

# Field Agent™

PREDIX MACHINE VERSION

UPGRADE GUIDE



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# Chapter 1: Overview

As new versions of Predix Machine are released by GE, they are integrated into the various Field Agents, validated, and released as officially supported versions. Due to resource constraints, performance optimizations, and security considerations, the default Predix Machine container is heavily customized to the profile of each Emerson Field Agent. In many cases, deploying a Predix Machine container built by a customer without Emerson customizations to an Emerson Field Agent can cause Predix Machine to fail to run, requiring a factory reset. For this reason, Emerson publishes Configuration and Application Templates that are pre-built, pre-validated Predix Machine containers on top of which customer modifications can be applied. Emerson also publishes migration packages for upgrading from one major version of Predix Machine to another. This document discusses the upgrade process for the following scenarios:

- Upgrading an MFA
  - From Predix Machine 16.2 to 17.1, in section 2.1.
  - From Predix Machine 17.1 to 17.2.3, in section 2.2.
- Upgrading an EFA
  - From Predix Machine 16.2 to 17.1, in section 3.1.
  - From Predix Machine 17.1 to 17.2.3, in section 3.2.

## 1.1 Revisions in this Manual

| Rev | Date      | Description  |
|-----|-----------|--|
| E   | Sep 2019  | Following Emerson's acquisition of this product, changes have been made to apply appropriate branding and registration of the product with required certification agencies. No changes to material, process, form, fit or functionality. |
| D   | July 2018 | Added instructions for upgrading the EFA from Predix Machine 17.1 to 17.2.<br>Added instructions for how to upgrade application and configuration templates through Edge Manager   |
| C   | May 2018  | Added instructions for upgrading the MFA from Predix Machine 17.1 to 17.2.   |
| B   | Aug 2017  | Added instructions for upgrading the EFA from Predix Machine 16.2 to 17.1.   |
| A   | Jul 2017  | Corrections throughout the document.   |
| -   | Jun 2017  | Original Issue.  |

## 1.2 Related Documentation

Field Agents User Guide      GFK-2993

In addition to these manuals, datasheets and product update documents describe individual modules and product revisions. The most recent PACSystems documentation is available on the Emerson support website

<https://www.emerson.com/Industrial-Automation-Controls/support>.

# Chapter 2: Mini Field Agent (MFA)

## 2.1 Upgrading an MFA from Predix Machine 16.2 to 17.1

### 2.1.1 Verify the Current Predix Machine Version is 16.2

There are two simple ways to confirm a given Field Agent is running Predix Machine 16.2.

1. If the Field Agent is enrolled and Reachable in EdgeManager, issue the “Predix Machine: Get Log” Command and read the version of the running Predix Machine bundles.

**Figure 1: Read Version from Log**

```
bundles/com.ge.dspmicro.httpclient-16.2.2.jar was installed. Bundle ID is 92
bundles/com.ge.dspmicro.predixcloud-identity-16.2.2.jar was installed. Bundle ID is 93
bundles/com.ge.dspmicro.machinegateway-impl-16.2.2.jar was installed. Bundle ID is 94
bundles/com.ge.dspmicro.storeforward-impl-16.2.2.jar was installed. Bundle ID is 95
bundles/com.ge.dspmicro.wsclient-impl-16.2.2.jar was installed. Bundle ID is 96
bundles/com.ge.dspmicro.wsserver-16.2.2.jar was installed. Bundle ID is 97
bundles/com.ge.dspmicro.hoover-impl-16.2.2.jar was installed. Bundle ID is 98
bundles/com.ge.dspmicro.machineadapter-opcua-16.2.2.jar was installed. Bundle ID is 99
bundles/com.ge.dspmicro.machineadapter-modbus-16.2.2.jar was installed. Bundle ID is 100
bundles/com.ge.dspmicro.machineadapter-healthmonitor-16.2.2.jar was installed. Bundle ID is 101
bundles/com.ge.dspmicro.management-impl-16.2.2.jar was installed. Bundle ID is 102
bundles/com.ge.dspmicro.webconsole-predixcloudenroll-16.2.2.jar was installed. Bundle ID is 103
bundles/com.ge.dspmicro.autoenroll-certificate-16.2.2.jar was installed. Bundle ID is 104
```

