Why it's Time to Migrate to SYSPRO on SQL Server

SYSPRO™
Simplifying your Success

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Why it's Time to Migrate to SYSPRO on SQL Server

Today, more than ever, companies need an ERP solution that is based on the latest technologies.

A while back, with SYSPRO 6, we re-engineered our ERP to provide a solution that allowed customers to become more agile and connected in the way they did business. And prior to that, we used a simple file format called ISAM (sometimes known as C-ISAM). However, the more industry moved towards cloud, mobilization and consumerism, the more this format showed its limitations.

Which is why SYSPRO 6 was one of the first ERP solutions to adopt Microsoft SQL Server for database management.

Because it was ahead of its time, in the beginning SYSPRO 7 supported both data formats – the legacy ISAM format and SQL Server. However, as the advantages of SQL Server became increasingly apparent, most of our newer products were only designed to work on SQL Server, including:

- SYSPRO Espresso – our mobile offering
- SYSPRO Workflow – our workflow offering
- SYSPRO Analytics – our business intelligence offering
- SYSPRO Harmony – our machine learning and collaboration offering
- Plus, many newer features developed since SYSPRO 7 are 'SQL Server only'.

What Exactly is Microsoft SQL Server?

It is a cloud-based database management system that provides enterprise-strength data integrity, security, scalability, availability, and performance that can be accessed by all popular querying and reporting tools.

In today's competitive business world, we require ever more scalability, higher availability with less planned downtime for maintenance, and enterprise-strength data integrity – all while offering excellent performance. Only by running SYSPRO on SQL Server can all of these requirements be fully satisfied.

Data Integrity

SQL Server is responsible for ensuring that the database structure – and the data it contains – is managed with absolute integrity. This includes ensuring that indexes are managed, transactions are handled and data constraints are honored. It can also fine-tune itself to improve its own performance.

Application-defined transaction processing ensures that only complete transactions are applied to the database. In the event of a power, network, hardware, software, or any other failure, any partially-completed transactions are rolled back, ensuring that either the whole transaction or none of the transaction is posted to the database.

SQL Server can be set up to automatically perform backups, compacting, reorganizing and replicating data, as well as running scripted jobs and stored procedures. The majority of these jobs can be performed while the system is in use, providing higher availability and reduced planned downtime.

Availability

Application downtime results in loss of revenue, decreased customer satisfaction and damage to the credibility of your company. SQL Server supports mission-critical applications with the highest level of availability.
Backups can be performed while the system is in use. It also allows backups to be performed frequently, meaning virtually no data loss even in the event of a catastrophic system failure.

Scalability

SQL Server is designed for scalability, so your system can easily be enlarged as your company grows – with almost no effect on performance. With an appropriate SQL Server Edition and resourced server, SYSPRO can scale to handle the largest enterprises.

Self-tuning

Self-tuning means that the database can manage itself, freeing you to focus on strategic business decisions instead of micromanaging technology. Once the system has been set up with appropriate parameters and automated jobs, the system only requires periodic oversight to ensure it is running optimally.

Data Accessibility

Although SYSPRO provides a large number of standard queries and out-of-the-box reports (all of which can be customized) there is occasionally a requirement for a customer query or report accessed directly from one or more of the SYSPRO tables. Assuming that the appropriate justification and protocols have been agreed upon, it is relatively easy to provide fast and efficient access directly from the SQL Server database.

Data Retrieval

With appropriately executed instructions, SQL Server can retrieve data matching your selection criteria and sequence it easily and efficiently. For example, if you want all customers with a balance over $1000, then SQL Server can process the Balance column against the Customer table and only return the relevant rows.

Database Maintenance

SQL Server comes with an extensive list of powerful tools for maintaining and administering the database, most of which can be performed while the system is in use. SYSPRO contains a SQL health check, which covers: Tables, Columns, Indexes, Foreign Keys and Custom Forms. Missing components can be added without special SQL Server skills.

