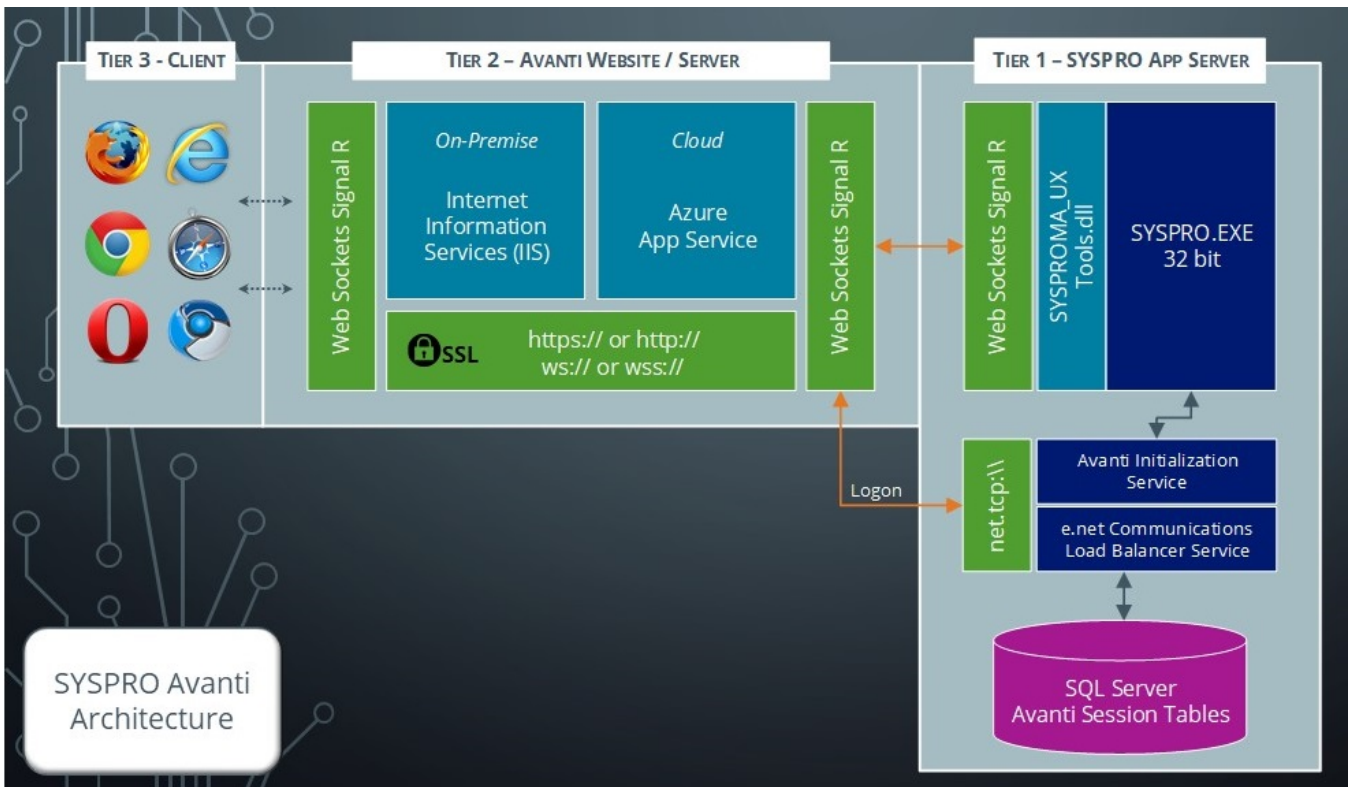
This allows **SYSPRO Web UI (Avanti)** to provide an experience akin to a native application on either a mobile device or a desktop browser. **SYSPRO Web UI (Avanti)** improves performance because only data is transmitted to the browser, which takes less time and bandwidth than constantly sending fully constructed HTML pages.

- **SYSPRO Web UI (Avanti) is a responsive web application**

The design of the user interface is fluid, meaning the web page content automatically fits into the available screen size, whether you are using a desktop browser or a smart phone. In short, **SYSPRO Web UI (Avanti)** ensures that it is effective and easy to use on any device.

The following provides a high-level technical overview of the **SYSPRO Web UI (Avanti)** architecture. It details the different deployment tiers as well as the technologies used by **SYSPRO Web UI (Avanti)** along with the key benefits.

The technologies discussed are both from an on-premise and cloud deployment perspective.



Tier 3 - Client (The Browser)

The client tier is the initial touch point for any users wanting to make use of **SYSPRO Web UI (Avanti)**.

- Using a web browser that supports **HTML 5**, a user can browse to the website where **SYSPRO Web UI (Avanti)** has been installed.
- All user interface elements in **SYSPRO Web UI (Avanti)** have been built using modern web based technologies such as **HTML 5**, **JavaScript** and **CSS3**.
- **SYSPRO Web UI (Avanti)** has been developed from the ground up to adhere to responsive web designs, which enables it to run on any device and any platform, regardless of form or size factor. As the size of the device or web browser increases or decreases, **SYSPRO Web UI (Avanti)** automatically adjusts itself to best suit its environment.
- **SYSPRO Web UI (Avanti)** has also followed the SPA (Single Page Application) design philosophy. This allows data to be dynamically bound to a page instead of the page being regenerated all the time, thus saving time, bandwidth and increasing the overall performance. This modern design also avoids disruption in the users experience within the application.
- **SYSPRO Web UI (Avanti)** is delivered via a web browser and requires no prerequisites or software to be installed on the user's machine, making **SYSPRO Web UI (Avanti)** have a zero footprint on the client.



Tier 2 - Avanti Website / Server

Tier 2 handles the requests and responses from the ***SYSPRO Web UI (Avanti)*** web browser to the SYSPRO Application Server.

- This tier can be installed on a traditional Windows Server running **Internet Information Services (IIS)** and is purposefully designed to run in the cloud, but can run on premise just as effectively.
- The ***SYSPRO Web UI (Avanti)*** website can be secured by the administrator using SSL. The data in transit from the website to the web browser and vice versa is compressed by the ***SYSPRO Web UI (Avanti)*** infrastructure and provides compression levels of up to 95%, thus adding to the overall performance.
- A web technology called **WebSockets** in conjunction with **Signal R** allows for robust communication between the ***SYSPRO Web UI (Avanti)*** website and the web browser. With this technology, ***SYSPRO Web UI (Avanti)*** can reconnect to the SYSPRO App Server and web browsers when there is a drop-in network connectivity, once again adding to the reliability of ***SYSPRO Web UI (Avanti)***.
- When running ***SYSPRO Web UI (Avanti)*** on-premise, it has been optimized to have an auto update setting. This allows any new ***SYSPRO Web UI (Avanti)*** features released to be updated on the ***SYSPRO Web UI (Avanti)*** website automatically, without the need of the administrator.

Tier 1 - SYSPRO App Server

The sole responsibility of the **SYSPRO 8 Avanti Initialization Service** is to perform a handshake between the SYSPRO executable and the website for each user that has logged on.

A few new tables are included in the SYSPRO SQL Server company wide database which are used to maintain state for the users using ***SYSPRO Web UI (Avanti)***.



SYSPRO Web UI (Avanti) workflow

The following process describes how **SYSPRO Web UI (Avanti)** authenticates and how information is passed from one tier of the architecture to the other:

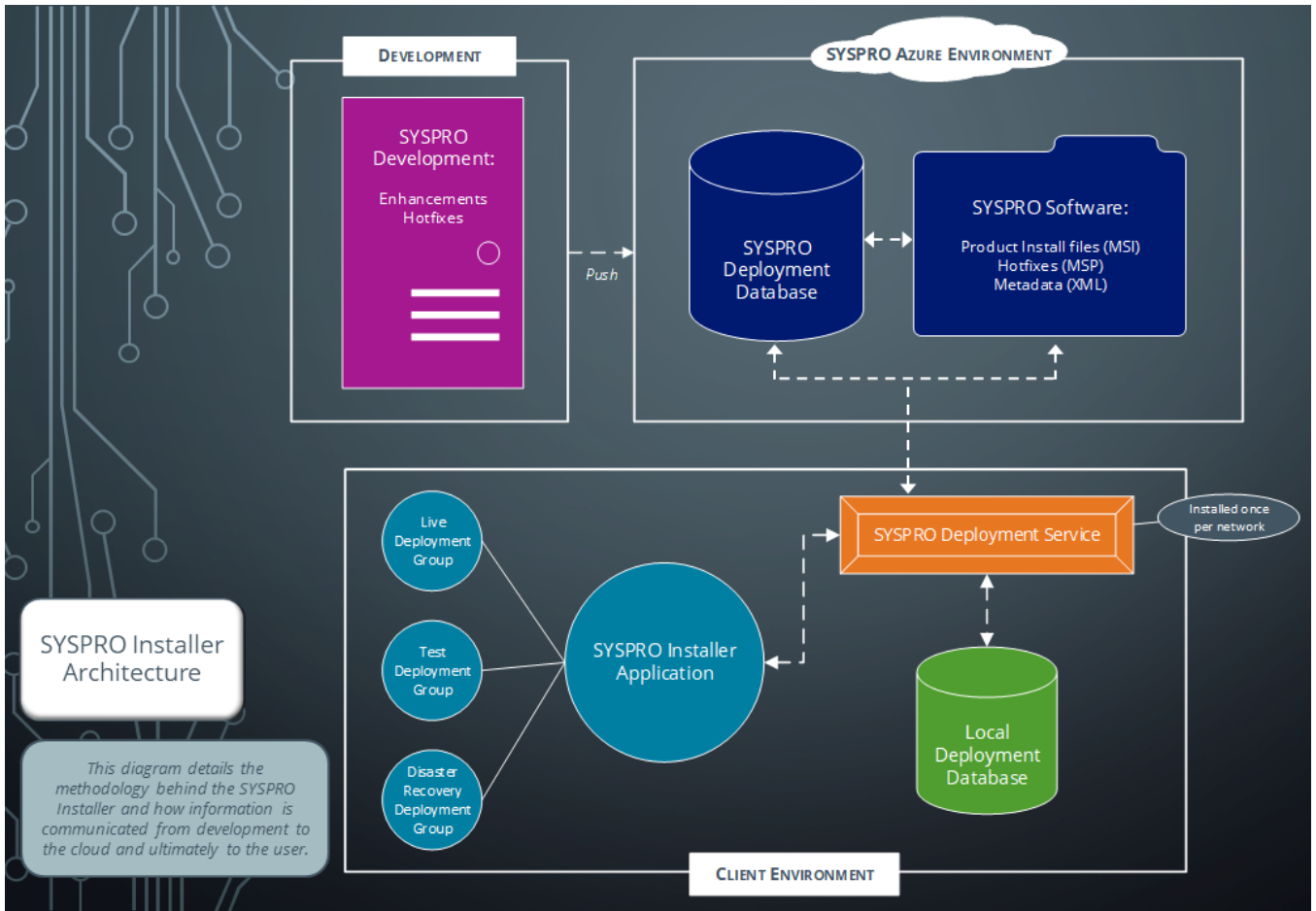
1. A user accesses **SYSPRO Web UI (Avanti)** through a web browser using an address specifically setup by the SYSPRO administrator for the installation of SYSPRO.
2. Once the address of the **SYSPRO Web UI (Avanti)** website is entered into the browser, a login screen is displayed, allowing the user to capture their user name, password and company details.
3. When the user selects the **Sign in** button a request is sent to the **SYSPRO Web UI (Avanti)** website, which in turn sends a request to the **SYSPRO 8 Avanti Initialization Service** for the credentials to be validated.