2. If the Field Agent is not enrolled or not Reachable in EdgeManager, log into the Predix Machine Web Console and check the available Technician Console pages. The “Cellular” and “Status and Commands” pages were not present in Predix Machine 16.2 but were added in Predix Machine 17.1. Note that the “Configuration” page may or may not be included in Predix Machine 16.2; this depends on whether an Application Template was deployed from EdgeManager to the Field Agent.

**Figure 2: Console Page for Predix Machine 16.2**



**Figure 3: Console Page for Predix Machine 17.1**



## 2.1.2 Upgrade Steps

Upgrading a Mini Field Agent (MFA) from Predix Machine 16.2 to Predix Machine 17.1 is a one-time activity that involves three steps:

1. Use the Field Agent Updater to update to an OS version that is 2017\_06\_06\_000000 or newer. See [Update the MFA OS](#) for details.
2. Verify the current Predix Machine version is 16.2. See [Verify the Current Predix Machine Version is 16.2](#) for details.
3. Deploy the Predix Machine upgrade package from either:
  - a. Field Agent Updater page of the Predix Machine Web Console as an offline upgrade. See [Offline Predix Machine Upgrade Through the Predix Machine Web Console](#) for details.
  - b. EdgeManager as an online upgrade. See [Online Predix Machine Upgrade Using an EdgeManager Migration Script](#) for details.

## 2.1.3 Update the MFA OS

Several underlying operating system updates are required to support Predix Machine. Before migrating a MFA from Predix Machine 16.2 to 17.1, the OS version must be 2017\_06\_06\_000000 or newer. If migration is attempted with an older MFA OS version, the migration will fail with a message indicating that the OS version must be updated.

The MFA OS version can be seen from the Technician Console > Field Agent Updater page in the Predix Machine Web Console.

**Figure 4: Read MFA OS Version from Technical Console**



There are four ways of updating the MFA OS:

1. If the MFA has not yet been configured and is therefore not expected to have an Internet connection, a local, offline update (.MAX file) can be uploaded using the Local Update section of the Field Agent Updater page. The MFA OS .MAX files can be obtained from: <https://www.emerson.com/Industrial-Automation-Controls/support>. For more information about applying Local Updates, refer to the [Field Agents User Guide, GFK-2993](#).

2. If the MFA was configured in the Field Agent Updater page for Automatic Updates, the MFA will update itself when configured to do so. For more details on how to configure Automatic Updates, refer to the [Field Agents User Guide, GFK-2993](#).
3. If the MFA was not configured in the Field Agent Updater page for Automatic Updates but has a network connection to the Cloud Update URL provided in the Field Agent Updater page, a Manual Cloud Update can be initiated. Use the Test Connection button to verify the URL can be reached before attempting a Manual Cloud Update. For more details on setting up the Network Configuration and verifying connectivity to the Cloud Update URL, refer to the Field Agents User Guide, GFK-2993. [Field Agents User Guide, GFK-2993](#)
4. If the MFA is enrolled and Reachable in EdgeManager, an EdgeManager Application package that contains the OS update can be uploaded to the EdgeManager Repository and deployed to the MFA. For detailed instructions for this process, please contact the Technical Support team using the contact information given on the last page of this guide.

