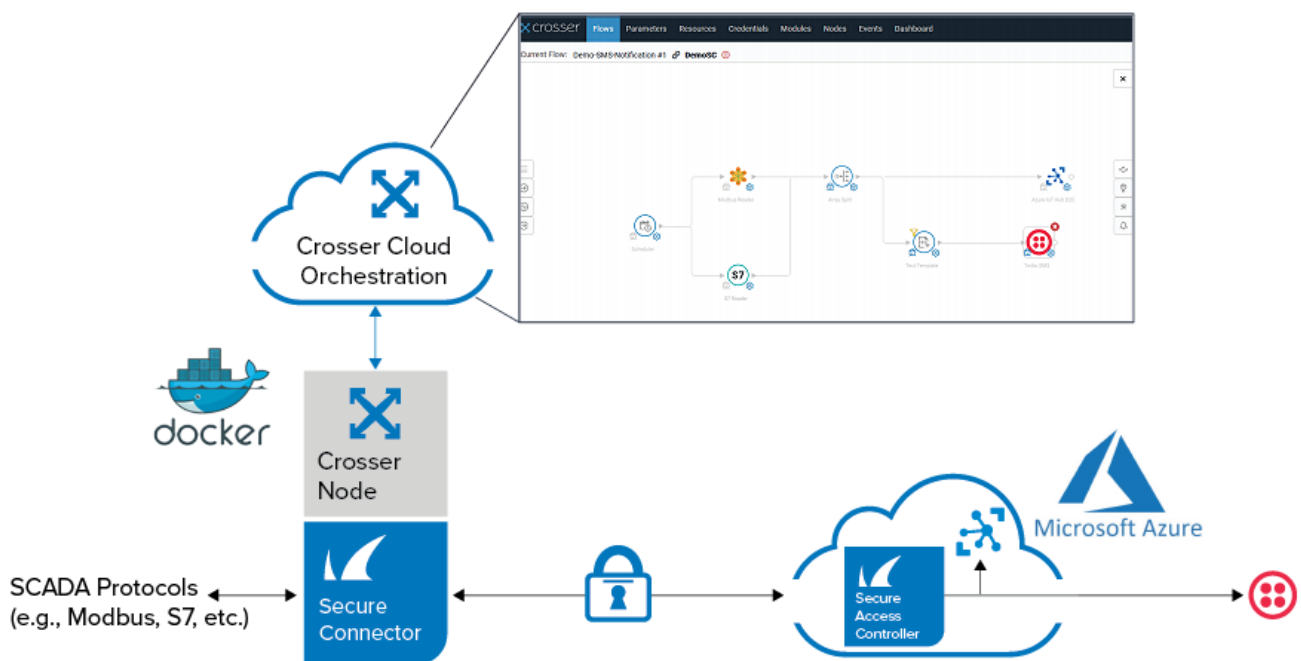


## How to Integrate Crosser Edge Analytics with the Barracuda Secure Connector

<https://campus.barracuda.com/doc/96025952/>

The Barracuda Secure Connector allows you to run [Crosser IoT Edge Streaming Analytics](#) in a container. The data collected at the edge can be aggregated, combined, and prefiltered to reduce the cost for storage and intermittent transmission, and to enable effective processing of useful data in an on-premises or cloud analytics platform. When utilizing Crosser, users obtain scalable connectivity to accommodate large and dispersed networks of industrial and IoT devices.

### Barracuda Crosser Integration Architecture



For the deployment of Crosser IoT Edge Streaming Analytics on the Secure Connector, you can use one of the following options:

- Option 1: As Docker Container by predefined LXC script.
- Option 2: Via Azure IoT Edge

### Deployment as Docker Container by Predefined LXC Script

Set the custom variables in the [crosser\\_container.tgz](#) file, add the Crosser Node on the platform, and install a Secure Connector container.

