

MC-EDGE™



MC-EDGE Actility Setup Guide

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- A description of the error

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Document History

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About This Document

This document describes how to set up MC-EDGE for Activity ThingPark™. It does not include general information on the MC-EDGE that is not specifically related to Activity configuration.

For more information on the MC-EDGE, including hardware information and device specifications, see the *MC-EDGE Owner's Manual*.

For information and documentation about Activity ThingPark, see <https://www.actility.com/enterprise-iot-connectivity-solutions/>

Helpful Background Information

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Related Information

For more information related to MC-LoT MC-EDGE™, see the following documents.

Document
<i>MC-EDGE™ Owner's Manual</i>
<i>MC-EDGE™ System Planner</i>
<i>MC-EDGE™ Service Manual</i>
<i>MC-LoT STS User Guide</i>
<i>MC-LoT STS Advanced Features Manual</i>
<i>MC-LoT_Advanced_System_Security</i>
<i>MC-LoT STS Software Diagnostic Output and Error Messages Manual</i>
<i>MC-LoT STS Third Party Protocols Manual</i>

Chapter 1

Activating Activity on MC-EDGE



NOTE: MC-EDGE T3 does not include a LoRa port, and is not compatible with Activity.

Prerequisites:

To use Activity, ensure you have the following:

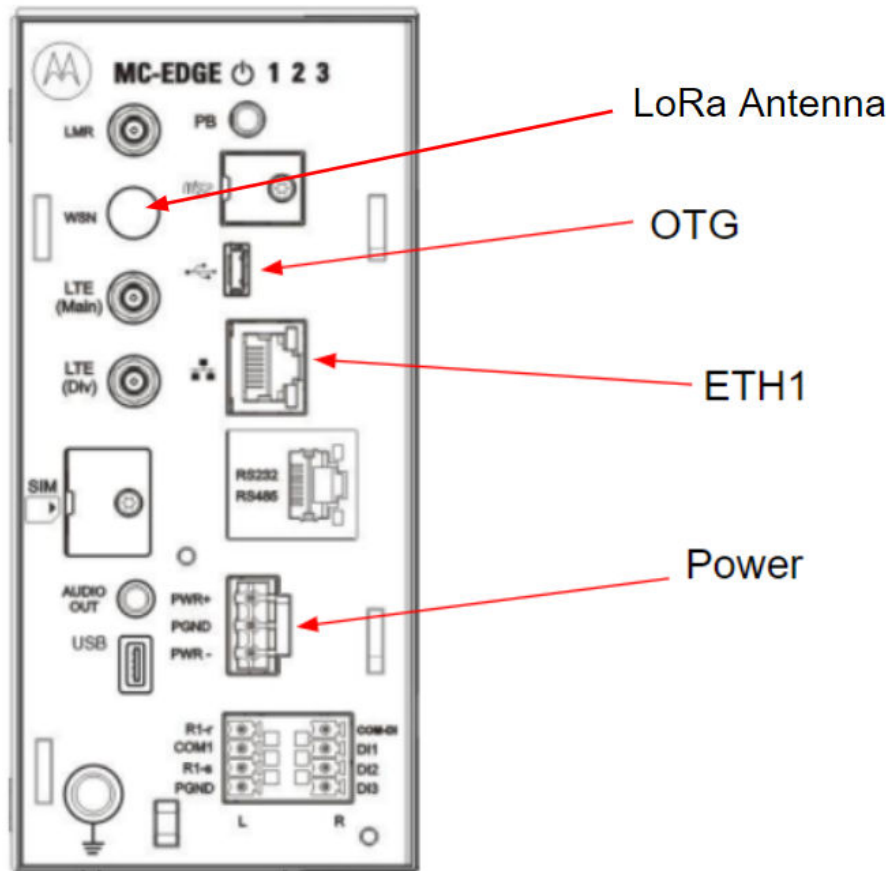
- MC-EDGE T1 or T2, release 8.5 or later
- Activity license for MC-EDGE Base Station
- MC-IoT System Tools Suite (STS) version 27.00 or higher

Before activating Activity on MC-EDGE, perform the following steps:

- 1 Connect the MC-EDGE to a 12V-24V DC power supply.
- 2 Attach the LoRa antenna to the MC-EDGE LoRa port.
- 3 Connect the MC-EDGE via USB OTG to the STS.

The following figure shows the location of the relevant power supply, antenna, and port connections on the MC-EDGE.

Figure 1: MC-EDGE Ports and Connectors



Process:

- 1 Upload the MC-EDGE site to the STS project, and configure its ports for Activity. See [Configuring the MC-EDGE Site and Ports on page 10](#).
- 2 Download the Activity Base Station image (.rpm file) from the online Activity ThingPark™ platform. See [Downloading the Activity Image from ThingPark on page 13](#)
- 3 Attach the Activity Base Station image to the MC-EDGE site in the STS project. See [Importing and Attaching the Activity Image on page 14](#).
- 4 Download the Activity Base Station image and site configuration file (with updated ETH1 and LoRa port configurations) to the MC-EDGE via the STS **Site Download** tool. See [Downloading Activity to MC-EDGE on page 15](#).
- 5 Obtain the module UUID and keys via the SSH SUPLOG.
- 6 Create the Activity Base Station in the ThingPark platform. See [Creating the Base Station in ThingPark on page 17](#).