The **SYSPRO 8 Avanti Initialization Service** does not have any authentication built into it as it relies on the standard authentication model of core SYSPRO.

4. Once authenticated there are no further workloads for the **SYSPRO 8 Avanti Initialization Service** until another user logs on. From there on in the SYSPRO executable responds to any requests made by the web browser.
5. All requests and responses made from web browser are routed to the **SYSPRO Web UI (Avanti)** website then relayed to the SYSPRO App server, then back to the **SYSPRO Web UI (Avanti)** website and finally back to the browser.

SYSPRO Installer Architecture



Development

This is the area in which the SYSPRO teams develop the product with enhancements and hotfixes required for the current SYSPRO version.

The following are produced in this area and pushed through to the SYSPRO Azure environment:

- Product install files (MSI)
- Hotfixes (MSP)
- Metadata definition files (XML)

SYSPRO Azure environment

The SYSPRO Azure environment comprises:

- SYSPRO Deployment Database
- SYSPRO Software



SYSPRO Deployment Database

This SYSPRO Azure database contains information about all SYSPRO products and hotfixes available.

SYSPRO Software

The MSI, MSP and XML files developed by SYSPRO are available here for download through the **SYSPRO Deployment Service** to the **SYSPRO Installer Application**.

Client environment

The Client environment comprises:

- The **SYSPRO Deployment Service** enables communication (i.e. retrieving and downloading information and files) from the SYSPRO Azure environment to the client's local environment.

This service is installed once per network and must be installed on a discoverable machine that is on 24/7 and which has constant Internet connectivity.

- The **Local Deployment Database** is created when the **SYSPRO Installer Application** is first run and contains a list of all software and files available in the SYSPRO Azure environment.
- The **SYSPRO Installer Application** is used for installing all required deployment groups with the relevant products.

Starting

Prerequisites

Technology

The following technology prerequisites are applicable to using **SYSPRO Web UI (Avanti)**:

- **Windows Server 2022: Datacenter Edition**



This only applies when using more than 30 instances of the **SYSPRO Web UI (Avanti)** - as defined against the **MAXIMUM NUMBER OF INSTANCES ALLOWED** setup option (*Setup Options > System Setup > System-Wide Personalization*).

- **SYSPRO Application Gateway service**



This only applies when using more than 30 instances of the **SYSPRO Web UI (Avanti)** - as defined against the **MAXIMUM NUMBER OF INSTANCES ALLOWED** setup option (*Setup Options > System Setup > System-Wide Personalization*).

- **SYSPRO 8 Avanti Initialization Service**

Service prerequisites:



This service must be installed on the same application server as the **SYSPRO 8** Server.

- Microsoft .NET Framework 4.6
- Microsoft .NET Framework 4.8
- SYSPRO 8 Service Upgrade Manager
- SYSPRO 8 e.net Communications Load Balancer

A valid endpoint must be configured in the **Setup Options** program of **SYSPRO 8**.

- **SYSPRO Avanti Web Service**

Web application prerequisites:



We recommend that you use **Windows Server 2019** (or higher) when running **SYSPRO Web UI (Avanti)**.



- □ Microsoft .NET Framework 4.6
 - SYSPRO 8 Server
 - SYSPRO 8 Service Upgrade Manager
 - SYSPRO 8 e.net Communications Load Balancer

A valid endpoint must be configured in the **Setup Options** program of **SYSPRO 8**.

- SYSPRO 8 Avanti Initialization Service connection
- Internet Information Services (IIS) 7.0 Core Web Engine Feature
- Internet Information Services (IIS) 7.0 World Wide Web Publishing Feature
- Internet Information Services (IIS) WebSocket Protocol Feature



SYSPRO Installer

The following prerequisites are required to run the **SYSPRO Installer Application**:

- Valid **InfoZone** login credentials on www.syspro.com.
- Admin privileges on the computer(s) that will be used.
- The deployment service is installed once per network and must be installed on a discoverable machine that is on 24/7 and which has constant Internet connectivity.

Warnings

Please take note of the following important warnings when using the **SYSPRO Installer Application**:

- At any stage during the installation, you may be required to reboot your system to complete the installation.

If there are pending reboots, a Toast Message informing you of this is displayed upon starting the app.

Restrictions and Limits

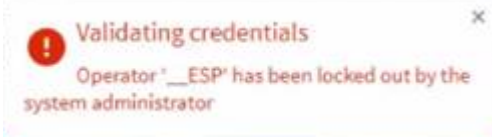
- You cannot run the **SYSPRO Installer Application** on a machine for which **Federal Information Processing Standard** (FIPS) has been enabled.

Solving

System messages

Error messages

Validating credentials - Operator '_ESP' has been locked out



Cause

This message is displayed in **SYSPRO Web UI (Avanti)** when you attempt to use the **Change password** function, if the `_ESP` operator has been locked out by the system administrator.

Solution

For the **Change password** feature to function correctly, the system administrator must disable the **OPERATOR LOCKED OUT** option against the `_ESP` operator in the **Operator Maintenance** program.



FAQs

SYSPRO Web UI (Avanti)

Do I need a special license for SYSPRO Web UI (Avanti)?

No special license is required to use **SYSPRO Web UI (Avanti)**.

Loading **SYSPRO Web UI (Avanti)** is equivalent to loading the **SYSPRO Desktop** version (i.e. it uses the same user credentials and the same concurrency licensing model). This means that (provided you are allowed concurrent use), you can use **SYSPRO Web UI (Avanti)** and the **SYSPRO Desktop** version at the same time.

Security and other options defined for the user apply equally, regardless of whether you load **SYSPRO Web UI (Avanti)** or the **SYSPRO Desktop** version. Similarly, the security principles and options apply in **SYSPRO Web UI (Avanti)** for the company you select.

How do the security and user permissions work in SYSPRO Web UI (Avanti)?

SYSPRO Web UI (Avanti) uses the same security and permissions that are configured in the **SYSPRO Desktop** version. This means that all user permissions and security settings must be enabled/disabled within SYSPRO.

SYSPRO Installer

What is the SYSPRO Installer Application?

The **SYSPRO Installer Application** lets you install **SYSPRO 8** and its required software components, as well as deploy hotfixes.

How do I access the SYSPRO Installer Application?

After you have applied for **SYSPRO 8** you will receive a notification email confirming your registration.

After your registration has been approved and the applicable license generated, you will receive an email with your new **SYSPRO 8** license XML file and a link to the **SYSPRO Installer Application** download.

A 6-digit pin is included in your license file and in the email, which will be used when logging into your customer code within the Installer application.



What is a Deployment Group?

A deployment group comprises a complete SYSPRO environment: from the application server, through all the necessary services, to any client machines that connect to the various servers in order to run a specific version of SYSPRO, together with any relevant hotfixes.

Deployment groups examples include:

- **Live environment:**

Where SYSPRO is used for every facet of running a business.

- **Test environment:**

Where new software is configured and evaluated in order to find the best way of applying it in the live environment.

- **Disaster Recovery environment:**

Where the software is configured exactly as it is in the live environment, with backups from the live server restored on a daily basis. This ensures the minimum downtime should the live environment encounter a hardware failure.



You can only have one deployment group per machine.

What is a hotfix?

A hotfix is the minimum software required to provide a solution for a specific problem experienced by one or more customers. These can also include any relevant dependencies.

SYSPRO provides hotfixes as a way of deploying software updates during the release of **SYSPRO 8**.

Types of hotfixes available include:

- **Mandatory Hotfix**
- **Optional/Customer-specific Hotfix**
- **Consolidated Hotfix**
- **Diagnostic Hotfix**
- **Restricted Hotfix**
- **Withdrawn Hotfix**

Please refer to the **SYSPRO Hotfixes** reference guide for a detailed explanation.



Where do I get the Customer Code and Customer Pin Code?

When you request a **SYSPRO 8** license, you will receive an email containing the XML license file attachment.

Both of these codes are contained in the license file.

Where do I install the SYSPRO Deployment Service?

SYSPRO ERP needs access to the **SYSPRO Deployment Service** and the **SYSPRO Deployment Service** needs access to the internet 24/7 and **Microsoft SQL Server**.

Best practice guidelines for installing the **SYSPRO Deployment Service**:

- Don't install the service on the SYSPRO Application server, unless absolutely necessary.

The reasons for this recommendation include:

- You may not want to unnecessarily expose your application server to the internet.
- You can't move the **SYSPRO Deployment Service** without uninstalling *all* SYSPRO Software.

This would also break your SYSPRO Client Deployment Service Endpoints, which would require visiting each Client PC and manually updating the endpoint.

- Ideally, you should always run the **SYSPRO Deployment Service** under a service account.

This makes it easier to control internet access security as the Deployment Service is not proxy server aware, so security must be managed by the service account.



If the SYSPRO Application servers are on the same network, then you should only be using one **SYSPRO Deployment Service** to avoid ending up with crosstalk.

If you require two Deployment services, ensure that they are located on isolated networks.

- The machine on which you install the service must be visible to all SYSPRO machines involved.
- The machine must have permanent internet access to communicate with the **SYSPRO Content Delivery Network (CDN)** and services.
- Don't install the service on a customer laptop or standalone PC that could potentially be removed from the network.
- Testing servers should ideally not be able to see the Production server.

- One of the reasons behind this guideline is that if you restore the Production SYSPRO Databases directly on a test server and start to use it without making other crucial changes, you will inadvertently be updating the Production Data.

FOR EXAMPLE:

The address of the **SYSPRO 8 e.net Communications Load Balancer** on a restore within a test server would be pointing to the Production server until you change it.

Therefore, if the test server can't see the production server, you reduce the risk of problems occurring later.



The SYSPRO Deployment Server should be a small server as it requires hardly any CPU and only a small SQL database. You can then create a similar one for a Test environment.

Is there a way to speed up the installation process?

