

Developer Considerations: SYSPRO e.net Solutions

SYSPRO 8 Technical Article

Last Published: March 2021



SYSPRO Help and Reference

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INTRODUCTION

Since the initial development of **SYSPRO e.net Solutions** around 2002, any application developed using e.net Solutions would work unchanged, even if an end-user subsequently migrated to a later version of SYSPRO.

This version independence is an important component in allowing third party developers to create applications and ship them without worrying about future upgrades.

For example:

If a third-party developer created an application to perform the following steps:

- Login to e.net Solutions and return a session ID
- Call the 'Add customer' business object (ARSSCS) passing the session ID and a specific XML string
- Verify any returned exception and/or XML
- Logout using the session ID

This code would work unchanged on all versions of SYSPRO from when it was first developed indefinitely into the future.

This concept has not changed and will continue to be supported into the foreseeable future.

Entry Points

ENCORE.DLL

When e.net Solutions was initially released, our product was called **Encore** and the entry point into our system via e.net was an assembly called **ENCORE.DLL**.

Third party developers who wished to use e.net 'referenced' **ENCORE.DLL**.

This allowed them to invoke various methods to query data, maintain items or post transactions.

ENCORE.DLL was a 32-bit application.

E.NET SOLUTIONS WCF SERVICE

During 2011 (**SYSPRO 6.1**), the SYSPRO development team developed a communication service gateway to e.net Solutions that used the Microsoft WCF (Windows Communication Foundation) framework for building service-oriented applications.

In effect, an application communicated with the service endpoint providing all the following as before:

- Login
- Querying
- Maintenance
- Transaction
- Logoff methods

There are many benefits to third party applications using the e.net Solutions Service rather than referencing **ENCORE.DLL** directly. These include:

- **Improved memory management**
The e.net Solutions Service included code to ensure optimal memory management.
- **Improved threading**
The e.net Solutions Service included code to handle multi-threading effectively. Without this, third party developers would typically be reduced to using a single thread, leading to bottlenecks in higher throughput situations.

- **Improved process decoupling**

Accessing e.net Solutions via a service decouples the application from having to run on the SYSPRO application server.

This results in an improved ability to manage multi-server and remote client connections to e.net (the alternative, such as DCOM, typically was difficult to setup and administer).

- **Improved start and restart management**

The e.net Solutions Service can be stopped and restarted if there are problems with the e.net environment.

Previously this could require a server restart.

- **Application architecture independence**

The e.net Solutions Service is 64-bit – all applications (whether 64-bit or 32-bit) can use the service endpoint.

Previously only 32-bit applications could reference **ENCORE.DLL** directly.

Once the e.net Solutions Service was released, many third-party applications were quickly changed to use the service endpoint rather than reference **ENCORE.DLL** directly.

This provided improved flexibility, scalability and performance as mentioned above.

SYSPRO 8

SYSPRO 8 is the latest version of SYSPRO ERP and provides:

- Improved performance and scalability
- A new browser interface (SYSPRO Avanti)
- Focus on SQL Server for enterprise strength, data integrity, security, and administration

ENTRY POINT CHANGES

The SYSPRO 8 Server software is completely 64-bit, providing improved memory scalability and performance.

Thus **ENCORE.DLL** is no longer available and 32-bit applications can no longer reference **ENCORE.DLL** directly.

WHAT DOES THIS MEAN?

For SYSPRO 8, all applications that previously referenced **ENCORE.DLL** must be recoded to reference the e.net Solutions Service endpoint.

This is typically a relatively trivial change and once done allows your application to work with any version of SYSPRO that supports the e.net Solutions Service.

SYSPRO 8 E.NET LOAD BALANCER SERVICE

In addition, for SYSPRO 8, your service endpoint can be directed to the **e.net Communications Load Balancer Service**.

This provides even higher scalability, more reliability and improved isolation between processes and threads.

SYSPRO 8 BENEFITS

In summary, there are several benefits to ensuring that all applications using e.net use the newer communication technology, including:

- SYSPRO 8 includes an **e.net Communications Load Balancer Service**. This is an improved version of the e.net Solutions Service providing multiple worker processes to provide enhanced scalability and isolation between processes.
- SYSPRO 8 is a 64-bit product and 32-bit applications that previously referenced **ENCORE.DLL** would never be able to reference SYSPRO 8 components directly. By referencing the service endpoint, the 'bitness' of your application is decoupled from SYSPRO.
- By all developers using the **e.net Communications Load Balancer Service** we can provide a greater range of enhancements to SYSPRO 8 in future. Until now some enhancements would have required each, and every, developer to modify their applications. This was not practical and so limited our enhancement capability.

It should be repeated that, apart from ensuring that your application uses the e.net service endpoint, any application that has been developed to use e.net Solutions classes and methods will continue to work unchanged.



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