



Quick Start Guide

Key Differences Between KEPServerEX V4 and V5

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1. Overview

This guide intends to provide a brief description of the differences between KEPServerEX V4 and KEPServerEX V5. For more information on features and options, refer to the KEPServerEX V5 help file.

2. Changes Made in KEPServerEX V5

The most important change made in KEPServerEX V5 is the separation of the Configuration and the Runtime: this allows users to create and edit projects online or offline. The Runtime is now administered through a separate administration utility. To access the Administration menu, right-click on the KEPServerEX icon located in the System Tray.

KEPServerEX V5 also manages licensing through a separate utility. To access the License Utility, right-click on the KEPServerEX icon located in the System Tray and then select **License Utility**.

2.1 Server Installation

Users that already have KEPServerEX V4 installed on a machine have two options when installing KEPServerEX V5. Descriptions of the options are as follows:

- **Side by Side:** This installation allows users to run both server versions at the same time. It is recommended for users that need to run concurrent tests comparing the old server to the new server. In order to connect to KEPServerEX V5, the OPC client must reference a new Program ID.
- **Remove and Replace:** This installation removes the KEPServerEX V4 server and replaces it with KEPServerEX V5. It also creates an alias so that OPC clients making calls to KEPServerEX V4 will be directed to KEPServerEX V5 without having to change the client code.

Note: For Wonderware connections, users must change the Service Name provided for server connections.

2.2 Licensing

Licensing is a separate process in KEPServerEX V5. Because KEPServerEX V4 licenses cannot be used, users must get a new license code when upgrading to KEPServerEX V5. There is a fee to upgrade unless otherwise specified by the Kepware Technologies Sales Department.

Note: When ordering new licenses, users must specify the version that is needed; otherwise, licenses will be sent for the new server.

2.2.1 KEPServerEX V5 Licenses

A licensed product has two functions: to run the product without time restrictions and to provide users with the option to purchase a support subscription. Subscriptions provide increased access to Technical Support, and also allow users to upgrade to newer versions of KEPServerEX V5 and drivers. Without a subscription, users have a three-month warranty that allows one update to the next version of the server. The support subscription extends that ability by twelve months, and also includes phone support. Subscriptions must be renewed every year.

2.2.2 License Transfer

The license transfer process has also changed in KEPServerEX V5. Licenses are now transferred to a managed license pool until they are ready to be re-installed on the new PC. There is no longer a ten day grace period for license activation.

Note: An Emergency Activation ID is provided along with the V5 license key for situations in which a PC crashes and license recovery is not an option.

2.3 Server Administration

As a consequence of the separation of the server Runtime and Configuration, many settings that affect how the project runs have been moved to the Project Properties. This means that they will travel with a project when it is moved to a new PC.

Settings that affect how the server works, such as DCOM configuration, have been moved to the KEPServerEX Administration menu. The associated functions and processes are as follows:

- Runtime start and stop.
- Client connection re-initialization.
- Event Log re-initialization.
- User Management.
- UA Management.
- License Utility.
- Server Settings. This includes DCOM Management, Runtime Process Mode (Service or Desktop), Process Priority, and Processor Affinity (multi-core CPU Management).

2.4 KEPServerEX V5 Configuration

The separation of the server Runtime and Configuration means that users can create or edit a project while online or offline. Since the Runtime uses a default project, users must save the edited online project to an OPC or XML-formatted file in order to move it to another PC.

Project settings can now be accessed through the Configuration by clicking **File | Project Properties**. Settings include the V4 Project Identification information, OPC DA, OPC DA Compliance, DDE, iFIX PDB, WW FastDDE/Suitelink, OPC AE, and OPC UA.

2.5 Security

2.5.1 OPC Client Connections

To address the demand for improved OPC and DCOM configuration security, KEPServerEX V5 enforces strict DCOM compliance at startup. This server setting is enabled through **Runtime Options**, which may be accessed by right-clicking on the KEPServerEX icon in the System Tray and then selecting **Settings | Runtime Options**. Then, locate the checkbox "Use DCOM configuration utility settings" beneath **OPC Connection Security**. The default setting is checked.

In KEPServerEX V4, this option is accessed through the Configuration by clicking **Tools | Options... | OPC Settings**. The default setting is unchecked. This means that as long as DCOM is configured, local clients can connect.

Note: Users that are unable to connect to KEPServerEX V5 but who can connect to KEPServerEX V4 should uncheck this option.

2.6 Non-OPC Client Connections to the Server

2.6.1 DDE Connections

DDE Clients like Excel connect to the server using a Service Name. This name may be specified in the **DDE** tab of **Project Properties**. The default name is "KEPdde".

- Users that are running the servers side by side must change the Service Name in one of the servers: two DDE servers cannot have the same service name interface.
- Users that are running one server and are unable to connect should check whether KEPServerEX V5 is running as a service. To do so, right-click on the Administration menu and then select **Settings | Runtime Process**.

Note: Connecting an Interactive Client (which is an application running on the desktop) to an application running as a service is the equivalent of a remote connection. This is not allowed for DDE. Once the server is set to run interactively, users will be able to connect to the server.

2.6.2 FastDDE/Suitelink Connections

Wonderware requires that the server have the ability to be launched when connecting even if it is not running. To do this, the Service Name used for connection must be the actual name of the executable. For KEPServerEX V4, this name is "Servermain". For KEPServerEX V5, it is "Server_Runtime". Users must change this name in the Wonderware application regardless of whether a "Side by Side" or "Replace and Remove" installation was performed.

Note: When running the server as a service, users must configure Wonderware's Access Name to perform a Suitelink Connection even if it is on the same PC.

2.7 Drivers and Plug-Ins Affected by the Server Running as a Service

The following driver and component plug-ins work differently when the server is running as a service as opposed to when it is running interactively on the desktop.

2.7.1 Advanced Simulator

The Advanced Simulator Driver uses ODBC to connect to data sources. When running as a service, users can only connect to a data source defined as a System DSN. When running interactively on the desktop, users should utilize User or System DSNs. It is recommended that System DSNs be used.

2.7.2 DataLogger

DataLogger uses ODBC to connect to data sources. When running as a service, users can only connect to a data source defined as a System DSN.

When running interactively on the desktop, users can utilize User or System DSNs. It is recommended that System DSNs be used.

2.7.3 DDE Client Driver

Since DDE cannot run as a service, the DDE Client Driver can only be used when the server is running interactively on the desktop.

2.7.4 InTouch Client Driver

The InTouch Client Driver works similarly to the DDE Client Driver. It can only be used when the server is running interactively on the desktop.

2.7.5 ODBC Client Driver

The ODBC Client Driver uses ODBC to connect to data sources. When running as a service, users can only connect to a data source defined as a System DSN. When running interactively on the desktop, users can utilize User or System DSNs. It is recommended that System DSNs be used.

2.7.6 OPC DA Client Driver

The OPC DA Client Driver is an OPC DA connection and depends on DCOM just like any other OPC DA client. In order for this driver to work correctly, users must properly configure DCOM on all machines involved in the OPC connection.

2.8 IPersistFile Interface Support

IPersistFile is a COM interface defined by Microsoft that is used by external client applications to direct the loading and saving of KEPServerEX project files.

With the separation of the user interface and project configuration from the Runtime in KEPServerEX V5, all decisions regarding project management have been delegated to the Configuration client. This ensures that the Runtime will not be instructed to load projects from multiple locations.

For projects that were designed to use this interface, the server will respond to the IPersistFile request with an HRESULT of 0x80004002 or E_NOINTERFACE.