2021 Roadmap Themes

SYSPRO 8

Reference Guide

SYSPRO™

CONTENTS

Roadmap Themes 2021

Roadmap Themes 2021

The following provides a summary of the features and functionality available in *SYSPRO 8*.

Improved Control of Internal Operations

As globalization continues and access to world markets becomes easier, manufacturing industries are under pressure to remain competitive and improve efficiencies while reducing costs, and being able to deliver their product anywhere in the world at short notice.

These expectations require improved internal controls throughout the manufacturing business. To support this, a number of capabilities are being developed to offer the manufacturing business the required level of internal control.

2021-R2

Recall Management

The parent item of contaminated or defective products can optionally be included in the **Product Recall Selections Review** to ensure that all potentially spoiled items are identified.

Although this initially increases the list of items included, filtering options are available to refine the results (typically useful for companies that retain traceability data and don't archive lots). This list can then be used by companies to identify the affected products.

Warehouse Order Policies

A new batching rule (**O - Cover shortages less than min overages up to max**) allows processing of supplies up to the warehouse maximum level, even though the quantity on hand is above the minimum level. This ensures that stock levels can be increased prior to promotions or anticipated demand.

This caters for raising a suggestion when the minimum stock level in the warehouse is greater than the demand. Further supplies can be raised outside of MRP until the maximum is reached, at which time a *cancel* action is raised (i.e. when the supply quantity exceeds the warehouse maximum for that stock code).

This feature is relevant to sites that are not licensed for the ***Inventory Optimization*** modules, but which are using warehouse order policies in MRP.

> This rule can only be used if the **Schedule jobs and purchase orders** setup option is enabled (*Setup Options > Configuration > Manufacturing > Requirements Planning*) and when running the **Requirements Calculation** in legacy mode.

SYSPRO Point of Sale

Administration: Managing inactive users

The management of users in ***SYSPRO Point of Sale*** has been enhanced so that administrators can disable operators no longer in use and exclude them from the **Manage Users** program.

Previously, the **Manage Users** program was unable to distinguish between these users, which compromised system speed when dealing with a large number of operators. Being able to remove inactive users from the **Manage Users** program improves the efficiency when configuring and maintaining operators in ***SYSPRO Point of Sale***.

Administrators can define a user as **Active** within the **Add/Edit User** screen of the **Manage Users** program. A new **Show all users** option (disabled by default) enables administrators to either include or exclude the inactive operators from the list view.

The **Active** option is enabled by default for all existing users. If you then disable this option against a user, the operator won't be able to log into ***SYSPRO Point of Sale***.

> This only applies to ***SYSPRO Point of Sale*** when running in ***SYSPRO Web UI (Avanti)*** and doesn't apply when running in **Silverlight**.

Quoting: Generating quotes for customers on hold

The existing access control in ***SYSPRO Point of Sale*** has been extended within the **Store > Manage Quotes** and **Store Management > Order Maintenance** programs so that you can control operator access to creating and maintaining quotes for customers on hold.

The new **Allow Quotes against Customers that has been placed 'On Hold'** access control setting has been added to the **Functionality** column of the **Access Control Setup** program and is set as `Deny` by default. This enables administrators to define one of the following options:

- **Deny** - Prevents quote generation for customers on hold.
- **Allow** - Allows a customer to be selected for quote creation, regardless of their hold status and without user intervention.

- **Allow (auth req)** - Quotations for customers on hold only allowed when supervisor authorization is provided.

- **Inherit all** - The system checks higher up in the access control hierarchy to determine the function's access.

Once you've configured access control, the system allows quote generation, but blocks the quote from being converted to a sales order until the hold against the customer is released.

> This only applies to *SYSPRO Point of Sale* when running in *SYSPRO Web UI (Avanti)* and doesn't apply when running in **Silverlight**.

Security and compliance enhancements

HTTPS and HSTS security

SYSPRO Point of Sale compliance and security features when running in *SYSPRO Web UI (Avanti)* has been strengthened by being able to run the application using HTTPS, a more secure form of communication.

During the installation, maintenance or upgrading of *SYSPRO Point of Sale* via the **SYSPRO Installer Application**, you can now specify the communication method you want to use.

Owing to its inherent security benefits, HTTPS has become the default and preferred method for running *SYSPRO Point of Sale*.

Single Sign-on

SYSPRO Point of Sale now supports **Single Sign-on** capabilities when running in *SYSPRO Web UI (Avanti)*.

Single Sign-on provides a simple to setup and robust method of using **Microsoft Active Directory (AD)** to control your users. Once configured, it enables a complete single sign-on experience as users are authenticated by **Microsoft Windows** and then simply use their email address to log into *SYSPRO Web UI (Avanti)*.

It means that administrators can use **Microsoft Active Directory (AD)** to add, change, disable and delete operators virtually seamlessly. Any changes to user attributes automatically reflect against the operator without manual intervention.

Benefits

- Increased login security.

- Simplified login process for *SYSPRO Point of Sale* users.

- Convenient administration of users managed by **Microsoft Active Directory (AD)**.

Requirements

- A registered certificate for the *SYSPRO Point of Sale* server is required to run **Single Sign-on**.

- A customer account must be registered with **Azure B2C** and configured with the correct redirect URL back to the specific *SYSPRO Point of Sale* instance.

- *SYSPRO Point of Sale* users must be configured with an email address for the system to identify the correct operator.

Setup

To enable **Single Sign-on** functionality in *SYSPRO Point of Sale* (when running in *SYSPRO Web UI (Avanti)*) add the following tags within the `Web.config` file located in the `\inetpub\wwwroot\SYSPRO8POS_xxxx\SYSPROPOSAVANTI` folder (where `xxxx` is your company code):

```
<add key="ida:IsB2Cauth" value="true" /><add key="ida:Tenant" value="yourcloud.onmicrosoft.com" />
<add key="ida:TenantId" value="yourUniqueTenantId" />
<add key="ida:ClientId" value=" yourUniqueClientId " />
<add key="ida:ClientSecret" value="YourClientSecret" />
<add key="ida:AadInstance" value="https://yourcloud.b2clogin.com/tfp/{0}/{1}" />
<add key="ida:RedirectUri" value="https://yourCompany.com/SYSPRO8POSAVANTI_EDU1/" />
<add key="ida:SignUpSignInPolicyId" value="b2c_1_susi" />
<add key="ida:EditProfilePolicyId" value="b2c_1_edit_profile" />
<add key="ida:ResetPasswordPolicyId" value="b2c_1_reset" />
```

> This functionality doesn't apply when running *SYSPRO Point of Sale* in **Silverlight**.

User experience: Performance improvements

The performance and responsiveness of *SYSPRO Point of Sale* when running in *SYSPRO Web UI (Avanti)* has been improved by speeding up the data binding process and subsequent display of modals and screens.

The *SYSPRO Web UI (Avanti)* framework has been enhanced to allow the file contents to be passed directly to *SYSPRO Web UI (Avanti)*. Previously, when displaying data in a grid, screen or modal in *SYSPRO Web UI (Avanti)*, the system speed was compromised by unnecessary disk usage.

WMS: Missions and Tasks

The **Missions and Tasks** feature lets you create a work-to-list for queuing and moving inventory within a warehouse. This gives warehouse managers greater work allocation control and visibility.

A mission can be created for inventory putaway, sales order pick or cycle count transactions. Once missions and tasks are assigned to the employee or team they can be serviced using the **Missions & Tasks** application in *SYSPRO Espresso* (where operators can then view their tasks from a mobile device) or the **WHM Review Mission Tasks** program.

The system is updated in real time as the stock is physically moved and the task completed. Once all tasks are done, the mission can be completed.

Tariff code application evolution

Tariff codes can be selected at all sales order lines, regardless of the tax configuration defined at company level. Previously, this could only be done if the **EC VAT SYSTEM REQUIRED** setup option was enabled.

Sales Pricing Engine

Pricing structures within SYSPRO have been simplified so that pricing methods can be created and maintained in one place.

Price groups can be linked to a customer, branch, customer class, geographic area or custom form. Pricing rules or lists are then set up per price group and governed by effective dates.

Inventory Bin Query Optimization

The enhanced **Warehouse Bin Query** program provides an easy way to create bin and warehouse transfers.

