

Description: This document describes security and GenEvents in IoTWorkX and how to configure them.

General Requirements:

- Familiarity with ICONICS security server and KPIWorkX.
- An IoTWorkX project set up in Workbench (see *IoTWorkX – Quick Start*) and a provisioned edge device.
- The Visualizer module must be deployed (see the "Deploying ICONICS Modules to the Device" section of *IoTWorkX – Quick Start*).

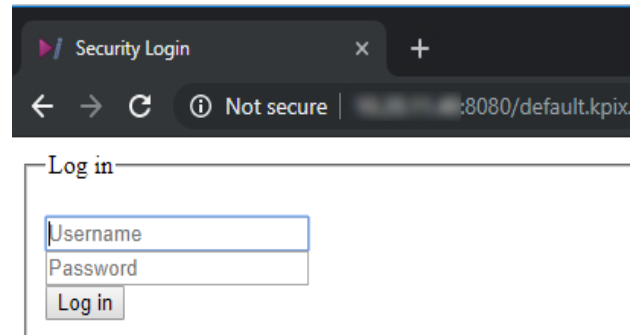
Introduction

IoTWorkX includes a security server that provides the same basic functionality as the security server running on a full ICONICS Suite system. This security allows for the creation of users and restrictions of privileges, such as access to certain points and actions. The IoTWorkX security server provides only the subset of security features that apply to edge devices.

Additionally, edge devices with IoTWorkX installed can report GenEvents that are readable in an AlarmWorkX64 Viewer in the IoT Visualizer, providing information on who has logged in, what points were changed, and other important events.

Configuring Security

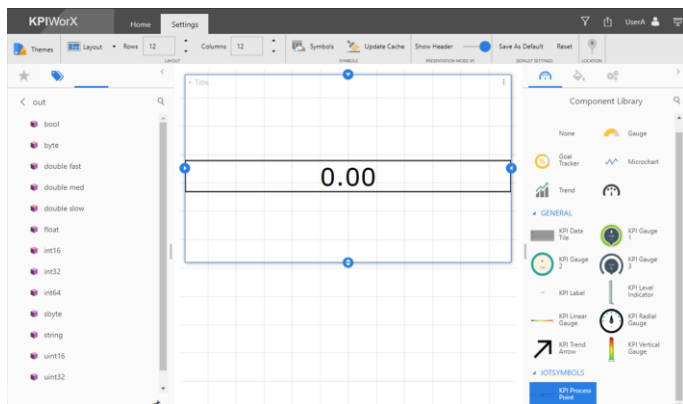
- 1) In **Workbench**, expand your IoT project > **Device Templates** > **Default Template** > **Internet of Things** > **Security**.
- 2) Add a user to the **Users** folder.
- 3) Give the user a name.
- 4) Apply the changes.
- 5) When prompted, give the user a password.
- 6) Right click your device and select **Deploy Device(s) Configuration**.
- 7) Once the deployment is complete, open the IoT Visualizer on the device by going to `http://DeviceIPAddress:8080`.
- 8) You will be presented with a login prompt. Log in with the credentials you created previously.



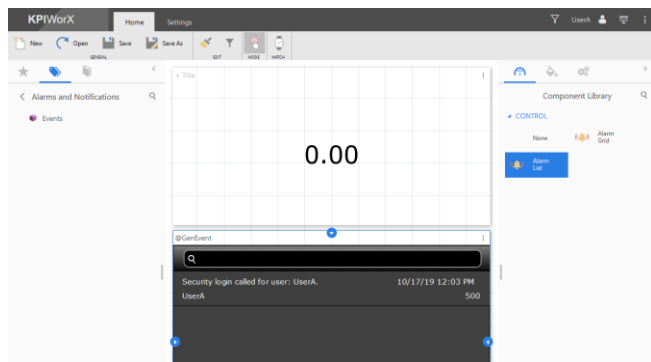
IMPORTANT: If you haven't already done so, log into the Diagnostics and Configuration page for your edge device and change the default admin password. Keeping the default admin password could provide a security vulnerability, allowing a malicious user to create an ICONICS security user. See the "Adding Security Users via Local Interface" section for more details.

Displaying GenEvents

- 1) If you haven't already, follow the steps in the previous section, "Configuring Security".
- 2) Go to the **Settings** tab.
- 3) Select **Symbols**.
- 4) Enable the **IoTSymbols** library.
- 5) Select **OK**.
- 6) Go to the **Component Library** panel.
- 7) From the **IoT Symbols** section, drag a **KPI Process Point** onto the dashboard.
- 8) Resize the process point widget, so it takes up half of the dashboard.
- 9) Go to the **Data Browser** panel.
- 10) Browse to **Platform Services** > **Server Internal Simulator** > **Out**.
- 11) Drag **Int16** onto the process point widget.



- 12) In the **Data Browser**, select the back button until you have returned to the top level.
- 13) Browse to **Alarm and Notifications**.
- 14) Drag **Events** into the unoccupied part of the dashboard. You will see an alarm list widget automatically created subscribed to GenEvents.



- 15) Go into presentation mode.
- 16) Write a value to the process point.
- 17) After a few moments, right click the alarm viewer and select **Refresh History**. You will see that a new event is shown in the viewer showing that a value was written and by which user.

Note: You can also change the Alarm List to an Alarm Grid and see similar information. Additionally, you can toggle the **Historical** property in the setting for the widget to switch between a real time subscription to the GenEvents and a historical subscription.

Adding Security Users via Local Interface

It is possible to add users directly on the gateway from the local interface on the edge device. This should only be done as a temporary measure, as the security configuration will be overwritten the next time a configuration is deployed from Workbench.

- 1) Go to the **IoTWorX Landing Page** by browsing to <http://DeviceIPaddress>.
- 2) Select **Diagnostics and Configuration**.
- 3) Log in as **admin**.

Note: The admin user is a built-in account used only for the IoTWorX Diagnostics and Configuration pages. Its default password is **iconics**. You will be asked to change this password the first time you log in. The user accounts used to log into the Diagnostics and Configuration pages are unrelated to ICONICS security user accounts.

- 4) Select **Device Setup > Security Configuration**.



- 5) Fill in the required fields and select **Add Security User**. The user will be added to the specified group.

Note: You must have at least one security group defined in your configuration in order to add a user.