

Ignition 7.9 User Manual — Enterprise Administration

Generated 2026-10-12 from
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This is documentation for **Ignition 7.9**, which is no longer actively maintained.

For documentation on the latest stable release, see the [latest version](#) (8.3).

Enterprise Administration



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**Introduction to Enterprise
Administration Module**

[Watch the video](#)

What is Enterprise Administration?

The Enterprise Administration Module (EAM) allows a user to control and monitor any number of Ignition Gateways from a central Gateway. The EAM takes advantage of the Gateway Network system to seamlessly deliver data between Gateways.

Benefits of EAM

EAM works great in systems with [multiple Gateways](#). EAM is not required for large Ignition systems, but there are several benefits to incorporating the module:

- **Gateway Version Control** - Upgrade modules on each Gateway to ensure each installation is on the same version.
- **Project Synchronization** - In cases where the same project is used on multiple Gateways, making updates to the project on each other Gateway is a hassle. With EAM, projects can automatically be pushed to select agents, greatly hastening how updates are pushed out.
- **Monitor Agent Health** - Overseeing the health of large systems can be a full-time job. With EAM, the controller monitors agent health, and will trigger alarms when an issue arises, such as high CPU or memory usage. Alarm notifications can also be sent, so you will always know immediately when an issue is detected.
- **Quick Recovery from System Failures** - Hardware failure can cause days of downtime. Agent Recovery allows for quick Gateway, license, and module restoration on new hardware to greatly reduce the amount of time the system is down.

What are Agents and Controllers?

EAM involves coordinating several different Gateways on the same network. Each Gateway is assigned a role:

- **Controller** - Manages or controls each others connected Gateway. The Controller is responsible for assigning tasks, as well as monitoring each agent. Only a single Gateway on each Gateway network can be a controller.
- **Agent** - Each other Gateway in the Gateway network is an agent. Agents perform all assigned tasks, and report to the controller.

Task Management

EAM allows you to schedule common Gateway tasks to execute against remote agent Gateways. Tasks are requests sent to an Agent by the Controller. These requests cause the agent to perform some action such as activating a license. Tasks include:

- **Activate License**
- **Collect Backup**
- **Install Modules**
- **Remote Upgrade**
- **Restart Agent**
- **Restore Backup**
- **Send Project**
- **Send Project Resources**
- **Unactivate License**
- **Update License**

☒ **Activate License**

Activate a license key on selected agent Gateways.

☐ **Collect Backup**

Collect a Gateway backup from an agent machine.

☐ **Install Modules**

Install one or more modules on selected agent Gateways.

☐ **Restart agent**

Restarts the Ignition service on the agent machine.

☐ **Restore Backup**

Restore a Gateway backup on selected agent Gateways.

☐ **Send Project**

Distributes a project to remote servers. Replaces the project on the remote server as if an export/import was performed.

☐ **Send Project Resources**

Distributes project resources, like windows and templates, to remote servers.

☐ **Unactivate License**

Unactivate a license key on selected agent Gateways.

☐ **Update License**

Update the license on selected agent Gateways.

On-Demand or Scheduled

Tasks can be executed immediately, scheduled to run once at a later time, or as part of a recurring schedule. Making backups is a breeze with automated task scheduling! Schedules can be freely modified or paused. Scheduled tasks can also **execute on-demand**, allowing the tasks to be called at will.

Agent Tasks

Available Tasks

Running and Scheduled Tasks

Task History

Name	Repeats?	Next Scheduled	Current State	Targets	
Collect Backup	true	11/2/16 2:00:00 AM	Scheduled	Agents [Agent99]	More ▾ edit
Send Project	false	11/4/16 2:00:00 AM	Scheduled	Agents [Agent99]	More ▾ edit
Send Project Resources	false	11/4/16 3:30:00 AM	Scheduled	Agents [Agent99]	More ▾ edit

→ [Create new Gateway Task...](#)

Disaster Recovery and Prevention

Agent Events

Every EAM agent sends information to the controller about its general health status. Whenever problems occur on an agent, the controller is notified of the agent's status in the form of agent events. Problems can include high CPU usage on the agent, large numbers of system errors in a short timeframe, and unusually high usage of database connections. Loss of connectivity to the agent also triggers an agent event on the controller. Agent events are recorded in an external database for analysis and reporting later. Agent events can also be directly configured on the controller to automatically trigger [alarms](#) or [send alarm notifications](#).

The screenshot displays the 'Agent Events' interface. At the top, there is a table with columns: Active Time, Display Path, Current State, and Priority. Below the table, there are tabs for 'Details' and 'Notes'. The 'Details' tab is selected, showing the configuration properties for the selected event. The properties include Source Path, Display Path, Name, and Mode.

Active Time	Display Path	Current State	Priority
6/29/16 3:55 PM	Site A/cpu [ERROR]	Cleared, Unackno...	High
6/29/16 3:55 PM	Site A/cpu [ERROR]	Cleared, Unackno...	High
6/29/16 3:55 PM	Site A/cpu [WARNING]	Cleared, Unackno...	Low
	Site A/cpu [WARNING]	Cleared, Unackno...	Low

Config Properties

Source Path	sys:Site A:/prov:EAM:/alm:cpu-error
Display Path	Site A/cpu [ERROR]
Name	cpu-error
Mode	Any Change

Buttons: Acknowledge, Shelve

Archival and System Recovery

The Collect Backup Gateway task does more than simply collect a Gateway backup from agents. Whenever the task runs, the Gateway backup, all installed modules and the current license are

collected from the agent and stored in the archive system on the controller. This system allows for quick recovery later if an agent machine catastrophically fails and must be reinstalled.

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Adding an Agent



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Adding an Agent

[Watch the video](#)

Agent Setup

To communicate with the controller, agents send data across a Gateway Network connection. If your Gateway Network setup requires that connections be manually approved in advance on the controller Gateway, you will need to set up the [Gateway Network connection](#) before starting the EAM Setup Wizard. You will be able to select the existing Gateway Network connection within the wizard. Navigate to **Configure > Enterprise Administration > Setup** to begin the EAM Setup Wizard.

Step 1: Select Controller or Agent

Since you are installing an agent, select '**Agent**' on this screen. Click the **Next** button.

Controller | Master

USER MANUAL

SUPPORT

admin

Sign Out

Launch Designer

Ignition

by Inductive automation

HOME

STATUS

CONFIGURE

Search...

SYSTEM

Overview

Backup/Restore

Licensing

Modules

Projects

Redundancy

Gateway Settings

NETWORKING

Gateway Network

Email Settings

ENTERPRISE ADMINISTRATION

Setup

License Incomplete ? 0:00:00

Reset Trial

View Modules

Enterprise Administration Setup

Step 1: Select Controller or Agent

☒ Agent

Installs the module as an agent. An agent Gateway needs to be configured to connect to a remote controller Gateway.

☐ Controller

Installs the module as a controller. A controller Gateway can control remote agent Gateways.

< Previous

Next >

Finish

Step 2: Agent Installation Mode

Select New Agent or Agent Recovery. Select **'New Agent'** if you are setting up a machine that is unknown to the controller. Select **'Agent Recovery'** if you are reinstalling an existing agent (possibly on a different machine), and the machine has been known to the controller in the past. This option also gives an opportunity to perform a system recovery (restore Gateway backup, reinstall missing modules and license) if possible. After you made your selection, click the **Next** button.

Controller | Master

USER MANUAL

SUPPORT

admin

Sign Out

Launch Designer

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Gateway Network

Email Settings

SECURITY

Auditing

Users, Roles

License Incomplete ? 0:00:00

Reset Trial

View Modules

Enterprise Administration Setup

Step 2: Agent Installation Mode

☒ New Agent

I am installing a new agent.

☐ Agent Recovery

I am reinstalling an existing agent. Backup files can also be automatically reinstalled during recovery if available.

< Previous

Next >

Finish

Step 3: Gateway Network Setup

As mentioned previously, a Gateway Network connection is required to communicate with a controller. On this page, you can either select an existing connection from the dropdown list, or click **Create New Connection** to create a new Gateway Network connection. If you are using an existing connection, enter the **System Name** that identifies your Agent to the controller.

If you create a new network connection, enter the **Host** network address and **Port** for the remote machine. You can even test the settings you selected by clicking on the **Test Connection** button. Note, that you cannot create a new SSL connection on this page. When using SSL, you must create the Gateway Network connection before entering the EAM Setup Wizard.

Click **Finish**.

Enterprise Administration Setup

Step 3: Agent Settings

Use an Existing Network Connection

Agent Settings

Controller	Controller	The Gateway Network server running the EAM controller
System Name	Agent133	The system name uniquely identifies this agent to the controller and other agents. Note that this setting also changes the system name under general Gateway Settings.

If you don't see your Gateway Network controller in the list above, you can create a new Gateway Network connection to the machine running your controller. Click the Create New Connection link below. Enter the host and port, and click the Apply button. The Controllers list will be updated with any controllers found under your new connection. The connection will be saved when you finish the Setup Wizard. If your Gateway Network controller uses SSL or security settings that require connection approval, you must configure the Gateway Network connection to the controller before entering the Setup Wizard.

[→ Create New Connection...](#)

Create a new Network Connection

New Gateway Network Connection

Host	10.20.8.46	The network address of the remote machine.
Port	8088	The port of the remote machine. Note that if the remote machine is running in SSL mode, you must select an existing Gateway Network connection.

Test New Connection

Apply

< Previous

Next >

Finish

Agent Post Setup

The EAM module will now attempt to register the local Gateway as an EAM agent on the controller, and download files if performing a system recovery.

- If you are running in **New Agent mode**, you will see the agent status check on the screen. When the agent status check is complete, you will need to navigate to the controller Gateway and approve the agent on the Gateway Agents page, as discussed in the section below. Click the **Retry** button to recheck agent status on the controller if the first status check failed.

Controller | Master

USER MANUAL SUPPORT
admin Sign Out
Launch Designer

HOME STATUS CONFIGURE

Search...

SYSTEM
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Licensing
Modules
Projects
Redundancy
Gateway Settings

NETWORKING
Gateway Network
Email Settings

License Incomplete ? 0:00:00 Reset Trial View Modules

Agent Management

Gateway	Status	Group	Version	License	Last comm	
Agent133	Pending	Default Group			N/A	approve delete
Ignition-ubuntu	Disconnected	Default Group			10/12/16 3:22:00 PM	More delete

→ Edit agent groups...

- If you are running in **Agent Recovery mode**, and you selected the **System Recovery** option, you will see the download status of the license file, installed modules, and the most recently collected Gateway backup file. Depending on the contents of your archive, some files may not be available. Click the **Apply Files** button to apply downloaded files. Note that this operation will require a Gateway restart if a Gateway backup file needs to be applied. Click the **Ignore Files** button to close this page and not apply downloaded files. Note that the agent settings have already been saved, so it is safe to not apply downloaded files if you choose. Click the **Retry** button to attempt to download the recovery files again.

