



IoT Gateway for KEPServerEX[®]

Easy Guide

The **IoT Gateway for KEPServerEX** leverages Internet-friendly protocols (like HTTP and MQTT) to allow data points from PLCs and other devices to be delivered to third-party endpoints and other clients (like web browsers). The data sent is a payload of Item ID, value, quality, and timestamp in a standard JSON format.

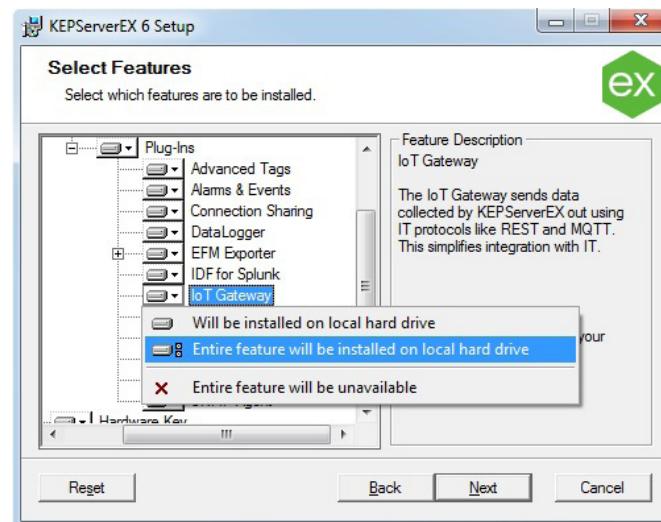
The IoT Gateway advanced plug-in offers the following features:

- Configurable header and payload information for easy integration with different third-party endpoints (such as NoSQL databases and web services) for the REST and MQTT clients
- Support for authentication and TLS/SSL encryption on all agents
- Configurable data collection and publish rates as frequent as 10 milliseconds up to once per 27.77 hours for the REST and MQTT clients

Follow the steps below to configure a REST Server Agent (endpoint) in KEPServerEX, add data items to the agent, and connect a web browser to the endpoint to read the items.

Follow the Steps

Step 1: Install the IoT Gateway

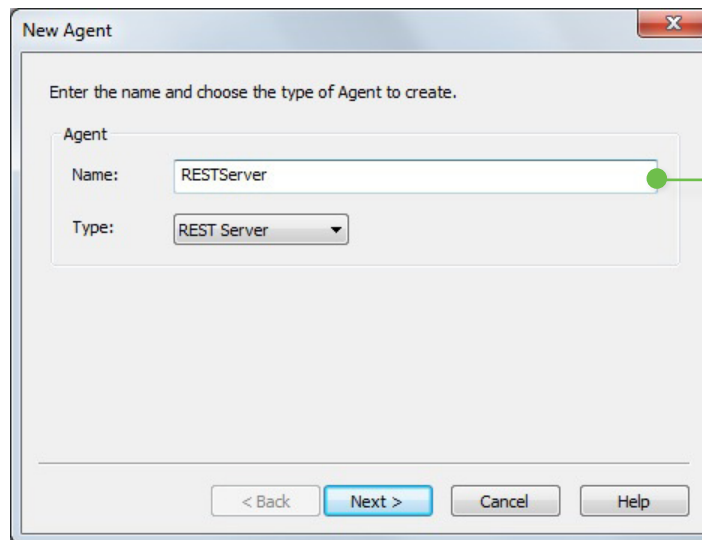
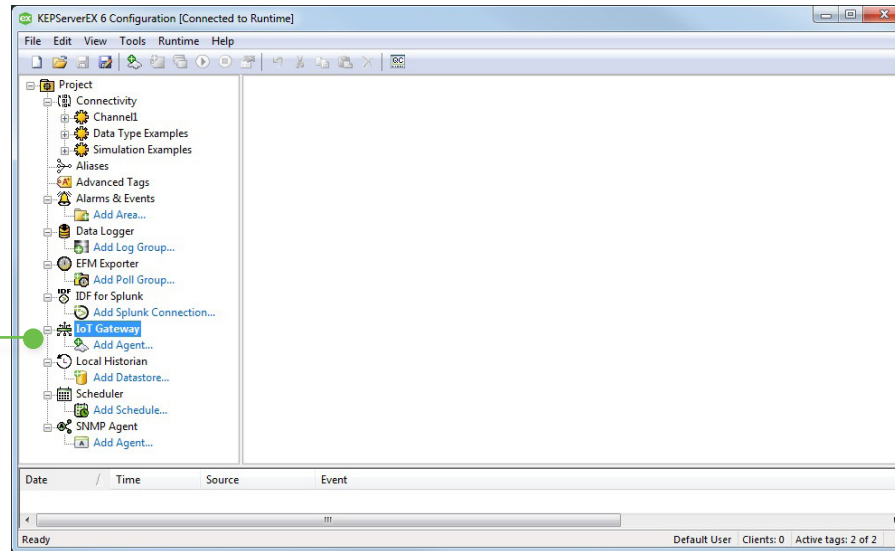