SYSPRO Installer Application version 1.0.0.44 onwards:

You can speed up the installation process by first downloading the installation files to a folder that the **SYSPRO Installer Application** can use.

Use the **Product File Downloads** function within the app.



View the **Product File Downloads** task within the **Using** section of this guide for more information.

SYSPRO Installer Application version 1.0.0.44 and prior:

You can speed up the installation process by copying previously downloaded installation files to a folder that the **SYSPRO Installer Application** can use.

Copy the latest files `C:\SYSPRO Deployment\SYSPRO Release*` from a computer which has already downloaded the installs, to the target computer folder with the same name.



Each file has an executable file (`EXE`, `MSI` or `MSP`) and an accompanying XML file with the same naming convention. Files are checked in these *sets* to ensure that they are valid.



What security is in place regarding the downloadable files?

Each installation file has a corresponding XML file which provides a security `checksum` that is validated against the install.

If the `checksum` doesn't match, the install will not continue until it has been resolved.

In addition, every installation has been digitally signed by SYSPRO from `EXEs` to `MSIs`. Therefore, the digital signature is broken as soon as a file is edited and re-saved in any way.

Where is the SYSPRO software published?

SYSPRO Software is published to the Azure Content Delivery Network (CDN). Downloading software is optimized to obtain software based on point-of-presence (POP). The benefits of this include:

- Software is always current
- Local downloads result in faster speed and higher performance
- Large file support
- Available 24/7 (If one region should fail for any reason, the software is then sourced from another POP.)
- No more DVD installs

Why must SYSPRO 8 be installed on a 64-bit server?

SYSPRO 8 must be installed on a 64-bit server because all the SYSPRO services are now 64-bit.

What if I change the machine name on which the app is installed?

If the **SYSPRO Installer Application** detects that the machine on which it is setup is renamed, it will attempt to self-heal with an automatic reconfiguration process, in order to update the deployment details.

Why is the SELECT button not available against the Deployment Group?

You can only have one deployment group per machine.

Therefore, if the **SELECT** button against the deployment group is grayed out, it means that this machine already has a deployment group configured against it and existing SYSPRO software installed.

How can I run the Deployment Service as a named user?

- If you are running the **SYSPRO Installer Application** for the first time:
From the **Endpoint Address** screen, disable the **Install service using defaults** option.
This enables you to enter the installation parameters and domain credentials required to run the service.



For more information about this process, view the **Initial run of SYSPRO Installer** section of the Help.

- If you are not running the **SYSPRO Installer Application** for the first time:
From the **Sign In** Page, select the config icon (⚙️) located in the top right-hand corner.
This enables you to configure the service to use a named user.



For more information about this process, view the **Update Deployment Service Credentials** section of the Help.

How do I enable the Internet Information Services (IIS) WebSocket Protocol feature?

The **Internet Information Services (IIS) WebSocket Protocol** feature is required when installing one of the following:

- SYSPRO Web UI (Avanti)
- SYSPRO Point of Sale

Therefore, before installing either of these products, you can enable the **Internet Information Services (IIS) WebSocket Protocol** feature as follows:

1. Open the **Turn Windows Features on or off** program.
2. Navigate as follows:
Internet Information Services > World Wide Web Services > Application Development Features
3. Enable the **WebSocket Protocol** option.
4. Save your changes.

Microsoft SQL Server

What SQL Server users are required?

The following SQL Server users must exist with the appropriate permissions enabled:

User type	Rules
Administration SQL user	<p>The user entered here must have the following SQL permissions assigned:</p> <p><i>SQL Server Roles</i></p> <ul style="list-style-type: none">▪ db_creator This is used to create and drop entities, such as databases, tables, columns, etc.▪ bulkadmin This is used to issue BULK INSERT statements.▪ securityadmin This is used to give database-level permissions as and when needed.▪ processadmin This is used to end SQL processes running on the server using the View Users program.
	<p><i>Database Mapping</i></p> <ul style="list-style-type: none">▪ db_owner This needs to be set for both system-wide and company databases.
	<p>The user cannot be the same account as the Standard SQL user and the User name cannot contain any spaces.</p>
Standard SQL user	<p>The user entered here must have the following SQL permissions enabled for both system-wide and company databases:</p> <ul style="list-style-type: none">▪ db_datareader▪ db_datawriter <p>The user cannot be the same account as the Administrative SQL user and the User name cannot contain any spaces.</p>

Can I use SQL Express with SYSPRO 8?



Yes, you can.

The only difference is during your SQL Configuration when running the **SYSPRO Installer** app for the first time.

At the **SQL Server Name** field, ensure that you enter the full instance name (e.g. `INSTANCENAME\SQLEXPRESS`).

You can check this entry if you run **SQL Server Management Studio** and view the instance to which you are logging in.

What if I need to change the SQL Server credentials used by the Deployment Service?

Use the **SQL Server Credentials** function within the app.

For more information on this, view the help section **Updating SQL Server Credentials**, located under **Configuring the app**.

Firewalls and Proxy Servers

What if I have additional Firewall software (other than the standard Windows Firewall)?

When the **SYSPRO Deployment Service** is installed, ports 30250 (Endpoint port) and 3702 (Endpoint discovery) are enabled on the Windows firewall.

If you have additional firewall software, you need to open these ports within the software to enable the **SYSPRO Installer** app to function.

What URLs must be open for sites with proxy servers?

For sites with proxy servers, the following URLs must be open for the **SYSPRO Deployment Service** to retrieve software and communicate with the SYSPRO Azure service:

- **SYSPRO 8** downloads (from Microsoft Azure CDN):

https://syspro8install.azureedge.net/*

- Azure service calls:

https://sysprodeploymentazlive.azurewebsites.net/*

- InfoZone:

https://izauthservicedev.syspro.com/*



This applies to the **SYSPRO Deployment Service** and the **SYSPRO Deployment Support Service**.

What ports should be enabled for discovery to work?

The **SYSPRO Deployment Service** provides support to be discoverable at runtime. Therefore, for WCF Discovery to work correctly, all NICs (Network Interface Controller) should only have one IP address.

Ports that must be open:

- UDP discovery: Port 3702
- Default listening endpoint: Port 30250

This is the port to which the service responds.



You can always manually enter the endpoint if discovery is not enabled.



Desktop Heap

What is “desktop heap”?

Each application utilizes a portion of reserved memory called “desktop heap”. As a resource it is finite and so can be exhausted, at which point the following may occur:

- Programs may show erratic behavior and no longer function as expected.
- Processes end for no apparent, obvious or consistent reason (i.e. the error message is not always the same when one is received).
- `Out Of Memory` error messages may appear when you attempt to start new programs or try to use programs that are already running.

Unfortunately there are no longer tools available to monitor this. The last version of **Microsoft Windows** that was capable of monitoring desktop heap usage was **Windows XP/Server 2003**, after which Microsoft deprecated the kernel system driver that could be used to analyse and monitor this (in conjunction with a tool called “dheapmon”).

This memory does not relate or change with the addition or removal of physical memory, and so should not be confused with this in any way.

Considerations

- 64-bit **Microsoft Windows** has a default interactive desktop heap size of 20MB.
- Lower values increase performance at the risk of crashing any process which can run out of resources.
- Microsoft do not recommend that you set a value that is over 20480 for the interactive desktop heap.
- Because the non-interactive desktop heap is mapped into the address space of each and every process, this value should not be set to an arbitrarily high value, but should only be increased sufficiently to allow all the desired applications to run.
- Many server applications will spawn multiple processes for each user request. SYSPRO is one such application where each client session has one or more processes running on the server for that client.
- Every increment of 512 K will support approximately 2,500 windows, menus, pens, icons, etc.
- **Microsoft Windows** has a system wide memory limit of 48Mb for all the above desktop heaps. If this limit is exceeded there might not be enough memory to create an error message dialog box. As a result, the requested operation fails without any indication.
- It is best to ensure that the number being specified is divisible by 64.

- Once the value is changed the operating system will need to be restarted in order for the changes to take effect.

Where is desktop heap configured?

The size of each desktop heap allocation is controlled by the following registry value:

```
HKEY_LOCAL_MACHINE\System\CurrentControlSet\Control\Session  
Manager\SubSystems\Windows
```

The default data for this registry value will look something like the following (all on one line):

```
%SystemRoot%\system32\csrss.exe ObjectDirectory=\Windows  
SharedSection=1024,20480,768 Windows=On SubSystemType=Windows ServerDll=basesrv,1  
ServerDll=winsrv:UserServerDllInitialization,3 ServerDll=sxssrv,4  
ProfileControl=Off MaxRequestThreads=16
```

How and why do desktop heaps affect SYSPRO?

In a SYSPRO client/server environment the SYSPRO services on the server are allocated resources in the desktop heap of the server. More specifically, the SYSPRO services are associated with the non-interactive desktop heap of the server.

When each user calls up SYSPRO using either the client, or by running ***SYSPRO Web UI (Avanti)***, then an instance of `SYSPRO.exe` is executed on the server for this user.

Each process loaded in this way consumes some of the non-interactive desktop heap. As tasks are performed in SYSPRO by each user, then more of this allocation may be consumed. When a user is finished and closes SYSPRO the respective process on the server is ended and so the heap memory used is released.

If the non-interactive desktop heap becomes exhausted and were to run out of resources, this would prevent additional SYSPRO clients from connecting, and existing SYSPRO client/server connections may not be affected.

When this happens restarting of the respective services (e.g. SYSPRO Communications Service) will not resolve the issue because all of the existing processes associated with it (such as the users that are already logged in) are still running and consuming memory, therefore these processes would also need to be terminated.

We recommend that, in order for SYSPRO to run as expected, the non-interactive desktop heap on the SYSPRO application server be configured to 20480.



Ensure that you have adequate system backups in place before changing this value, as an incorrectly set value could cause system instability.



What do the desktop heap values mean or represent?