The bins within the warehouse can be selected from a tree structure. The bin content is displayed in a list view where you can select the ellipses at the **Action** column to create bin and warehouse transfers.

From there the **Inventory Movements** program is displayed where all relevant fields are pre-populated for ease of use. If the **ENABLE FOR PUT-AWAYS** setup option is enabled, you can also create bin or warehouse put-aways.

Flexible consolidated dispatch invoice pricing

Because the price of an item can change after a dispatch is created, a new setup option (**USE SALES ORDER PRICE ON INVOICE**) lets you choose to use the sales order price when consolidating dispatch notes for invoicing instead of defaulting to the original dispatch invoice price.

2021-R1

SYSPRO Installer Application

The **Utilities** panel lets you download all product files (including hotfixes) to your local SYSPRO Deployment folder.

The download process occurs in the background so you can continue using the **SYSPRO Installer Application**, or close the app and leave the download to continue overnight.

> 💡 This is useful as it ensures that you have all the required installation files before proceeding with an install.
>
> SYSPRO partners can also use this feature to download and copy product files to a storage device to save time when installing off-site (typically at a customer site with unstable internet connectivity).

The **Utilities** panel also lets you delete downloaded media files, such as product and hotfix files.

Order Picking in Espresso

The **Order Picking** application has been added to *SYSPRO Espresso*. It lets operators remain on the shop floor to conduct order picking in a quicker and more efficient manner.

The *SYSPRO Espresso* application is equivalent to the **Pick Maintenance**[1] program in the core SYSPRO product and lets you maintain order picks with the following functionality:

- Start, stop, complete and cancel a pick.
- Start, complete and cancel a pick line.
- Complete selected pick lines.

> ℹ️ The **Order Picking** application uses the SO PICK QUERY[2] business object to output pick line information and the SO PICK STATUS CHANGE[3] business object to post the updated pick details.

SYSPRO Point of Sale

Improved Access Control

The existing access control in *SYSPRO Point of Sale* has been extended in the **Manage Orders** program so that you can control an operator's access to the **Invoice** function, regardless of the order's type or status.

[1]Program: SORPPM
[2]Business object: SORQPN
[3]Business object: SORTPS

Previously, this function was accessible except when working with deposit or suspended orders. You can now hide or disable the **Invoice** button by configuring your requirements within the **Access Control Setup** program (available from the **Setup** menu).

> If you previously defined the `<InvoiceOnlyButtonManageOrdersAlwaysDisabled>` element in the `SystemConfig.xml` file to be TRUE, then you need to reconfigure the access to this button using the **Access Control Setup** program after updating to *SYSPRO 8 2021 R1*.

Enhanced searchability

The search capability in *SYSPRO Point of Sale* has been extended to barcodes when searching for stock items.

In addition, when you use the **Add/Edit Line** screen of the **Manage Orders** program, you can now add stock items using a stock code, serial number or barcode (normal or integrated). Previously, this was only possible using stock codes.

You can also define your preferences as follows:

- Default filter options for the **Manage Orders** program can now be defined by barcode or serial number within the **Search Defaults** screens of the **Branch Settings** program.

- Default filter options for the **Search** program can now be defined by barcode within the **Search Defaults** screen of the **Manage Users** program.

> - You can't use serial numbers when adding stock items to a quote.
> - You can only use normal barcodes when searching for stock items, as integrated barcodes are not supported within the search.

Centralized logging for debugging purposes

To simplify the debugging process and reduce the persistence of files to the file system, SQL logging within *SYSPRO Point of Sale* is now recorded within the SQL database.

Previously, each query logged was output to a unique file on disk. From *SYSPRO 8 2021 R1*, it is now logged to the `SQLQueryLogging` database table to ensure that all information relevant to debugging is centralized and located at a single point for reference.

SQL query logging exclusions

To simplify the fault-finding process when SQL Query Logging is enabled, *SYSPRO Point of Sale* and its `SystemConfig.exe` file have been altered to limit the logging of SQL queries executed, to functional queries only.

Previously, when SQL logging was enabled, multiple *miscellaneous* queries were logged which increased the size of the log file and made it difficult to identify queries.

From *SYSPRO 8 2021 R1*, a standard exclusions list is now included in the `SystemConfig.exe` file and allows for the exclusion of certain SQL queries by name. A new XML node `<SQLQueryLoggingExclusions>` has been implemented at parent level and the ChildNodes are named `<QueryNameToExclude>`.

Although you can add further queries to the list if required, the following SQL queries are now excluded by default:

- BranchSqlConnectionForBranchSelect
- OfflineService
- PoSTransactionListToProcessSelect
- SystemSettingsSelect
- UserSessionsCurrentUserStatusSelect

Each query included in the new exclusions list of the `SystemConfig.exe` file is not logged when the `<OutputSqlQueries>` element is set to TRUE.

Improved transaction tracking

The assigning of receipt numbers within the **Account Payments** program has been extended to the **Account Payment Reallocations** program.

From *SYSPRO 8 2021 R1*, receipt numbers are assigned (using the same numbering method as account payments) to both the reversal payment and new payment when you process an account payment reallocation in *SYSPRO Point of Sale*.

In addition, the receipts related to these transactions are now available to view, print or reprint within the **Account Payment Query** program.

Improved governance

To improve governance around account payment re-allocations, you can now enable supervisor authorization for these transactions by configuring the **Allow Account Payment Reallocation** option within the **Branch Settings** program.

Improved performance

The *SYSPRO Web UI (Avanti)* framework for *SYSPRO Point of Sale* has been enhanced to cater for providing data directly to *SYSPRO Web UI (Avanti)*.

This removes the need to first save data to disk - improving the grid layout and data binding speed when running *SYSPRO Point of Sale* in *SYSPRO Web UI (Avanti)*.

Enhanced Flexibility when Maintaining Sales Orders

A new operator preference has been added to the **Sales Order Entry** and **Sales Order Entry Express** programs that lets you indicate that the back order quantity must be updated before the ship quantity when maintaining orders. Previously, the ship quantity was impacted first when you adjusted the order quantity of an existing order line.

The **Adjust b/order when order qty changed** preference is available from the **Options** tab of the **Preferences** pane and requires that the **Automatically put order qty in b/order** operator preference is also enabled.

When you decrease the order quantity, the back order quantity is decreased first, followed by the ship (or reserved) quantity, if there is not enough stock on back order to satisfy the change. Similarly, when you increase the order quantity for an existing line, the additional quantity goes into back order.

Intrastat Reporting

Intrastat reporting now includes freight and miscellaneous charges for dispatches as well as service charges on non-stocked lines for arrivals. This addresses the need for European countries to record and report on Intrastat transactions that occur when goods are purchased from or delivered to other countries within the EU.

Other enhancements include:

- Supplier invoice values can now be used to report on Intrastat arrival transactions (no longer Goods Received Notes).

- The supplementary unit factor and method can be captured for sales orders and purchase orders to ensure recording of the actual quantity invoiced.

- Goods for demonstration purposes and goods on consignment that are transported to a warehouse outside the supplier's country are included.

> Quick Sales, Counter Sales, Point of Sale and Credit Notes are not included in this enhancement.

Improved Organizational Controls

As the landscape changes, businesses need to focus on improving organizational controls and internal controls.

Improved organizational control will become steadily critical as the business changes and grows, and for improved real-time decision making by the leadership team.

2021-R2

Single Sign-on for SYSPRO Avanti in Azure environments

SYSPRO Web UI (Avanti) now supports **Single Sign-on** capabilities when using **Microsoft Azure Active Directory B2C**.

This provides a simple to setup and robust method of using **Microsoft Active Directory (AD)** to control your *SYSPRO Web UI (Avanti)* users.

Administrators can use **Microsoft Active Directory (AD)** to add, change, disable and delete operators virtually seamlessly and any changes to user attributes automatically reflect against the operator without manual intervention.

Once configured, it enables a complete single sign-on experience as operators are authenticated by **Microsoft Windows** via the **Microsoft Azure Active Directory B2C** login page configured for their organization. Operators can then use their email address to log into *SYSPRO Web UI (Avanti)* and engage as normal.

Benefits

- Increased login security
- Simplified login process for *SYSPRO Web UI (Avanti)* users
- Convenient administration of users managed by **Microsoft Azure Active Directory B2C**

Requirements

- A registered certificate for the *SYSPRO Web UI (Avanti)* server is required to run **Single Sign-on**.