DANGER

Setup a Regularly Scheduled Collect Backup Task for Agents

After you set up your agents, it is very strongly recommended that you set up a regularly scheduled Collect Backup task for your agents. System recovery through the EAM Setup Wizard will not work if there are no archived backup files! To learn more about performing agent backups, refer to [Agent Task - Backup and Restore](#).

Agent Approval

When an unknown agent first contacts the controller, it is saved in pending status. No interaction with the controller is allowed until you approve the agent. Agent version and license information fields will remain empty until the agent is approved. To approve the agent, go to your controller on the **Configure** section of the Gateway webpage, scroll down to **Enterprise Administration > Agent Management**, and click on the 'approve' button on the right side next to the name of your agent. After a few moments, the agent's status should change to "Connected." To remove an agent, click the

'delete' button on the right side. If the agent machine is still active, the agent will reappear on the list in pending status, but will no longer be able to interact with the controller. To remove the agent permanently, you must navigate to the agent Gateway and uninstall the agent via the Agent Settings page.

ControllerMaster

USER MANUALSUPPORT

adminSign Out

Launch Designer

Ignitionby Inductive Automation

HOMESTATUSCONFIGURE

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SYSTEM

OverviewBackup/RestoreLicensingModulesProjectsRedundancyGateway Settings

NETWORKING

Gateway NetworkEmail Settings

License Incomplete0:00:00

Reset TrialView Modules

Agent Management

Gateway	Status	Group	Version	License	Last comm	
Agent133	Pending	Default Group			N/A	approvedelete
Ignition-ubuntu	Disconnected	Default Group			10/12/16 3:22:00 PM	More▼delete

Edit agent groups...

Modifying Agent Settings

You can modify Agent Settings by going to the agent, and under the **Configure** section on the Gateway webpage, select **Enterprise Administration > Agent Settings**. Here you can change the Gateway Network Server name and the Send Stats Interval.

- Gateway Network Server is the Gateway Network Server running the EAM controller. You can select your controller machine from this dropdown list.
- Send Stats Interval is the interval in seconds that the agent will send its statistics to the controller Gateway.
- After you make your changes, click **Save**.

Agent Settings

Uninstall Agent

Main

Gateway Network Server

Controller

The name of the Gateway Network server that holds a connection to the controller Gateway.

Send Stats Interval

5

The interval in seconds that the agent will send its statistics to the controller Gateway.

- **Perform System Recovery** - this checkbox is only shown when running in Agent Recovery mode.

- After you make your selections, click the **Finish** button. The Gateway will attempt to download the most recent Gateway backup, previously installed modules, and the license file.

Agent Management

Once the agent is setup and connected, the **'Setup'** option disappears on the controller, and is replaced with a list of Enterprise Administration menu options.



On the controller, go to the **Configure** section of the Gateway webpage, scroll down to **Enterprise Administration > Agent Management**. You'll notice that each agent row is expandable with a **More** button on the right side which displays tasks you can perform: **Details**, **Visit Agent**, and **Restart Agent**.

Agent Management

Gateway	Status	Group	Version	License	Last comm		
Agent133	Connected	Default Group	7.9.0	AAA-AAA	10	details	More ▼ delete
Ignition-ubuntu	Disconnected	Default Group			N	visit agent	More ▼ delete

→ [Edit agent groups...](#)

- If you select **details**, you can view agent details on your Gateway backups, license, installed

Agent Details

- [View saved Gateway backups for this agent](#)
- [View details about the license assigned to this agent](#)
- [Display a list of modules currently installed on this agent](#)
- [View details about projects on this agent](#)

modules, and projects.

- **View Saved Gateway Backups:** opens a page that allows you to view all Gateway backups and modules that have been archived for this agent. You can schedule a Gateway task to restore a

specified Gateway backup from this page by using the “Restore Backup” link.

- **View License Detail:** opens a page which compares the agent’s current license to the license key on file at Inductive Automation. This page is handy when you have purchased new software for a license, and you need to verify that your agent’s license key is up to date. You can update the license for this agent by clicking the “Update Agent License” link at the bottom of the screen. This will schedule a Gateway task to immediately update the license on the agent.
- **Installed Modules:** opens a page that displays all modules that are currently installed in the agent Gateway. The module version and the current state of each module is also displayed
- **Details about Projects:** opens a page that displays all projects that currently exist on the agent. The Project Source field is populated by the controller name if the project was deployed to the agent by the controller via a gateway task.
- **Visit Agent** - This is a link that takes you to the Gateway Webpage of that agent.
- **Restart** - creates a Gateway task that immediately restarts the agent Gateway. After clicking the link, you will be asked to confirm that you really want to restart the agent.

Agent Groups

Agents can be grouped into groups that you create. This allows you to organize agent lists by location or agent function. Agent groups can also be selected in Gateway tasks. For example, you can create an agent group for a location that collects backups every night at 3AM. Any new agent that is added to the group will automatically be included when the Gateway tasks executes.

To edit and create agent groups, go to the **Configure** section on the Gateway webpage, scroll down to **Enterprise Administration > Agent Management**, and click the '**Edit agent groups**' link at the bottom of the page. To assign an agent to a group, check the checkbox on the left side next to the agent name. Then locate the agent groups dropdown on the right side next to the “**Move selected Agents to**” link. Select the new group from the dropdown. Then click the “Move selected Agents to” link to move the agents, and click **Save**.

Edit Agent Groups

Default Group

☐ check/uncheck all

☒ Ignition-ubuntu

☐ Agent133

Move selected agents to Choose One ▼

Remote

☐ check/uncheck all

No agents in group...

[→ Edit group names](#)

Save

From the Edit Agent Groups page, click on **Edit group names** to create new groups, edit a group name, and delete a group. If you delete a group that contains agents, the agent will be automatically reassigned to the default group.

Groups

Group Name

Remote

delete

edit

[→ Create new Group...](#)

[< Back](#)

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Creating a Controller



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Creating a Controller

[Watch the video](#)

Controller Setup

To set up the EAM, you must first designate one machine as the controller. Keep track of the IP address of this machine, as you must enter this address on each agent during agent installation.

Install the EAM module in the Gateway if it has not already been installed. After module installation, you must designate a database connection that will be used by the controller to store agent event history. Navigate to **Configure > Databases > Connections**, and setup a connection to the database that you intend to use. After the database connection has been set up, navigate to **Configure > Enterprise Administration > Setup**. You will now enter the EAM Setup Wizard.



TIP

Tips for Configuring Controllers and Agents

- If you have any existing installations of Ignition running, it's a good idea to perform a backup before you begin this process.
- If you have 2 or more Gateway Webpages open in your browser, you may want to have the Controller and Agents on separate monitors so you don't get confused which one you are working on.
- It's always a good idea to verify that all your modules are loaded correctly. Go to **Configure > Modules** to check which modules you have installed.

Step 1: Select Controller or Agent

Since you are installing the controller, select '**Controller**' on this screen. Click **Next**.

Ignition! by Inductive automation

admin Sign Out

Launch Designer

HOME STATUS CONFIGURE

Search...

License Incomplete 0:00:00 Reset Trial View Modules

SYSTEM

- Overview
- Backup/Restore
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- Projects
- Redundancy
- Gateway Settings

NETWORKING

- Gateway Network
- Email Settings

ENTERPRISE ADMINISTRATION

- Setup

Enterprise Administration Setup

Step 1: Select Controller or Agent

☐ Agent

Installs the module as an agent. An agent Gateway needs to be configured to connect to a remote controller Gateway.

☒ Controller

Installs the module as a controller. A controller Gateway can control remote agent Gateways.

< Previous Next > Finish

Step 2: Controller Setup

Default Database - for the default database, you must select the database connection that you created before entering the EAM Setup Wizard. If you forgot to create the database connection, you can do so now and return to the EAM Setup Wizard later.

Archive Path - this is a file path on the Gateway's local machine where all archived files will be stored. You can use a locally mounted network share for archiving. Use a value such as '**E:\team-archive**.' It is strongly recommended that you put a system into place to externally monitor the free size of the disk that contains the archive. Gateway backups can potentially be many megabytes in size, and can eat up large volumes of space when using many agents.

After you have determined your settings, click the **Finish** button to save the controller settings and exit the wizard. This machine is now ready to accept agents.

The screenshot shows the Ignition Gateway configuration interface. The top navigation bar includes the Ignition logo, user 'admin', 'Sign Out', and a 'Launch Designer' button. The main navigation menu on the left lists categories: SYSTEM (Overview, Backup/Restore, Licensing, Modules, Projects, Redundancy, Gateway Settings), NETWORKING (Gateway Network, Email Settings), SECURITY (Auditing, Users, Roles, Service Security, Security Zones), DATABASES (Connections, Drivers, Store and Forward), and ALARMING (General, Journal, Notification, On-Call Rosters). The main content area is titled 'Enterprise Administration Setup' and shows 'Step 2: Controller Setup'. A green banner at the top of the main area indicates 'License Incomplete' with a timer at 0:00:00 and buttons for 'Reset Trial' and 'View Modules'. The configuration is divided into two sections: 'Main' and 'Archiving'. The 'Main' section has a 'Default Database' dropdown set to 'MySQL'. The 'Archiving' section has three rows: 'Archive Location' set to 'Manual', 'Archive Path' set to 'C:\eam-archive', and 'Low Disk Space Threshold' set to '1024'. At the bottom, there are three buttons: '< Previous' (disabled), 'Next >' (disabled), and 'Finish' (active).

Ignition! by inductive automation

admin Sign Out

Launch Designer

HOME STATUS CONFIGURE

Search...

License Incomplete 0:00:00 Reset Trial View Modules

SYSTEM

- Overview
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NETWORKING

- Gateway Network
- Email Settings

SECURITY

- Auditing
- Users, Roles
- Service Security
- Security Zones

DATABASES

- Connections
- Drivers
- Store and Forward

ALARMING

- General
- Journal
- Notification
- On-Call Rosters

Enterprise Administration Setup

Step 2: Controller Setup

Main

Default Database MySQL

The database connection to use for recording agent history.

Archiving

Archive Location Manual

If "Automatic", the system will manage the location of the Agent archive. If "Manual", the path below will be used.

Archive Path C:\eam-archive

The file path to save Gateway backups, archived modules, and other files.

Low Disk Space Threshold 1024

Value is in megabytes. Errors will be reported in this Gateway when the disk used for archiving drops below this value.

< Previous Next > Finish

Once you setup your Controller, the '**Setup**' option disappears in the menu and is replaced with another list of Enterprise Administration menu options.