The numeric values following **SharedSection=** control how desktop heap is allocated. These SharedSection values are specified in kilobytes:

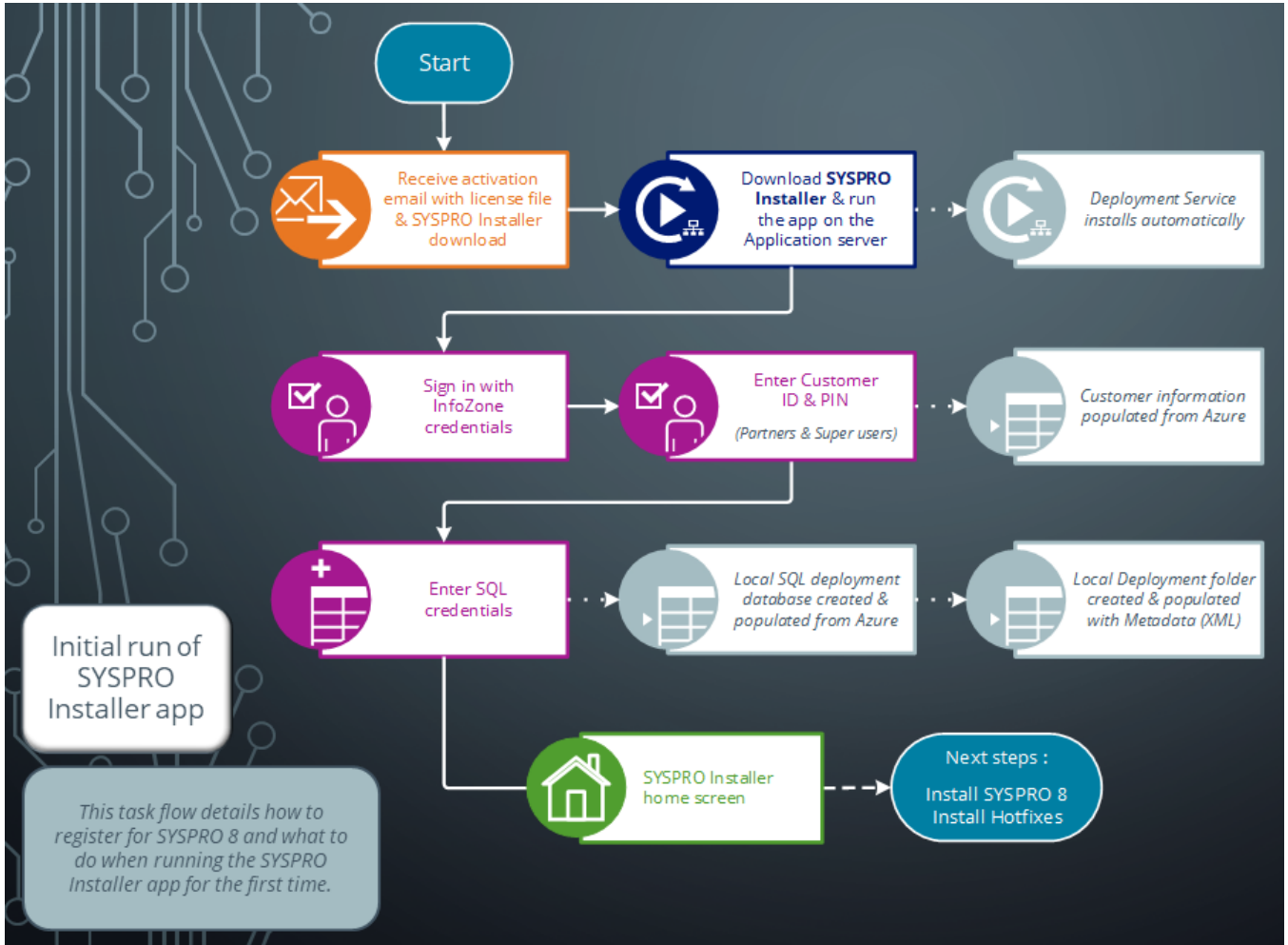
- The first value (1024) defines the system heap size.
- The second value (20480) controls the size of the interactive desktop heap (used for Windows objects).
- If a third value is present (e.g. "1024,20480,768") then this covers the non-interactive desktop heap.

If the third value is not present then non-interactive desktops will default to the same value as interactive desktops.

With each succeeding version of **Microsoft Windows**, the interactive desktop heap allocations have increased significantly, whereas the non-interactive portion has not.

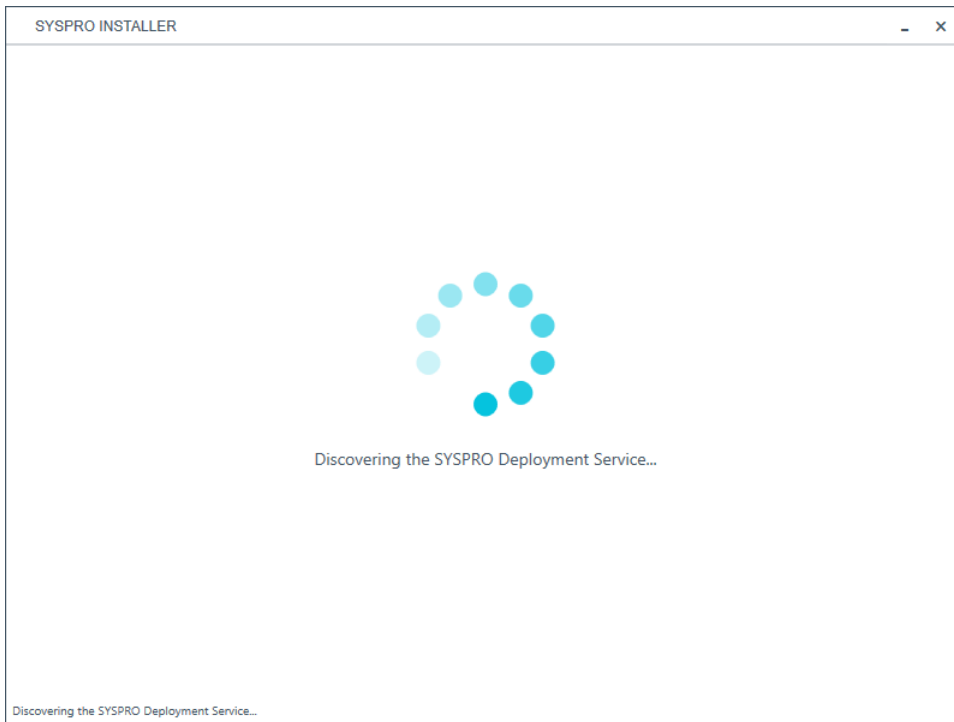
Using

Initial run of the SYSPRO Installer Application



Ensure to run the **SYSPRO Installer Application** on the SYSPRO application server.

1. Application Start-up



When you launch the **SYSPRO Installer**, it checks your registry to detect if there is a saved **endpoint address** for the **SYSPRO Deployment Service**:

- If the application finds an address entry in your registry, it uses this to find the **SYSPRO Deployment Service** at that address.
- If a registry entry is not found, the application performs discovery for the **SYSPRO Deployment Service**.

If the service is found, the application writes this address to your registry and continues.



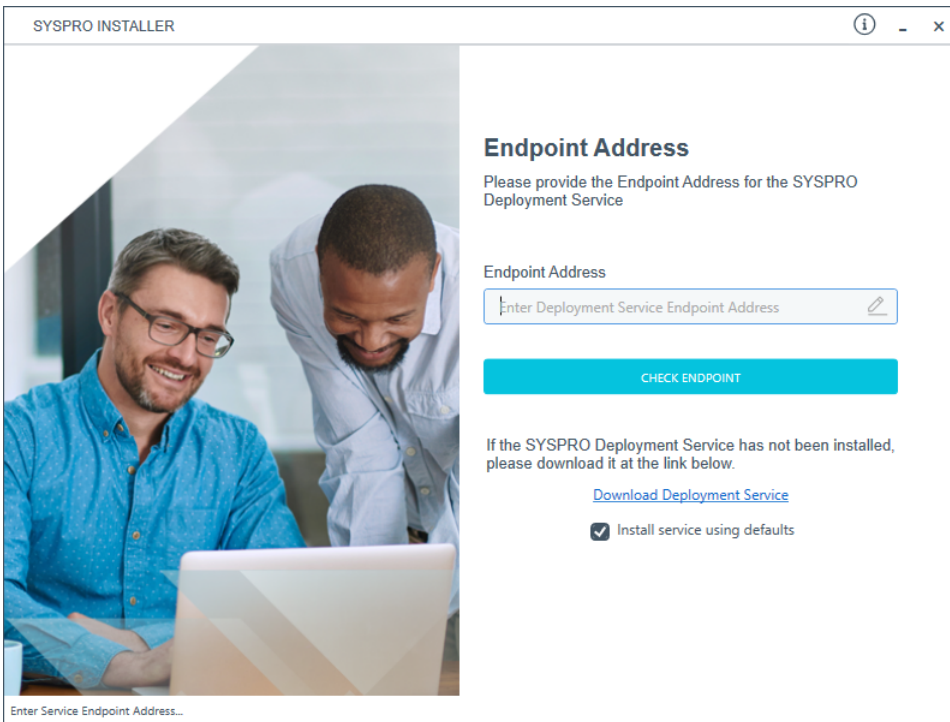
This *discovery phase* is not performed when using the support version of the application (**SYSPRO Installer Support**). Instead, you are taken directly to the **Endpoint Address** screen.

- If the **SYSPRO Deployment Service** is not discovered:
 - The app checks whether the service has been installed on your machine. If the service is installed, and discovery failed, it could be that the service is not running.
 - If the deployment service is not installed, a link is provided to allow you to download the service.



- - The deployment service setup installation file is automatically downloaded from Azure and installed on your machine.
 - Once the deployment service is installed, the application verifies the connecting endpoint.
- Once the deployment service is discovered, it is silently installed in the background by default.

2. Endpoint Address



The **Endpoint Address** screen is only displayed if the **SYSPRO Deployment Service** has never been installed on your machine.

If no download link is displayed, then the service is installed, but may not be currently running.

Select the **Insert default Endpoint** icon inside the **Endpoint Address** text block to populate the block with the current machine DNS name and default Deployment Service SOAP Port.

You can use the **Check Endpoint** option to start discovery for the service again, if required, however this only works if the **Endpoint Address** text block is already populated. This is useful if your deployment service has been restarted.



When using the support version of the application, you will need to enter the endpoint address manually during start up. To locate this endpoint address, open the relevant configuration file and view the `baseAddress` entry:

```
C:\Program Files\SYSPRO\SYSPRO Deployment Support  
Service\SYSPRODeployServiceHost.exe
```

Install service using defaults option

The **Install service using defaults** option enables you to decide how to install the service.

This option is enabled by default and (if left enabled) results in the Deployment service being downloaded and installed silently to a default location on your c: drive.

If you disable this option, the Deployment service will download and you can select how and where you want to install the service.

When the option is disabled, the following screen will allow you to enter the installation parameters and domain credentials required to run the service:

SYSPRO Deployment Service parameters...

You would typically disable this option in one of the following situations:

- You want to run the **SYSPRO Deployment Service** as a specific user.
- You want to change the installation options for the **SYSPRO Deployment Service**.

3. Login



Once a connection is made to the **SYSPRO Deployment Service**, you need to login using your **InfoZone** credentials.

A valid **InfoZone** account is required to continue.



Enable the **Save Customer Details** checkbox option if you want the app to save your **Customer Code** and **Customer PIN** when logging in.