## 2.1.4 Deploy the Predix Machine Upgrade Package

There are two ways of deploying the package that upgrades Predix Machine from 16.2 to 17.1:

1. Offline Predix Machine upgrade through the Predix Machine Web Console:
  - This approach is preferred for migrating a relatively small number of MFAs. It is faster than the online update and can be done directly by the end-customer.
  - Pre-requisites:
    - MFA OS updated to version 2017\_06\_06\_000000 or newer
    - Local Area Network access to the MFA
  - Outcomes:
    - Existing Predix Machine container replaced with an un-enrolled 17.1.2 container
      - This operation acts like a Factory Reset. The network configuration, time synchronization configuration, and Field Agent Updater configuration set previously in the Predix Machine Web Console are reverted to factory defaults. Additionally, the Predix Machine Web Console credentials will revert to the defaults and Predix Machine must be re-enrolled into the new tenancy. All Configuration and Application customizations must be upgraded to be compatible with Predix Machine 17.1 using the A&C Configuration and Application Templates, then uploaded to the EdgeManager Repository, and deployed from EdgeManager.
    - The MFA Factory Reset partition is updated with Predix Machine 17.1.2
2. Online Predix Machine upgrade using an EdgeManager migration script:
  - This approach is preferred for migrating a relatively large number of MFAs. It must be done with the assistance of a representative from Emerson business.

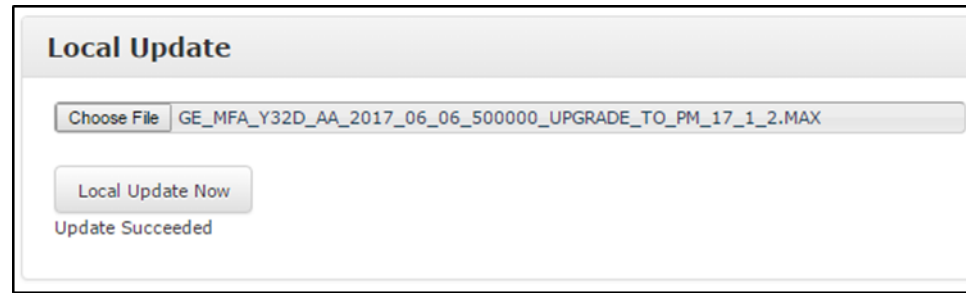
- Pre-requisites:
  - MFA OS updated to version 2017\_06\_06\_000000 or newer
  - The MFA is both enrolled and Reachable in EdgeManager
- Outcomes:
  - The existing Predix Machine container replaced with an enrolled 17.1.2 container
    - This operation deploys a clean Predix Machine 17.1.2 container and performs certificate enrollment into the new EdgeManager tenancy. The Predix Machine Web Console credentials, network settings, time synchronization settings, and Field Agent Updater settings are retained. All Configuration and Application customizations must be upgraded to be compatible with Predix Machine 17.1 using the A&C Configuration and Application Templates, then uploaded to the EdgeManager Repository, and deployed from EdgeManager.
  - The MFA Factory Reset partition is updated with Predix Machine 17.1.2

## Offline Predix Machine Upgrade through the Predix Machine Web Console

The steps to perform an upgrade from Predix Machine 16.2 to 17.1 as an offline update are:

1. Download the MFA offline upgrade package (.MAX file) for Predix Machine 17.1.2 from the following location: <https://www.emerson.com/Industrial-Automation-Controls/support>.
2. Connect to the Predix Machine Web Console and browse to the Field Agent Updater page. For details on connecting to the Predix Machine Web Console and locating the Field Agent Updater page, refer to the [Field Agents User Guide, GFK-2993](#).
3. Confirm that the Current Field Agent Version shown is 2017\_06\_06\_000000 or newer.
4. In the Local Update section of the Field Agent Updater page, browse to and select the previously downloaded MFA offline upgrade package (.MAX file).
5. Press the Local Update Now button and wait for approximately 3.5 minutes while the upgrade is performed.
6. After the upgrade completes, an “Update Succeeded” indication will appear beneath the Local Update Now button and the MFA will reboot and start a clean copy of Predix Machine 17.1.2. It will take another six minutes until the green ON LED becomes solid indicating that Predix Machine is running and ready to be enrolled.