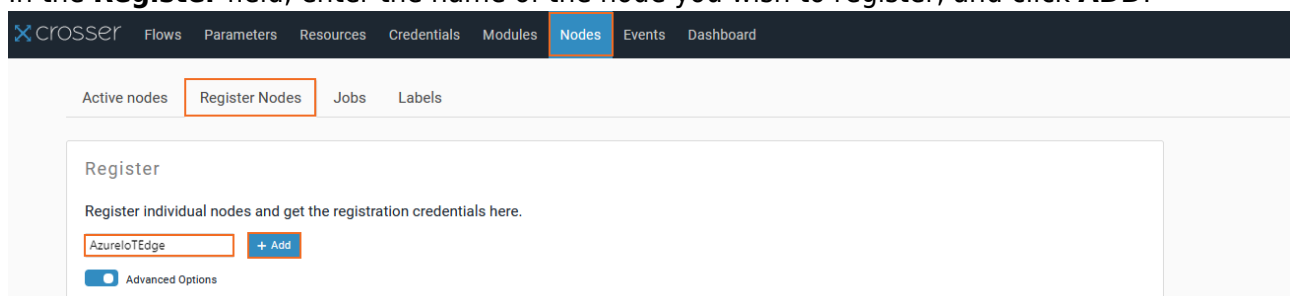
### Step 1. Adjust the Custom Variables

1. In the [crosser\\_container.tgz](#) file, modify the custom variables in the *doit* file with your information. The information is available within your Crosser portal <https://cloud.crosser.io>.

```
#####Custom Input Variables#####  
#Docker Credentials  
  
DOCKER_USER="YOUR-USERNAME"  
DOCKER_PASS="YOUR-PWD"  
DOCKER_HOST=https://docker.crosser.io  
  
####Please use either individual or global key####  
  
#####Individual Key#####  
  
ID_CROSSER="ENTER-YOUR-NODE-ID-HERE"  
KEY_CROSSER="ENTER-YOUR-NODE-KEY-HERE"  
  
#####Global Key#####  
  
GLOBAL_KEY="ENTER-YOUR-GLOBAL-HERE"  
#####
```

### Step 2. Register the Crosser Node

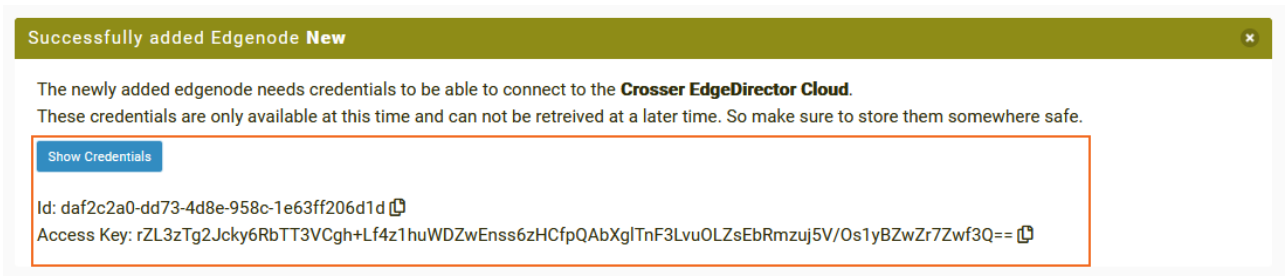
1. Log into the [Crosser Portal](#).
2. Go to **Nodes** and click the **Register Nodes** tab.
3. In the **Register** field, enter the name of the node you wish to register, and click **ADD**.



The screenshot shows the Crosser portal's 'Nodes' section. The 'Nodes' tab is selected in the top navigation bar. Below it, the 'Register Nodes' sub-tab is active. The main content area is titled 'Register' and contains the instruction 'Register individual nodes and get the registration credentials here.' There is a text input field containing 'AzureIoTEdge' and a blue '+ Add' button next to it. Below the input field, there is a checkbox labeled 'Advanced Options' which is currently unchecked.

A confirmation window opens, stating that you have successfully added the node.

4. Click **Show Credentials** to display ID and access key of the node.



5. Copy the credentials to a *doit* file and compress the *doit* file including all deb packages to **<name>\_container.tgz**.