The IoT Gateway is installed as an advanced plug-in to the KEPServerEX connectivity platform. During the KEPServerEX installation, expand the **Plug-Ins** option to locate the **IoT Gateway** in the **Select Features** dialog. Then, select **Entire feature will be installed on local hard drive** and complete the install.

Step 2:
Create a REST Server Agent

In the KEPServerEX Configuration, locate the **IoT Gateway** in the left-hand panel.

Under the **IoT Gateway** branch, click **Add Agent...** to launch the **Agent** creation wizard.



In **New Agent**, do the following:

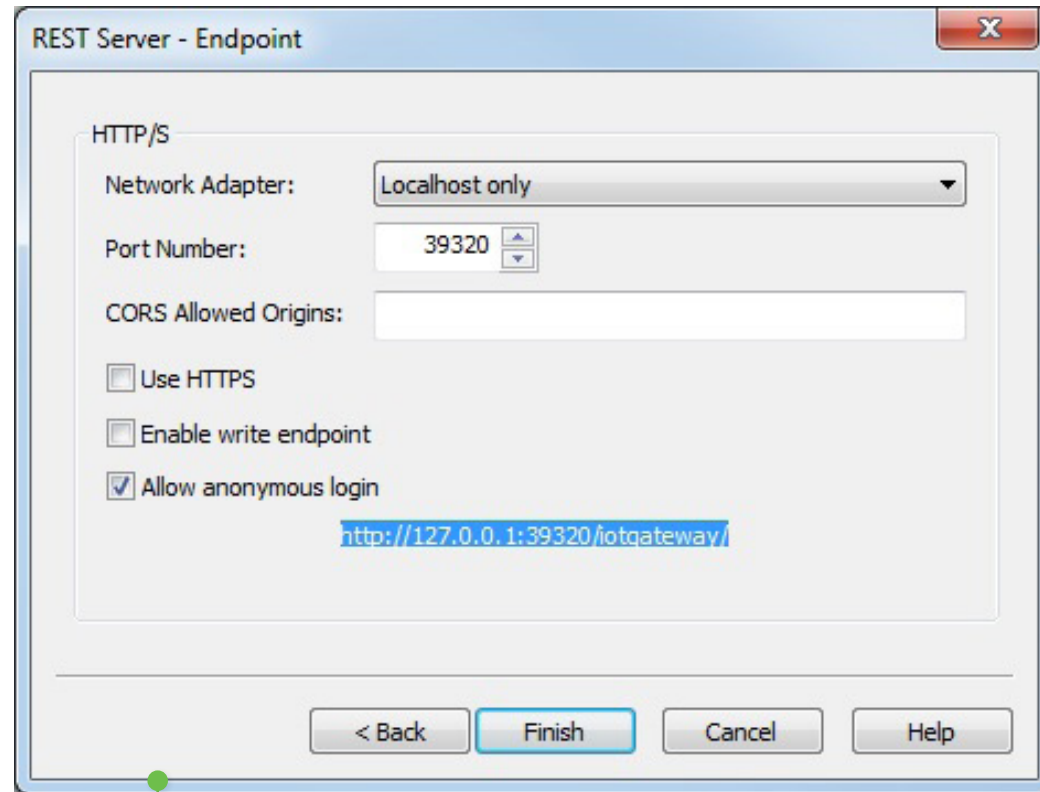
- In **Name**, type "RESTServer".
- In **Type**, select **REST Server**.