- A customer account must be registered with **Microsoft Azure Active Directory B2C** and configured with the correct redirect URL back to the specific *SYSPRO Web UI (Avanti)* instance.

- The relevant tags within the `Web.config` file of the **SYSPRO Avanti Web Service** service must be updated accordingly.

- As AD users are mapped to SYSPRO operators, each operator's configured email address must match their registered email address within the **Microsoft Azure Active Directory B2C** portal.

> The *SYSPRO Cloud ERP* team are responsible for enabling **Single Sign-on** for customers in a *SYSPRO Cloud ERP* environment.

WIP Shift Patterns

The **WIP Shift Patterns** feature lets you establish schedules with different activities for work centers and machines within manufacturing and distribution facilities. Previously, you were restricted to allocating a full day for a specific activity.

Shift patterns can be defined at various levels (i.e. company, site, work center, production line, warehouse or machine) and a work day can have multiple shifts with different start and end times to accommodate shift requirements.

Allocating maintenance times ensures that machine time can't be booked for production time (i.e. avoids different activities coinciding at the same time on the same machine).

Tax Connectors

The **Tax Connectors** feature has been enhanced with the following improvements when using the Tax Connector - Avalara module:

- The filter options of the **Tax Interface Setup** program (which allow you to exclude certain states and countries from submission to **Avalara**) have been extended to filter submissions by product class.

- The process for manually importing tax rates into SYSPRO using the **Tax Rates Import** program has been enhanced by the addition of the following new standardized panes:

- □ **Options** - These options let you define import criteria.

  □ **Details** - This lets you view and edit specific details of the import file.

  □ **Import Results** - This displays a summary of the import results.

- You can now select specific **Customers** and **Sales orders** for which you want to run the report when you use the **Tax Interface Error Log Print** program to view and print any errors that may have occurred during the posting of transactions.

  In addition, the following new columns have been added to the **Tax Interface Error Log Print** pane for ease of reference to information:

  □ **Customer** - This indicates the customer assigned to the transaction.

  □ **Line type/Increasing** - This indicates the status of the transaction.

  □ **Transaction description** - This indicates a detailed description of the error that occurred.

- The **Exemption Certificates Setup** program has been updated so that it is only accessible when the *Tax Connector - Avalara* module is licensed and installed.

2021-R1

WIP by Branch improvements

The **WIP by Branch** feature (which initially introduced ledger integration for work in progress at branch level) has been extended to include separate control accounts at work center level - useful when jobs are in transit during the production process.

A job transfer feature has also been added to let you track the total costs of a job when transferring a job between operations. The job's total cost is transferred to the WIP branch ledger account of the next operation. The WIP branch defined for the work center is used when posting labor transactions.

> If ledger Integration for WIP is by job classification within the WIP branch, then the ledger account for the job classification is used for the job master as well as labor and material allocations.

Streamlined tax integration with Avalara and Vertex

The **SYSPRO 8** architecture has been re-engineered to cater for connecting to cloud-based tax calculation systems. This provides a more sophisticated tax capability that allows you to remain compliant when facing complex tax scenarios in your business.

The following tax connector modules are now available for **SYSPRO Cloud ERP** and **SYSPRO 8 on-premise** (both in **SYSPRO Web UI (Avanti)** and **SYSPRO Desktop**):

- Avalara Tax Connector
- Vertex Tax Connector

Once you obtain the appropriate licensing for these connected services and configure your preferred tax connector, you can establish a direct link between these platforms and SYSPRO using a prebuilt connection that allows for seamless interaction.

SYSPRO sends transaction data to Avalara or Vertex and receives the tax total in return, enabling the following capabilities:

- Calculate tax requirements.
- Record tax transactions in Avalara and Vertex.
- Use the tax transactions recorded in Avalara and Vertex for reporting purposes.
- Record invoices.
- Create, maintain and store Avalara tax exception certificates (only applicable to Avalara Tax Connector).
- Perform other tax-related functions.

Benefits include:

- Simplified sales and use tax processes for all US states and Canadian provinces (from tax determination on transactions to exemption certificate management and tax returns).

- Monthly updates to ensure constant application of current tax rates.

- Analysis capability by state, county and city.

- Enhanced VAT process efficiency (from indirect tax determination to reporting).

- Improved accuracy and reliability of tax calculations at the federal, state, and local levels in the US and Canada.

Digital Tax improvements

The following enhancements were introduced to the **Digital Tax System** for this release:

- You can now capture the **VAT registration number** and **User tax reference** field at company and branch level.

- The **Digital Tax Tool** program lets you design a template with your preferred input and output options while the new **Browse on Digital Tax tool Template** program lets you search and choose an existing template.

- The **Consolidated Tax Return** program lets you identify records that still require submission in the selected financial period, by displaying transactions that have been submitted, not submitted and not printed.

- The **Tax Transaction by GL Allocation Account** report includes the **VAT registration number** and **User tax reference** field.

- The **Digital Tax Tool Status** report displays the status of the tax return for the selected financial period.

- The **VAT at a Glance** program displays the month-to-date printed and unprinted VAT transactions for the current financial year.

AP Group Payments

The **AP Group Payments** feature simplifies the allocation of a single supplier remittance to multiple related suppliers, in a single transaction.

This avoids errors typically associated with the manual preparation of transactions related to secondary suppliers and improves the administrative time taken to process them.

> ℹ️ Processing payments to suppliers across multiple SYSPRO companies is not yet available.

AR Group Payments

The **AR Group Payments** feature simplifies the allocation of a single payment from a customer to multiple related customers, in a single transaction.

This avoids the errors typically associated with the manual preparation of transactions related to secondary customers and improves the administrative time taken to process them.

> **i** Processing payment from customers across multiple SYSPRO companies is not yet available.

The Supply Chain and Connected World
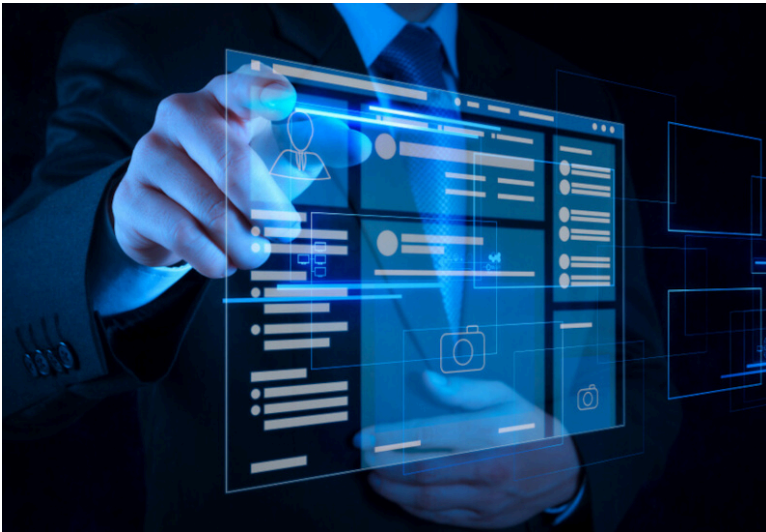
The competitive landscape has changed and each manufacturer increasingly faces a requirement to find new and alternative routes to market, as well as being able to better service their current market.

SYSPRO's product roadmap provides capabilities to improve processes to support optimization of the sales and distribution channel as well as aftermarket support for the sale.

2021-R2

Customer and Supplier Account Management

Online web portals have become the connection point for organizations, and self-service that maximizes the efficiency of interactions is key to empowering users, having connected interactions across channels, and enabling successful organizations.

In keeping with this self-service trend, the **SYSPRO Supply Chain Portal** has evolved to provide SYSPRO sites with enhanced account management capabilities for end-customers and suppliers.

The following functional roles are currently available when using the portal:

- Request for quote (RFQ)
- Supplier Account Management (SAM)
- Customer Account Management (CAM)

> ⓘ These functional roles will be extended as the capabilities of the feature grows.

A SYSPRO company can provide its customers and suppliers with access to information relevant to their relationship and the transactions between them. This forms the basis of self-service access and reduces the administrative burden of sending and requesting specific information through other communication channels.

Benefits

- End-customers and suppliers have direct access to information relating to their account, including transaction details.