If you are not listed as a customer on the **InfoZone** (i.e. you are a Partner or Super-user) an additional screen is displayed for you to enter the relevant customer code for the customer you want to install.

Partners and Super-users

SYSPRO INSTALLER

SYSPRO

Sign in

Hi Ross Bateman

You are listed on the InfoZone as a Partner. Please provide the Customer ID and Customer PIN for the Customer you are currently installing for.

Customer ID
###-###

Customer PIN
###-###

Save Customer Details

CANCEL CONTINUE

Version ###.###

Ensure that you enter the **Customer ID** for the customer being installed.



The **Customer ID** defaults to the customer code defined within your **InfoZone** profile, therefore you *must* ensure that it matches the SYSPRO account that you are installing.

The **Customer PIN** is the 6-digit code included in the email you received that contained your **SYSPRO 8** license.

You can verify your customer ID and PIN against the `CustomerId` and `CustomerPin` elements of the license XML file.

4. Configuration

Configure
Please configure your environment below

SQL Server Name ⓘ
SQLSERVERNAME

SQL Login ⓘ
SQL Account

SQL Password ⓘ
SQL Password

SYSPRO Deployment Downloads ⓘ
C:\SYSPRO Deployment

CONTINUE

Service Version 1.0.0.0 User Name | XXX-1234 Company Name





The **Configure** screen is only displayed if this is a first time install.

The **SYSPRO Installer** application requires access to a *SQL Server Instance* on your network. The application uses this SQL instance from now onwards to download and record your installation preferences and configuration; including information about your deployment groups, software component versions and installed hotfixes.

Capturing requirements

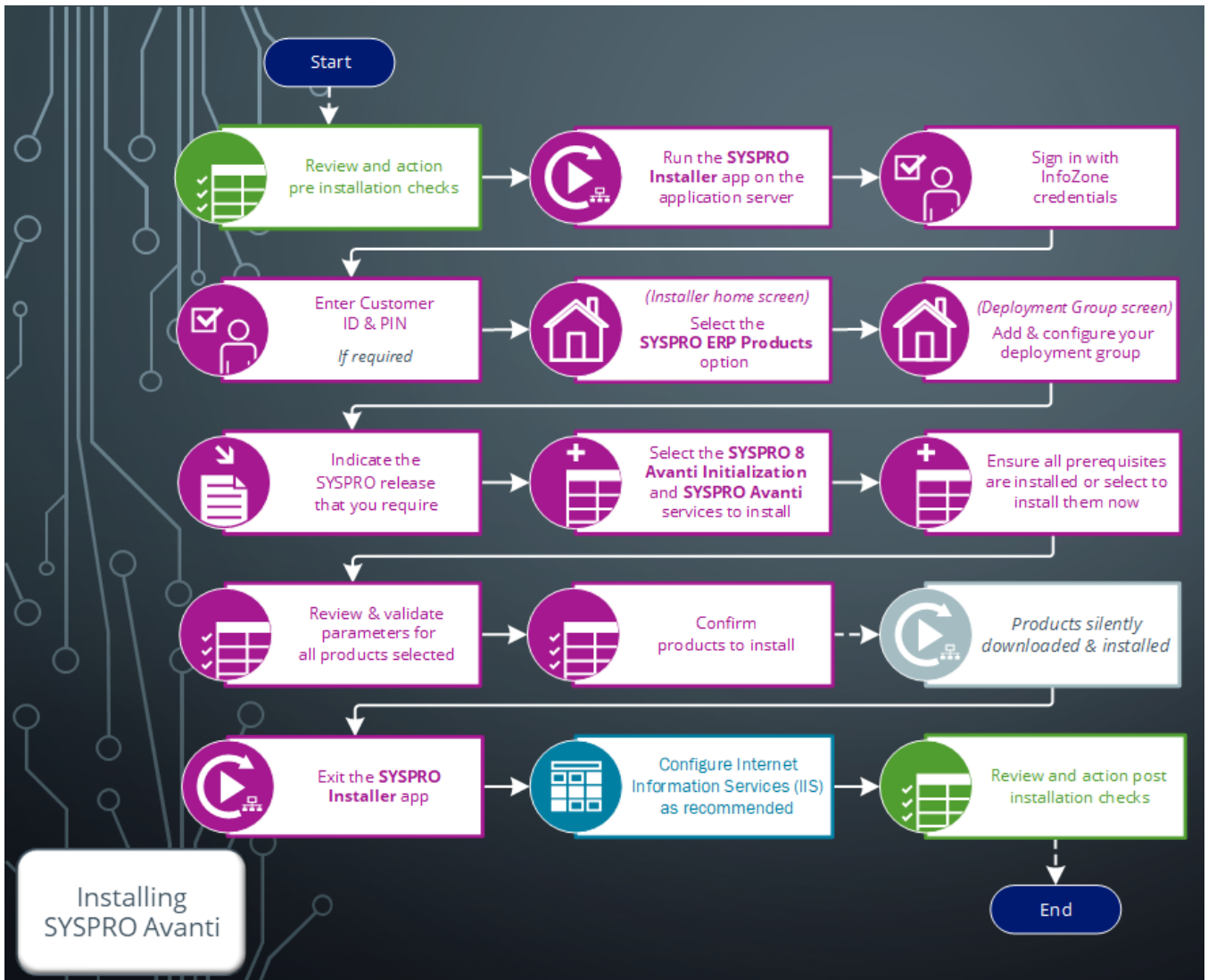
You are required to set up your SQL authentication and the name of the SQL Server which will store the SYSPRO Deployment database.

Field	Description
SQL Server Name	<p>This entry defaults to the DNS name of the current machine.</p> <div> If you are using SQL Express, ensure that you enter the correct and full instance name (e.g. <code>INSTANCENAME\SQLEXPRESS</code>). You can check this entry if you run SQL Server Management Studio and view the instance to which you are logging in.</div>
SQL Login	Enter your SQL Server login credentials.
SQL Password	Enter your SQL Server password credentials.
SYSPRO Deployment Downloads	<p>This folder is the physical location to which all software components and hotfixes are downloaded, and subsequently run from during each installation process.</p> <p>All downloads, being either the Parameter XML files or the actual install files are downloaded here and stored in the Release subfolder.</p> <p>The entry defaults to <code>C:\SYSPRO Deployment</code>, but can be changed if required. However, once the folder name is set during this stage of the app, please ensure that no changes are made to the folder name, location, contents or structure.</p> <p>Any subsequent change to the folder will result in checksum errors and the app not being able to download any files.</p> <div> A share is created for this folder that must be available to the network.</div>

Background processes

At this point, the application checks Azure to determine which products are available. It then proceeds to configure an on-premise database and downloads the relevant XML definition files and runtime components (for later use during the install).

Installing SYSPRO Web UI (Avanti)





1. Pre Installation Checks


First time installation of SYSPRO 8

As part of your preparation for installing **SYSPRO 8**, please ensure the following:


Step	Description
1.	<p>Ensure that you have access to a SQL Server Administrative user name and password (e.g. 'sa').</p> <p>This user must have the following administrative permissions enabled:</p> <ul style="list-style-type: none">■ Create and Drop entities (such as databases, tables, columns, etc.) for all SYSPRO databases.■ Issue BULK INSERT statements.
2.	<p>Ensure that you have access to administrative privileges for all servers to which you will be installing SYSPRO 8 and its components.</p>
3.	<p>Confirm you have a valid SYSPRO license:</p> <p>Ensure that you have valid licenses for the software you will be installing. In particular, ensure that your new SYSPRO 8 license is valid for the modules you will be using.</p>
4.	<p>Verify third party products to ensure that the product or application is available and compatible with SYSPRO 8.</p> <p>In addition, ensure that you have the appropriate installation and licensing information required (particularly relating to SYSPRO 8).</p>

Upgrading to SYSPRO 8

As part of your preparation for upgrading to **SYSPRO 8**, please ensure the following:

Step	Description
1.	<p>Confirm your SYSPRO companies have been migrated to SQL:</p> <p>If you are upgrading from SYSPRO 7 Update 1 and your company data has been migrated to SQL, then you can migrate directly to SYSPRO 8.</p> <p>If you are on any prior releases you have to upgrade version-by-version until you reach SYSPRO 7 Update 1.</p> <div style="border: 1px solid #0070C0; border-radius: 10px; padding: 10px; margin-top: 10px;"> All company data needs to be in SQL before you can upgrade to SYSPRO 8.</div>
2.	<p>Ensure that you have access to a SYSPRO Administrator user name and password (e.g. ADMIN).</p>
3.	<p>Ensure that you have access to a SQL Server Administrative user name and password (e.g. 'sa').</p> <p>This user must have the following administrative permissions enabled:</p> <ul style="list-style-type: none">■ Create and Drop entities (such as databases, tables, columns, etc.) for all SYSPRO databases■ Issue BULK INSERT statements.
4.	<p>Confirm you have a valid SYSPRO license:</p> <p>Ensure that you have valid licenses for the software you will be installing. In particular, ensure that your new SYSPRO 8 license is valid for the modules you will be using.</p>
5.	<p>Run financial checks on your existing SYSPRO 7 Update 1 system:</p> <ul style="list-style-type: none">■ Ensure all pending transactions are posted to General Ledger.■ Ensure all modules are in the same period.■ Run a Balance function in all modules and retain reports for balancing purposes after the installation.■ Print distribution reports and retain reports for reference purposes after the installation.■ Print the At a Glance information for all modules. This can be used to confirm balances once you have completed the installation and conversion.



Step	Description
6.	Log out all users (i.e. SYSPRO operators and e.net users).
7.	Stop all SYSPRO services. <div style="border: 1px solid #0070C0; border-radius: 10px; padding: 10px; margin-top: 10px;"> This step is only required if you are upgrading to SYSPRO 8 and not running parallel to SYSPRO 7 Update 1.</div>
8.	<p>Check port numbers assigned to services:</p> <p>As part of the installation process for existing sites, a number of services will need to be reinstalled.</p> <p>During the installation you have the option to either assign new ports or use the existing SYSPRO 7 Update 1 ports. Reasons why you would select to use the SYSPRO 7 Update 1 ports include:</p> <ul style="list-style-type: none">▪ SYSPRO 8 services can reuse the assigned firewall rules▪ SYSPRO 8 Clients can connect to the same SYSPRO Communication Endpoint to save time▪ SRS Printing will just work as it will use the same port number. <p>When these services are reinstalled, you will need to review any connection issues as the new default port numbers might have changed (e.g. either reinstate the original port number or update the configuration of any calling applications to reflect the new port number).</p>
9.	<p>Verify third party products to ensure that the product or application is available and compatible with SYSPRO 8.</p> <p>In addition, ensure that you have the appropriate installation and licensing information required (particularly relating to SYSPRO 8).</p>
10.	Disable SYSPRO users from logging into each company, until after installation and migration is complete.