To simplify the deployment on a large-scale basis, use the global key in order to have the same container that can be used to deploy a Crosser node to a large number of containers. For more information on containers, see [Secure Connector Container](#).

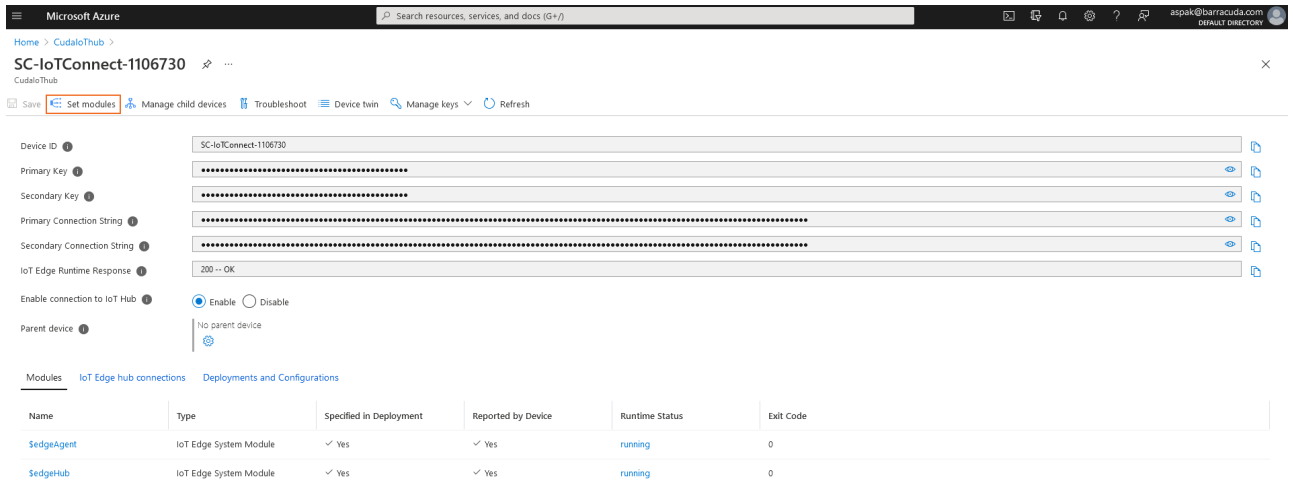
### Step 3. Install a Container via Firmware Update in Barracuda Firewall Admin

Containers are installed just like Secure Connector firmware updates. Copy the container.tgz file to the Control Center and distribute it just like a firmware update. When the archive is on the Secure Connector, the deb packages are installed, and the installation scripts executed. For more information, see [Secure Connector Firmware Updates](#).

## Deployment via Azure IoT Edge

Configure Microsoft IoT Edge on the Secure Connector, and configure Crosser IoT Edge Streaming Analytics as an IoT Edge module. For details on how to enable Azure IoT Edge runtime on a Secure Connector, see [How to Enable Microsoft IoT Edge and Docker on a Secure Connector](#).

1. Log into the Azure portal: <https://portal.azure.com>
2. Enable IoT Edge on the Barracuda Secure Connector. For more information, see **Configure Azure IoT Edge** in [How to Enable Microsoft IoT Edge and Docker on a Secure Connector](#).
3. In the Azure portal, navigate to the IoT Edge device that has been linked with your Secure Connector.
4. Click the **Set modules** tab.