- End-customers and suppliers can download invoices, statements (Customer Account Management) and remittance advices (Supplier Account Management) in PDF format, as required.

- Self-service access improves the administrative response time to communicate customer or supplier-specific information.

- The average accounts receivable turnaround time is reduced for the SYSPRO company because of the immediate availability of information to the end-customer.

- The immediate availability of information to the supplier can reduce supplier lead times and increase opportunities to take advantage of any early settlement discounts offered by the supplier.

Security

The portal's security ensures that the correct access is given to each portal user and that your end-supplier or customer can't access any unauthorized information.

This is achieved by each portal user being linked to a specific supplier or customer account from the SYSPRO company and then linked to a functional portal role. When logging in, portal users are presented with a landing page determined by their functional role(s) and includes insights into the relevant information.

> **FOR EXAMPLE:**
>
> **Customer Account Management** functional roles includes insights such as credit standing, average days to pay, receivable days outstanding, outstanding balances, etc.
>
> **Supplier Account Management** functional roles includes insights such as agreed invoice terms, value of goods ordered but not yet received, value of goods received but not yet invoiced, outstanding balances, etc.

Administrators can easily configure security access for each portal user by defining an operator as a portal user; configuring each portal role with the appropriate access; and assigning the correct functional roles to the portal operators.

2021-R1

SMTP email using Office 365

In a server-side reporting environment, the SYSPRO Reporting Services infrastructure caters for using the operator's Office 365 account when sending emails. This provides visibility to the recipients of distributed reports by displaying the address of the operator who emailed the report.

This only applies if a valid Office 365 account is configured and enabled within the **Personal Settings** program (*SYSPRO Ribbon bar > Home > Personal Settings*) and the appropriate Email/SMTP settings for emailing via Office 365 are configured at company or system-wide level (depending on your setup options).

> **i** If the **Use system-wide SMTP details** company setup option is enabled (*Setup Options > Company > General*) then ensure that the correct Email/SMTP settings are configured against the system setup options (*Setup Options > System Setup > Connectivity*).

Information and Intelligence
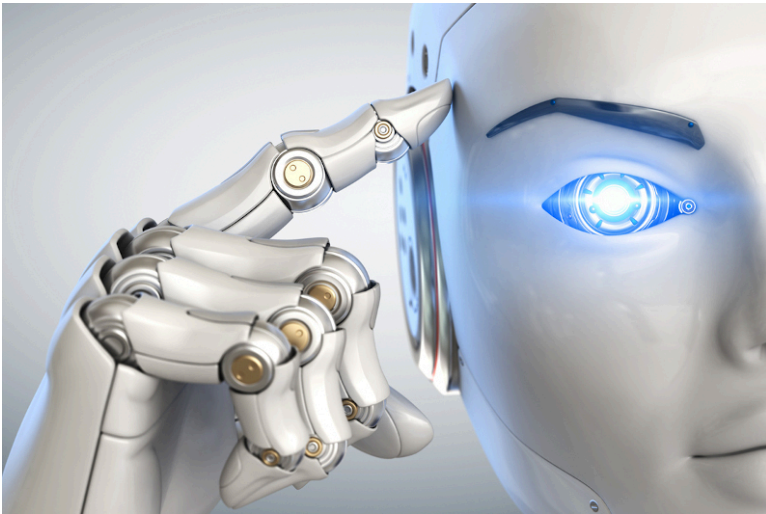
Along with the improved controls, a business needs information to function. Digital Transformation is bringing more and more information to the business, but without the tools to manage all of the extra information it adds no value.

SYSPRO adds the key tools to manage and analyze all of the extra information. Augmented Services translates all of the knowledge into an improved customer experience.

2021-R2

SYSPRO OData Connector

The **SYSPRO OData** feature lets you connect securely to SYSPRO data without direct SQL access and retrieve data for use by third-party applications. It is a future-proof technology that provides a RESTful API to the SYSPRO database and allows OData-compliant applications to query SYSPRO data in a standard and controlled manner.

Although it is available for both on-premise and cloud solutions, **SYSPRO OData** is the only mechanism available when applications need access to SYSPRO data in the **SYSPRO Cloud ERP** environment (the **SYSPRO Cloud ERP** platform doesn't allow direct database access by any application or personnel).

> The **Data Connector - OData** module is currently in BETA status and the connection to **Microsoft SQL Server** is managed manually. The full feature and its functionality is scheduled for release in **SYSPRO 8 2021 R2**.

Accessibility

You can connect to the **SYSPRO OData Service** on an HTTPS endpoint and retrieve live data from the SYSPRO company and system-wide SQL databases (in that SYSPRO instance).

Security

SYSPRO OData is secured via a prerequisite SSL certificate on the endpoint. You can then use your predetermined SQL user credentials to access the underlying SYSPRO SQL table data.

> *i* For **SYSPRO Cloud ERP**, external access is then protected from attack and subject to intrusion detection.

Functionality

You can connect external third-party applications to the **SYSPRO OData Service** for analytics, reporting or triggering requirements. Scalability is supported by best practice guides.

Solution Use

A typical user would connect a product such as **Microsoft Excel** or **Tablaeu** to the **SYSPRO OData** solution, extract data for further analysis or presentation in a visualization tool, and set up schedules to refresh the data.

SYSPRO Business Activity Queries

SYSPRO Business Activity Queries provides a low-code dataset creation tool based on business logic that solves custom dataset requirements across a number of areas of enterprise reporting in SYSPRO.

These include:

- Business insight tiles
- Crystal Sub Reports
- Artificial Intelligence and Machine Learning Dataset Inputs
- Business Intelligence Tools
- SYSPRO Report Writer (via the Data Dictionary)

SYSPRO Business Activity Queries are SQL views that are created in the relevant company databases and (because they are defined in SYSPRO) are recognized as data sources. They provide a view into the business data commonly used during the typical business management process. The queries are built and secured in the core ERP system and then surfaced to users via their enterprise reporting and connectivity solutions.

Benefits:

- Reduced risk of inappropriate access to SYSPRO data.
- Increased flexibility of creating custom linked data, including custom form fields.
- SQL views no longer need to be created outside of SYSPRO (i.e. using a tool like Microsoft SQL Server Management Studio).

- Less reliance on custom SQL objects for data access (for both reporting and integrations).
- Reduced need for SQL knowledge in creating custom datasets.

Business Insights Tile Builder

The **Insight Tile Definition** program simplifies designing, verifying and deploying business insight tiles. New tiles are easily created with the revised program which supports regular text, line and bar chart tiles.

Existing and standard SYSPRO tiles can be copied and subsequently changed. The **Insight Tile Definition** program integrates with the new **Business Activity Query Builder** program to allow easy access to custom SQL views.

SRS Import Report Template

This functionality lets SYSPRO administrators import customized report templates into SYSPRO Reporting Services from any location (i.e. local disk or external hard drive). Previously, this involved a lengthy process of manually copying the relevant report templates in to a specific directory.

Customized report templates are created using the SAP Crystal Reports designer and imported into the SrsReporting table of the system-wide database.

2021-R1

Tax totals for SRS sales order documentation

The **Tax totals for SRS sales order documentation** feature (exclusive to SYSPRO Reporting Services) is designed to comply with the Canadian and US legislation that requires tax total amounts to be shown on sales order documentation. All calculations relating to order and line totals in **Sales Order Entry** and **Point of Sale Entry** are performed using a 3rd party tax system.

Totals you can add when using a 3rd party tax system include:

- Canadian GST and PST
- US State, County and City tax

This feature is available once you have enabled the **Apply USA 3rd party tax in Sales Orders** setup option (*Setup Options > Tax > Sales and Use Tax*).

Power Tailoring and Customization

2021-R2

Operator customization across any machine

To provide operators with the same customization experience across any machine (and in the event of a pod loss in a **SYSPRO Cloud ERP** environment) the following customization settings per operator are now retained in SQL within the SysSettings table of the system-wide database:

- System-wide personalization settings
- Recent Programs
- Favorites
- Other SYSPRO menu personalization

When an operator logs into SYSPRO and the **Persist operator UI settings to SQL** option is enabled, the system checks the SQL system database for any customized operator settings defined and returns these if found. If these settings are not found during the start-up process, the system checks the file system (`\Base\Settings`) and, if found, copies these to the SysSettings table and returns the settings to the SYSPRO instance.

