

Description: This document describes IoTWorX™ Analyzer and how to configure it.

General Requirements:

- Familiarity with FDDWorX or Facility AnalytiX.
- An IoTWorX project set up in Workbench (see *IoTWorX – Quick Start*) and a provisioned edge device.
- The IoT Analyzer Point Manager module must be deployed (see the "Deploying ICONICS Modules to the Device" section of *IoTWorX – Quick Start*).

Introduction

The IoTWorX Analyzer provides edge analytics with built-in ICONICS fault detection. The following shows how to configure IoTWorX faults in AssetWorX and how to establish an Analyzer connection on your IoTWorX gateway.

Add IoT Analyzer Components to IoT Project

First, we will add the necessary components to the IoT project to use IoT Analyzer on one or more devices.

1. In **Workbench**, go to *your IoT project* > **Device Templates** > **Default Template** > **Internet of Things** > **Analyzer Group**.
2. Add a new analyzer group.
3. Give the group a name.
4. Apply the changes.
5. Go to **Internet of Things** > **Loggers**.
6. Add a new logger.
7. Give the logger a name.
8. Apply the changes.
9. Go to **Internet of Things** > **Publish Lists**.
10. Add a new publish list.
11. Give the publish list a name.
12. For **Default Collection Group**, select a collection group. If you have no collection groups, click the **plus (+)** button to automatically create one.
13. For **Default Logger**, choose the logger created earlier.
14. For **Analyzer Group**, choose the analyzer group created earlier.
15. Apply the changes.
16. Go to **Internet of Things** > **Publisher Connections**.
17. Add a new publisher connection.
18. Give the publisher connection a name.
19. Go to the **General Settings** section.

20. Set **Connection Type** to **Platform Services**.
21. For **Publish List**, select the publish list created earlier.
22. Go to the **Platform Services Settings** section.
23. For **Publish Machine Name**, enter the DNS name or IP address of your remote FDDWorX or Facility AnalytiX server.
24. Apply the changes.
25. Expand **Internet of Things** > **Nodes**.
26. Edit **Publisher Nodes**.
27. Add a new entry to the list.
28. For **Machine Name**, enter the DNS name or IP address of your edge device.
29. For **Publisher Connection**, choose the publisher connection we created earlier.
30. Apply the changes.

Define Faults to be Processed by IoT Analyzer

The next steps will configure the fault rules that will be processed by IoT Analyzer running on the IoTWorX edge device.

1. In **Workbench**, go to *your local (non-IoT) project* > **AnalytiX** > **FDDWorX** > **Fault Diagnostic Models**.
2. Create a new fault diagnostic model as you would for a standard FDDWorX or Facility AnalytiX application.

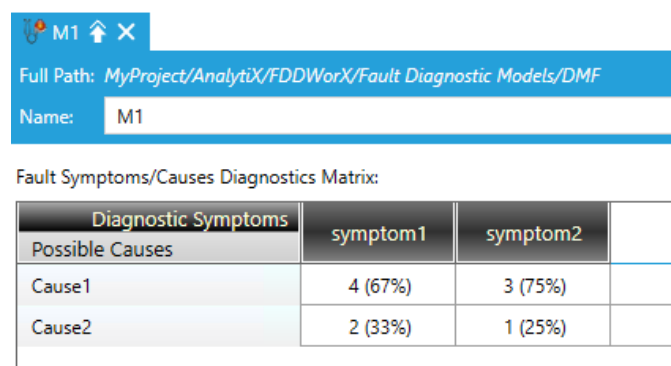


Figure 1 - Fault Diagnostic Model

3. Expand *your local (non-IoT) project* > **Assets**.
4. Find an asset you would like to add FDDWorX to and edit it.
5. Use the **plus (+)** tab to add the FDDWorX extension. Under **FDDWorX** > **Fault Definitions**, define a fault rule. Use aliasing to place hold for tags that will be evaluated