Once finished, click **Next**.

In HTTP/S, do the following:

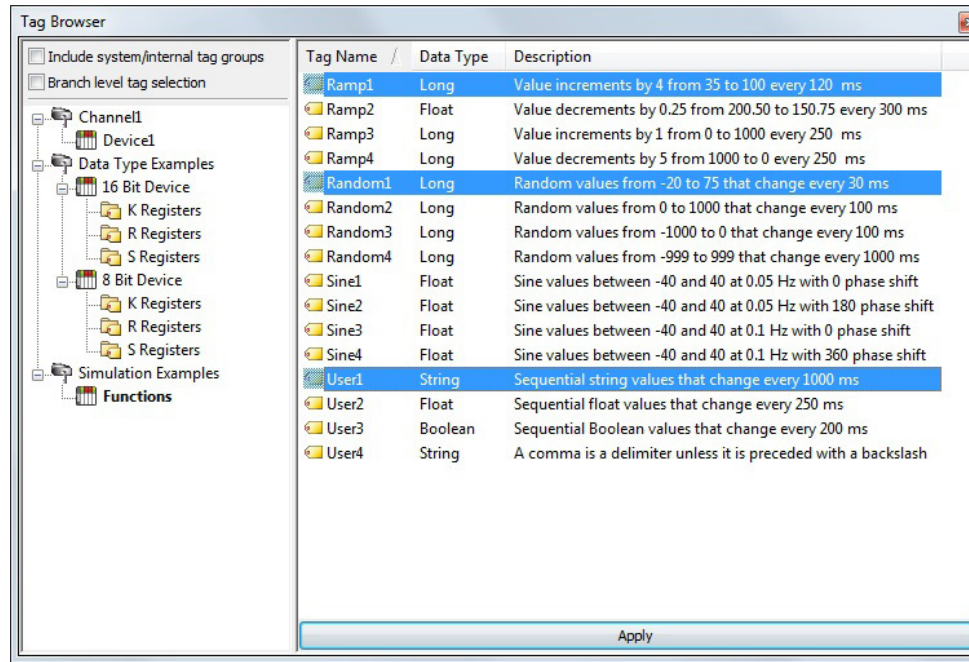
- Select a network adapter. This example uses the default setting "Localhost only".
- Leave the **Port Number** at the default setting of 39320.
- Ensure that **Use HTTPS** is unchecked.
- Ensure that **Allow anonymous login** is checked.
- Copy the URL displayed at the bottom of the dialog and store it for later use.

Then, click **Finish**.



The REST Server is now ready to send data to a connected client.