1.1

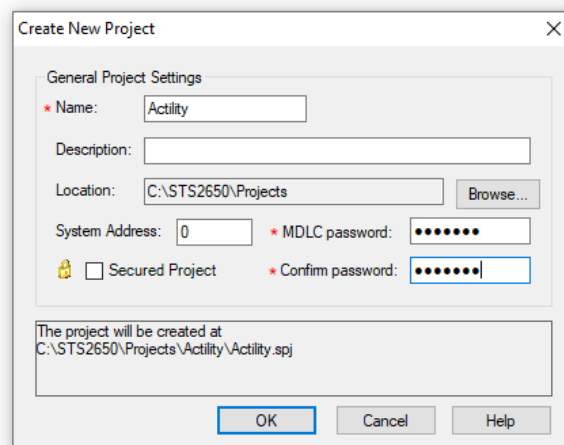
Configuring the MC-EDGE Site and Ports

The MC-EDGE ETH1 and LoRa ports must be properly configured before running the Activity agent.

Procedure:

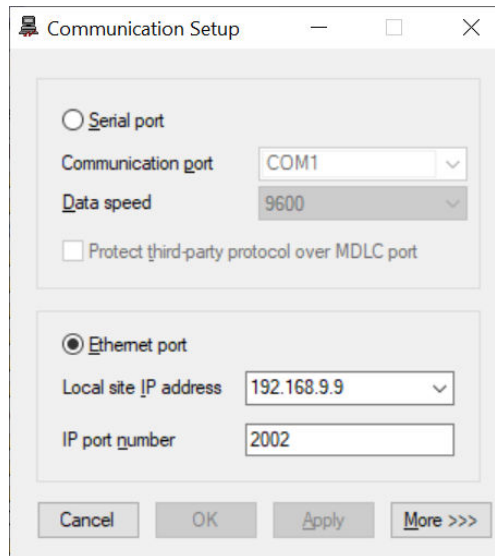
- 1 To create a new STS project, perform the following actions:
 - a From the STS menu bar, select **File**→**New Project**.
 - b Enter a **Name** for the project.
 - c Set the **MDLC password**.
 - d To create the project, click **OK**.

Figure 2: STS–Create New Project Dialog



- 2 To configure the STS for local connectivity to the MC-EDGE, perform the following actions:
 - a From the STS menu bar, select **Setup**→**Comm. Setup...**
 - b Select **Ethernet port** (default) and configure the IP connection as shown in the following figure.

Figure 3: STS Communication Setup Dialog

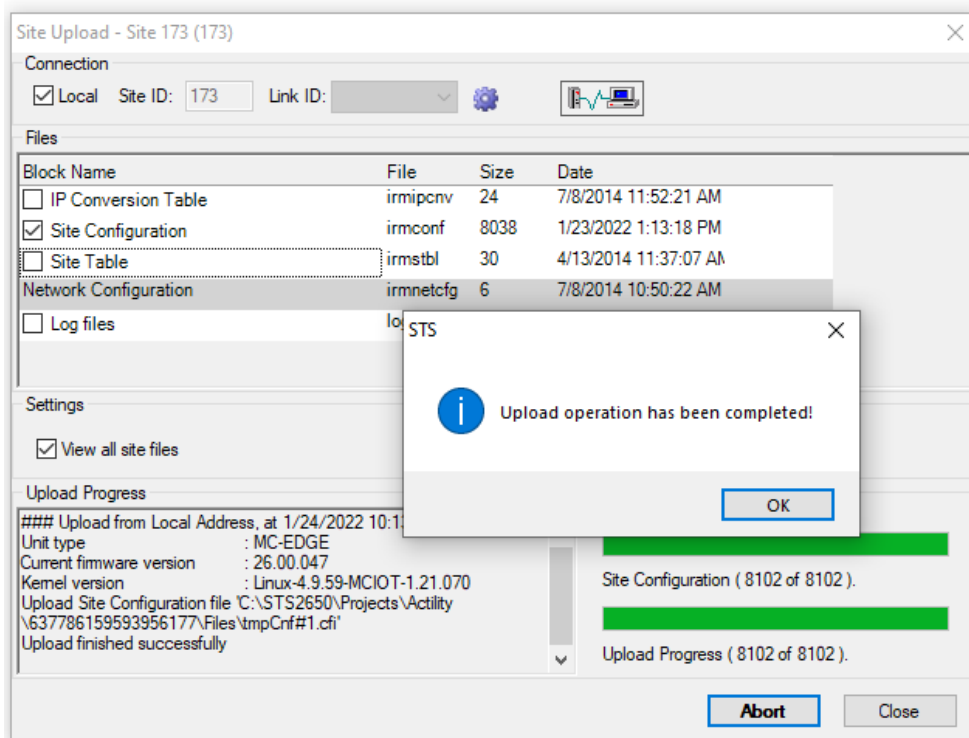


- c To apply the settings and close the **Communication Setup** dialog, click **OK**.
- 3 In the STS **Diagram View**, right-click the white area and select **Upload New Site...**
- 4 Ensure that the **Local** option is selected, and click **OK**.
- 5 In the **Site Upload** dialog, select the **Site Configuration** entry and click **OK**.