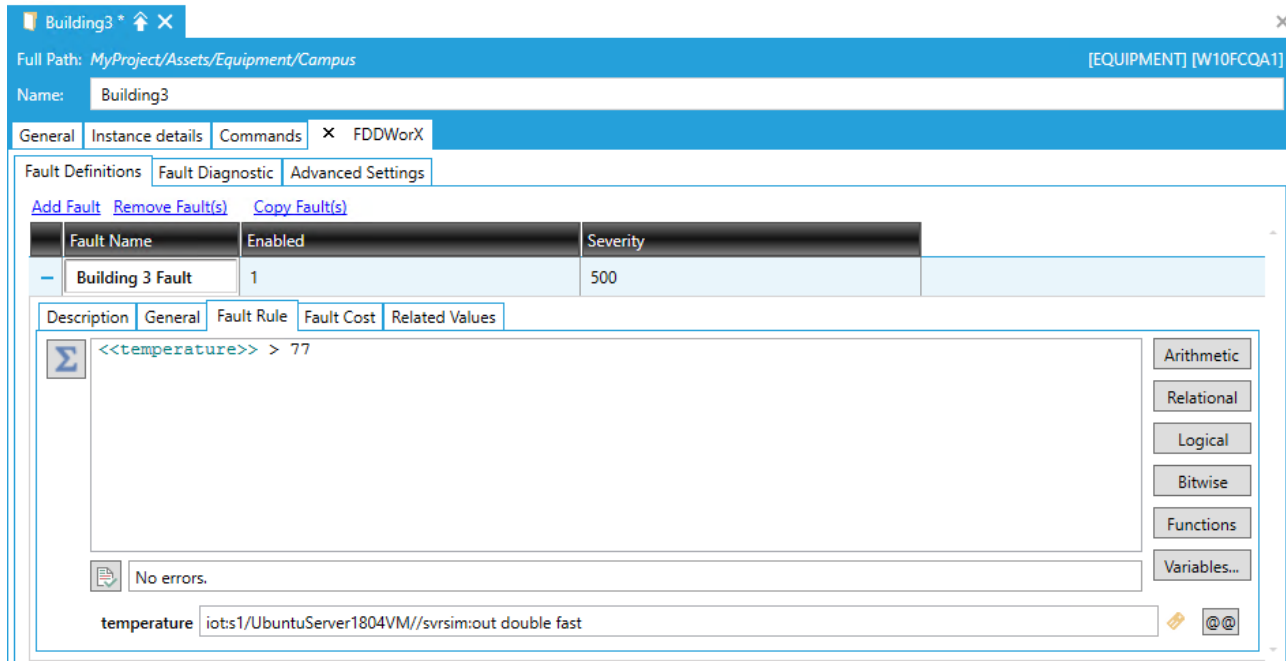


Figure 2 - Example Fault Definition

on the device, then browse to them. See Figure 2 for an example.

6. If you plan to use diagnostics:
 - a. Go to the **Fault Diagnostic** tab
 - b. Select your **Diagnostic Model** and fill in the mappings as appropriate. Only Expression-based diagnostic symptoms can be used to configure fault diagnostics. (Alarm-based symptoms are not supported.)
7. Go the **FDDWorX > Advanced Settings** tab.
8. Enable **IoT Asset**.
9. For IoT Device Tag, use the **browse** button choose the device to process this fault.
10. Select **OK** in the tag browser.
11. Apply your changes.
12. Select **Update IoT Configuration**.
13. Select the database where the IoT template is configured (not where you have configured FDDWorX).
14. Select **Next**.
15. For **Select existing Group**, choose the analyzer group that was created earlier.
16. Select **OK**.
17. You should receive a message that the IoT configuration database was successfully updated. Select **OK**.
18. Apply the changes to the asset.

Finalizing Deployment

Now that FDDWorX is configured and the necessary IoT Analyzer components have been added to the IoT project, we can deploy the settings to the device.

1. Start the FDDWorX service if it is not already started.
2. In **Workbench**, expand to *your IoT project* > **Default Group**.
3. Right-click your device and select **Deploy Device(s) Configuration**.
4. Once the deployment completes, IoT Analyzer on the edge device will begin to process the fault rules. If a fault incident occurs, it will be logged on the device and then merged to your remote FDDWorX server at the rate defined in your publish list. You can view the fault incidents using a Fault Viewer as you would faults for non-IoT assets.