The screenshot shows a dark blue sidebar menu with the title 'ENTERPRISE ADMINISTRATION'. Below the title, there are five menu items: 'Event Thresholds', 'Controller Settings', 'Agent Management', 'License Management', and 'Agent Tasks'.

ENTERPRISE ADMINISTRATION

- Event Thresholds
- Controller Settings
- Agent Management
- License Management
- Agent Tasks

Removing a Controller

From the Gateway, go to **Configure** section, scroll down and select **Enterprise Administration > Controller Settings**. To uninstall the controller, click the **Uninstall Controller** link.

Controller Settings

[→ Uninstall Controller](#)

Main

Default Database

MySQL

The database connection to use for recording agent history.

A confirmation window will appear. Click **Confirm** to complete uninstalling the controller.

Uninstall Controller

Are you sure you want to uninstall this controller? You will lose all controller settings, and agents will no longer communicate with this Gateway.

Confirm

Cancel

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EAM in the Designer



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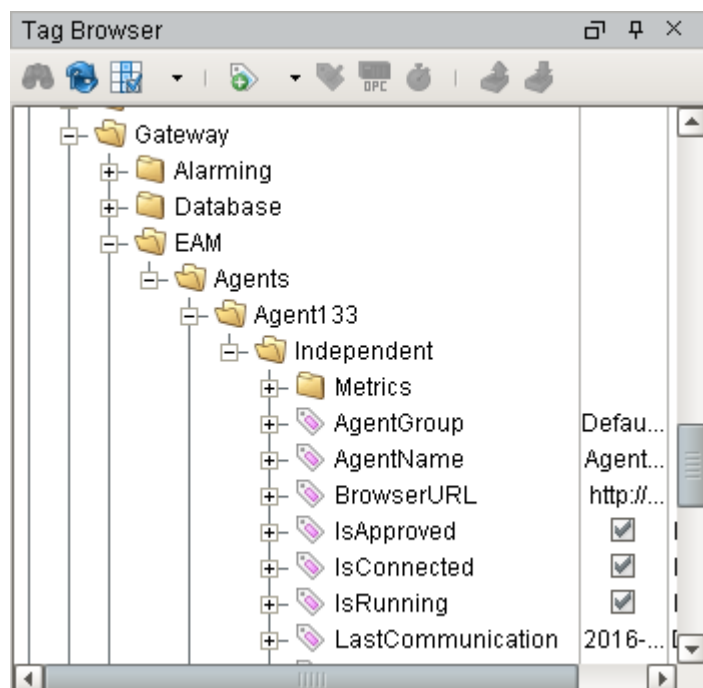
EAM in the Designer

[Watch the video](#)

The Enterprise Administration Module provides a lot of information about agents inside the Designer that allow you to search agent information to see the status of an agent and history of tasks using tags, binding functions, and scripting functions. Anything you want to know about an agent can be found using EAM in the Designer.

Agent System Tags

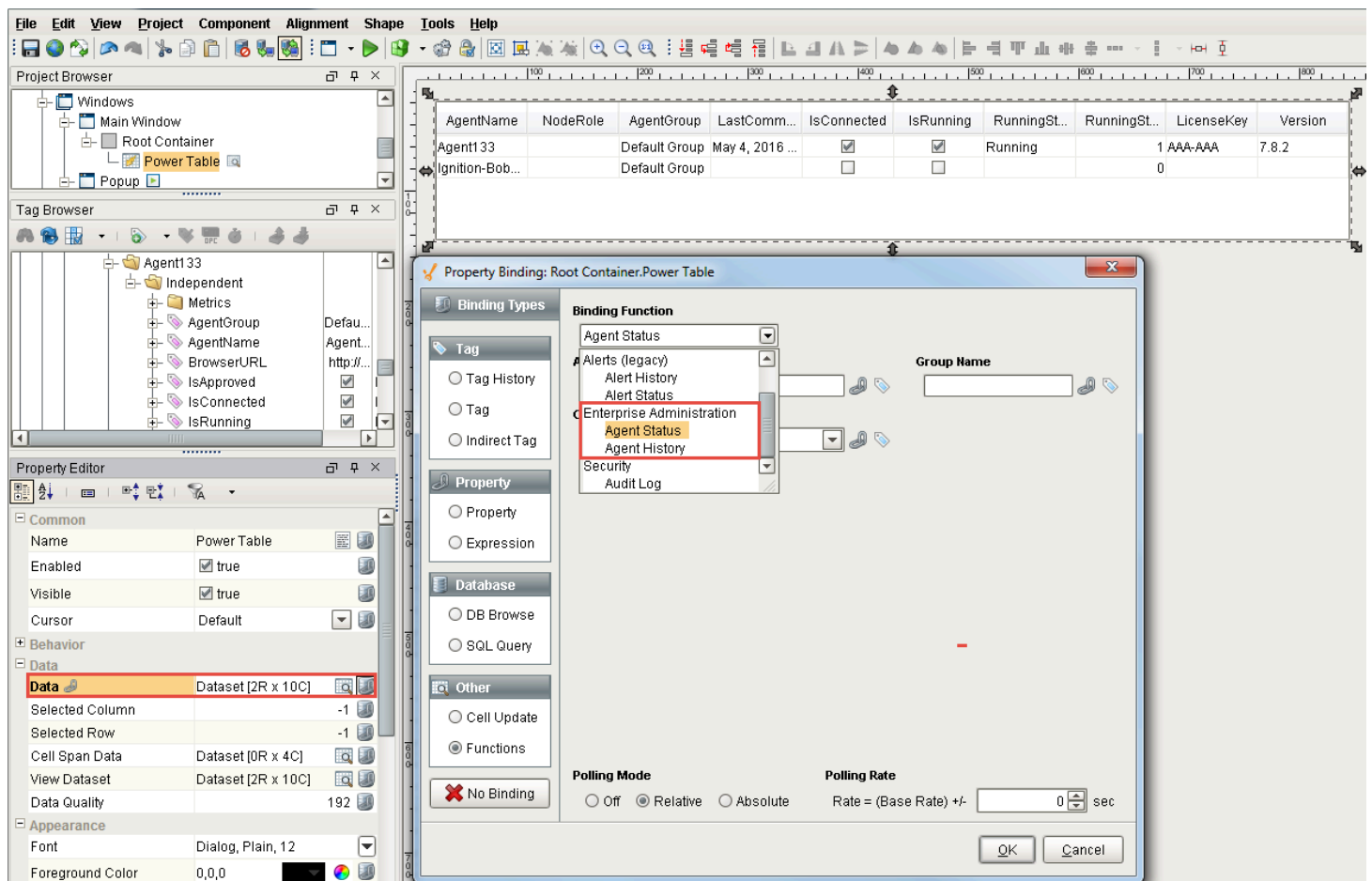
System Tags are created on the controller for each agent, allowing you to build EAM monitoring clients, set alarms on individual Tags, and many other Tag-related operations. To view EAM Tags, launch a Designer on the controller Gateway. In the **Tag Browser**, navigate to **System > Gateway > EAM > Agents**. A Tag folder is created for each agent. As with other system Tag values, all EAM system Tag values are read-only.



Property Binding Functions

The EAM adds its own binding functions to the standard property binding functions, allowing you to quickly add agent information to a component such as a table. The following binding functions are available:

- **Agent Status:** reports some basic information about each agent, such as platform version, connection status, and the last time a message was received from the agent.
- **Agent History:** reports agent events from the the **agent_events** table in the controller's configured database. Agent events include Gateway task results, abnormal health statistics, and agent communication status events.



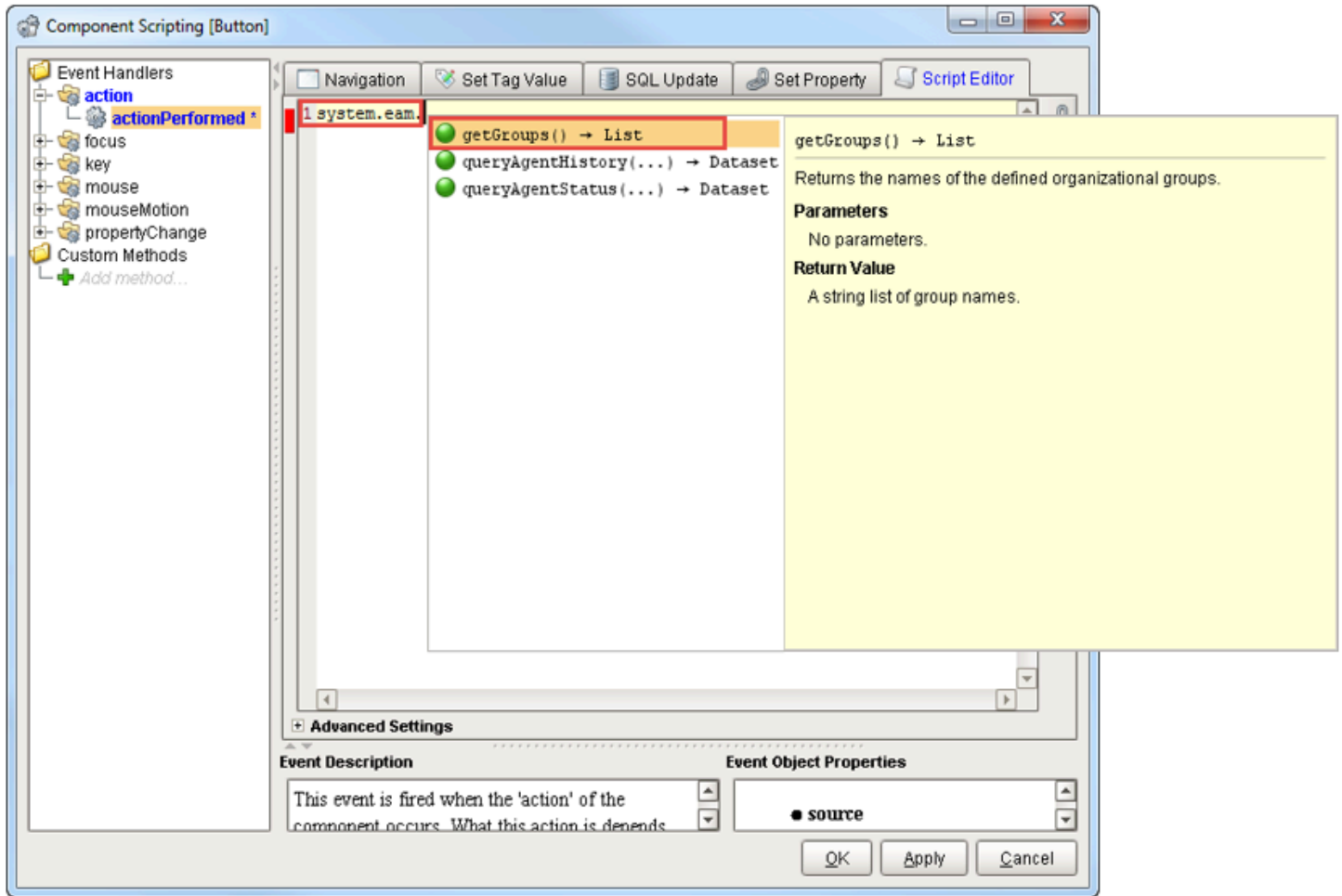
Scripting Functions

There are several scripting functions that are included in the system.eam package:

- **system.eam.getGroups()**: returns a String list of all agent groups configured in the controller
- **system.eam.queryAgentHistory()**: returns a Dataset of agent events from the controller's configured database
- **system.eam.queryAgentStatus()**: returns a Dataset with some basic information about each agent, such as platform version, connection status, and the last time a message was received

from the agent

More details and examples can be found in the system.eam section of the Appendix.