For more details, see "Uploading Files From Sites" in the *MC-IoT STS User Guide*.

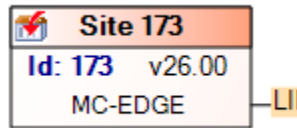
The STS begins uploading the site configuration file from the locally connected MC-EDGE. A message appears when the upload is completed.

Figure 4: Uploading a Site Configuration to the STS



After the site is successfully uploaded to the project, it is represented by an icon in the STS **Diagram View** as shown in the following figure.

Figure 5: MC-EDGE Site in the STS Diagram View



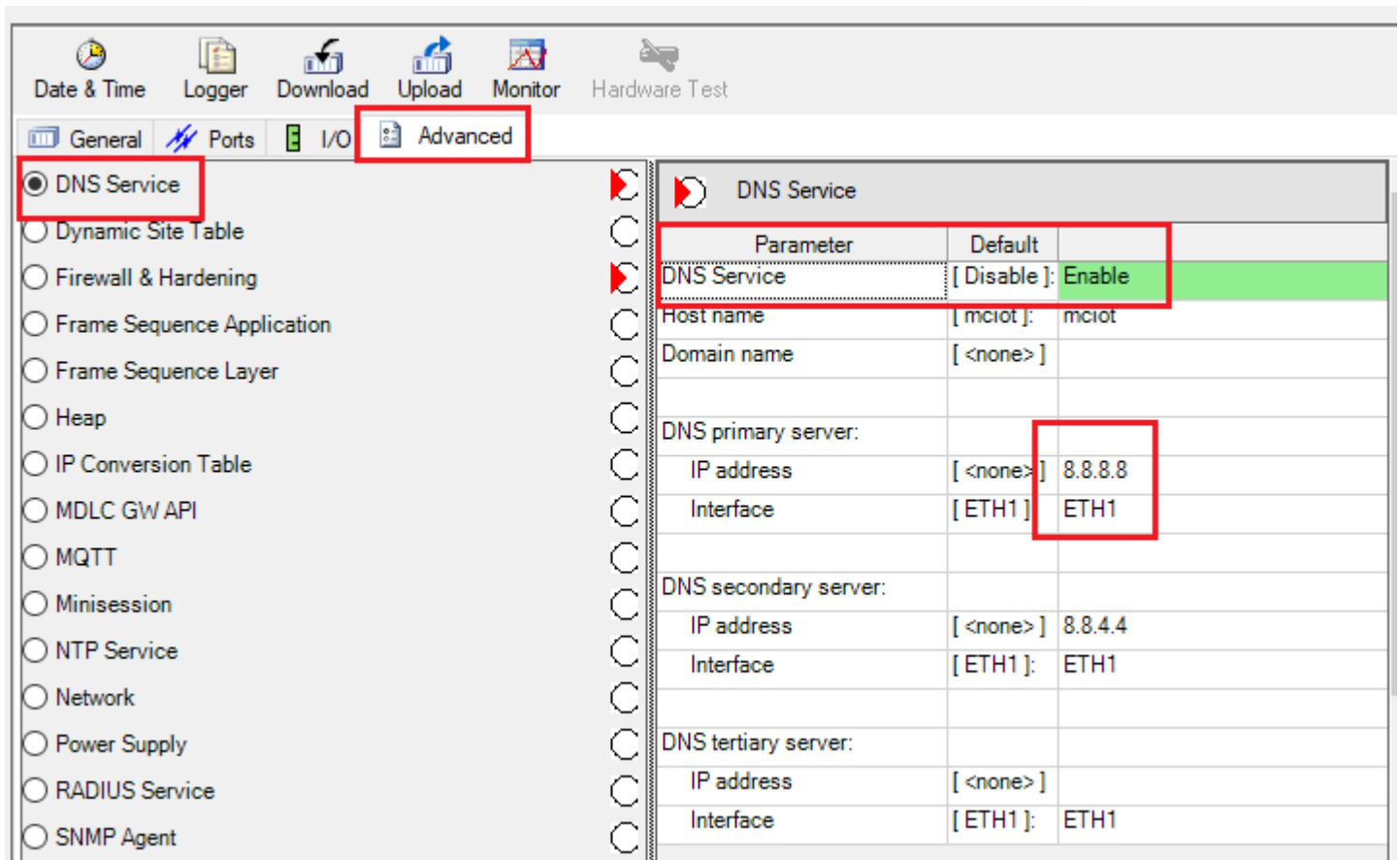
- 6 In the system diagram, open the site configuration by double-clicking the site icon.
- 7 Optional: In the site configuration, under the **General** tab, set the preferred **Site ID** and **Site Name** for the MC-EDGE unit.
- 8 Navigate to the **Ports** tab and perform the following actions:
 - a Configure the **ETH1** as preferred.
 - b Define the **LoRa** port as shown in the following figure.