Database Customization

SQL Server provides significant customization capability. This includes the following capabilities:

- SQL triggers can be applied to standard SYSPRO tables to provide improved integration to third-party systems or notification capabilities
- Custom or computed columns can be applied to standard SYSPRO tables, providing enhanced querying and reporting capabilities
- SQL views can be created from standard SYSPRO tables, allowing you to simply and safely provide limited access to standard SYSPRO tables and/or provide simpler access when joining more than one table
- Custom tables can be added to the standard SYSPRO database, providing additional storage of virtually any type of user-defined data.

Total Cost of Ownership

It only takes one system crash – and the loss of availability while the system is being restored – for the cost of SQL Server to be justified. Other benefits include:

- Data integrity – you can trust the data to be valid at all times
  - Data constraints help ensure correct data types are applied
  - Indexes ensure uniqueness of keys and other data
  - Transactions are always completely applied
- Frequent backups including while system is in-use
- Self-managing and auto-tuning capabilities
- Tight integration with the Windows environment
- Easy-to-use utilities to help set up security and perform ad-hoc tasks.

How ISAM Compares to SQL

The following lists some of the key differences between SYSPRO sites running on ISAM and SQL Server:

	ISAM	SQL Server
Data Integrity	In the event of a failure, the two files may become out of sync. Could cause looping and require a re-index rerun. Can only be done when the system is free. Possible that some data is written to one file and not the other. Due to these relatively common problems, most ISAM systems require periodic (often daily) processes to re-index and balance corrupted data, resulting in excessive downtime.	Automatically managed indexes and transaction processing reduces all these problems to virtually zero.
Maximum File Size	Maximum ISAM file size of 4GB per file. For smaller companies this data limit is often not a problem; however as your company grows in size, or you elect to retain more data for reporting and analysis purposes, you run into this file size maximum.	Server can use tables of any size, limited only by your server configuration.
Data Accessibility	Sites wishing to query or report using direct access to ISAM files are required to purchase ODBC drivers and use a catalog. This can prove to be relatively slow and less efficient when accessing large files.	Provides fast and scalable access to SYSPRO tables. You do not need to purchase any special drivers to access the data in SQL Server. Ensures appropriate security has been considered and applied.
Data Maintenance	During all maintenance tasks, ISAM users must log off for maintenance.	Performs these tasks while the system is in use. Alternatively, these tasks are considerably reduced and/or run significantly quicker than the ISAM equivalent, leading to substantially less planned downtime. ISAM sites cannot run various SYSPRO features, including: SYSPRO Espresso; SYSPRO Workflow; SYSPRO Analytics; SYSPRO Harmony; and selected business features added since SYSPRO 7 was initially released. All of these features are fully supported when using SQL Server.

If you are serious about staying ahead of the game, we strongly suggest that you use SYSPRO on SQL Server. Remember that many new features are being released that only run on SQL Server. If you are currently running SYSPRO on an ISAM-based system, please contact your local SYSPRO partner to enquire about upgrading.

About SYSPRO

Established in 1978, SYSPRO is an industry-built Enterprise Resource Planning (ERP) solution designed to simplify business complexity for manufacturers and distributors worldwide. SYSPRO provides an end-to-end business solution for optimized cost control, streamlined business processes, improved productivity, and real-time data analysis for comprehensive reporting and decision-making.

SYSPRO is highly scalable and can be deployed either in the cloud, on-premise, or accessed via any mobile device.

What sets SYSPRO apart is an unwavering, sustained focus on the manufacturing and distribution sectors. Combined with a practical approach to technology and a passionate commitment to simplifying business processes, SYSPRO dedicates itself to the success of its partners and customers alike.

SYSPRO applies its resources to the advancement and improvement of the complex and changing needs of its customers.

Recognized as a leader in customer service, SYSPRO has one of the highest customer retention rates in the industry.

SYSPRO's intuitive product features, business intelligence capabilities, and easy deployment methodology are unmatched in the marketplace. The depth of software functionality and targeted industry knowledge makes SYSPRO an excellent fit for a number of select manufacturing and distribution industries, including food and beverage, machinery and equipment, electronics, fabricated metals, automotive, and many more.

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