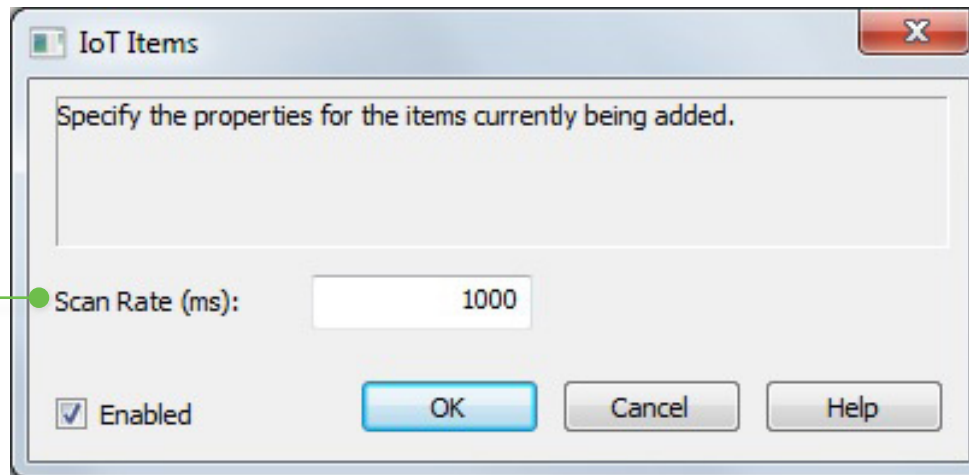
Step 3:
Choose items to read through the gateway



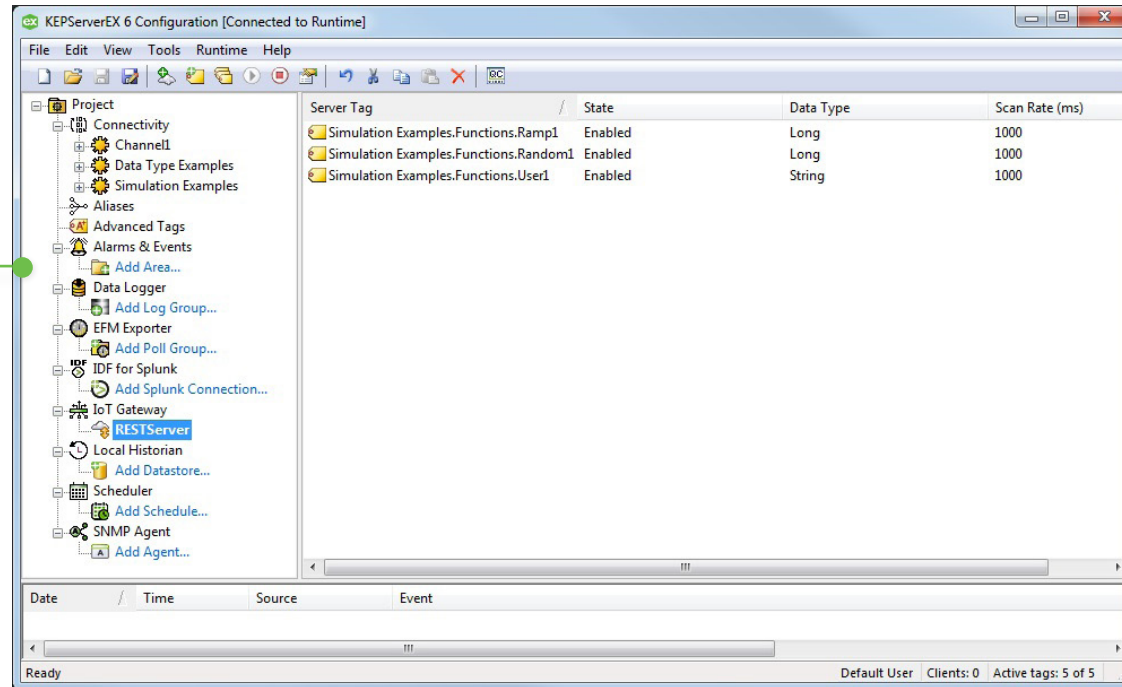
Once the REST Server Agent is created, select it in the left-hand pane. Then, click **Add IoT items...**

In the **Tag Browser**, select the items you would like to read through the gateway. This guide uses data generated from the Simulation driver, including Ramp1, Random1, and User1 from the "Simulation Examples. Functions" channel and device.