Figure 6: LoRa Port Definition for Activity

LoRa	Media	LoRa	▼
	Connection Type	LoRa Gateway Type	▼
	Connection to	Activity	▼

- c From the drop-down menu, select the preferred Activity Deployment type.
The following Deployment type configurations are available:
 - **TPE-SaaS EU**
 - **TPE-SaaS AU**
 - **TPE-SaaS US**
 - **ThingPark Community**
 - **TPE-OCF**
- 9 To save the project, select **File**→**Save Project**.
- 10 Optional: Activity requires definition of DNS servers for properly functioning. It can be done through STS or later by the Activity Suplog menu. If you prefer to do it through STS, perform the following actions:
 - a Navigate to **Advanced tab**→**DNS service**.
 - b Enable **dns service**.
 - c Insert the IP address of DNS server and attach it to appropriate interface (up to 3 addresses).
 - d To save the project, select **File**→**Save Project**.

Figure 7: DNS Service



1.2

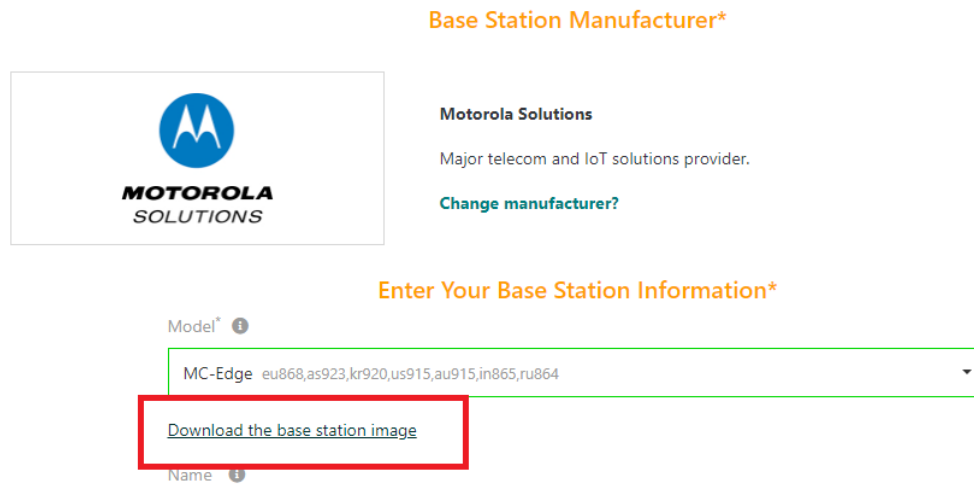
Downloading the Activity Image from ThingPark


The Activity Base Station image (.rpm file) is downloaded from the online ThingPark™ platform. After downloading the file, the user imports it into the STS project and attaches it to the MC-EDGE site.

Procedure:

- 1 In the ThingPark™ Enterprise platform, select **Base Stations**→**Create**.
- 2 When prompted to choose a gateway manufacturer, select **Motorola Solutions**.
- 3 From the **Model** drop-down list, select **MC-Edge**.
- 4 Click **Download the Base Station image**, and save the file when prompted.

Figure 8: ThingPark Community Portal–Downloading a Base Station Image



 **NOTE:** Do not close the ThingPark page after downloading the Activity image. After installing the Activity agent on the MC-EDGE as described in the following sections, return to ThingPark to finish creating the Base Station (which is [step 6](#) of the overall process; see [Activating Activity on MC-EDGE on page 9](#)).

1.3

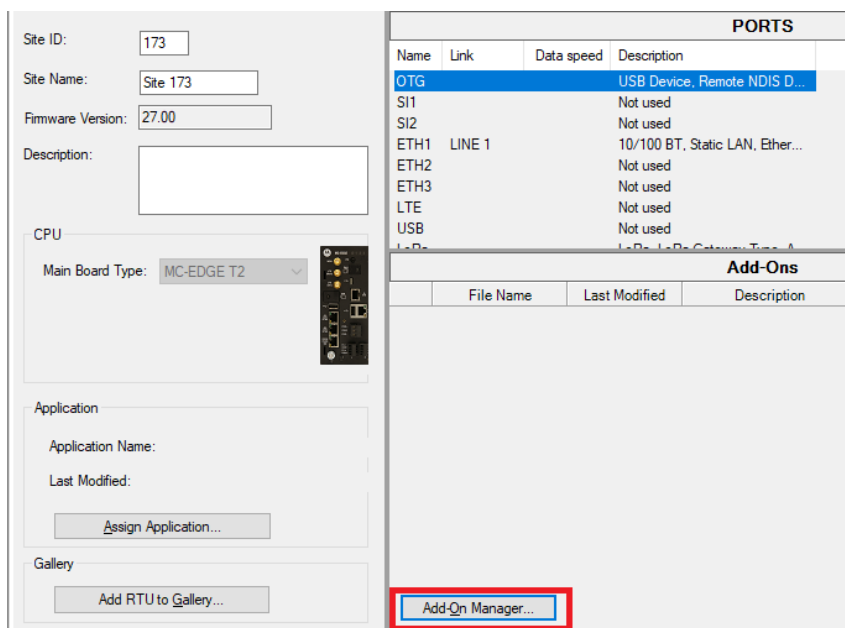
Importing and Attaching the Activity Image