**Figure 5: Update Succeeded Notification**

7. To reconfigure the network settings, time synchronization settings, and Field Agent Updater settings, refer to the instructions in the [Field Agents User Guide, GFK-2993](#).
8. To enroll the Field Agent into EdgeManager, refer to the instructions in [the Field Agents User Guide, GFK-2993](#).

## Online Predix Machine Upgrade using an EdgeManager Migration Script

To perform a mass upgrade of enrolled, Reachable MFAs from 16.2 to 17.1, please contact the Technical Support team using the contact information given on the last page of this guide. The assigned representative will require the following migration information:

1. The EdgeManager URL and UAA URL for the source EdgeManager environment where the MFAs are currently enrolled and reachable.
2. The list of Device IDs of the MFAs in the source EdgeManager environment. If the devices are enrolled in groups, the Group ID for each group is needed along with the list of which Device IDs are in each group.
3. An Application Client ID and Application Client Secret for the source EdgeManager environment.
4. The EdgeManager URL and UAA URL for the target EdgeManager environment where the MFAs are to be migrated and enrolled.
5. An Application Client ID and Application Client Secret for the target EdgeManager environment.
6. The list of Configuration and Application packages that have been deployed on the MFAs that must be migrated forward to the target EdgeManager repository and re-deployed after re-enrollment.

## 2.2 Upgrading an MFA from Predix Machine 17.1 to 17.2

This section discusses the process of upgrading an MFA from Predix Machine 17.1 to 17.2.3. If an MFA is running an older version of Predix Machine, it must be upgraded to 17.1 before upgrading to 17.2.3.

## 2.2.1 Verification of Predix Machine 17.1

There are two simple ways to confirm a given Field Agent is running Predix Machine 17.1.

- a. If the Field Agent is enrolled and Reachable in EdgeManager, issue the “Predix Machine: Get Log” Command and read the version of the running Predix Machine bundles.

**Figure 6: Read Version from Log**

|                      |      |   |                                |
|----------------------|------|---|--------------------------------|
| 4/9/2018, 3:16:50 PM | INFO | Bundle with id #80 com.ge.dspmicro.management-impl, 17.1.2 was started.   | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:50 PM | INFO | Bundle with id #79 com.ge.dspmicro.websocketriver-send, 17.1.2 was started.   | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:50 PM | INFO | Bundle with id #78 com.ge.dspmicro.opcua-common, 17.1.2 was started.  | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:50 PM | WARN | No Predix cloud HTTP client is available. HTTP River will not be able to send data until the client identity service is configured. | Predix Machine HTTP River Send |
| 4/9/2018, 3:16:50 PM | WARN | HTTP river com.ge.dspmicro.httpriver.send.river.name not available. Configuration for destination host is empty.                    | Predix Machine HTTP River Send |
| 4/9/2018, 3:16:49 PM | INFO | Bundle with id #77 com.ge.dspmicro.httpriver-send, 17.1.2 was started.  | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:49 PM | INFO | Bundle with id #76 com.prosyst.mbs.web.api, 1.1.0 was started.  | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:49 PM | INFO | Bundle with id #75 com.prosyst.mbs.webservices.jsonrpc.handler.useradmin, 1.1.1000 was started.                                     | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:49 PM | INFO | Bundle with id #74 com.prosyst.mbs.webservices.jsonrpc.core, 1.1.1000 was started.  | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:48 PM | INFO | Bundle with id #73 com.prosyst.mbs.webservices.jsonrpc.api, 1.1.1000 was started.   | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:48 PM | INFO | Bundle with id #72 com.ge.dspmicro.webconsole-useradmin, 17.1.2 was started.  | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:48 PM | INFO | Bundle with id #71 com.ge.dspmicro.webconsole-storeforward, 17.1.2 was started.   | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:48 PM | INFO | Bundle with id #70 com.ge.dspmicro.webconsole-validateroute, 17.1.2 was started.  | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:48 PM | INFO | Bundle with id #69 com.ge.dspmicro.webconsole-changepassword, 17.1.2 was started.   | com.prosyst.mbs.system.bundle  |

- b. If the Field Agent is not enrolled or not Reachable in EdgeManager, log into the Predix Machine Tech Console and navigate to the OSGi Log page. This is the initial page shown after log-in. Read the version of the running Predix Machine bundles as shown above.

