



Technical Note

Simulation Mode

1. Overview

The purpose of this technical note is to explain how Simulate Mode works in the Server and how it can be used to see changing data.

1.1 Applies to Server Versions

- All KEPServerEX V4.x
- All KEPServerEX V5.X

2. Simulate Mode with OPC Clients

It is a common misconception that Simulate Mode allows the simulation of a device as is done with a soft PLC. This is of course incorrect. Simulate Mode is intended to be used when no physical device is available but it is necessary to make sure a client application is functioning properly. It essentially echoes back to the connected client application anything the client writes to each tag. If nothing has been written to a Boolean or Analog tag then the value echoed back to the client will be zero. If nothing has been written to a string tag then the value echoed back will be a null character (the string display will be blank).

2.1.1 Why Can't Two Clients See the Same Data

The Server creates poll groups based on the update rates that have been configured in an OPC client application. When the Server is placed into Simulate Mode, it is these poll groups that are echoed back to the client. If two clients use different update rates then different data values will be echoed back even when the clients are addressing the same tags. If you want to use one OPC client to change data in the Server and see it with the other then you will need to connect both clients using the same update rates.

3. Simulate Mode with Non-OPC Clients

Tag update rates are not specified from within Non-OPC clients. Rather, the Scan Rate of each tag is set within the Server. When using Simulate mode with Non-OPC clients, like InTouch, tag values are still echoed back to the client application. A Non-OPC client connected to the same items will see any changes made from another Non-OPC client.

4. Simulate Mode with OPC and Non-OPC Clients

If you are using a Non-OPC client, like InTouch, and want to simulate changing data for it using Kepware's OPC Quick Client, make sure that the Update Rate used in the Quick Client is the same as the rate used for InTouch. For the OPC Quick Client, the Update Rate is set under Group Properties. For the non-OPC client InTouch, the update rate is set through the Server using the Scan Rate field under Tag Properties. The default Scan Rate for each tag is 100 msec. You also have the option of using the Server's Alias Map feature and performing an override of a tags Scan Rate.