Prerequisites: Ensure that the previously configured MC-EDGE site (see [Configuring the MC-EDGE Site and Ports on page 10](#)) is open in site configuration view. If the STS system view is currently displayed, double-click the preferred site to open it in site configuration view.

Procedure:

- 1 In the site configuration (under the **General** tab), select **Add-On Manager...**

Figure 9: STS Site Configuration – General Tab



2 In the Add-On Manager, perform the following actions:


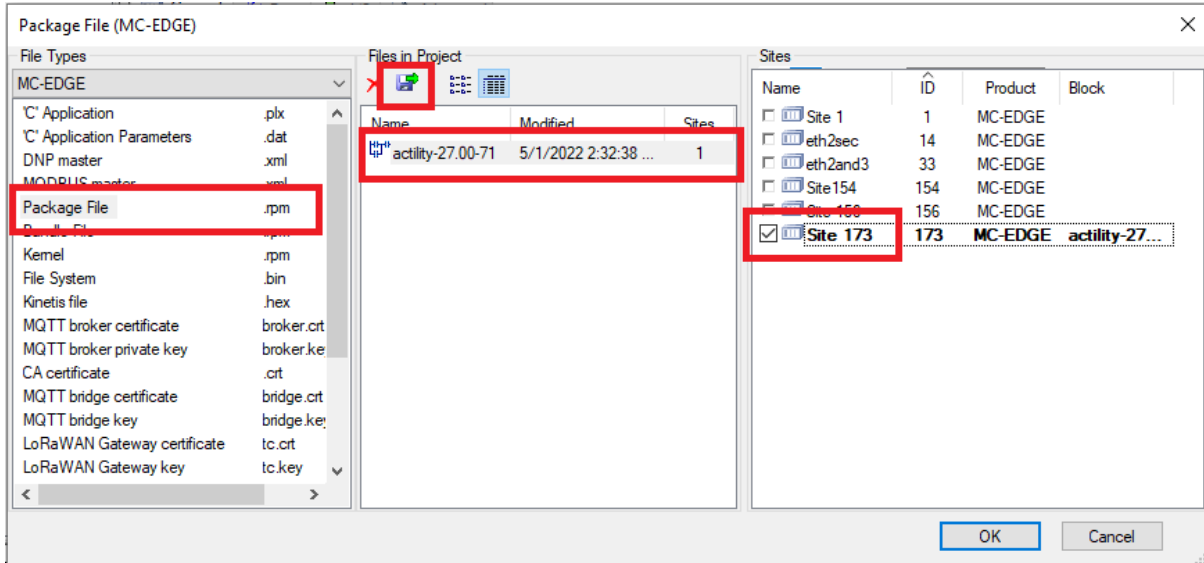
- a Under **File Types**, select **Package File**.
- b Under **Files in Project**, click the  **Browse and Import** icon.
- c In the Windows **Add** dialog, select the previously downloaded Activity image (.rpm file) and click **Open**.
- d In the **Sites** pane, select (check) the preferred site.
- e To attach the selected image to the chosen site (and close the Add-On Manager), click **OK**.

Figure 10: Adding Image File via STS Add-On Manager



For more information on the STS Add-On manager, see "Managing Add-On Files" in the *MC-IoT STS User Guide*.

Postrequisites: After attaching the image to the site, download it to the site (see following section).

1.4

Downloading Activity to MC-EDGE



NOTE: The Activity Base Station image and the MC-EDGE site configuration file cannot be simultaneously downloaded to the site. First download the image (package file), then download the site configuration.

For more information on the **Site Download** tool, see "Downloads to Sites" in the *MC-IoT STS User Guide*.