Tag Distribution for Development Servers

With the EAM installed, you unlock more than just Agent tasks as a way to send data between gateways. When you are using a pair of servers for Development/Production, you can take advantage of the EAM to send Tags between Gateways much like you can send projects by using an Agent Task.

From your Controller, you can right-click on any Tag and send it to another Gateway in the Gateway Network. Since it is unlikely that you have identical PLC devices connected to multiple Ignition Gateways, this will only be useful for Development/Production server pairs or for Memory Tags.

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Redundant EAM Configuration

Redundant Controller Setup

To set up redundancy on an EAM controller, you first follow the normal [setup process for a redundant master and backup](#). The main difference with EAM is that each agent requires separate Gateway Network connections to both the master controller and the backup controller. The agent will automatically route messages to the active controller. Some items to keep in mind:

- As with any redundant configuration, you cannot make any changes on the backup controller. This includes approving new agents and running agent tasks.
- Agent metrics are only sent to the active controller. This means that EAM agent system Tags will not process data on a backup controller until the backup becomes active.
- Scheduled and running agent tasks on the master controller will be automatically suspended if control is transferred to the backup controller. The tasks will never run on the backup controller. The tasks will resume on the master controller after it resumes control.

Redundant Agent Setup

As with the redundant controller setup, you follow the same redundant master and backup setup process. Then run the Agent Setup wizard in the same way as you set up a standard agent. After the Agent Setup wizard completes, you must navigate to the controller Gateway and approve both the master and backup pending agents. Some items to keep in mind:

- Both the master agent and the backup agent will send agent metrics. The controller will create a Master folder and a Backup folder of system Tags, allowing you to create a project that monitors both sets of system Tags at the same time.
- Agent tasks list the master agent and the backup agent separately. Tasks that do not change any configuration on an agent can be run without errors on both the master agent and the backup agent (such as the Restart Gateway task and the license tasks). But tasks that do change configuration (such as the Send Project task) will fail on the backup agent, due to the fact that Gateway configuration cannot be changed on a redundant backup.

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Event Threshold Settings



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Agent Event Threshold Settings

[Watch the video](#)

Overview

One of the main functions of the controller is to keep track of connected agents and report when an agent starts to experience performance problems, logs many errors in a short time, or unexpectedly goes offline. Agent events are held in the controller's configured database in the **agent_events** table. Within this table, you can find three types of event categories: **agent**, **metric**, and **task**. The agent event category is used for major connectivity events, such as loss of connectivity from an agent. The metric event category is used for events that report abnormal agent health statistics, such as abnormally high CPU usage. The task event category does not affect metrics, and is detailed in the Gateway Task Results section.

General Settings

Alarm Evaluation

This section is for activity and metric events, you can configure alarms to trigger when an event is reported at the warning or error level. You can also set the alarm pipeline that will process the generated alarms.

- **Enable Activity Alarms:** If true, alarms will be generated for agent activity events, such as when an agent stops responding.
- **Enable Metrics Alarms:** If true, alarms will be generated for agent metric events.
- **Enable Task Alarms:** If true, alarms will be generated when a scheduled task fails.

- **Warning Priority:** The priority assigned to all of the **warning** thresholds. Options are: Diagnostic, Low, Medium, High, Critical.
- **Error Priority:** The priority assigned to all of the **error** thresholds. Options are: Diagnostic, Low, Medium, High, Critical.
- **Active Pipeline:** The Pipeline to use for active events. Note that this Pipeline must be created before the alarm event happens, and that the name is case-sensitive.
- **Ack Pipeline:** The Pipeline to use for acknowledgement events. Note that this Pipeline must be created before the alarm event happens, and that the name is case-sensitive.

Activity Monitor

The Activity Monitor configures how agent inactivity is reported. When contact is lost with an agent, an inactivity warning or error event is fired if the configured time in minutes has elapsed since last contact.

- **Inactivity Warning (Minutes):** The number of minutes before a **warning** threshold alarm is activated. (default 5)
- **Inactivity Error (Minutes):** The number of minutes before an **error** threshold alarm is activated. (default 15)

System Metric Thresholds

In addition to inactivity alarms, alarms can be set on all agents when certain metrics like CPU usage, number of clients, error rates, and more are reached. Each one has both a **warning** and an **error** level.

- **CPU Usage Warning (%):** The **warning** level of an Agent's CPU usage. (default 70)
- **CPU Usage Error (%):** The **error** level of an Agent's CPU usage. (default 90)
- **Memory Usage Warning (%):** The **warning** level of an Agent's memory (RAM) usage. (default 70)
- **Memory Usage Error (%):** The **error** level of an Agent's memory (RAM) usage. (default 90)
- **Errors Per Minute Warning:** The **warning** level of an Agent's error rate (minute). The contents of the Agent's errors can be checked in the Agent's console. (default 2)

- **Errors Per Minute Error:** The **error** level of an Agent's error rate (minute). The contents of the Agent's errors can be checked in the Agent's console. (default 5)
- **Errors Per Hour Warning:** The **warning** level of an Agent's hourly error rate. The contents of the Agent's errors can be checked in the Agent's console. (default 20)
- **Errors Per Hour Error:** The **error** level of an Agent's hourly error rate. The contents of the Agent's errors can be checked in the Agent's console. (default 60)
- **Connected Clients Warning:** The number of clients connected to that Agent required to raise a **warning** alarm. (default 50)
- **Connected Clients Error:** The number of clients connected to that Agent required to raise an **error** alarm. (default 100)
- **DB Utilization Warning (%):** Triggered when the utilization of the DB connection pool exceeds the specified percentage. (default 80)
- **DB Utilization Error (%):** Triggered when the utilization of the DB connection pool exceeds the specified percentage. (default 100)

This is documentation for **Ignition 7.9**, which is no longer actively maintained.

For documentation on the latest stable release, see the [latest version](#) (8.3).

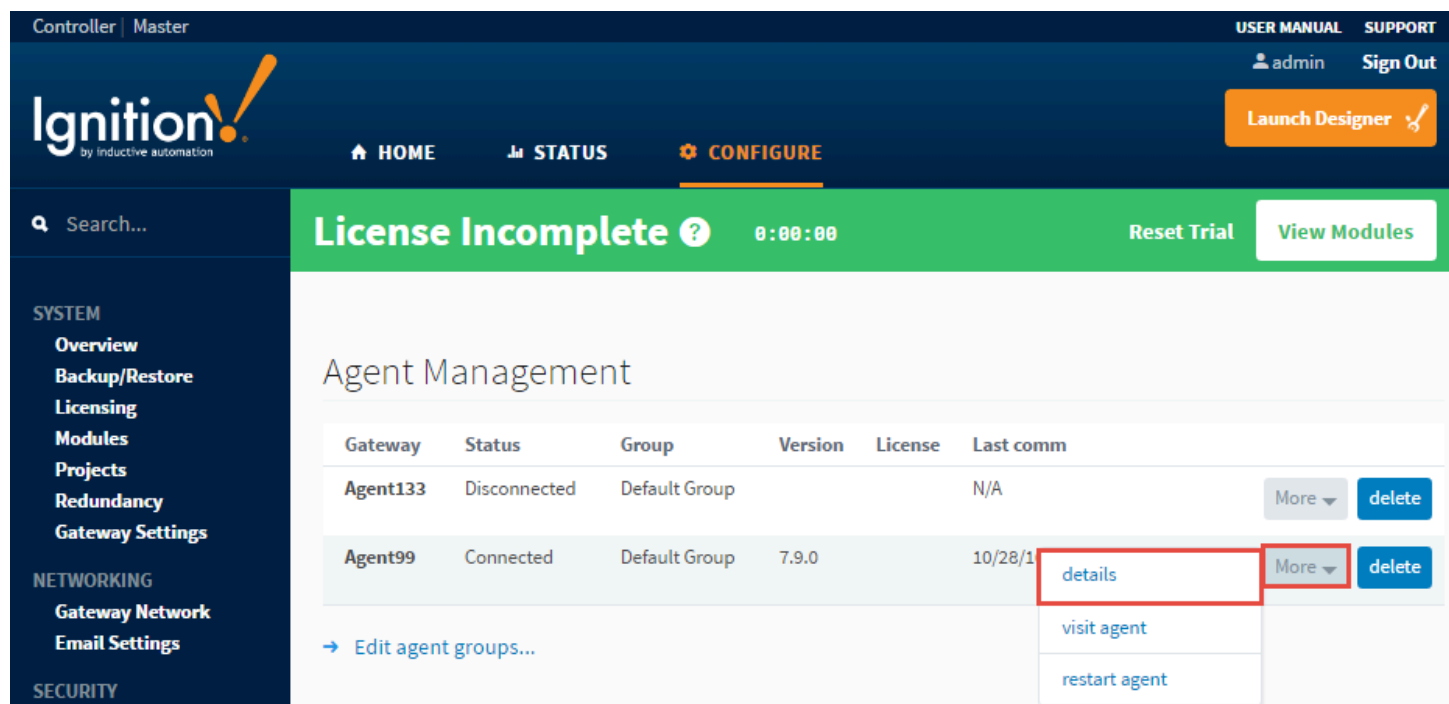
Agent Management

Maintaining Your Agents

There are a variety of tools available that allow you to manage certain parts of your agent Gateways that are not scheduled tasks. If your agent goes down, agent recovery makes it easy to get your agent back up and running again as quickly as possible, from backups that were taken from the Controller Gateway. In addition, you can create configuration files that can automatically setup an agent when starting the Gateway instead of having to go through the agent configuration wizard. This makes setting up multiple agents a breeze.