Customization

SYSPRO 8 Windows Client Interface

The vast majority of Customization and Power Tailoring will work unchanged after migrating to **SYSPRO 8**. However, as the scope for customization is vast and could have been developed in a 'non-version independent' way, we recommend that your customizations are tested post migration to **SYSPRO 8**.

The use of VBScripts to customize the user interface will work, as long as the appropriate parameters and variables were used.

Calling business objects using the standard **CallBo** function will also work unchanged.

SYSPRO Avanti

Many of the VBScript and e.net customization, and other Power Tailoring Customization, will work unchanged in the **SYSPRO Web UI (Avanti)** interface.

However, if the customizations incorporated components specifically developed for the .NET framework (such as a .NET user control) this will not automatically work in the **SYSPRO Web UI (Avanti)** interface as it makes use of HTML5 and JavaScript - languages specific to a web UI instead of a windows client UI.



In all cases where you intend to use both interfaces, it is recommended that the customizations are tested in both user interfaces.

2. Software Installation

Login to the SYSPRO Installer Application

SYSPRO INSTALLER

SYSPRO

Sign in

Discover the Infinite Possibilities of SYSPRO 8

Please use your InfoZone credentials to Sign in.

Email

Enter your email address

Password

Enter your password

SIGN IN

Don't have InfoZone credentials?
[Create an account](#)

Version #.#.#.#

Once a connection is made to the **SYSPRO Deployment Service**, you need to login using your **InfoZone** credentials.

A valid **InfoZone** account is required to continue.



Enable the **Save Customer Details** checkbox option if you want the app to save your **Customer Code** and **Customer PIN** when logging in.



If you are not listed as a customer on the **InfoZone** (i.e. you are a Partner or Super-user) an additional screen is displayed for you to enter the relevant customer code for the customer you want to install.

Partners and Super-users

SYSPRO INSTALLER

SYSPRO

Sign in

Hi Ross Bateman

You are listed on the InfoZone as a Partner. Please provide the Customer ID and Customer PIN for the Customer you are currently installing for.

Customer ID
###-###

Customer PIN
###-###

Save Customer Details

CANCEL CONTINUE

Version ###.###

Ensure that you enter the **Customer ID** for the customer being installed.



The **Customer ID** defaults to the customer code defined within your **InfoZone** profile, therefore you *must* ensure that it matches the SYSPRO account that you are installing.

The **Customer PIN** is the 6-digit code included in the email you received that contained your **SYSPRO 8** license.

You can verify your customer ID and PIN against the `CustomerId` and `CustomerPin` elements of the license XML file.

Home screen



From the **SYSPRO Installer Application** home screen, select the **SYSPRO ERP Software** option.



You can navigate back to this home page from any point in the app by selecting the home icon (🏠) from the toolbar at the top of each screen.

Deployment Groups

When working with the **SYSPRO Installer** application you will perform all installations against one of your deployment groups. A deployment group is a name that describes an installation instance of SYSPRO.



You can only have one deployment group per machine.

Deployment Groups home screen

SYSPRO INSTALLER

Deployment groups

Please select a Deployment group

ADD NEW DEPLOYMENT GROUP

	Live Live Deployment Group SYSPRO 8 2020 R1 3 Mandatory Hotfixes Available	HOTFIXES	UPDATE	EDIT	SELECT
	testing Test Not configured			EDIT	SELECT

BACK

Version #.#.#.# User Name | XXX-X1234 Customer



The **Deployment Groups** screen contains two default groups which are configured for a new install. You can, however, select to create a new group (**Add New Deployment Group** button) or edit one of the existing ones (**Edit** button).



You can refresh the **Deployment Groups** screen by pressing **F5** and you can refresh the **SYSPRO Deployment Service** by pressing **ALT+F6**.



You can also use the **Search** function to search for a specific deployment group if more than 4 groups exist.

Add deployment group




Field	Description and considerations
Deployment Group Name	Enter a unique name for the group.
Deployment Group Description	Enter a description of the group.
Group Type	<ul style="list-style-type: none"> ▪ Test Server ▪ Live Server ▪ Disaster Recovery Server ▪ Standalone System ▪ Client System
Attach SYSPRO License	 This feature is still in development and will be released shortly.
Install all Hotfixes by default	<p>Enable this option to ensure that <i>all</i> available hotfixes are installed when installing SYSPRO 8 for the first time, or when upgrading to a new release.</p> <p>This option is enabled by default.</p> <div style="border: 1px solid #0070C0; border-radius: 10px; padding: 10px; margin-top: 10px;">  If you disable this option, Mandatory Hotfixes are still installed when installing SYSPRO 8 for the first time, or when updating to a new release. </div>



Edit deployment group

Field	Description and considerations
Deployment Group Name	Enter a unique name for the group.
Deployment Group Description	Enter a description of the group.
Group Type	<ul style="list-style-type: none">■ Test Server■ Live Server■ Disaster Recovery Server■ Standalone System■ Client System
Attach SYSPRO License	<i>This function is not yet available.</i>
Install all Hotfixes by default	<p>Enable this option to ensure that <i>all</i> available hotfixes are installed when installing SYSPRO 8 for the first time, or when upgrading to a new release.</p> <p>This option is enabled by default.</p> <div data-bbox="534 1108 1353 1310" style="border: 1px solid #0070c0; border-radius: 10px; padding: 10px;"><p> If you disable this option, Mandatory Hotfixes are still installed when installing SYSPRO 8 for the first time, or when updating to a new release.</p></div>
Delete	<p>Delete the selected deployment group.</p> <p>The application requires at least 1 deployment group to exist. Therefore, if this is the only group existing on your system, you can't delete it.</p> <div data-bbox="534 1534 1353 1697" style="border: 1px solid #0070c0; border-radius: 10px; padding: 10px;"><p> This function is only available if the deployment group has not yet been configured.</p></div>





Field	Description and considerations
Details	<p>This displays the Deployment Group Details screen from where you can view the machines that form part of the selected deployment group, as well as which products and hotfixes are installed on each machine.</p> <div data-bbox="536 472 1353 689" style="border: 1px solid #f0e68c; padding: 10px;"><p> You can export a text file of the products and hotfixes installed on a machine by using the Export function () on the Deployment Group Details screen.</p></div> <div data-bbox="536 712 1353 873" style="border: 1px solid #4682b4; padding: 10px;"><p> This function is only available if the deployment group has already been configured.</p></div>



Release Selection

SYSPRO INSTALLER

Select a Release to install for: Test
Please select a SYSPRO software release to install

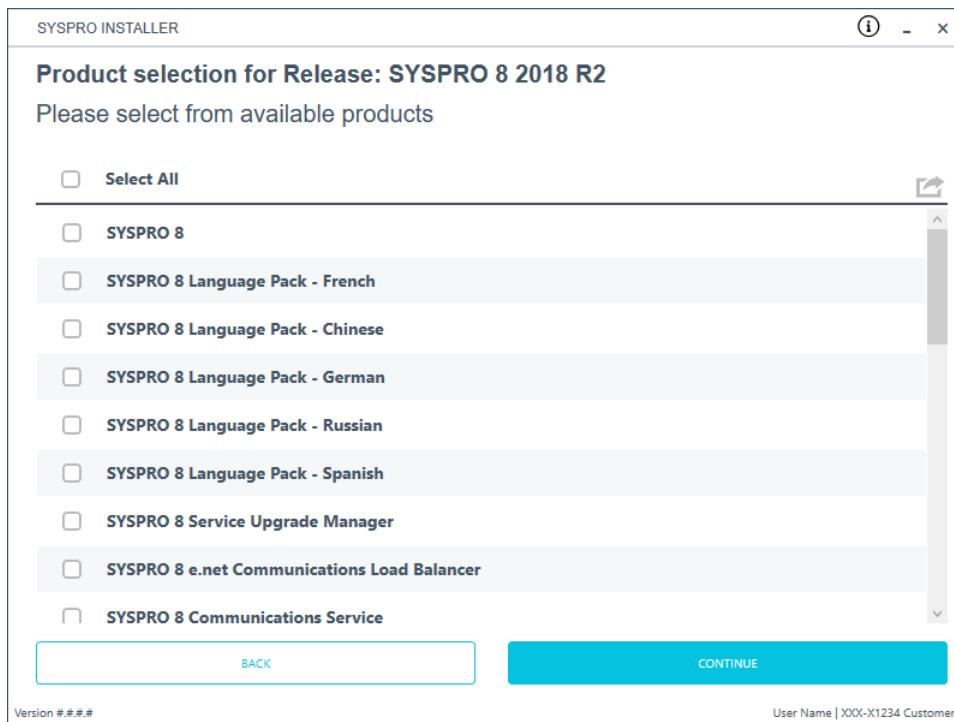
	SYSPRO 8 2018 R2 SYSPRO 8 2018 R2	<input type="button" value="SELECT"/>
	SYSPRO 8 2018 R1 SYSPRO 8 2018 R1	<input type="button" value="SELECT"/>

Service Version ###.##.## User Name | XXX-X1234 Customer

Pressing the **Select** option on the **Deployment Groups** screen allows you to select the release applicable for install for that deployment group.

We recommend that you install the most recent software release, but you may select any suitable version.

Product Selection



All products that are available for installation are displayed on the **Product Selection** screen. The choices displayed here may vary depending on the SYSPRO Release that you have selected for the current deployment group.

Products that have already been installed on your machine are displayed at the bottom of the list.

If you select a product that requires another product(s) to be installed as a prerequisite, those products are automatically added to the installation list, in the correct sequence.