Prerequisites: Obtain the Activity Base Station image from the Activity ThingPark™ platform, and attach it to the MC-EDGE site via the STS Add-On Manager. See:

- 1 [Downloading the Activity Image from ThingPark on page 13](#)
- 2 [Importing and Attaching the Activity Image on page 14](#)

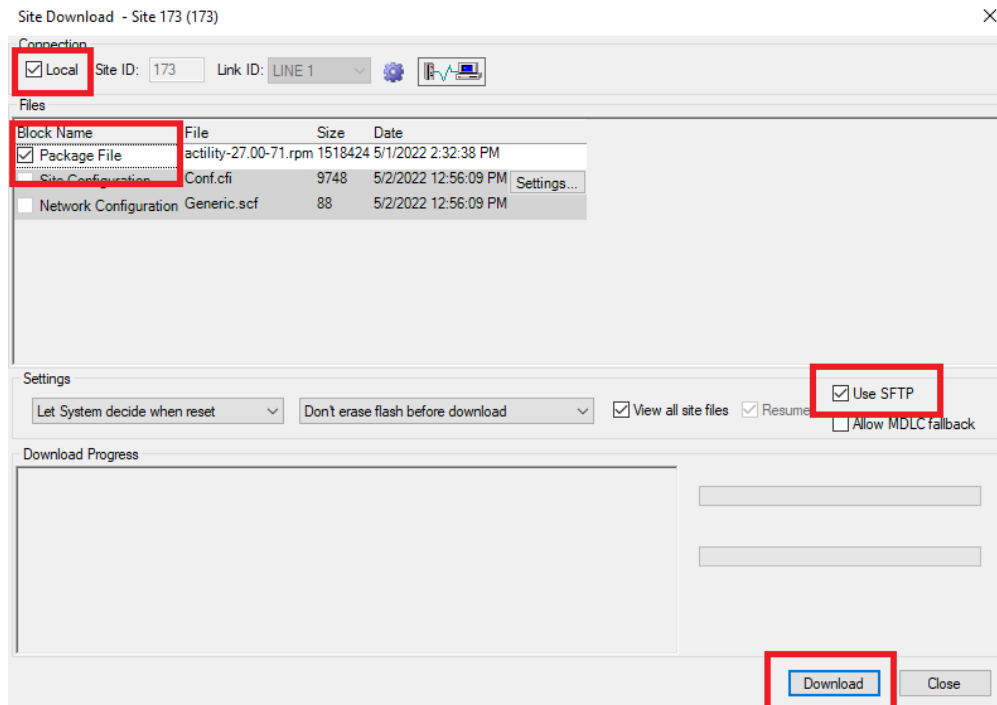
Procedure:

- 1 From the STS menu bar, select **Site**→**Download...**

If the **Download...** command is inactive, ensure that the preferred site is selected (or opened in site configuration view).

- 2 In the **Site Download** dialog, perform the following actions:
 - a Under **Connection**, select **Local**.
 - b Under **Files**, select the **Package File** entry corresponding to the preferred Activity Base Station image.

Figure 11: Site Download Dialog with Activity Package File Selected



- c Under **Settings**, select **Use SFTP**.
 - d To begin downloading the Base Station image, click **Download**.


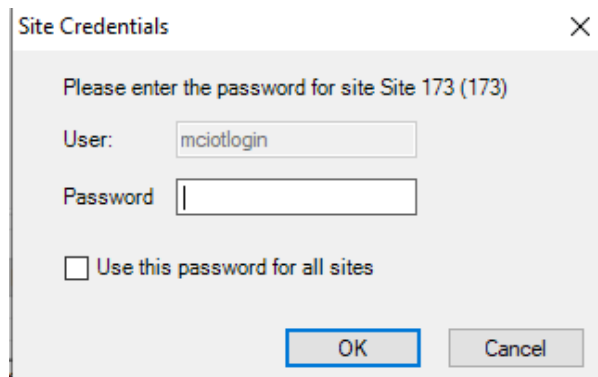
 **NOTE:** If prompted by the STS to enter a password for the `mciotlogin` user (see the following figure), contact Motorola Solutions IoT support team for the password.

Figure 12: Site Credentials Dialog



- e A "Download finished successfully" message appears if no errors occur. To return to the **Site Download** dialog, click **OK**.
- 3 Download the updated **Site Configuration** file to the MC-EDGE.