Agent Management Page

The **Agent Management** Page in the Configure section of the Gateway contains a lot of useful tools for managing all of the Agents in the Gateway network, all right from the Controller. Click on the **More** button and then select '**details.**'



The screenshot shows the Ignition web interface. The top navigation bar includes 'Controller | Master', 'USER MANUAL', 'SUPPORT', 'admin', 'Sign Out', and a 'Launch Designer' button. The main navigation bar has 'HOME', 'STATUS', and 'CONFIGURE' (highlighted). A green banner at the top of the main content area reads 'License Incomplete ? 0:00:00' with 'Reset Trial' and 'View Modules' links. The left sidebar contains a search bar and a menu with categories: SYSTEM (Overview, Backup/Restore, Licensing, Modules, Projects, Redundancy, Gateway Settings), NETWORKING (Gateway Network, Email Settings), and SECURITY. The main content area is titled 'Agent Management' and contains a table with columns: Gateway, Status, Group, Version, License, and Last comm. The table lists two agents: 'Agent133' (Disconnected) and 'Agent99' (Connected). For 'Agent99', a 'More' dropdown menu is open, showing options: 'details' (highlighted with a red box), 'visit agent', and 'restart agent'. There is also a 'delete' button for each agent row.

Gateway	Status	Group	Version	License	Last comm	
Agent133	Disconnected	Default Group			N/A	More delete
Agent99	Connected	Default Group	7.9.0		10/28/1	details More delete

→ Edit agent groups...

Agent Details

- [View saved Gateway backups for this agent](#)
- [View details about the license assigned to this agent](#)
- [Display a list of modules currently installed on this agent](#)
- [View details about projects on this agent](#)

The page itself contains information about the status of each connected Gateway, as well as when our last communication was with it. There are then many options under Agent Details that allow you to perform specific actions for each agent:

- **View Agent Details** - Takes you to the Agent Details page where you can view the details about Gateway Backups, the agent license, installed modules, and projects running on the agent.
- **Visit Agent** - Takes you to the Gateway webpage of the agent.
- **Restart Agent** - This will remotely restart the Agent Gateway service.
- **View Gateway Backups** - Gives a list of currently installed modules, as well as a list of previously collected backups, with the option to restore to a specific backup.
- **View Installed License** - This page will compare the license currently on the Gateway to the license on file at Inductive Automation. It will give you the option to update the license if you have added new modules to your license and have not yet update the license on the Gateway to reflect that.
- **Display a List of Installed Modules** - Will show all of the modules currently installed on the Gateway.
- **View Projects** - Will give a list of projects as well as when they were last modified.

Agent Groups

Agents can also be grouped into Agent Groups that you create. This allows you to organize Agent lists by location or Agent function. Agent groups can also be selected in Gateway Tasks. For example, you can create an Agent Group for a location that collects backups every night at 3AM. Any new agent that is added to the group will automatically be included when the Gateway tasks executes. To create an agent group, go to **EAM > Agent Management**. Click the **“Edit Agent Groups”** link at the bottom of the **Agent Management** page. You will now be on the Edit Agent Groups page, where you can move agents to other groups. To assign an agent to a group, check the checkbox on the left side next to the agent name. Then locate the agent groups dropdown for **“Move selected Agents to,”** and click **Save**.

Controller | Master

USER MANUAL SUPPORT

admin Sign Out

Launch Designer

Ignition! by Inductive automation

HOME STATUS CONFIGURE

Search...

License Incomplete ? 0:00:00 Reset Trial View Modules

SYSTEM

- Overview
- Backup/Restore
- Licensing
- Modules
- Projects
- Redundancy
- Gateway Settings

NETWORKING

- Gateway Network
- Email Settings

SECURITY

- Auditing
- Users, Roles
- Service Security
- Security Zones

DATABASES

- Connections
- Drivers
- Store and Forward

ALARMING

- General
- Journal

< back

Edit Agent Groups

Default Group ☐ check/uncheck all

☐ Agent99

☒ Agent133

Move selected agents to

Choose One
Choose One
Remote
Test

Remote ☐ check/uncheck all

No agents in group...

Test ☐ check/uncheck all

No agents in group...

→ Edit group names

Save

To create a new agent group and edit an existing group name, click on **"Edit Group Names"** at the bottom of the page. Here you can create a new agent group, edit a group name, and delete a group. If you delete a group that contains agents, the agent will be automatically reassigned to the default group.

Controller | Master

USER MANUAL SUPPORT

admin Sign Out

Launch Designer

Ignition! by Inductive automation

HOME STATUS CONFIGURE

Search...

License Incomplete ? 0:00:00 Reset Trial View Modules

SYSTEM

- Overview
- Backup/Restore
- Licensing
- Modules
- Projects
- Redundancy
- Gateway Settings

NETWORKING

- Gateway Network
- Email Settings

Groups

Group Name	
Remote	delete edit
Test	delete edit

→ Create new Group...

There is also a page in the **Status** section of the Gateway webpage called **EAM Agents** that give a brief synopsis of the Agent similar to what it shows on the Agent Management page, the difference being that it does not allow the user to interact with the Agent, only showing basic information.

Default Group

Gateway ▾	Status	Last Comm	Last Event	Event Date
Agent99	✓ Connected	28Oct2016 12:21:53	activity_monitor [NORMAL]	28Oct2016 07:57:33
Agent133	✗ Disconnected	N/A		N/A

License Management

The License Management page allows you to view and manage all licenses currently available on your Gateway network. You can view the **details** of each license in your Gateway network such as what module versions it contains, as well as assigning or removing it from a particular Gateway. A license doesn't necessarily need to be linked to a Gateway, allowing you to easily keep it stored in the Gateway network until the agent is brought online.

Controller | Master

USER MANUAL

SUPPORT

admin

Sign Out

Launch Designer

Ignition

by Inductive automation

HOME

STATUS

CONFIGURE

Search...

License Incomplete ? 0:00:00

Reset Trial

View Modules

SYSTEM

Overview

Backup/Restore

Licensing

Modules

Projects

Redundancy

Gateway Settings

NETWORKING

Gateway Network

Email Settings

SECURITY

Auditing

Managed License Keys

License Key	Assigned Agent		
AAA-AAA	Agent133	details	More delete
XXX-XXX	Unassigned	unactivate	More delete
ABC-123	Unassigned		More delete

→ Add Licenses

This is documentation for **Ignition 7.9**, which is no longer actively maintained.

For documentation on the latest stable release, see the [latest version](#) (8.3).

Agent Recovery



INDUCTIVE
UNIVERSITY

Agent Recovery

[Watch the video](#)

Once the Controller is up and running, you can use it to perform recoveries on Agents. For example, if one of your computers crashed that is running Ignition, you can do a fresh install from a previous backup collection that was performed on your Agent. When the recovery is complete, the Agent will immediately pick up where it left off like nothing ever happened.

BACKUP REQUIRED TO PERFORM AGENT RECOVERY

Agent recovery requires that a [backup collection](#) on the Agent was performed, otherwise, you will not be able to use this procedure to recover your Agent's instance of Ignition.

Perform an Agent Recovery

Let's assume that the Agent computer crashed. To check the status, go to your **Controller**, navigate to **Enterprise Administration > Agent Management** and check the status of the Gateway Agent. In this example, you can see that Agent99 is disconnected.

The screenshot shows the Ignition software interface. At the top, there's a dark blue header with the Ignition logo and navigation links like 'HOME', 'STATUS', and 'CONFIGURE'. A green banner at the top right indicates 'License Incomplete' with a timer at 0:00:00 and buttons for 'Reset Trial' and 'View Modules'. On the left, a sidebar lists system and networking settings. The main content area is titled 'Agent Management' and contains a table with columns: Gateway, Status, Group, Version, License, and Last comm. Two agents are listed: Agent133 (Disconnected, Default Group, N/A) and Agent99 (Disconnected, Default Group, 10/31/16 11:12:16 AM). The 'Disconnected' status for Agent99 is highlighted with a red box. Below the table is a link to 'Edit agent groups...'.

Gateway	Status	Group	Version	License	Last comm
Agent133	Disconnected	Default Group			N/A
Agent99	Disconnected	Default Group			10/31/16 11:12:16 AM

1. On the **Agent** computer, **install Ignition** and make sure the EAM Module **is also installed** (it is **added by default** if you use the 'Typical' selection during installation).
2. On your **Agent**, go to the **Configure** tab and select the **Enterprise Administration Setup**. The EAM wizard will walk you through each step of the Agent recovery process. Select **Agent** to configure, and press **Next**.

The screenshot shows the 'Enterprise Administration Setup' wizard in the Ignition software. The interface includes a dark blue header with the Ignition logo and navigation links. A green banner at the top right indicates 'Trial Version' with a timer at 1:49:50 and a button to 'Activate Ignition'. The main content area is titled 'Enterprise Administration Setup' and shows 'Step 1: Select Controller or Agent'. Two options are presented: 'Agent' (selected and highlighted with a red box) and 'Controller'. The 'Agent' option description states: 'Installs the module as an agent. An agent Gateway needs to be configured to connect to a remote controller Gateway.' The 'Controller' option description states: 'Installs the module as a controller. A controller Gateway can control remote agent Gateways.' At the bottom, there are three buttons: '< Previous', 'Next >' (highlighted with a red box), and 'Finish'.

3. In order to continue with the Agent Recovery procedure, you must have a backup collection of the Agent. When you initially setup your Agent on the Controller, you created an **Archive Path** where the backup files are stored. EAM will automatically know where to retrieve the backup files. Click on **Agent Recovery**, and press **Next**.

Agent99

USER MANUAL SUPPORT

admin Sign Out

Launch Designer

Ignition! by Inductive automation

HOME STATUS CONFIGURE

Search...

Trial Version 1:48:12 We're glad you're test driving our software. Have fun. [Activate Ignition](#)

SYSTEM

- Overview
- Backup/Restore
- Licensing
- Modules
- Projects
- Redundancy
- Gateway Settings

NETWORKING

- Gateway Network
- Email Settings

SECURITY

- Auditing
- Users, Roles

Enterprise Administration Setup

Step 2: Agent Installation Mode

☐ New Agent
I am installing a new agent.

☒ Agent Recovery
I am reinstalling an existing agent. Backup files can also be automatically reinstalled during recovery if available.

< Previous **Next >** Finish

4. Since Agent99 existed previously, the EAM remembered the Agent's prior settings. Select from the list of names in the dropdown lists for the Controller and Agent (or you can type it in). Press **Finish**.

Agent99

USER MANUAL SUPPORT

admin Sign Out

Launch Designer

Ignition! by Inductive automation

HOME STATUS CONFIGURE

Search...