## 2.2.2 Upgrade Steps

Upgrading a Mini Field Agent (MFA) from Predix Machine 17.1 to Predix Machine 17.2.3 is an activity that involves several steps:

If the MFA contains configuration files that should be archived for future use, confirm that a copy of the configuration files exists somewhere, such as in the EdgeManager Repository. Consider using the EdgeManager Predix Machine: Upload Configurations command to upload the MFA configuration to the EdgeManager Repository.

Use the Field Agent Updater to update to an OS version that is 2018\_05\_18\_000000 or newer. This is more fully described in section 2.2.3 below. The MFA will retain its current configuration, including the network configuration, the password for the Predix Machine Web Console predix user and its Predix Cloud tenancy enrollment.

Enroll the MFA into a Predix Cloud tenancy, if you had not done so previously.

Obtain the MFA Predix Machine 17.2.3 Application and Configuration Templates from the URLs below: <https://www.emerson.com/Industrial-Automation-Controls/support>.

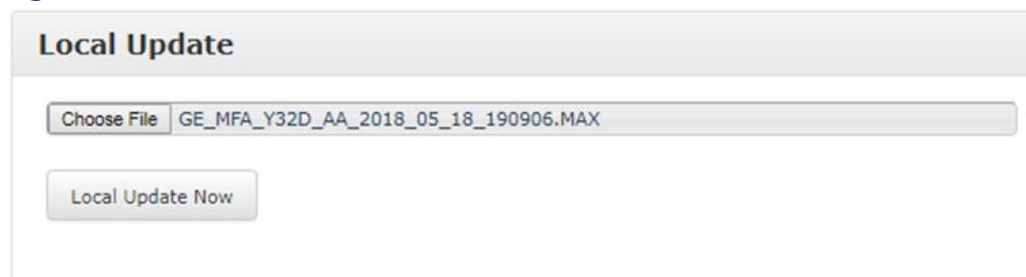
Modify the Configuration and Application Templates as needed, upload them to the EdgeManager Repository, and deploy them to the MFA. For more information, refer to the [Field Agents User Guide, GFK-2993](#).

## 2.2.3 Update the MFA OS

There are three ways of updating the MFA OS:

1. A local, offline update (.MAX file) can be uploaded using the Local Update section of the Field Agent Update section of the Field Agent Updater page.
  - a. Download the MFA offline upgrade package (.MAX file) for Predix Machine 17.2.3 from the following location: <https://www.emerson.com/Industrial-Automation-Controls/support>.
  - b. Connect to the Predix Machine Web Console and browse to the Field Agent Updater page. For details on connecting to the Predix Machine Web Console and locating the Field Agent Updater page, refer to the [Field Agents User Guide, GFK-2993](#).
  - c. Confirm that the Current Field Agent Version shown is 2017\_06\_06\_000000 or newer. In the Local Update section of the Field Agent Updater page, browse to and select the previously downloaded MFA offline firmware upgrade package (.MAX file).

**Figure 7: Select Previously-Downloaded .MAX file**



- d. Press the Local Update Now button and wait for approximately 10 minutes while the upgrade is performed. At this point the MFA will reboot. All the LEDs will turn off and there will be a UI error (see image) as the connection to the web browser is broken. This is expected.

**Figure 8: UI Error Notification (Expected)**



- e. After an additional 3 minutes the MFA will have finished rebooting and the green ON LED will become solid. You will need to login again, if you need to continue the upgrade process.
2. If the MFA was not configured in the Field Agent Updater page for Automatic Updates but has a network connection to the Cloud Update URL provided in the Field Agent Updater page, a Manual Cloud Update can be initiated. Use the Test Connection button to verify the URL can be reached before attempting a Manual Cloud Update.