Microsoft Azure

Home > CudaIoTHub > SC-IoTConnect-1106730

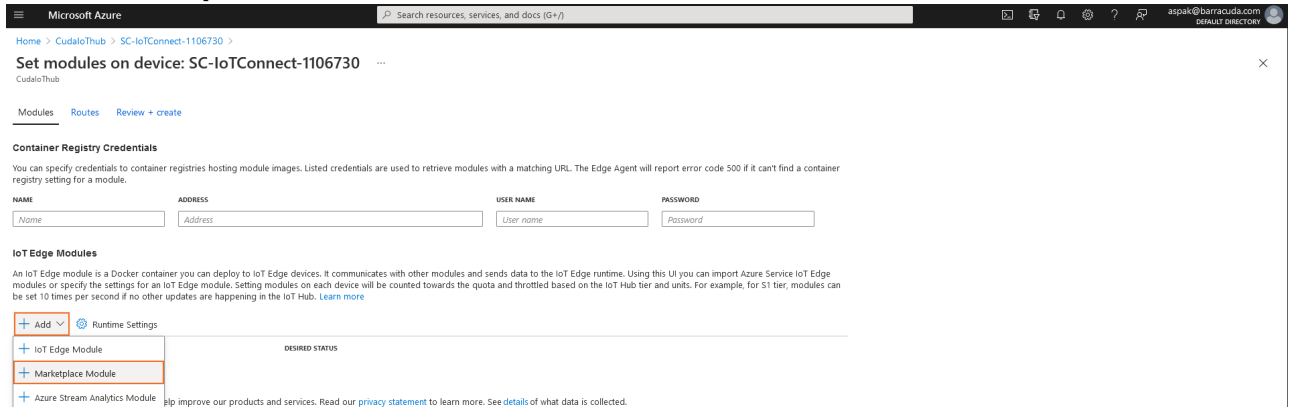
Set modules on device: SC-IoTConnect-1106730

Modules

Name	Type	Specified in Deployment	Reported by Device	Runtime Status	Exit Code
EdgeAgent	IoT Edge System Module	✓ Yes	✓ Yes	running	0
EdgeHub	IoT Edge System Module	✓ Yes	✓ Yes	running	0

5. In the **IoT Edge Modules** section, click **ADD**.

6. Select **Marketplace Module**.



Microsoft Azure

Home > CudaIoTHub > SC-IoTConnect-1106730 > Set modules on device: SC-IoTConnect-1106730

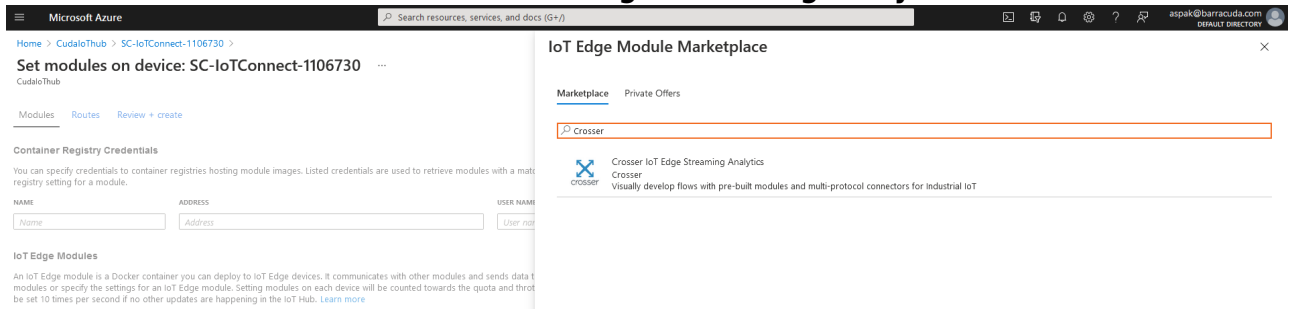
Container Registry Credentials

IoT Edge Modules

+ Add

- IoT Edge Module
- Marketplace Module
- Azure Stream Analytics Module

7. Search for Crosser and select **Crosser IoT Edge Streaming Analytics**.



Microsoft Azure

Home > CudaIoTHub > SC-IoTConnect-1106730 > Set modules on device: SC-IoTConnect-1106730