Trial Version 1:46:33 We're glad you're test driving our software. Have fun. [Activate Ignition](#)

SYSTEM

- Overview
- Backup/Restore
- Licensing
- Modules
- Projects
- Redundancy
- Gateway Settings

NETWORKING

- Gateway Network
- Email Settings

SECURITY

- Auditing
- Users, Roles
- Service Security
- Security Zones

DATABASES

- Connections
- Drivers
- Store and Forward

ALARMING

- General
- Journal
- Notification
- On-Call Rosters

Enterprise Administration Setup

Step 3: Agent Settings

Agent Settings	
Controller	Controller The Gateway Network server running the EAM controller
System Name	Agent99 Agent99 The system name of the agent you are trying to recover. After you have selected a controller, you can choose an agent name from the dropdown list.

If you don't see your Gateway Network controller in the list above, you can create a new Gateway Network connection to the machine running your controller. Click the Create New Connection link below. Enter the host and port, and click the Apply button. The Controllers list will be updated with any controllers found under your new connection. The connection will be saved when you finish the Setup Wizard. If your Gateway Network controller uses SSL or security settings that require connection approval, you must configure the Gateway Network connection to the controller before entering the Setup Wizard.

[→ Create New Connection...](#)

< Previous **Next >** **Finish**

5. The Agent will go through a series of steps: check the Agent status on the Controller, retrieve the Ignition license file, download Ignition modules, and copy the latest Gateway backup to the Agent. When you get a message that the setup is complete, press **Apply Files**. Once you press the Apply Files button, you will see a message stating the Gateway is starting. It will take about a minute to bring the Gateway up.

Agent99

USER MANUAL SUPPORT

admin Sign Out

Launch Designer

HOME STATUS CONFIGURE

Search...

Trial Version 1:23:02 We're glad you're test driving our software. Have fun. **Activate Ignition**

Agent Post Setup Items

Setup is complete, but some files were not available for download. Click the Apply Files button to apply the available files. The Gateway may need to restart.

Checking agent status on controller.... **done**

Retrieving license file.... **fail: Could not download the license.ipl file from the controller**

Downloading modules.... **done. The following modules will be installed: Alarm Notification:4.9.0.2016101208, Allen-Bradley Driver:4.9.0.2016101215, DNP3 Driver:2.9.0.2016101215, Logix Driver:3.9.0.2016101215, Mobile:4.9.0.2016101208, Modbus Driver:5.9.0.2016101215, Omron Driver:2.9.0.2016101215, OPC-UA:4.9.0.2016101215, OpcCom:4.9.0.2016101215, Reporting:4.9.0.2016101208, SFC:3.9.0.2016101215, Siemens Drivers:4.9.0.2016101215, SMS Notification:4.9.0.2016101208, SQL Bridge:8.9.0.2016101208, Symbol Factory:5.9.0.2016101215, Tag Historian:2.9.0.2016101208, UDP and TCP Drivers:4.9.0.2016101215, User Manual:4.9.0.2016101208, Vision:9.9.0.2016101215**

Downloading latest Gateway backup.... **done. Backup from 'Mon Oct 31 11:48:19 PDT 2016' is ready to be applied.**

Retry **Ignore Files** **Apply Files**

6. The screen will refresh once the Gateway is up and running. Go to the **Configure** tab of the the Gateway webpage, and click on **Projects**. You will notice that all your projects were recovered.

Agent99

USER MANUAL SUPPORT

admin Sign Out

Launch Designer

Ignition
by Inductive automation

HOME STATUS CONFIGURE

Search...

SYSTEM

- Overview
- Backup/Restore
- Licensing
- Modules
- Projects**
- Redundancy
- Gateway Settings

NETWORKING

- Gateway Network
- Email Settings

SECURITY

Trial Version 0:29:38 We're glad you're test driving our software. Have fun. Activate Ignition

Projects

Name	Description	Authentication	Default Database	Default Tag Provider	
NewProject	Created by EAM controller	None	None	None	More ▼ edit
Parameters		default	MySQL ⚠	default	More ▼ edit

→ Create new Project...

→ Upload project from a *.proj backup file...

7. It's also a good idea to verify that all your modules are installed and running by going to the **Configure** tab, and selecting **Modules**.

Agent99

USER MANUAL SUPPORT

admin Sign Out

Launch Designer

Ignition
by Inductive automation

HOME STATUS CONFIGURE

Search...

SYSTEM

- Overview
- Backup/Restore
- Licensing
- Modules**
- Projects
- Redundancy
- Gateway Settings

NETWORKING

- Gateway Network
- Email Settings

SECURITY

- Auditing
- Users, Roles
- Service Security
- Security Zones

DATABASES

- Connections
- Drivers
- Store and Forward

ALARMING

- General

Trial Version 0:24:42 We're glad you're test driving our software. Have fun. Activate Ignition

Module Configuration

☒ View Certificate

Name	Version	Description	License	State	
Alarm Notification	4.9.0 (b2016101208)	Provides alarm notifications via email	Trial	Running	More ▼ restart
Allen-Bradley Driver	4.9.0 (b2016101215)	Allen-Bradley driver suite for the OPC-UA module.	Trial	Running	More ▼ restart
DNP3 Driver	2.9.0 (b2016101215)	A driver supporting DNP3 (Distributed Network Protocol) device.	Trial	Running	More ▼ restart
Enterprise Administration	2.9.0 (b2016101215)	A remote Gateway administration system, allowing you to manage Gateways and automate tasks from a single controller.	Trial	Running	More ▼ restart

This is documentation for **Ignition 7.9**, which is no longer actively maintained.

For documentation on the latest stable release, see the [latest version](#) (8.3).

Automated Agent Installation

Automated Agent Installation

The EAM allows an agent Gateway to be automatically configured from text files the first time the Gateway is started. This capability is enormously useful when installing multiple agent Gateways in your network, as otherwise you must install each Gateway, log in, and install and configure the EAM agent. To automatically configure an agent, you must add two files to the Ignition /data folder before startup: `init.properties` and `eam-install.properties`. Example contents are below. After the files have been read, they are renamed to `.init.properties.bak` and `.eam-install.properties.bak`. A typical application for this capability would be a script that creates the init files and adds them to an `ignition.zip` that is distributed to many machines.

NOTE

- For `init.properties`, you are not required to use all the settings shown below. The Gateway will use its standard default settings instead.
- Multiple Gateway Network connection settings are managed by numbering each setting. The first set of connection settings must contain “0” in the setting name after “`gateway.network.`”. For example, you can create two outgoing connections with different IP addresses like so:

Gateway Network Addresses

```
gateway.network.0.Host=10.20.11.18
gateway.network.1.Host=10.20.15.23
```

Example `init.properties`

```
init.properties
```

```
# SystemName: sets the Gateway name in Gateway Settings
SystemName=Agent1
# AutoDetectLocal: set to true to check the first found network interface to
determine local IP address. Set to false to manually set the IP address of the
Gateway.
AutoDetectLocal=false
# LocalInterface: manually sets the IP address of the Gateway. If set, the
AutoDetectLocal setting must be set to false
LocalInterface=10.20.11.17
# UseSSL: set to true to force all connecting web browsers to connect to the
Gateway over SSL
UseSSL=false
# PingRate: how often in milliseconds to ping the remote machine
gateway.network.0.PingRate=1000
# Enabled: set to false to disable the gateway connection after it is created
gateway.network.0.Enabled=true
# Host: the address of the remote machine
gateway.network.0.Host=10.20.11.18
# Port: the port of the remote machine.
gateway.network.0.Port=8088
# Enable SSL: set to true to use SSL to connect to the remote machine. Note that
you must change the Port setting to use the Gateway Network SSL port. This port is
8060 by default.
gateway.network.0.EnableSSL=false
# PingTimeout: how long in milliseconds to wait for a ping request to be processed
by the remote machine
gateway.network.0.PingTimeout=300
# PingMaxMissed: the number of failed pings allowed before the connection state is
set to Faulted.
gateway.network.0.PingMaxMissed=30
# EnableWebSockets: set to true to allow faster asynchronous communications with
the remote machine.
gateway.network.0.EnableWebSockets=true
# WebsocketTimeout: how long to wait in milliseconds for a message to be processed
over the web socket
gateway.network.0.WebsocketTimeout=10000
# HttpConnectTimeout: how long to wait in milliseconds to initially connect the
http data channel
gateway.network.0.HttpConnectTimeout=10000
# HttpReadTimeout: how long to wait in milliseconds to read data from the http
data channel
gateway.network.0.HttpReadTimeout=60000
```

Example eam-install.properties

eam-install.properties

```
# installSelection: always set this setting to Agent
setup.installSelection=Agent
# controllerServerName: the Gateway Network server name of the controller
agent.controllerServerName=Ubuntu-Controller
# sendStatsInterval: the amount in seconds that the agent will wait before sending
new metrics and configuration data to the controller. Note that if there are
currently no interesting metrics or updated config data to send, the agent will
not send any data.
agent.sendStatsInterval=5
```

This is documentation for **Ignition 7.9**, which is no longer actively maintained.

For documentation on the latest stable release, see the [latest version](#) (8.3).

License Management

License Management



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License Management

[Watch the video](#)

The License Management page acts as a central repository for managing Ignition licenses. You can preload a list of licenses, view details of a license as it appears on file at Inductive Automation, assign licenses to individual agents, and bulk assign free licenses in the Activate License Gateway task. To visit the License Management page, navigate to **Configure** section of the Gateway webpage, and go to **Enterprise Administration > License Management**.

Agent License Reporting

Whenever an approved agent contacts the controller, it sends its license information. The License Management page is automatically updated whenever new or updated license information is received from an agent. This means that even if you install a license directly in an agent Gateway, the license installation will still be known to the controller.

Controller | Master

USER MANUAL | SUPPORT

admin | Sign Out

Launch Designer

HOME STATUS CONFIGURE

Search...

License Incomplete ? 0:00:00

Reset Trial View Modules

SYSTEM

- Overview
- Backup/Restore
- Licensing
- Modules
- Projects
- Redundancy
- Gateway Settings

NETWORKING

- Gateway Network
- Email Settings

SECURITY

- Auditing

Managed License Keys

License Key	Assigned Agent		
AAA-AAA	Agent133	details	More delete
XXX-XXX	Unassigned	unactivate	More delete
ABC-123	Unassigned		More delete

→ Add Licenses

License Details

You can click on the **details** link on the right side of each license to view modules and versions currently assigned to the license. Note that the information displayed on the License Detail page reflects the license as it appears on file at Inductive Automation. This functionality allows you to confirm exactly which modules and versions are currently assigned to a license.

Activate and Unactivate a License

The controller acts as a license proxy on behalf of agents. This means that only the controller requires Internet access to the Inductive Automation licensing servers. Whenever you use the License Management page or a Gateway task to assign, update or unactivate a license, the controller will request system information from the agent and forward the information to the licensing servers. If performing an activation, the activation data is sent back to the agent after the data is received from the licensing servers.