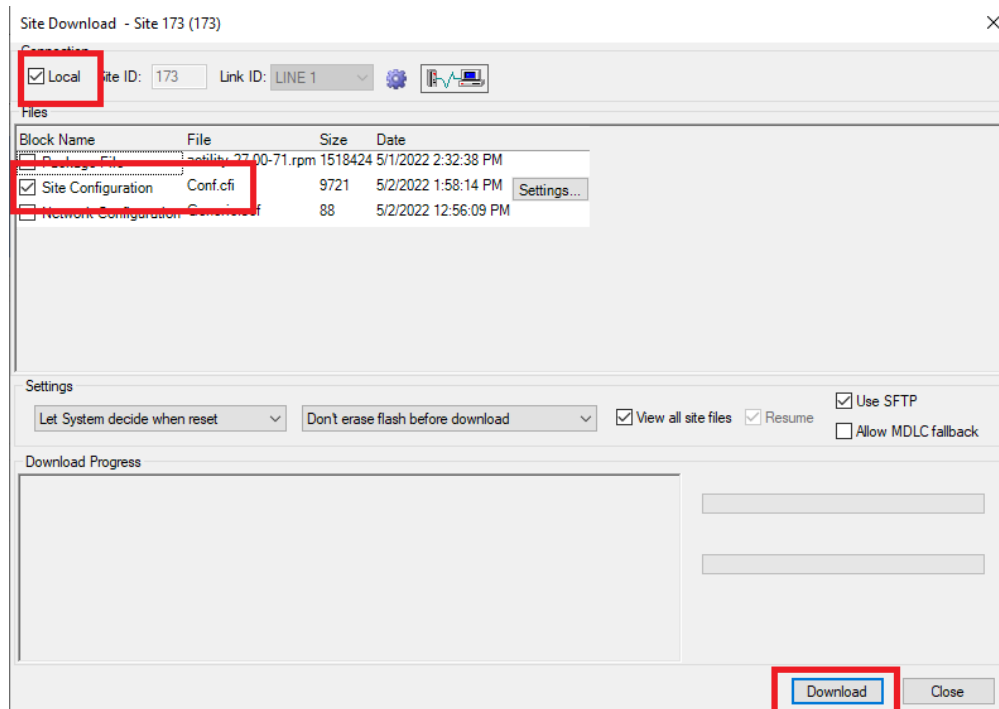
 **NOTE:** Do not bypass this step. The changes made to the site configuration (see [Configuring the MC-EDGE Site and Ports on page 10](#)) must be applied to this site by downloading the updated site configuration file.

Figure 13: Site Download Dialog with Site Configuration File Selected

The Activity agent is installed on the MC-EDGE. You can connect to the MC-EDGE via SSH to access the SUPLOG menu and retrieve the module UUID and keys. For more information, see [SUPLOG Configuration on page 18](#).

1.5

Creating the Base Station in ThingPark

Prerequisites: Obtain the module UUID and keys via the SSH SUPLOG. For general information on SUPLOG, see [SUPLOG Configuration on page 18](#).

Procedure:

- 1 In the ThingPark™ Enterprise platform, select **Base Stations**→**Create**.
- 2 When prompted to choose a gateway manufacturer, select **Motorola Solutions**.
- 3 From the **Model** drop-down list, select **MC-Edge**.
- 4 Follow the on-screen prompts to configure the Base Station.

For more information, see the technical documentation available on the Activity website at: <https://www.actility.com/thingpark-documentation-portal/>

Chapter 2

SUPLOG Configuration

For SUPLOG configuration, see the technical documentation available on the Actility website at:

<https://www.actility.com/thingpark-documentation-portal/>

The SUPLOG credentials are as follows:

- User: support
- Password: [Contact Motorola Solutions IoT support team]



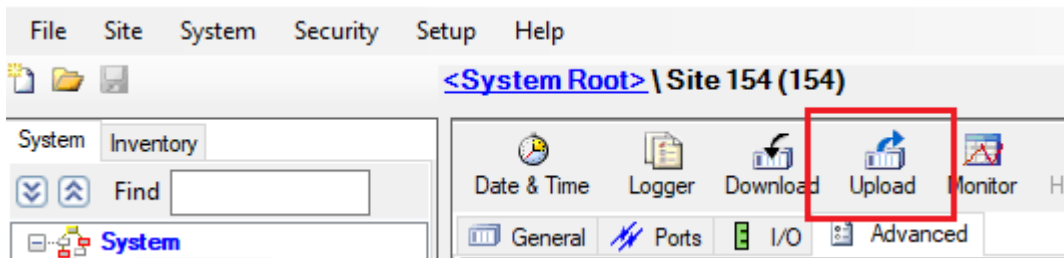
NOTE:

- MC-EDGE allows up to three DNS servers for all interfaces together. If more than three DNS servers are defined, only first three are used.
- At least one valid DNS server should be configured for Actility proper functioning.
- MC-EDGE allows up to two NTP servers.



NOTE: To synchronize network configuration changes made through Suplog with STS, you must use the **Upload** feature

Figure 14: Upload Feature



Chapter 3

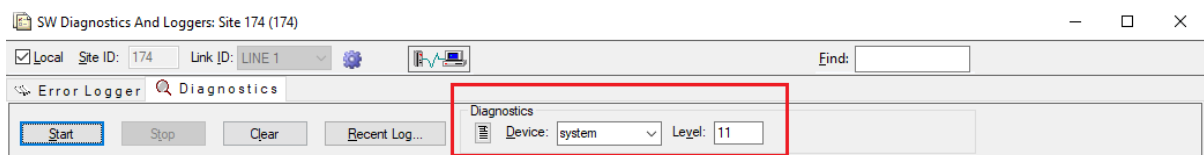
Troubleshooting

Users can use the System Tools Suite (STS) Software Diagnostics to check the status of the LoRa interface and Activity license of an MC-EDGE unit.