Advantages of storing this data in the database include:

- Centralized access to all related data
- Simplified portability of data and backup strategy
- Improved performance
- Provision for enhanced scalability in future releases

Role customization across any machine

To provide operators within defined roles with the same customization experience across any machine (and in the event of a pod loss in a **SYSPRO Cloud ERP** environment) the following role customizations are now retained in SQL within the system-wide database:

- Role customization files (e.g. `\Settings\Role_xxx`, stored in the SysRoles table)
- Role menu files (stored in the SysMenu table)

When operators within a defined role log into SYSPRO, the system checks the SysRoles and SysMenu tables for any customized role settings or menus defined and returns these if found. If these settings are not found during the start-up process, the system checks the file system (`\Base\Settings`) and, if found, copies these to the respective SQL database tables and returns the saved settings to the SYSPRO instance.

Advantages of having this data available from the database include:

- Centralized access to all related data
- Simplified portability of data and backup strategy
- Improved performance
- Provision for enhanced scalability in future releases

Technology Development

2021-R2

SYSPRO Advanced Browse

The **SYSPRO Advanced Browse** feature consolidates SYSPRO's traditional browse look-ups into a single program, making it easier to administer and customize. The traditional browse look-up programs are typically accessed from the browse icon, or by pressing F9.

> From **SYSPRO 8 2021 R2**, all new programs that require browses default to using the new advanced browse facility which is available for valid key fields on a toolbar, grid or form.
>
> For the traditional browse look-up programs (accessed from the browse icon, or by pressing F9) you will need to enable the **ENABLE ADVANCED BROWSE** option (*Setup Options > System Setup > System-Wide Personalization*) to take advantage of the new advanced browse features.

SYSPRO eSignatures UX Improvements

The architecture of the **Electronic Signatures** system has been re-engineered to simplify and enhance the user experience of configuring eSignatures in **SYSPRO Web UI (Avanti)**.

The functionality of the legacy **eSignature Setup** program has been split into the following new programs (which are accessible both within the **SYSPRO Desktop** and **SYSPRO Web UI (Avanti)**):

- **Electronic Signature Configuration Setup**

  This program lets you enable the **Electronic Signatures** system and create or maintain your eSignature configuration levels and their associated access control.

- **Electronic Signature Transaction Setup**

  This program lets you configure specific transaction conditions against your eSignature configuration levels.

This assists system administrators who prefer to manage their administrative tasks in *SYSPRO Web UI (Avanti)*, as they can now configure the **Electronic Signatures** system using the web UI.

In addition, new import and export functionality has been introduced within the **Electronic Signature Configuration Setup** program that lets you import and export your eSignature configuration levels from one environment to another.

> The **eSignature Setup** program is still accessible via the CTRL+R command and is fully functional in the SYSPRO core product, however this will be rendered obsolete with a later release of *SYSPRO 8*.

SYSPRO Avanti Enhancements

GL Financial Reporting

The **GL XML Report Viewer** program is available in *SYSPRO Web UI (Avanti)* from the **GL Financial Reporting** option of the **Financial Reporting** menu.

This lets you process GL financial reports based on a specific report code and allows for GL reports that have been designed for the XML Viewer to be rendered in the *SYSPRO Web UI (Avanti)* and previewed in PDF format.

Other capabilities include:

- Financial figures within the report include hyperlinks that let you drill down to the applicable account.

- The **Account Transactions** list view lets you query a GL code, post to the applicable account and drill down to transaction level.

- The **Transactions** list view allows you to view journal information and execute the following Zoom functions for a specific source against the journal:

  - General ledger

  - AP Expense Journal

  - AP Expense Journal

  - A/R Cash Posting Journal

  - A/R Invoice Detail

  - Inventory Journal

  - GRN Journal

  - WIP Labor Journal

■ ▫ WIP Part Billing

▫ AP Disbursement

▫ Cashbook Journal

Support Diagnostics

The **Avanti Event Viewer** (accessible from the ⚙ icon on the **Home** page) logs all events and calls to the system so that support personnel can identify and resolve technical problems that may arise.

The **Support Diagnostics** function (accessible from the ⚙ icon on the **Home** page) can also be used to help resolve issues with grid content not populating. Enabling this function retains grid files in the `\Base\Settings\HTMLUX` folder during the run of *SYSPRO Web UI (Avanti)* for the logged-in user. When exiting *SYSPRO Web UI (Avanti)*, these grid files are removed and the **Support Diagnostics** option automatically switched off.

User Interface

The user-interface includes the following improvements for a more intuitive and engaging user experience:

- ■ **To-Do List**

  You can display the **To-Do List** in *SYSPRO Web UI (Avanti)* (which lists activities that require your attention) by selecting the **Gear** icon (⚙) on the **Home** page, followed by the **Enable To-Do List** option.

  Similarly, you can display the **To-Do List** in a web view by launching the **Visual Designer** and adding the **To-Do List Details** grid to your layout section.

- ■ **Customizing Task Dialogs**

  You can customize task dialogs to improve throughput, particularly on transactional screens. These customizations range from removing buttons and changing the default action button, to preventing the dialog from being displayed at all.

  Currently, task dialog customization must be performed in SYSPRO using the **Customize Task Dialogs** program (accessible from the **Administration** tab of the **Ribbon bar**) however, these customizations are also applied when running in *SYSPRO Web UI (Avanti)*.

Centralized System Administration

As part of the continuing process to simplify SYSPRO configuration and consolidate the user interface, administrators can now manage the **Company password** and **Prevent logins** functionality from within the **Setup Options** program (*Setup Options > Company > General*).

This functionality was previously located within the **Company Maintenance** program.

Document printing using third party application

Administrators can now add multiple printer devices that enables the printing of PDF documents using any third-party application. Depending on the application you choose to install, these third party applications dramatically improve print quality issues experienced when using Type 3 fonts and dot-matrix printers. These applications integrate to **SAP Crystal Reports 2016** (used within SYSPRO) and let you silently print a PDF file with **Adobe Acrobat Reader DC** on your client machine.

Previously, SYSPRO required the underlying associated document information before it could print a PDF document. The file previously used to configure specific printer device names (`UserSrsDocumentPrint.txt`) has been replaced by this new functionality.

Considerations:

- This applies to SRS server-side document printing (i.e. your **REPORTING CONFIGURATION** setup option needs to be configured as **Server-side reporting using SQL**).
- **SAP Crystal Reports 2016** is required to leverage the benefits of this enhancement.
- There are various methods that you can use to print your PDF documents:
  - Print using the preview window
  - A forced print using an installed instance of **Adobe Acrobat Reader DC**
  - Opening the document using the Windows Default Viewer. This doesn't apply to all documents, excluding PDFs which are easily printed using the SYSPRO Reporting Host Service and **SAP Crystal Reports 2016** (client-side printing).

Database Optimization: GL and Inventory control records

Inventory and General Ledger control records within the SYSPRO database architecture have been redesigned for greater scalability to allow the independent management of individual key numbers (e.g. registers, journals, etc.). This addresses the need to cater for the locking and, by extension, queuing of processes of the current control tables while a process retrieves and uses the next keys held in these tables.

Benefits

- Greater scalability for high-volume sites
- Less excessive blocks and bottlenecks in high transaction environments

Control records (which have been a core part of the SYSPRO architecture for many years) are used to store certain values that are updated continuously by multiple transactions (e.g. Financial next journal and register numbers, Lowest unprocessed journal numbers, MTD and YTD values per module, etc.). In high-volume environments (with high user activity or high automated transactions) these control records are read and updated constantly and can potentially cause record locks and result in SQL deadlocks and rollbacks.

From **SYSPRO 8 2021 R2**, the next key and next journal columns have been removed from the GenControl and InvCompanyCtl control files and redefined as individual rows in a new set of tables that are defined by module:

- GL register numbers: GenNextKeys

- Inventory journal numbers: InvNextKeys

The next numbers are now allocated in a self-contained SQL transaction by the **COM FETCH NEXT KEY AND UPDATE AUDIT**[1] business object and an audit record is created to track when this number was allocated. The transactional data is then created in a separate SQL transaction and used to update the audit record to indicate that the transaction has been completed.

This prevents record locks by ensuring that the InvCompanyCtl and GenControl records aren't accessed or locked as frequently.