Preloading Licenses

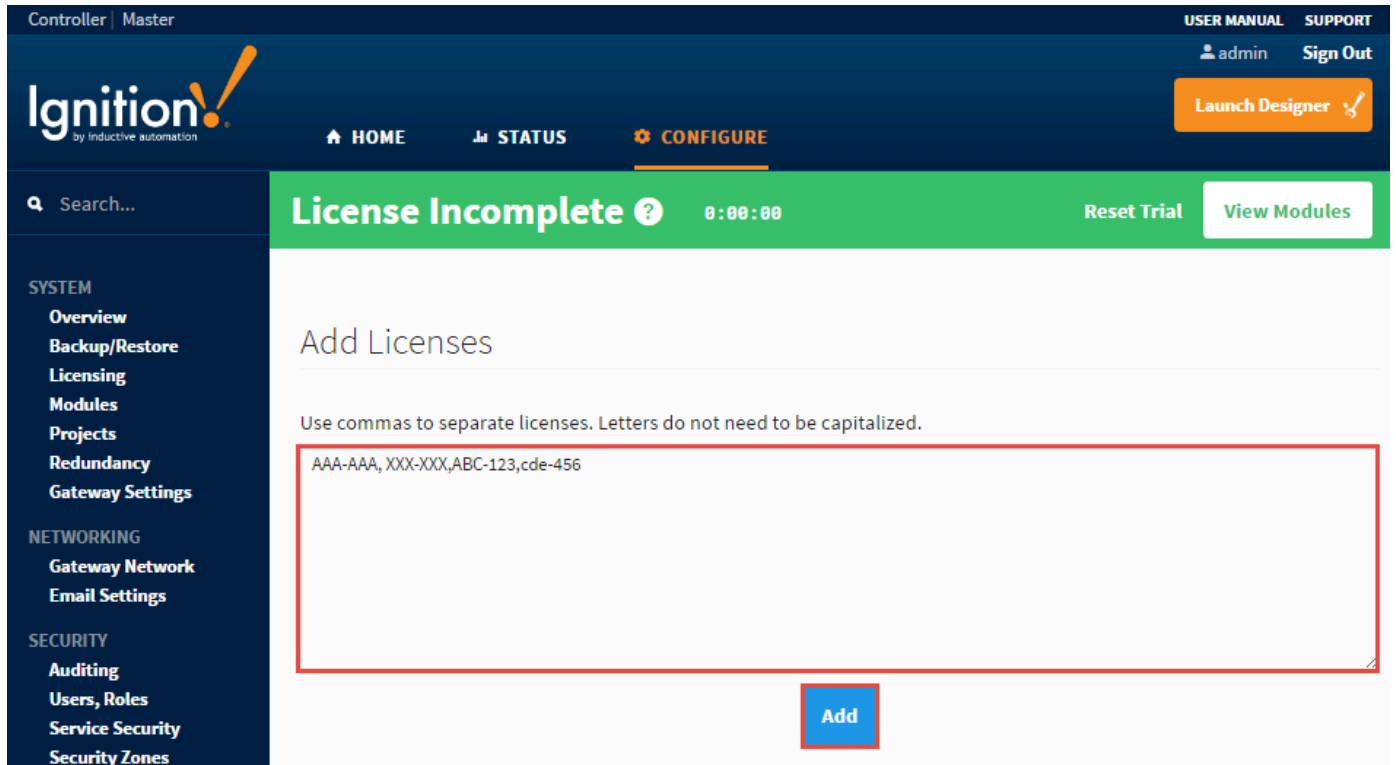
You can preload a list of license keys in the controller. After the license list is loaded, you can individually assign licenses to agents, or assign all free licenses to agents in one step via the Activate License task.

1. To preload a license list, navigate to the **Enterprise Administration > License Management** page, look for the blue arrow, and click the **Add Licenses** link.

2. Enter the license keys. Use commas to separate the licenses. The formatting is shown below:

AAA-AAA,xxx-xxx,ABC-123,cde-456

3. Click the **Add** button to save preloaded licenses.



Deleting Licenses

You can remove unused licenses from the License Management page, but only if the license is not currently assigned to any agent. If you want to delete an assigned license, click the **unactivate** link on the right side of the license. After the Assigned Agent field changes to “Unassigned,” you can delete the license.

Search...

License Incomplete ?

0:00:00

Reset Trial

View Modules

SYSTEM

Overview

Backup/Restore

Licensing

Modules

Projects

Redundancy

Gateway Settings

NETWORKING

Gateway Network

Email Settings

SECURITY

Auditing

Managed License Keys

License Key	Assigned Agent		
AAA-AAA	Agent133	details	More ▾ delete
XXX-XXX	Unassigned	unactivate	More ▾ delete
ABC-123	Unassigned		More ▾ delete

[→ Add Licenses](#)

This is documentation for **Ignition 7.9**, which is no longer actively maintained.

For documentation on the latest stable release, see the [latest version](#) (8.3).

Remote Upgrade

New in 7.9.2

Agents can be upgraded remotely from the Controller. This involves uploading the required binary files for the desired architecture as a task. Once the files have been saved, the remote upgrade procedure may be initiated. Both the Agent to be upgraded, as well as the Controller, must be on 7.9.2 to execute a Remote Upgrade.

Upgrading Redundant Agents

When upgrading a redundant pair of agents, it is recommended that the backup be upgraded before the master.

Remote Agent Upgrade Task

This task will upgrade the agent(s) upon execution.

This task takes zipped binary files for a version of Ignition, and saves them for upgrades later. Multiple files may be saved for different versions and architectures. Additional modules may be included, allowing for upgrades of **non-standard modules** to occur simultaneously.

NOTE

The zipped binary files differ from the installers. The binary files may be found on the Ignition downloads page, listed below the installers.

Release Information:

Version: 7.9.2-rc1

Release Date:

System Requirements

By downloading the software you agree to the Ignition license.

Version 7.9.2-rc1 Change Log »

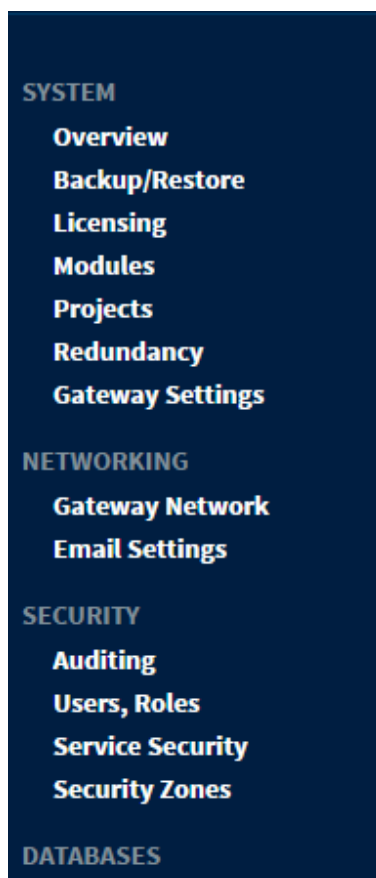
Full Change Log »

 Microsoft Windows		
Ignition - Windows 64-bit zip	Ignition-windows-64-7.9.2-rc1.zip (300MB)	Version: 7.9.2-rc1.20170327-2121
Ignition - Windows 32-bit zip	Ignition-windows-32-7.9.2-rc1.zip (300MB)	Version: 7.9.2-rc1.20170327-2121
 Linux		
Ignition - Linux 64-bit zip	Ignition-linux-64-7.9.2-rc1.zip (298MB)	Version: 7.9.2-rc1.20170327-2121
Ignition - Linux 32-bit zip	Ignition-linux-32-7.9.2-rc1.zip (298MB)	Version: 7.9.2-rc1.20170327-2121
 Mac OS X		
Ignition - OSX zip	Ignition-osx-7.9.2-rc1.zip (283MB)	Version: 7.9.2-rc1.20170327-2121

This task only needs to be executed once per version/architecture: multiple upgrades may be performed from the same files.

Creating the Remote Agent Upgrade Task

1. From the Controller, navigate to the **Configure > Enterprise Administration > Agent Tasks**. Click on the **Create new Gateway Task** link.
2. Select the **Remote Agent Upgrade** task from the list of tasks, and then click **Next**.



Add Gateway Task Step 1: Choose Type

☐ **Activate License**

Activate a license key on selected agent Gateways.

☐ **Collect Backup**

Collect a Gateway backup from an agent machine.

☐ **Install Modules**

Install one or more modules on selected agent Gateways.

☒ **Remote Agent Upgrade**

Prepare a full system upgrade on selected agent Gateways.

☐ **Restart agent**

Restarts the Ignition service on the agent machine.

3. On the **Task Scheduling** page, give the task a name. Like all tasks, you will specify either a group, or several agents, so providing a useful name will make the task easier to identify later. you can leave the schedule set to **Execute Immediately**.

NOTE

This task does not upgrade the agent, it only prepares the files for later. You may continue without worry that the agent will be restarted.

4. On the **Remote Agent Upgrade** page, click the **Choose File** button, navigate to the files you wish to upload, and click **OK**. Note that this page will state the architecture of the Agents that were selected in the previous step. Once finished, click **Next**.

Remote Agent Upgrade

✓ All installation zips have been provided. Click Next to proceed.

Select upgrade zip files

Architecture: **Linux 64-bit**

💡 The agents listed below require a Linux 64-bit Ignition installation .zip file. This file will be sent when this task begins at the scheduled time. The actual upgrade process will not start until you visit the EAM Remote Upgrade page and begin the upgrades.

Choose File No file chosen

Selected zip

Ignition-linux-64-7.9.2-rc1.zip

[remove](#)

Agent

Status

Agent

Ready for upgrade

< Previous

Next >

Finish

- Next, select any additional modules that should be included with this Task. Modules that are not included in the typical installation, including third party modules, may be added. Click the **Choose File** button, navigate to the module, and click **OK**. This step is optional, so regardless of whether you add custom modules, click **Next** when you're ready to move on.
- The **Task Summary** page will appear. Review the information, and click **Finish**. The new task will run, and pass the files to the agent. Once complete, the agent will be prepared for a remote upgrade.

Upgrading the Agent

Once the files have been passed to the Agent, a remote upgrade may be initiated from the **Controller's** web interface.

NOTE

As with all upgrades, it is highly recommended to take a backup of the Agent before starting the upgrade process. Information on taking a backup from an Agent can be found on the [Agent Task - Backup and Restore](#) page.

Remotely Upgrading an Agent

1. To begin a remote system upgrade, on the Controller, navigate to **Gateway > Configure > Enterprise Administration > Remote Upgrades**. Once the Remote Upgrades page appears, you may either click the **Upgrade** button next to the agent you wish to upgrade, or select multiple agents/groups and click the **Upgrade Selected** button.

Remote Upgrades

Select one or more agents below to begin remote system upgrades. The selected agent Gateways will be shut down and restarted to perform the upgrades. For redundant agent pairs, the backup agent upgrade must be completed before the master agent can be selected.