FOR EXAMPLE:

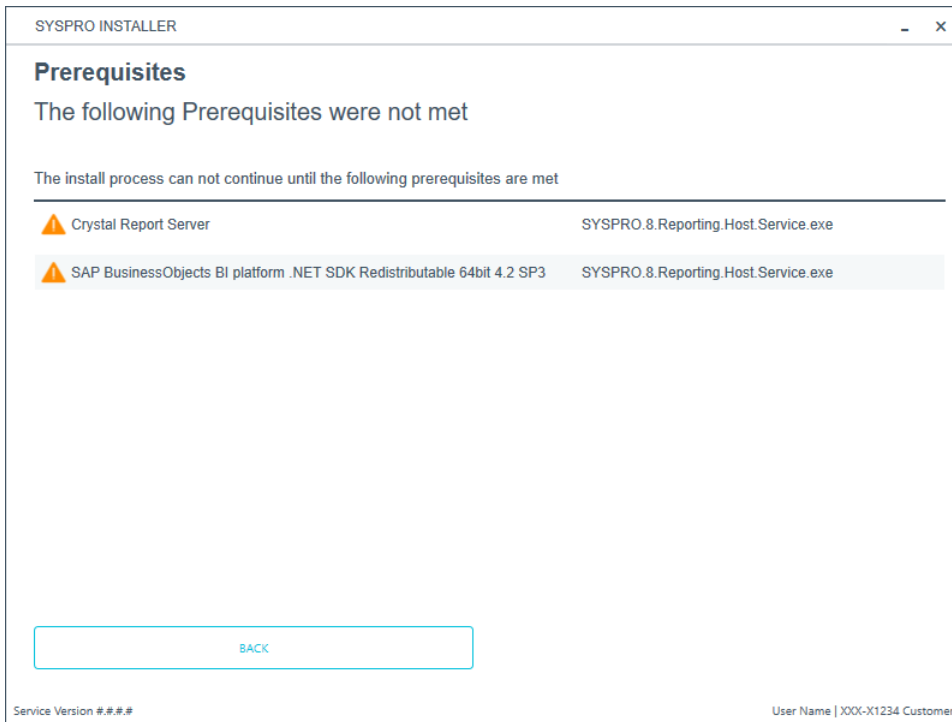
The **SYSPRO 8 Communications Service** requires the **SYSPRO 8 Service Upgrade Manager**. Therefore both products are added to the list in the correct install sequence.

To install **SYSPRO Web UI (Avanti)**, select the following products:

- SYSPRO 8 Avanti Initialization Service
- SYSPRO Avanti Web Service

Once you have indicated all of your required products to install, select the **Continue** button.

Prerequisites

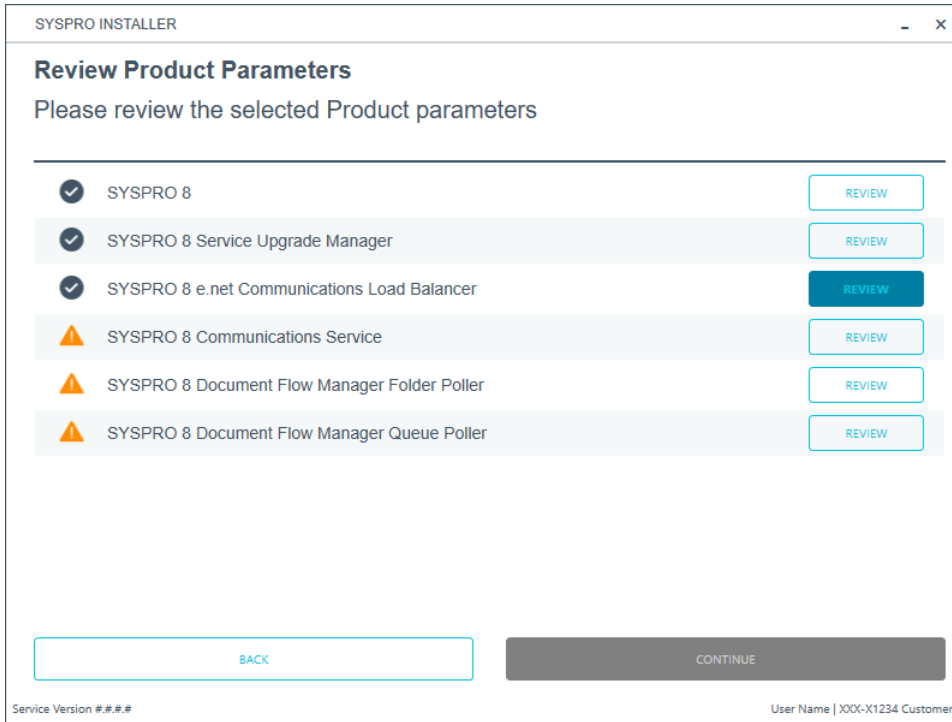


The **SYSPRO Installer** verifies your system against all prerequisites required for the products you select to install. Should any product fail a prerequisite check at this stage, the **Prerequisites** screen is displayed.

The following prerequisites are required for the **SYSPRO Web UI (Avanti)** services:

- SYSPRO 8 Server
- SYSPRO 8 Service Upgrade Manager
- SYSPRO 8 e.net Communications Load Balancer (valid endpoint configured in **System Setup**)
- Microsoft .NET Framework 4.6

Review Product Parameters



The **Review Product Parameters** screen allows you to review all parameters required for each product selected for install.



To view information about product specific parameters, please see the **Referencing** section: **Product parameter details**.

You cannot continue until all product parameters have been validated.

Click the **Review** button against each product that indicates a warning icon. This will display a parameters screen prompting you to verify and/or change various properties, before validating the entries.




SYSPRO provides a default port number range (30101 - 30300) for your convenience, however these defaults may be changed and then validated.


Once validated, the warning icon changes to a confirmation tick, indicating that you can proceed to the next product's parameters.



The following provides details of each product's parameters and their considerations:
SYSPRO 8 Avanti Initialization Service


Parameter	Description and considerations
Do you want to upgrade the existing installation	<div style="border: 1px solid #0070C0; padding: 5px;"> This field is only applicable if you have SYSPRO 7 Update 1 installed.</div> <p>Enabling this option upgrades your existing SYSPRO 7 Update 1 service/product.</p>
Enter a SOAP port number	Default provided: 30190 You can choose to accept the default provided, or manually change to that which you require.
Add port to firewall	For best practice, enable this option to ensure that the port number is added to your firewall.
Destination Folder	Default provided: C:\Program Files\SYSPRO\SYSPRO Avanti Initialization Service Accept the default provided or change manually to match your preference.

SYSPRO Avanti Web Service


Parameter	Description and considerations
Do you want to upgrade the existing installation	<div style="border: 1px solid #0070C0; padding: 5px;"> This field is only applicable if you have SYSPRO 7 Update 1 installed.</div> <p>Enabling this option upgrades your existing SYSPRO 7 Update 1 service/product.</p>
Enter a SOAP port number	Default provided: 30190 You can choose to accept the default provided, or manually change to that which you require.
SYSPRO Avanti Initialization Service Endpoint	Default provided: net.tcp://localhost:30190/SYSPROInitializationService Accept the default provided or change manually to match your preference.



SYSPRO 8 Server



Parameter	Description and considerations
Do you want to upgrade the existing installation	<div style="border: 1px solid #0070C0; padding: 5px;"> This field is only applicable if you have SYSPRO 7 Update 1 installed.</div> <p>Enabling this option upgrades your existing SYSPRO 7 Update 1 service/product.</p>
Destination Folder	Default provided: C:\SYSPRO Accept the default provided or change manually to match your preference.

SYSPRO 8 Service Upgrade Manager

Parameter	Description and considerations
Do you want to upgrade the existing installation	<div style="border: 1px solid #0070C0; padding: 5px;"> This field is only applicable if you have SYSPRO 7 Update 1 installed.</div> <p>Enabling this option upgrades your existing SYSPRO 7 Update 1 service/product.</p>
Enter a port number	Default provided: 30140 Accept the default provided or change manually to match your preference.
Add port to firewall	For best practice, enable this option to ensure that the port number is added to your firewall.
Destination Folder	Default provided: C:\Program Files\SYSPRO\SYSPRO 8 Service Upgrade Manager Accept the default provided or change manually to match your preference.



SYSPRO 8 e.net Communications Load Balancer

Parameter	Description and considerations
Do you want to upgrade the existing installation	<div style="border: 1px solid #0070c0; padding: 5px;"> This field is only applicable if you have SYSPRO 7 Update 1 installed.</div> <p>Enabling this option upgrades your existing SYSPRO 7 Update 1 service/product.</p>
SYSPRO 8 Application Server Instance	<p>Default provided: 0</p> <div style="border: 1px solid #0070c0; padding: 5px;"> Accept the default provided or change manually to match your preference.</div> <p>When SYSPRO 8 is installed, an available <code>BaseDir</code> entry is created for SYSPRO 8. This entry can be found under:</p> <ul style="list-style-type: none">■ <code>HKLM\SOFTWARE\SYSPRO\e.net solutions.</code> <p>This is used by communication services, both client-server and e.net-related services, to target the SYSPRO 8 files under the specified path in the <code>BaseDir</code> entry.</p> <p>For 32 bit applications, the <code>BaseDir</code> entry can be found under:</p> <ul style="list-style-type: none">■ <code>HKLM\SOFTWARE\WOW6432Node\SYSPRO\e.net solutions.</code>
Enter a SOAP port number	<p>Default provided: 30140</p> <p>Accept the default provided or change manually to match your preference.</p>
Add SOAP port to firewall	<p>For best practice, enable this option to ensure that the port number is added to your firewall.</p>
Enter a REST port number	<p>Default provided: 31002</p> <p>Accept the default provided or change manually to match your preference.</p>
Add REST port to firewall	<p>For best practice, enable this option to ensure that the port number is added to your firewall.</p>
Specify the number of load balancing processes	<p>Default provided: 5</p> <p>Accept the default provided or change manually to match your preference.</p>



Parameter	Description and considerations
Basic http port required	Enable this option to define a port for the Basic HTTP protocol.
Enter a Basic port number	Default provided: 31003 Accept the default provided or change manually to match your preference.
Ws http port required	Enable this option to define a port for the WS HTTP protocol.
Enter a Ws port number	Default provided: 31004 Accept the default provided or change manually to match your preference.
Destination Folder	Default provided: C:\Program Files\SYSPRO\SYSPRO 8 e.net Communications Load Balancer Accept the default provided or change manually to match your preference.

SYSPRO License Agreement

Read and accept the license terms and conditions before continuing with the install.



Select the **Printable Version** option to view a PDF version of the EULA in your default PDF software.

Products Ready to Install

A summary of all products to be installed is displayed for you to review.