To assist with auditing purposes, the InvNextKeyAudit and GenNextKeyAudit tables can be used for the following:

- Trace the next numbers allocated (where no transaction was created).

- Explain missing transaction numbers in the transactional tables.

In addition, the `Lowest Unprocessed Journal` numbers (used for locating unprinted journals and unposted GL integration records) have been removed from these control records (they were originally introduced to speed up the processing time in C-ISAM environments and have little value in SQL). Using the capabilities in SQL enables SYSPRO to locate unprinted journals and unposted GL integration records quickly and easily.

---

[1]Business object: COMNXK

2021-R1

SYSPRO Avanti Enhancements
User Interface

The user-interface includes the following improvements for a more intuitive and engaging user experience:

- GeoLocation support

  When working with address fields in a web view, you can now use the **Resolve Address** feature to ensure that the customer or shipping address is correct, or the **Map Directions** feature to get directions using Google Maps.

  > ℹ️ You can configure how GeoLocation works within *SYSPRO Web UI (Avanti)* using the **Setup Options** program (*Setup Options > System Setup > System-Wide Personalization*).

- Multimedia object inclusion

  Using the **Visual Designer** or **Customize Application** programs you can now select the **Multimedia** button to add multimedia objects (e.g. images, documents, etc.) associated with key fields.

- Multiple web page handling

  The *SYSPRO Web UI (Avanti)* infrastructure has been enhanced to allow for a new browser tab to be opened for a given URL.

- Simplified interface customization

  When adding a custom form field using the **Customize Application** program, you can now select to automatically add the field to the web view, without having to use the **Visual Designer**.

- Easier program navigation by role

  A **Program List** card that mimics the functionality of the **Avanti Program List** in the hamburger menu has been added to the **Visual Designer** to allow easier navigation of programs by certain user roles.

- Program name and version visibility

  For improved debugging purposes, you can now access the (**Admin Shift+F7 System Information**) program from the **Gear** menu to view the name and version of a program in *SYSPRO Web UI (Avanti)*.

- Quicker grid entry

- Editable grids in *SYSPRO Web UI (Avanti)* that support the notion of automatically adding rows now enable you to paste the contents of your clipboard directly into the grid.

- Help popups & group headings on forms

  To assist you when configuring new or existing setup options within the **Setup Options** program, form fields now include descriptive group headings and you can hover over fields to view Help text for each option.

Enhanced initialization service

The **SYSPRO 8 Avanti Initialization Service** has been enhanced to improve performance and enable more concurrent *SYSPRO Web UI (Avanti)* user sessions.

Increased stability and reduced memory usage

A number of enhancements have been made to increase stability and reduce memory consumption, including:

- The ability to limit the number of *SYSPRO Web UI (Avanti)* instances.

- Improved support for comments in cells.

- Minimal CPU consumption when idle.

- Decreased memory usage per user upon initial login to the home page.

- Increased robustness when handling rapid data entry in data grids (specifically to prevent data corruption in grid rows).

Reduced file system persistence

The footprint on the file system has been reduced by moving non-static data (e.g. setting files) to the SQL database.

When you enable the **PERSIST OPERATOR UI SETTINGS TO SQL** setup option (*Setup Options > System Setup > System-Wide Personalization*) the `ADMPRO.DAT` indexed file is converted to the AdmProControl table in the system-wide database and thereafter any records are stored in this table. The `ADMPRO.DAT` file contains information about custom fields, table master and scripted fields that have been added to forms.

App store plugin

An App Store plugin has been developed that allows you to activate or deactivate SYSPRO applications in *SYSPRO Web UI (Avanti)*. The `SYSPRO.AvantiAppStore.Avanti.Plugin.dll` plugin is accessible from the hamburger menu.

User Interface changes

System-wide Personalization/Setup Options

The previous release outlined the consolidation of all the options from the **System-wide Personalization** program to the **Setup Options** program.

At the time, you could still run a standalone version of the **System-wide Personalization** program (i.e. IMPFRB) from the SYSPRO Ribbon bar or using the **Run a Program** function (CTRL+R).

From the **SYSPRO 8 2021 R1** release, this program is no longer available and all settings must be managed from within the **Setup Options** program (*SYSPRO Ribbon bar > Setup > Setup Options > System Setup*):
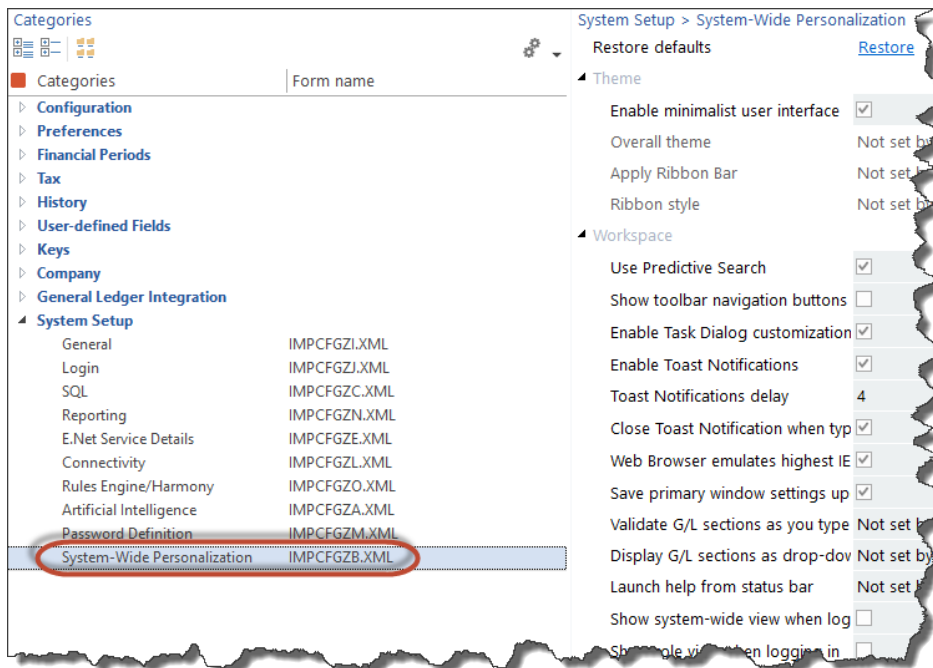
Reduced file system usage

As part of the journey to reduce file system persistence, when running *SYSPRO 8 on-premise* you can opt to retain the following RTF and CMS data in the SQL database (instead of the file system):

- RTF notepad documents attached to entities

- CMS Activity body RTF documents

- CMS Activity attachments

- CMS Organization lists

> ℹ This functionality is available from the new **Migrate Files To SQL** program (*Program List > Administration > General Setup*) that lets you migrate these files to your SQL database (and vice versa). You can also run the program from the **Migrate Files to SQL** option from the **Functions** menu of the **Setup Options** program.

> ℹ You can migrate these files to your SQL database and vice versa using the **Migrate Files To SQL** program (*Program List > Administration > General Setup*).
>
> Alternatively, you can access this program via the **MIGRATE RTF FILES TO SQL FROM FILE SYSTEM** or **MIGRATE RTF FILES FROM SQL TO FILE SYSTEM** hyperlink against the **RTF AND CMS FILES IN SQL** option in the **Setup Options** program (*Setup Options > System Setup > System-Wide Personalization*). The name of this hyperlink changes depending on the current state of your file storage.

Advantages of moving this data from the file system to the database includes:

- Centralized access to all related data
- Reduction of file system usage
- Simplified portability of data and backup strategy
- Improved performance
- Provision for enhanced scalability in future releases

SQL Optimized SRS Document Printing

During the ***SYSPRO 8 2020 R2*** release, the *custom* SRS Document Print XML control files were migrated to **Microsoft SQL Server** as part of the initiative to reduce file system usage.

Continuing on this journey, the setup and printing processes for SRS Document Printing is now optimized to reduce file persistence and address the overhead of loading the control information into memory when using SRS Document Printing.

The *standard* SRS Document Print XML control files and templates are now loaded into a set of three global SQL temporary tables for each instance of SYSPRO as they are required:

- Standard document types
- Standard document samples
- Available archive fields

In addition, the SRS Document Print programs that read the control files are now SQL-optimized for faster retrieval and updating of data. This improves performance, eliminates the use of in-memory collections and reduces the scope of resource locks.