For details on setting up the Network Configuration and verifying connectivity to the Cloud Updater URL, refer to the [Field Agents User Guide, GFK-2993](#).

3. If the MFA was configured in the Field Agent Updater page for Automatic Updates, the MFA will update itself when configured to do so. For more details, refer to the [Field Agents User Guide, GFK 2993](#).

# Chapter 3: Embedded Field Agent (EFA)

## 3.1 Upgrading an EFA from Predix Machine 16.2 to 17.1

### 3.1.1 Upgrade Steps

Upgrading an Embedded Field Agent (EFA) inside a CPE400 from Predix Machine 16.2 to Predix Machine 17.1 is a one-time activity that involves several steps:

1. Verify the current Predix Machine version is 16.2. See [Verify the Current Predix Machine Version is 16.2](#) for details.
2. If the EFA contains configuration files that should be archived for future use, confirm that a copy of the configuration files exists, such as in the EdgeManager Repository. Consider using the EdgeManager “Predix Machine: Upload Configurations” commands to upload the EFA configuration to the EdgeManager Repository.
3. As a pre-requisite for upgrading to Predix Machine 17.1.2, the EFA version must be 2017\_07\_10\_160104 or newer. Use the Field Agent Updater page of the Predix Machine Web Console to update to version 2017\_07\_10\_160104 or newer. See [Update the EFA OS](#) for details.
4. Deploy the Predix Machine upgrade package (EfaUpgradeToPredixMachine17.1.2.MAX) using the “Local Update” section found at the bottom of the Field Agent Updater page of the Predix Machine Web Console. The offline upgrade .MAX file can be obtained from <https://www.emerson.com/Industrial-Automation-Controls/support>.
5. The EFA will automatically reboot after the installation successfully completes. It may take 8 minutes after the successful upgrade before the EFA is running and the Predix Machine Web Console is ready for operation. To access the Predix Machine Web Console, Configuration Mode must be entered using the Push Button interface. While the EFA will retain its network configuration, the password for the Predix Machine Web Console Predix user will be reverted to the default password of predix2machine.
6. Use the Network Configuration page of the Predix Machine Web Console to apply the current network proxy settings to the new 17.1.2 Predix Machine.
7. Enroll the EFA into a US-West Predix Cloud tenancy.
8. Obtain the EFA Predix Machine 17.1.2 App

9. Location and Configuration Template from the URLs below:  
<https://www.emerson.com/Industrial-Automation-Controls/support>.
10. Modify the Configuration and Application Templates as needed, upload them to the EdgeManager Repository, and deploy them to the EFA. For more information, refer to the [Field Agents User Guide, GFK-2993](#).

## 3.1.2 Update the EFA OS

The EFA OS must be updated to 2017\_07\_10\_160104 or newer prior to upgrading Predix Machine to version 17.1.2. If a Predix Machine upgrade is attempted with an older EFA OS version, the Predix Machine upgrade will fail. More information about this failure can be seen on the OSGi > Log Service page of the Predix Machine Web Console. When this failure occurs, a long error message can be seen about the attempted upgrade containing “FAILURE NUMBER 31 DETECTED!” near the end of the log statement, preceded about 14 lines above by a message like “The Field Agent OS version 2017\_01\_19\_182114 DOES NOT support migration to Predix Machine 17.1.2”.

The EFA OS version can be seen from the Technician Console > Field Agent Updater page in the Predix Machine Web Console.

**Figure 9: Read EFA OS from Technical Console**



If the EFA OS is not at version 2017\_07\_10\_160104 or newer, it can be updated two ways:

1. Local Update: If the EFA does not have an Internet connection, an offline OS update can be performed by uploading the OS image in the “Local Update” section near the bottom of the Field Agent Updater page. The EFA OS offline update .MAX file can be obtained from: <https://www.emerson.com/Industrial-Automation-Controls/support>.