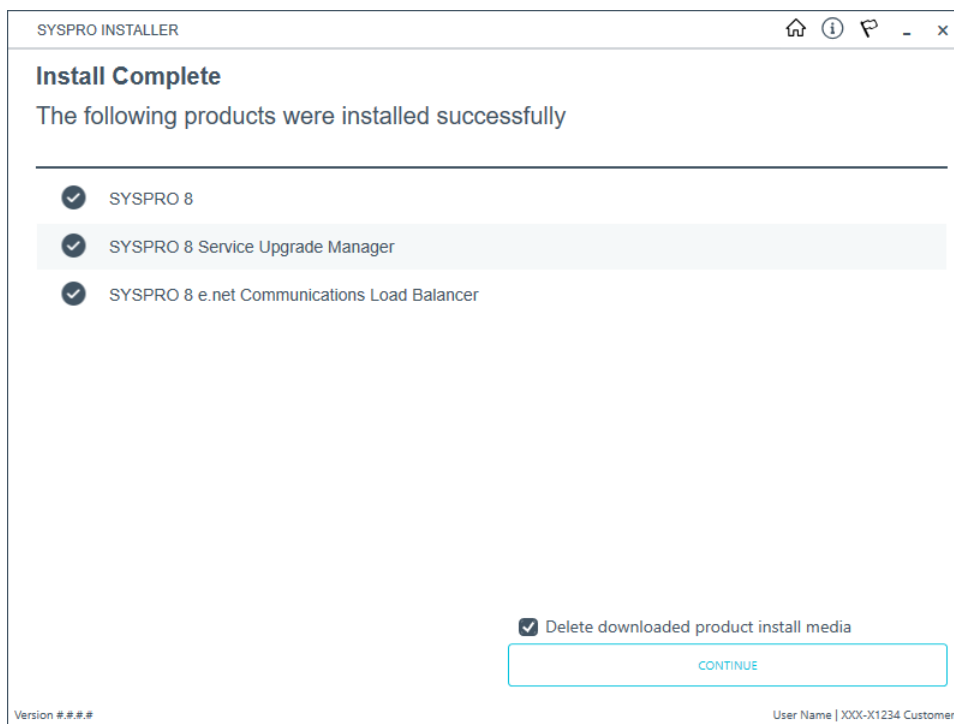
If you have previously downloaded the install files and have them available on another form of media, these can now be copied into the **SYSPRO Deployment Downloads** folder.

Ensure that you copy your files to the correct location.

Once you are satisfied with the list, continue by selecting the **Begin Install** button. The *silent* download of install files and installation of all selected products then commences.

The appropriate status information is shown during the installation process.

Install Complete



The **Install Complete** screen is displayed with a summary of all products installed.

Optional Delete Product Media Files

To delete the product media files that were downloaded for your install, proceed as follows:

- 
1. Enable the **Delete downloaded product install media** option and select **Continue**.

A confirmation screen is then displayed which lists the product media files to be deleted.

2. Review the items for deletion on the **Delete Product Install Media** screen and select **Continue** to proceed with the deletion process.

The app returns a confirmation page once the deletion process has completed, which indicates the files that were deleted.



This doesn't apply to SYSPRO Additional Software (i.e. SYSPRO Reporting Software, Additional services and SYSPRO Point of Sale).



To view an audit trail of all deleted files including date and operator details, access the log file saved to the release or SYSPRO Additional Software folder of your local SYSPRO Deployment folder.

FOR EXAMPLE:

File name DeletedMediaFiles_20201207143907.txt

3. Internet Information Services (IIS) - Recommended Configuration

We recommend the following additional configuration within **Internet Information Services (IIS)** to assist with optimal performance:

General IIS Configuration

Using the **Windows Features** application, ensure that the following features are enabled for **Internet Information Services (IIS)**:

- Web Management Tools (including all sub features)
- Application Development Features (including all sub features)
- Common HTTP Features (including all sub features)
- Health and Diagnostics (including all sub features)
- Performance Features (including all sub features)
- Internet Information Services Hostable Web Core
- Media Features

IIS Configuration for all SYSPRO related application pools and virtual directories

Application pool initialization



This ensures that the application is always available.

Configure the **Start Mode** and **Idle Time-out** values against the application pool:

1. Open the **Internet Information Services (IIS) Manager**.
2. Within the **Connections** pane, navigate to the **Application Pools** folder.
3. From the **Application Pools** pane, right-click *SYSPROAvanti* and select the **Advanced Settings** option.
4. Define the **Start Mode** and **Idle Time-out** options as follows:
 - a. **Start Mode** = `AlwaysRunning`
 - b. **Idle Time-out (minutes)** = 0
5. Save your changes.

Application pool recycling



This assists with quicker response times within the application at all times.

1. Open the **Internet Information Services (IIS) Manager**.
2. Configure the application pool's recycling conditions to occur at a specified time:
 - a. Within the **Connections** pane, navigate to the **Application Pools** folder.
 - b. From the **Application Pools** pane, right-click on `SYSPROAvanti` and select **Recycling**.
The **Edit Application Pool Recycling Settings** window is displayed.
 - c. Enable the **Specific time(s)** option to recycle the application pool outside of normal operating hours, and define the entry as per your requirements.
 - d. Save your changes.
3. Ensure the application is preloaded when recycling:
 - a. Within the **Connections** pane, navigate to the **Sites** folder and locate the `SYSPROAvanti` site.
 - b. Right-click the `SYSPROAvanti` site and select **Manage Application**, followed by the **Advanced Settings** option.
 - c. Define the **Preload Enabled** option as `True`.
 - d. Save your changes.

Web content expiration



This ensures that the site content used by clients is always up to date and that browser caching issues are avoided.

To ensure that the latest components are always in use by the 'client' browser, we recommend that you set web content to expire immediately.

1. Open the **Internet Information Services (IIS) Manager**.
2. Within the **Connections** pane, navigate to the **Sites** folder and locate the `SYSPROAvanti` site.
3. Once you have selected the `SYSPROAvanti` site, double-click the **HTTP Response Headers** option from the **IIS** section.
4. On the **HTTP Response Headers** screen, select the **Set Common Headers** option from the **Actions** pane.

The **Set Common HTTP Response Headers** window is displayed.

5. Select the **Expire Web content** option and enable the **Immediately** radio button.
6. Save your changes.



This setting can be changed at the site level, in which case the virtual directories hosted under this site will inherit this setting.

As there may be other applications hosted on any given site, we suggest that these be changed against each virtual directory instead, so as to not impact the other applications.

IIS configuration specific to list views in SYSPRO Web UI (Avanti)



The following suggested configuration enables the loading of larger list views in **SYSPRO Web UI (Avanti)**.

Request filtering

Define the maximum content length allowed in the **Request Filtering** options:

1. Open the **Internet Information Services (IIS) Manager**.
2. Within the **Connections** pane, navigate to the **Sites** folder and locate the `SYSPROAvanti` site.
3. Once you have selected the `SYSPROAvanti` site, double-click the **Request Filtering** option from the **IIS** section.
4. On the **Request Filtering** screen, select the **Edit Feature Settings** option from the **Actions** pane.

The **Edit Request Filtering Settings** window is displayed.

5. Define the **Maximum allowed content length (Bytes)** option as 2147483647.
6. Save your changes.


Request length

Define the maximum request length setting against the specific site:

1. Open the **Internet Information Services (IIS) Manager**.
2. Within the **Connections** pane, navigate to the **Sites** folder and locate the `SYSPROAvanti` site.
3. Once you have selected the `SYSPROAvanti` site, double-click the **Configuration Editor** option from the **Management** section.
4. On the **Configuration Editor** screen, select `system.web/httpRuntime` at the **Section** drop-down field.
5. Define the **maxRequestLength** entry as 2147483647.
6. Apply your changes.




4. Post Installation Checks

Check	Description
1. Services	Start up the SYSPRO Services.
2. Licensing	<ul style="list-style-type: none">Apply the licensing for new modules and users (if any) in the Company Setup program.Update the company settings for any new modules.
3. Data conversion	<p>The upgrade from SYSPRO 7 Update 1 to SYSPRO 8 converts all ISAM data into SQL tables.</p> <p>Therefore, we recommend that you run the SQL Server Diagnostic program to ensure database integrity.</p>
4. Port numbers	Ensure that all port numbers configured in the System Setup program are correct.
5. Security	<ul style="list-style-type: none">Review and assign the security features required for all users, including electronic signatures, operator activities and role-based security. <div data-bbox="667 1039 1353 1294" style="border: 1px solid #0070C0; padding: 10px; margin: 10px 0;"><p> This is only required for first time installations.</p><p>If you have upgraded from SYSPRO 7 Update 1, your security settings will be retained.</p></div> <ul style="list-style-type: none">If any users require denied access to Custom Form Query business objects, you can enable this now.



Check	Description
6. Web views	<p>Any web views created in SYSPRO 7 Update 1 must be renamed in order for them to appear in SYSPRO 8.</p> <div style="border: 1px solid #0070C0; padding: 10px;"><p> Prior to SYSPRO 8 2019 R1, any customized web view by operator or role surfaced in both SYSPRO and SYSPRO Web UI (Avanti).</p><p>From SYSPRO 8 2019 R1 onwards you must explicitly state whether a web view is targeted for SYSPRO or SYSPRO Web UI (Avanti).</p><p>Because any pre-existing web view is assumed to be for SYSPRO Web UI (Avanti), if you want existing SYSPRO web views to appear in later versions of SYSPRO, you must rename the .JSON file to include a <code>_SYSPRO</code> extension (e.g. <code>UX_OperatorCode_ProgramLZ_SYSPRO.JSON</code>).</p><p>The .JSON file resides in your <code>\Base\Settings</code> folder (or the <code>Role_XXX</code> folder if the user interface is configured by role).</p><p>You can also rename the file using the Save as function from within the Visual Designer. You will be prompted to indicate the type of web view you want to save (i.e. Avanti or SYSPRO Client).</p></div>
7. Custom software	Any previously installed custom software (developed in the same technology as SYSPRO) should be re-installed or verified that it functions as expected in SYSPRO 8 .
8. Reports	Ensure that all Report Writer and SYSPRO Reporting Services reports work as required.
9. Confirm software	Verify that the software works as expected.
10. Financial checks	Check all your balances against the balances printed prior to the upgrade and conversion.



Check	Description
11. Operator login	<ul style="list-style-type: none">▪ Deselect the Prevent further logins setup option in the Company Setup program. This allows users to log back into the system.▪ Notify users that they can now use the new software.
12. Third party applications	<ul style="list-style-type: none">▪ Any previously installed third party applications may need to be re-installed or updated to work with SYSPRO 8.▪ Check with the relevant third party developers for further information.
13. Custom tiles	<p>If you had custom tiles in the SYSPRO 7 Update 1 <code>Custom program</code> folder, you need to manually move these to the <code>\Plugin\CustomStore</code> folder in SYSPRO 8.</p> <div style="border: 1px solid #0070C0; border-radius: 10px; padding: 10px; display: flex; align-items: center;">Custom tiles are named <code>CX_Tile*.SQL</code>.</div>
14. Analytics	<p>If you are an Analytics user (and your existing Analytics site databases are on SYSPRO 7 Update 1) ensure that you manually migrate and update your site databases inside the Analytics program.</p>
15. Archive Migration <i>(Optional)</i>	<p>If during the data migration you elected not to convert your archive data, you have the option of performing this at a later stage using the Archiving Migration program.</p>
16. Bin to Serial Linkage <i>(Optional)</i>	<p>If you want to make use of the new improved Bin to Serial Linkage feature (which enables you to accurately determine where serials reside in a warehouse from the perspective of bins) enable the Associate serials by bin setup option (<i>Setup Options > Configuration > Distribution > Inventory</i>).</p> <p>For more information on this feature, please refer to the Bin to Serial Linkage reference guide.</p>



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