Once the items have been selected, click **Apply** to exit the **Tag Browser**. In **IoT Items**, specify a scan rate or leave it at the default setting of 1000ms. Then, click **OK**.



You should now see your items configured in the gateway. At this point, data updates for these items can be consumed by any REST client, such as a web browser.

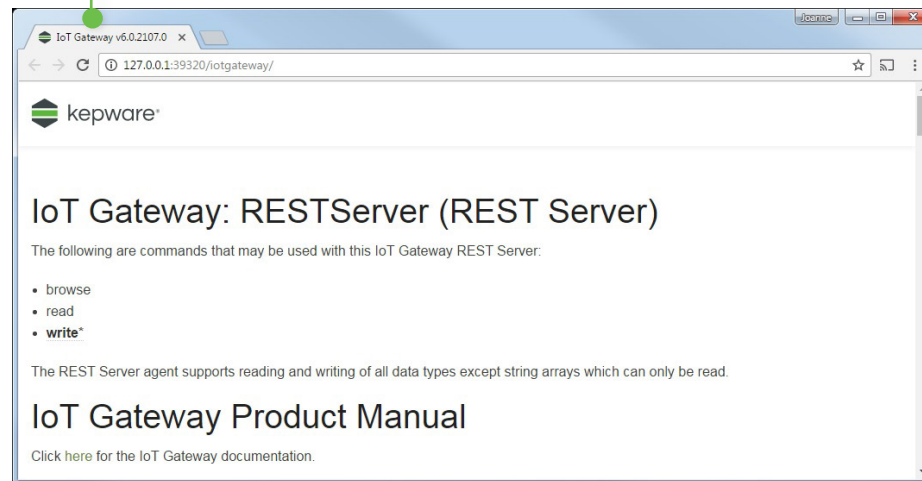


Step 4:

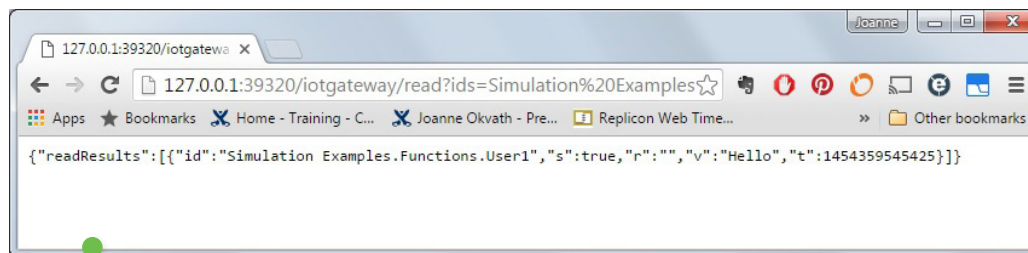
Launch a web browser and use commands to perform actions

Launch the web browser of your choice. This example uses Chrome. In the address bar, paste the URL copied and stored from Step 2 and then press **Enter**. You can also find the URL by double-clicking on the REST Server agent and opening the **Endpoint** tab.

Note: The initial splash page shown below contains links to the [IoT Gateway product manual](#) as well as tips on using commands to read and write data in the server.



To perform a read, enter "http://127.0.0.1:39320/iotgateway/read?ids=Simulation%20Examples.Functions.User1" into the address bar and then press **Enter**. If you used something besides the Simulation Examples item, enter your tag item in the format of "Channel.Device.Tag" after the "read?ids=" in the URL.



The web page will display the tag name ("id"), value ("v"), and timestamp ("t") information in a JSON format, along with some other information in the JSON payload. Refresh the page to get data updates and see the value change.

- To see how to quickly configure the IoT Gateway, watch the [IoT Gateway Demo Video](#).
- To learn more about application support, configuration, functionality, and security, read the [Q&A Kepware Applications Engineers Talk IoT Gateway](#) blog post.
- To gain detailed technical information, access the [IoT Gateway product manual](#).

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