For more information about applying Local Updates, refer to the [Field Agents User Guide, GFK-2993](#)

2. Cloud Update: If the EFA has an Internet connection, an online OS update can be performed using the “Cloud Update Now” button in the “Manual Cloud Updates” section of the Field Agent Updater page. Use the Test Connection button to verify the URL can be reached before attempting a Manual Cloud Update. For more information about setting up the Network Configuration and verifying connectivity to the Cloud Update URL, refer to the [Field Agents User Guide, GFK-2993](#).

## 3.2 Upgrading an EFA from Predix Machine 17.1 to 17.2

This section discusses the process of upgrading an EFA from Predix Machine 17.1 to 17.2.3. If an EFA is running an older version of Predix Machine, it must be upgraded to 17.1 before upgrading to 17.2.3.

### 3.2.1 Verification of Predix Machine 17.1

There are two simple ways to confirm a given Field Agent is running Predix Machine 17.1.

- a. If the Field Agent is enrolled and Reachable in EdgeManager, issue the “Predix Machine: Get Log” Command and read the version of the running Predix Machine bundles.

**Figure 10: Read Version from Log**

|                      |      |   |                                |
|----------------------|------|---|--------------------------------|
| 4/9/2018, 3:16:50 PM | INFO | Bundle with id #80 com.ge.dspmicro.management-impl, 17.1.2 was started.   | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:50 PM | INFO | Bundle with id #79 com.ge.dspmicro.websocketriver-send, 17.1.2 was started.   | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:50 PM | INFO | Bundle with id #78 com.ge.dspmicro.opcua-common, 17.1.2 was started.  | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:50 PM | WARN | No Predix cloud HTTP client is available. HTTP River will not be able to send data until the client identity service is configured. | Predix Machine HTTP River Send |
| 4/9/2018, 3:16:50 PM | WARN | HTTP river com.ge.dspmicro.httpriver.send.river.name not available. Configuration for destination host is empty.                    | Predix Machine HTTP River Send |
| 4/9/2018, 3:16:49 PM | INFO | Bundle with id #77 com.ge.dspmicro.httpriver-send, 17.1.2 was started.  | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:49 PM | INFO | Bundle with id #76 com.prosyst.mbs.web.api, 1.1.0 was started.  | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:49 PM | INFO | Bundle with id #75 com.prosyst.mbs.webservices.jsonrpc.handler.useradmin, 1.1.1000 was started.                                     | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:49 PM | INFO | Bundle with id #74 com.prosyst.mbs.webservices.jsonrpc.core, 1.1.1000 was started.  | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:48 PM | INFO | Bundle with id #73 com.prosyst.mbs.webservices.jsonrpc.api, 1.1.1000 was started.   | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:48 PM | INFO | Bundle with id #72 com.ge.dspmicro.webconsole-useradmin, 17.1.2 was started.  | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:48 PM | INFO | Bundle with id #71 com.ge.dspmicro.webconsole-storeforward, 17.1.2 was started.   | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:48 PM | INFO | Bundle with id #70 com.ge.dspmicro.webconsole-validateroute, 17.1.2 was started.  | com.prosyst.mbs.system.bundle  |
| 4/9/2018, 3:16:48 PM | INFO | Bundle with id #69 com.ge.dspmicro.webconsole-changepassword, 17.1.2 was started.   | com.prosyst.mbs.system.bundle  |

- b. If the Field Agent is not enrolled or not Reachable in EdgeManager, log into the Predix Machine Tech Console and navigate to the OSGi Log page. This is the initial page shown after log-in. Read the version of the running Predix Machine bundles as shown above.