> The scope of the resource lock is now reduced to only lock the document type that is being maintained and the document that is being maintained or designed (i.e. multiple users can now maintain different document types and different documents at the same time.

Licensing Changes

SYSPRO's licensing system has been extended for both **SYSPRO 8 on-premise** and **SYSPRO Cloud ERP** sites.

> The **e.net System Manager** is required to access these new modules.

SYSPRO Ken the BOT

The BOT infrastructure and technology (available as an early adopter product for the past few **SYSPRO 8** releases) is now a purchasable, licensed module.

Tax Connectors

The following modules are now available for licensing to run in **SYSPRO Web UI (Avanti)** and the core **SYSPRO 8** product:

- Avalara Tax Connector
- Vertex Tax Connector

Enhanced Diagnostic Capabilities

To assist service personnel in providing speedy resolutions, the diagnostics capability of **SYSPRO 8** has been extended to record a log of identified problems in SQL Server for current and future analysis. A *Black-box* capability has also been introduced to record what was happening on a system prior to failure. Recording the information in SQL is vital for the **SYSPRO Cloud ERP** offering where the file system cannot be used to persist information.

SYSPRO Run Time Errors

When the SYSPRO Run Time System (RTS) detects a problem, diagnostic files are now written to the `\Work\Diagnostics` folder using a naming convention that includes the date and time. The current contents of the black box are also appended to the existing log, providing a trace of the events leading up to the RTS error.

SYSPRO64.DLL exceptions & Client-server failures

A single log file per exception or message is written to the `\Work\Diagnostics` folder instead of all exceptions or messages being concatenated into a single file. This simplifies the SQL Server handling of log files on an individual basis and improves the performance during the upload process. It also lets you check each exception or message as an individual record in the AdmDiagDetail table.

Micro Focus unhandled exceptions

If an unexpected error occurs in the underlying run time when you log into SYSPRO, the system first verifies whether the `mfdebug.log` file exists in the `\Base` folder before moving it to the `\Work\Diagnostics` folder. The system then creates the new `mfdebug.log` file for the current unhandled exception in the `\Base` folder.

This effectively retains a record of all exceptions instead of just the last example (previously, the original file was overwritten by a subsequent unexpected error).

SYSPRO Cloud ERP Service Accounts

The introduction of Service Accounts in **SYSPRO Cloud ERP** aims to provide controlled access for selected SYSPRO personnel and partners to assist with various support related tasks like implementation, system configuration and training.

SYSPRO Cloud ERP administrators can now designate an operator as a service account, assigning the email address of the support person to the account (the email address is the unique identifying attribute used as part of the cloud authentication).

Although the service account operator can access the **SYSPRO Cloud ERP** environment without affecting the Named User licensing, the local site administrator retains full control over the account (i.e. the service account is treated as a regular user and all the standard access permissions, logging and auditing capabilities are available). These service accounts have no effect on **SYSPRO 8 on-premise** sites.

To implement this feature, the account status of the operator must be enabled within the **Operator Maintenance** program (i.e. the **Service account** option must be enabled), as well as the **SYSPRO Cloud ERP** Active Directory (managed by the **SYSPRO Cloud ERP** team).

SRS Dynamic Connection String for third-party reports

New customization capabilities in **SYSPRO Reporting Services** allows the SYSPRO company database connection string to be dynamically set at run-time when processing third-party SRS reports. This effectively allows the same report to be used across multiple companies.

Whereas standard SRS reports in SYSPRO are typically driven by business objects that query data from the company database to which you are connected, third-party SRS reports (such as Crystal) were designed using a specific data source connection that was fixed per report. In the past, to run the same report in all companies, you had to copy the report to each company and configure the connection string for each report, for each company.

From **SYSPRO 8 2021 R1** there is a new **Use current company database for ODBC data** option available within the **SRS Report Control**).

When processing third-party SRS reports, this option allows the **SYSPRO 8 Reporting Host Service** at run time to dynamically update the connection string to the database that you are currently logged into.

If you then switch SYSPRO companies and run the same report, the data source automatically points to the currently logged-in company database for which you are processing the report. This effectively reduces the burden on report management and maintenance across multiple companies, as the same single Crystal report can now be used across multiple companies.

Considerations:

- This option uses the credentials configured against the **SRS REPORTING DATABASE CONNECTION** setup options (*Setup Options > System Setup > SQL*).

- This option is configured per report and applies to any third-party report developed using the ODBC (RDO) connection (including sub reports attached to standard SYSPRO reports).

- The report control file is defined at system-wide level. Therefore, when enabled, it affects reports that have been defined at system, company, role, group or operator level.

- This only applies to SRS Report Printing (server-side and client-side) and has no effect on SRS Document Printing.

Integration Support
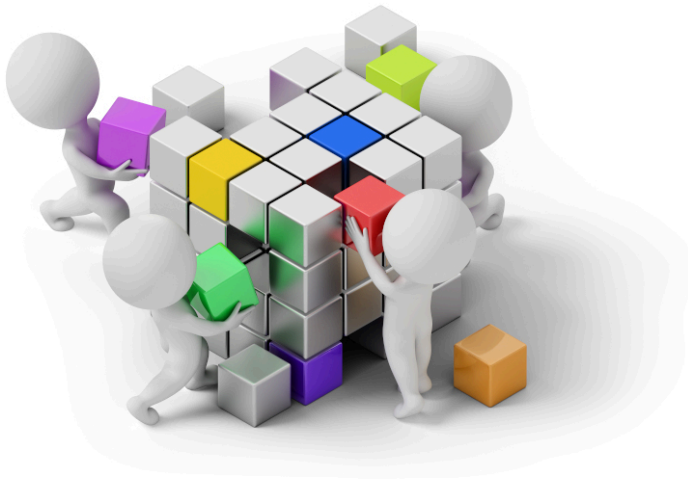
2021-R2

Business Objects
Setup Objects

- The **BOM PRODUCTION LINE MAINTENANCE**[1] business object lets you add, change and delete production lines.

- The **BOM MULTIPLE SHIFT ALLOCATION**[2] business object lets you add, change and delete shift allocations.

- The **BOM SITE LOCATION MAINTENANCE**[3] business object lets you add, change and delete site codes.

- The **BOM SHIFT DETAIL SETUP**[4] business object lets you add, change and delete shift details.

- The **BOM SHIFT HEADER SETUP**[5] business object lets you add, change and delete shift code records for the BomShiftHdr table.

- The **SO PRICE LIST DETAIL MAINTENANCE**[6] business object lets you create price list detail records.

[1]Business object: BOMSPL
[2]Business object: BOMSSA
[3]Business object: BOMSSC
[4]Business object: BOMSSD
[5]Business object: BOMSSH
[6]Business object: SORSPD

- The **SO PRICING ENGINE PRICE GROUP SETUP**[1] business object lets you create price group records.

- The **SO PRICE LIST HEADER MAINTENANCE**[2] business object lets you create list price header records.

- The **SO PRICING ENGINE PRICE GROUP RULES SETUP**[3] business object lets you create price group rule records.

- The **WHM MISSION TEAM MAINTENANCE**[4] business object lets you allocate a mission to a team.

- The **WHM MISSION TEAM EMPLOYEE MAINTENANCE**[5] business object lets you add, change or delete employees that form part of the teams to which missions can be allocated.

- The **TEAMS MAINTENANCE**[6] business object lets you add, change and delete teams that can be allocated to missions.

Query Objects

- The **AP CHECK AND REMITTANCE FORMAT QUERY**[7] business object is used for online SRS printing and lets you query AP check and remittance format information for all document types against each bank code.

- The **AP CHECK/REMITTANCE DOCUMENT QUERY**[8] business object is used for online SRS printing and lets you query AP remittance format information against a single supplier.

- The **SHIFT PATTERN QUERY**[9] business object caters for the creation of the **BOM Shift Pattern Report**.

- The **COM QUERY ODATA OPERATORS**[10] business object lets you query OData operator information (e.g. operator code, name and credentials).

- The **SO PRICE GROUP QUERY**[11] business object lets you query price group and price group rule information.

- The **SO PRICING PRICE QUERY**[12] business object lets you query the best price details per stock code (and other prices available in a price group) for a specific customer.