IoT Edge Module Marketplace

Marketplace

Crosser

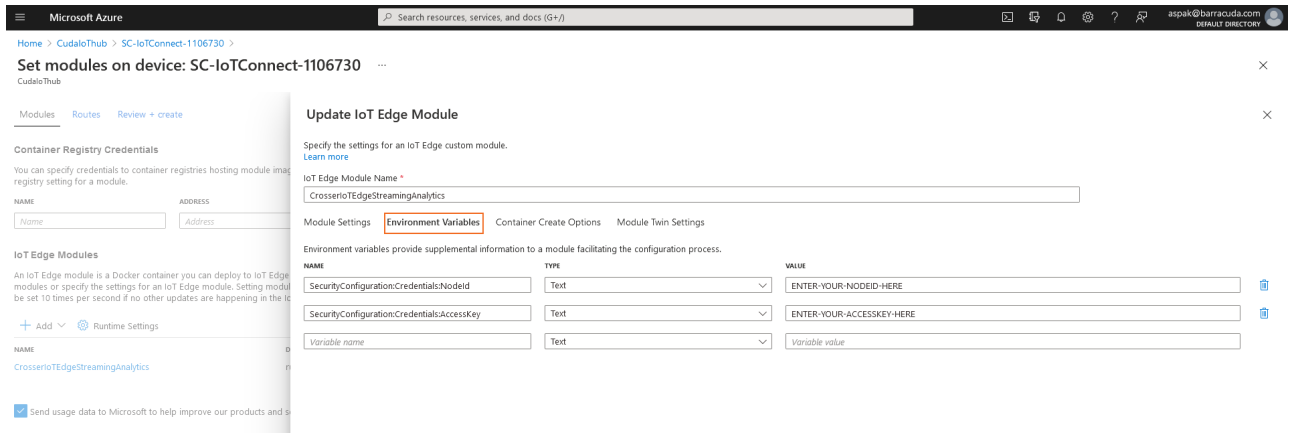
Crosser IoT Edge Streaming Analytics

Crosser

Visually develop flows with pre-built modules and multi-protocol connectors for Industrial IoT

8. Open the **Environmental Variables** tab.

9. Configure the variables using the information provided during the Crosser Node registration in the step 2.4.



Microsoft Azure

Home > CudoIoTHub > SC-IoTConnect-1106730 >

### Set modules on device: SC-IoTConnect-1106730

CudoIoTHub

Modules Routes Review + create

#### Update IoT Edge Module

Specify the settings for an IoT Edge custom module.  
[Learn more](#)

IoT Edge Module Name \*

CrossoverIoTEdgeStreamingAnalytics

Module Settings **Environment Variables** Container Create Options Module Twin Settings

Environment variables provide supplemental information to a module facilitating the configuration process.

NAME	TYPE	VALUE
SecurityConfiguration.CredentialsNodeId	Text	ENTER-YOUR-NODEID-HERE
SecurityConfiguration.CredentialsAccessKey	Text	ENTER-YOUR-ACCESSKEY-HERE
Variable name	Text	Variable value

Container Registry Credentials

You can specify credentials to container registries hosting module images. You can specify the settings for a module.

NAME ADDRESS

Name Address

IoT Edge Modules

An IoT Edge module is a Docker container you can deploy to IoT Edge modules or specify the settings for an IoT Edge module. Setting module be set 10 times per second if no other updates are happening in the IoT Edge module.

+ Add - Runtime Settings

NAME

CrossoverIoTEdgeStreamingAnalytics

☒ Send usage data to Microsoft to help improve our products and services

10. Review your information and create the module.

The deployment should be completed within a couple of minutes.

For more information and use cases on Crossover and Barracuda, watch this [Video](#).

## Figures

1. c\_overview.png
2. c\_reg.png
3. c\_cred.png
4. c\_conn.png
5. c\_mod.png
6. c\_mp.png
7. c\_var.png

© Barracuda Networks Inc., 2024 The information contained within this document is confidential and proprietary to Barracuda Networks Inc. No portion of this document may be copied, distributed, publicized or used for other than internal documentary purposes without the written consent of an official representative of Barracuda Networks Inc. All specifications are subject to change without notice. Barracuda Networks Inc. assumes no responsibility for any inaccuracies in this document. Barracuda Networks Inc. reserves the right to change, modify, transfer, or otherwise revise this publication without notice.