### 3.2.2 Upgrade Steps

Upgrading an Embedded Field Agent (EFA) from Predix Machine 17.1 to Predix Machine 17.2.3 is an activity that involves several steps:

1. Use the Field Agent Updater to update to an OS version that is 2017\_07\_10\_160104 or newer. **This is more fully described in section 3.2.3 below.** The EFA will retain its current configuration, including the network configuration, the password for the Predix Machine Web Console Predix user and its Predix Cloud tenancy enrollment.
2. Enroll the EFA into a Predix Cloud tenancy, if you had not done so previously.
3. If the EFA contains configuration files that should be archived for future use, confirm that a copy of the configuration files exists somewhere, such as in the EdgeManager Repository. Consider using the EdgeManager Predix Machine: Upload Configurations command to upload the EFA configuration to the EdgeManager Repository.
4. Obtain the EFA Predix Machine 17.2.3 Application and Configuration Templates from the URL: <https://www.emerson.com/Industrial-Automation-Controls/support>
5. Unzip your templates directory. Modify the Configuration and Application Templates as needed, re-zip the directory within the configuration and application directory, i.e. you will want to zip up the “configuration” in the Configuration Template directory and “machine” directory in the Application Template directory, upload them to the



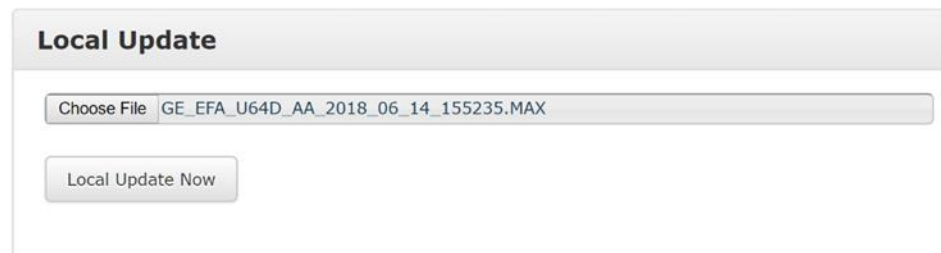
EdgeManager Repository, and deploy them to the EFA. For more information, refer to the [Field Agents User Guide, GFK-2993](#).

### 3.2.3 Update the EFA OS

There are three ways of updating the EFA OS:

1. A local, offline update (.MAX file) can be uploaded using the Local Update section of the Field Agent Update section of the Field Agent Updater page.
  - a. Download the EFA offline upgrade package (.MAX file) for Predix Machine 17.2.3 from the following location: <https://www.emerson.com/Industrial-Automation-Controls/support>.
  - b. Connect to the Predix Machine Web Console and browse to the Field Agent Updater page. For details on connecting to the Predix Machine Web Console and locating the Field Agent Updater page, refer to the [Field Agents User Guide, GFK-2993](#).
  - c. Confirm that the Current Field Agent Version shown is 2017\_07\_10\_000000 or newer. In the Local Update section of the Field Agent Updater page, browse to and select the previously downloaded EFA offline firmware upgrade package (.MAX file).

**Figure 11: Select Previously-Downloaded .MAX file**



- d. Press the Local Update Now button and wait for approximately 5 minutes while the upgrade is performed. At this point the EFA will reboot.
2. If the EFA was not configured in the Field Agent Updater page for Automatic Updates but has a network connection to the Cloud Update URL provided in the Field Agent Updater page, a Manual Cloud Update can be initiated. Use the Test Connection button to verify the URL can be reached before attempting a Manual Cloud Update. For details on setting up the Network Configuration and verifying connectivity to the Cloud Updater URL, refer to the [Field Agents User Guide, GFK-2993](#).
3. If the EFA was configured in the Field Agent Updater page for Automatic Updates, the EFA will update itself when configured to do so. For more details, refer to the [Field Agents User Guide, GFK 2993](#).

## Technical Support & Contact Information

Home link: <http://www.emerson.com/industrial-automation-controls>

Knowledge Base: <https://www.emerson.com/industrial-automation-controls/support>

**Note:** If the product is purchased through an Authorized Channel Partner, please contact the seller directly for any support.

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