Procedure:

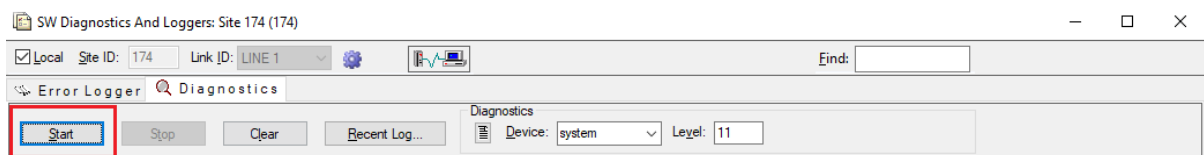
- 1 In the system **Diagram View** or **Table View**, right-click the preferred MC-EDGE site and select **Logger...**
- 2 In the **SW Diagnostics and Loggers** window, navigate to the **Diagnostics** tab.
- 3 In the **Diagnostics** panel (shown in the following figure), perform the following actions:
 - a Set the **Device** to `system`
 - b Set the **Level** to `11`

Figure 15: STS–SW Diagnostics–Setting the Device and Level



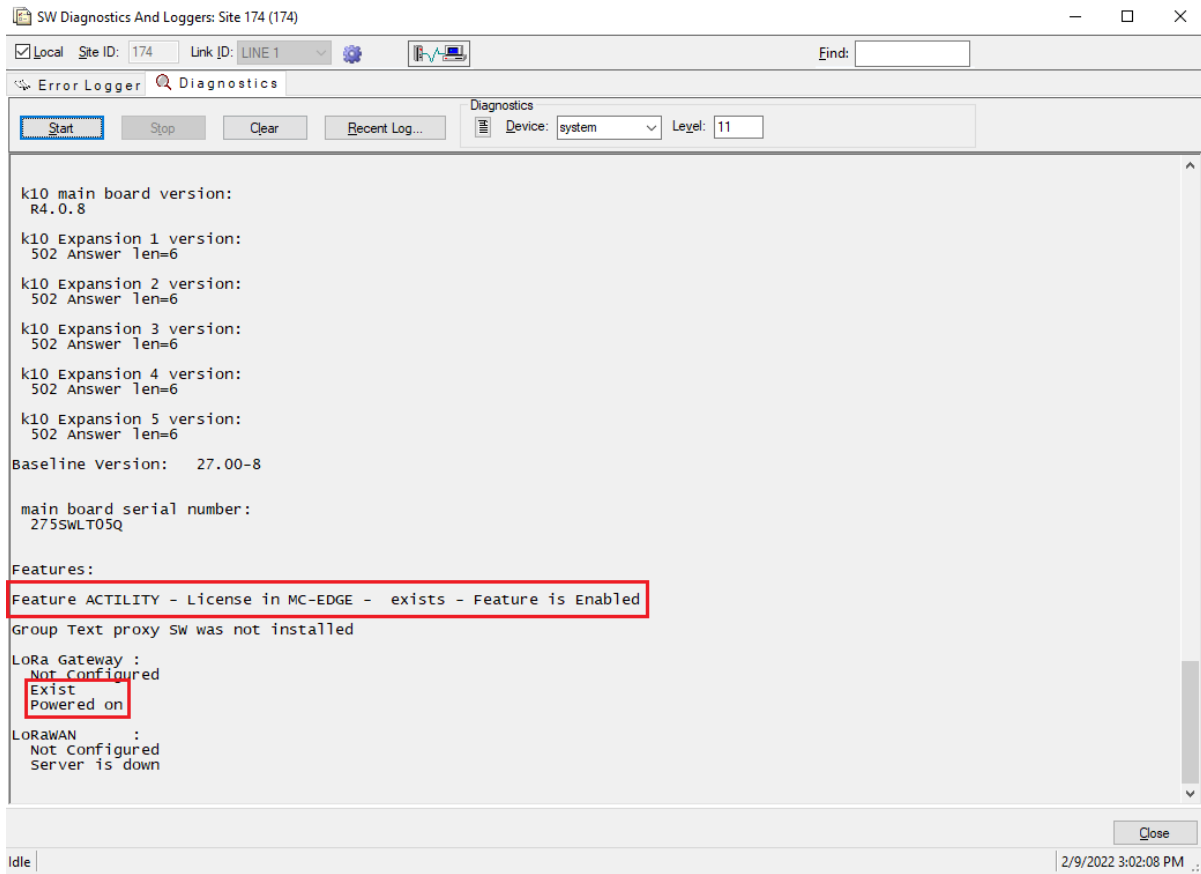
- 4 To initiate the diagnostics, click **Start**.

Figure 16: Initiating the STS SW Diagnostics



The STS outputs diagnostic information, including the status of the LoRa Gateway and the Activity license (as shown in the following figure).

Figure 17: SW Diagnostics Output



3.1 Possible Activity Errors

The following table lists the possible Activity errors that the user may encounter when performing diagnostics, along with the potential cause or causes of each error.

Table 1: Possible Activity Errors

Error/Issue	Cause
Activity is not listed in the Features section.	Device is not licensed for Activity.
LoRa Gateway is Powered Off.	<ul style="list-style-type: none"> Activity package is not installed. LoRa is not enabled in the site configuration.