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[1]Business object: SORSPG
[2]Business object: SORSPH
[3]Business object: SORSPR
[4]Business object: WHMSMT
[5]Business object: WHMSTE
[6]Business object: WHMSTM
[7]Business object: APSQD1
[8]Business object: APSQDP
[9]Business object: BOMQSP
[10]Business object: COMQOD
[11]Business object: SORQPG
[12]Business object: SORQPP

- The **SO Pricing Best Price Query**[1] business object lets you calculate the best price for a given stock code and price group.

- The **SO Price List Query**[2] business object lets you query a price list, with the option to see all associated stock codes and calculated prices.

- The **Quantity Conversion for Multiple UOM**[3] business object lets you manage quantity conversions for multiple units of measure, and return the converted quantity for stocking, alternate and other unit of measures.

- The **WHM Completed Missions Query**[4] business object lets you query all completed missions and tasks.

- The **WHM Mission Query**[5] business object lets you query a mission, and the tasks associated with that mission, from the WhmMission table.

- The **WHM In Progress Missions Query**[6] business object lets you query all missions from the WhmMission table that are still in progress (i.e. missions that are not canceled or completed).

- The **WHM Missions Query**[7] business object lets you query missions in the WhmMissionTasks and WhmMission tables and displays their status and source (i.e. picking, cycle counting or inventory putaway). It is called from the **WHM Review Mission Tasks** program and loads the results in the list view.

- The **WHM Mission Team Employees Query**[8] business object lets you query any single input team operator from the WhmTeamEmployees table.

- The **WIP Balance Query**[9] business object is part of a suite of business objects that lets you quickly identify whether there are imbalances between Work in Progress tables.

- The **Job Nesting Query Business Object**[10] business object lets you query job nests according to a range of filters (e.g. job, job nest, nest status, parent stock code and work center. You can optionally choose to view a summary of the data, or a detailed query that shows all the information regarding the nests.

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[1]Business object: SORQPQ
[2]Business object: SORQPR
[3]Business object: SORQUM
[4]Business object: WHMQCM
[5]Business object: WHMQMS
[6]Business object: WHMQPM
[7]Business object: WHMQSM
[8]Business object: WHMQTE
[9]Business object: WIPQBL
[10]Business object: WIPQJN

Transaction Objects

- The **VESSEL MAINTENANCE**[1] business object lets you add, maintain and delete LCT vessels.

- The **PO STATUS CHANGE**[2] business object lets you change the status of a purchase order.

- The **WHM MISSION PURGE**[3] business object lets you selectively purge complete or canceled missions and tasks from the WhmMission and WhmMissionTasks tables. It is run from the **WHM Mission Purge** program.

- The **WHM MISSION COMPLETE/CANCEL**[4] business object lets you complete or cancel a putaway (e.g. a warehouse or bin transfer) and is called from the **WHM Review Mission Tasks** program.

- The **WMS PUTAWAY ENTRY**[5] business object lets you add putaways to the WhmMissionTasks and WhmMission tables.

- The **WHM ALLOCATE EMPLOYEE/TEAM**[6] business object lets you allocate employees and teams to a task or a mission.

Utility Objects

- The **WHM MISSION AND TASKS ENTRY UTILITY**[7] business object lets you add and change the status of missions and tasks created.

[1]Business object: PORTMA
[2]Business object: PORTOS
[3]Business object: WHMT01
[4]Business object: WHMTCM
[5]Business object: WHMTPE
[6]Business object: WHMTTM
[7]Business object: WHMUMM

2021-R1

Business Objects

Setup Objects

- The **AP SUPPLIER GROUP MAINTENANCE**[1] business object lets you define primary and secondary suppliers for payment against a supplier group. Records are written to the ApSupplierGroup table.

- The **AR CUSTOMER GROUP MAINTENANCE**[2] business object lets you define primary and secondary customers for payment against a customer group. Records are written to the ArCustomerGroup table.

- The **INVENTORY WAREHOUSE BIN MAINTENANCE**[3] business object lets you add, update and delete fixed bins.

- The **PORT/AIRPORT MAINTENANCE**[4] business object lets you create ports and airports that are used for Instrastat transactions.

- The **REGIME CODE MAINTENANCE**[5] business object lets you maintain regime codes (used to identify and report on Intrastat transactions) stored in the SalRegimeCode table.

Query Objects

- The **AP GROUP SUPPLIER CASH REQUIREMENTS**[6] business object lets you query cash requirements for a supplier group.

- The **AP LIST OF SUPPLIER GROUPS QUERY**[7] business object lets you query records held against the ApSupplierGroup table in order to establish the primary and secondary supplier relationships for processing group payments.

- The **AR CUSTOMER GROUP QUERY**[8] business object lets you query customer groups in the ArCustomerGroup table.

- The **AR GROUP PAYMENT RUN REPORT**[9] business object lets you query customer group payment records to establish which payments have been made.

[1]Business object: APSSSG
[2]Business object: ARSSCG
[3]Business object: INVSBW
[4]Business object: SALSPT
[5]Business object: SALSRG
[6]Business object: APSQGR
[7]Business object: APSQSG
[8]Business object: ARSQCG
[9]Business object: ARSQGP

- The **ASSET BALANCE HEALTH CHECK**[1] business object lets you report on and create log files of integrity errors detected within *Assets* module tables, without actually updating any values.

- The **COM SAMS EXTRACT QUERY**[2] business object lets you collect system configuration information from a site and upload it to a cloud service.

- The **DIGITAL TAX TOOL STATUS**[3] business object lets you report on the reprint flags added to the AdmTaxReturn table for the **Digital Tax System**. It compiles a summary or detailed view on whether transactions have been printed or submitted based on the DttStatus and DttSubmitted columns of the AdmTaxReturn table.

- The **SO CUSTOMER BALANCES QUERY**[4] business object forms part of a suite of business objects that lets you identify imbalances between the active orders in SYSPRO and records held in the ArCustomer table.

- The **WIP BRANCH COSTS QUERY**[5] business object lets you query the total material costs, total labor costs, and total hours booked for each WIP branch and job.

- The **BRANCH TRANSFER QUERY**[6] business object lets you query WIP branch transfer transactions recorded in the WipBranchTransfer table for jobs are processed at different WIP branches.

- The **WIP JOB COSTS PER WIP BRANCH QUERY**[7] business object lets you calculate the total material costs, labor costs and hours booked per job and WIP branch, using the job detail information from the WipJobPost table.

- The **TRANSFER JOB TO WIP BRANCH**[8] business object lets you transfer a job to another WIP branch that is used against one of the job operations.

Transaction Objects

- The **ASSET BALANCE HEALTH FIX**[9] business object lets you report on, fix, and create log files of any integrity errors detected within tables of the *Assets* module.

- The **CSH DEPOSITS AND WITHDRAWALS**[10] business object lets you enter details of deposits and withdrawals, change existing transactions, reconcile or unreconcile transactions, and process inter-bank transfers in Cash Book. It can also be used to process foreign currency transactions through either a local or foreign bank account.

[1]Business object: ASSQBF
[2]Business object: COMQAS
[3]Business object: IMPQDS
[4]Business object: SORQCB
[5]Business object: WIPQBC
[6]Business object: WIPQJB
[7]Business object: WIPQJC
[8]Business object: WIPTTB
[9]Business object: ASSTBF
[10]Business object: CSHTWD

- The **BOM COST IMPLOSION**[1] business object lets you calculate and update costs using SQL-only statements (instead of temporary files). The business object is only used if you uncheck the **RUN COST IMPLOSION IN LEGACY MODE** option of the **Cost Implosion** program.

- The **TAX INTERFACE**[2] business object interfaces with the Avalara and Vertex tax systems.

- The **STOCK TAKE CANCELLATION**[3] business object lets you cancel a stock take and clear the stock take tables. It is called when you run the **Stock Take Cancellation** program from the *SYSPRO Desktop* version.

- The **STOCK TAKE SELECTION**[4] business object lets you select the stock codes you want to include in a stock take count. The selection of stock items to count is the first step in the stock take process.

- The **SO CUSTOMER BALANCE FUNCTION**[5] business object forms part of a suite of business objects that lets you correct imbalances between the active orders in SYSPRO and records held in the ArCustomer table.

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[1]Business object: BOMTCI
[2]Business object: IMPTAT
[3]Business object: INVT6C
[4]Business object: INVT60
[5]Business object: SORTCB

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