☐ Default Group

Agent	Role	Upgrade Status	As Of	Status Message
☐ Agent		Ready to upgrade	4/6/17 5:12 PM	Remove Upgrade

Upgrade Selected

Remove Selected

2. A confirmation page will appear. Click the **Confirm** button when ready to proceed.
3. The Remote Upgrades page will appear again. This will report the status of the upgrade. Once complete, the Upgrade Status of the agent will show that the upgrade was successful

Remote Upgrades

💡 Select one or more agents below to begin remote system upgrades. The selected agent Gateways will be shut down and restarted to perform the upgrades. For redundant agent pairs, the backup agent upgrade must be completed before the master agent can be selected.

☐ Default Group

Agent	Role	Upgrade Status	As Of	Status Message
☐ Agent		Upgrade success	4/10/17 5:33 PM	Remove

Upgrade Selected

Remove Selected

This is documentation for **Ignition 7.9**, which is no longer actively maintained.

For documentation on the latest stable release, see the [latest version](#) (8.3).

Agent Tasks

Using The Gateway Network

Once the Gateway Network is up, and there is at least one Controller and one Agent configured, there are a variety of actions that can be performed on your agents in the form of Agent Tasks.

Agent Tasks

Agent Tasks involve performing a specific task to one or more specific Agents. The Agent Tasks page contains three tabs: Available Tasks which contain tasks waiting to run, Running and Scheduled Tasks which include any tasks that are currently running or scheduled to be run, and Task History, which provides a list of all previously run tasks. There are many different types of tasks to choose from, but they mostly involve doing Gateway level actions such as taking a Gateway backup or activating a license.

1. To create an Agent task, go to the **controller**, and select the **Configure** section on the Gateway webpage, and scroll down to **Enterprise Administration > Agent Tasks**. This opens the Agent Tasks window. Click the **Create new Gateway Task** link to create an agent task.

Agent Tasks

Agent Tasks				
Available TasksRunning and Scheduled TasksTask History				
Name	Repeats?	Next Scheduled	Current State	Targets
No Gateway Tasks				
→ Create new Gateway Task...				

2. Select a task and press **Next**.

Add Gateway Task Step 1: Choose Type

☒ **Activate License**

Activate a license key on selected agent Gateways.

☐ **Collect Backup**

Collect a Gateway backup from an agent machine.

☐ **Install Modules**

Install one or more modules on selected agent Gateways.

☐ **Restart agent**

Restarts the Ignition service on the agent machine.

☐ **Restore Backup**

Restore a Gateway backup on selected agent Gateways.

☐ **Send Project**

Distributes a project to remote servers. Replaces the project on the remote server as if an export/import was performed.

☐ **Send Project Resources**

Distributes project resources, like windows and templates, to remote servers.

☐ **Unactivate License**

Unactivate a license key on selected agent Gateways.

☐ **Update License**

Update the license on selected agent Gateways.

3. Tasks can then be scheduled to run in a couple of different ways depending on your needs. You can:

- Execute the task immediately
- Execute the task one time at a certain time, or after a certain period of time
- Schedule the task to run multiple times on a schedule
- Save the task to run manually at a later time.

4. The EAM Wizard will guide you through setting up your task. Lastly, a Task Summary window will appear, and if you're ready to go, click **Finish**. Your task will be submitted according to the schedule type you defined.

Task Summary

Task Name	Collect Backup
Task Type	Collect Backup
Schedule	Execute once at 10/19/16 11:25 AM
Target Groups/Agents	Agent133
Force Backup	false

< Previous

Next >

Finish

Agent Tasks Status

On the **Status** page of the Gateway webpage there is a page called **EAM Tasks**. This page is useful, as it shows information on what tasks are currently running, which tasks are scheduled to run, and a history of tasks that have been run. The **EAM Tasks** page can be used to allow users to see what is going on with the various agents without giving them the ability to configure them.

Controller | Master

USER MANUAL | SUPPORT

admin | Sign Out

Launch Designer

HOME | STATUS | CONFIGURE

Search...

License Incomplete ? 0:00:00

Reset Trial

View Modules

SYSTEMS

Overview

Performance

Alarm Pipelines

Gateway Scripts

Modules

Redundancy

Reports

SFCs

Voice Alarming

Tags

EAM Tasks

Transaction Groups

CONNECTIONS

EAM Agents

Databases

Designers

Devices

Gateway Network

Store & Forward

OPC Connections

OPC-UA Server

Vision Clients

DIAGNOSTICS

Execution

Logs

Threads

Configuration

EAM Tasks

Executing Agent Tasks

0

Scheduled Agent Tasks

2

Executing Agent Tasks

Task Name Task Type Task State Execution Start Progress Message

No items to display.

Scheduled Agent Tasks

Task Name Task Type Repeats Next Execution Start Status

Collect Backup Collect Backup true 20Oct2016 00:00:00 Scheduled Pause

Restart agent Restart agent false 22Oct2016 00:00:00 Scheduled Pause

Recently Completed Tasks

Task Name Task Type Task Start Agent Task Result

Collect Backup backup 19Oct2016 11:52:01 Agent133 Success

Collect Backup backup 19Oct2016 11:50:01 Agent133 Success

Collect Backup backup 19Oct2016 11:48:01 Agent133 Success

Collect Backup backup 19Oct2016 11:45:01 Agent133 Success

Collect Backup backup 19Oct2016 11:41:49 Agent133 Success

This is documentation for **Ignition 7.9**, which is no longer actively maintained.

For documentation on the latest stable release, see the [latest version](#) (8.3).

Agent Task - Backup and Restore



INDUCTIVE
UNIVERSITY

Agent Task - Backup and Restore

[Watch the video](#)

The Backup and Restore tasks are an extremely important part of the Enterprise Administration Module. Performing a Collect Backup is required if you want to do an Agent recovery.

The Gateway Tasks discussed in this section are the [Collect Backup](#), [Restore Backup](#), [Install Modules](#) and [Restart Agent](#).

Collect Backup

Collect Backup is a Gateway Task that performs a Gateway backup on the selected Agent's machine. Additionally, this task will archive copies of the Agent's modules. This modules may be used in the [Install Modules task](#).

New in 7.9.20 Collect Backup now times out by default after waiting 60 minutes for the Agent to generate the backup, plus another 60 minutes for the Agent to transfer the backup to the controller over the Gateway network if the backup generation did not timeout.

Transfer timeout is configurable using the [system property](#)

`ignition.eam.task.collectBackup.transferTimeout`.

1. On the **Controller**, navigate to **Configure > Enterprise Administration > Agent Tasks**, and click on the blue link, **Create new Gateway Task** at the bottom of the page.
2. Collect Backup is one of the several Gateway tasks you can perform. Select **Collect Backup**, and press **Next**. The EAM Task Wizard will walk you through each step of the Collect Backup

process.

The screenshot shows the Ignition Gateway Configuration web interface. The top navigation bar includes 'Controller | Master', 'USER MANUAL', 'SUPPORT', 'admin', 'Sign Out', and a 'Launch Designer' button. The main navigation menu on the left lists categories: SYSTEM (Overview, Backup/Restore, Licensing, Modules, Projects, Redundancy, Gateway Settings), NETWORKING (Gateway Network, Email Settings), SECURITY (Auditing, Users, Roles, Service Security, Security Zones), and DATABASES (Connections, Drivers, Store and Forward). The main content area is titled 'Add Gateway Task Step 1: Choose Type' and displays five radio button options: 'Activate License' (Activate a license key on selected agent Gateways), 'Collect Backup' (Collect a Gateway backup from an agent machine), 'Install Modules' (Install one or more modules on selected agent Gateways), 'Restart agent' (Restarts the Ignition service on the agent machine), and 'Restore Backup' (Restore a Gateway backup on selected agent Gateways). The 'Collect Backup' option is selected and highlighted with a red border. A green banner at the top of the main content area indicates 'License Incomplete' with a timer at 0:00:00 and buttons for 'Reset Trial' and 'View Modules'.

3. There are several different task scheduling options available. For this Collect Backup example, choose to **Execute Immediately**, and press **Next**. If you need more information on other scheduling options, refer to [Task Scheduling](#).

Collect Backup

Task Scheduling

Task Name: Collect Backup

☒ Execute Immediately

☐ Execute On Demand

☐ Execute Once, Scheduled

10/19/16



2

:

05

PM



☐ Execute Once, Delayed

SECONDS



☐ Execute On Schedule

Common Settings

Once Per Hour (0 *****)



Minutes

0



:00 (0)



Hours

*



Every hour (*)



Days

*



Every Day (*)



Months

*



Every Month (*)



Weekdays

*



Every Day (*)



Expression Descriptor:

Every hour (0 *****)

4. Select the Agent you want to perform the Collect Backup on, and press **Next**.

Collect Backup

Agent Selection

☐ Default Group

☒ Agent133

☐ Ignition-ubuntu

☐ Remote

No Gateway Agents found in group

< Previous

Next >

Finish

5. The EAM Task Wizard will prompt you if you want to do a Force Backup even if nothing changed since the last backup. This step is optional, but it is useful when your backups are performed on a regular schedule. It captures the changes between the time the last backup was performed and the unscheduled backup. To be safe, check the **Force Backup** box, and press **Next**.

Collect Backup

Settings

Force Backup

☒ The controller will not take a scheduled backup if the agent's internal database has not changed since the last backup was taken. Set to true to override this behavior.

< Previous

Next >

Finish

6. Review the **Collect Backup Task Summary** information, and press **Finish**.

Collect Backup

Task Summary

Task Name	Collect Backup
Task Type	Collect Backup
Schedule	Execute Immediately
Target Groups/Agents	Agent133
Force Backup	true

< Previous

Next >

Finish

7. Once the Collect Backup task is complete, a successful message will be displayed. You can even check the Task History which will provide a list of all previously run tasks.

Agent Tasks

Available Tasks

Running and Scheduled Tasks

Task History

✓ Successfully created new Gateway Task "Collect Backup"

Name	Repeats?	Next Scheduled	Current State	Targets	
Collect Backup	false	10/22/16 2:00:00 AM	Scheduled	Agents [Agent133]	More ▾ edit

→ Create new Gateway Task...

Your new Gateway backup will be stored wherever your Controller settings are pointing to when the Controller was initially created. To check, go to the **Controller**, and navigate to **Configure > Enterprise Administration > Controller Settings**. You can have your Archive Path set to Automatic or Manual. If you have it set to Automatic, you can find your backups inside the directory for Ignition, otherwise, it will be the folder location that is specified in the Controller Settings. To learn more about controller settings, refer to [Creating a Controller](#).

Controller Settings

→ Uninstall Controller

Main

Default Database

MySQL ▾

The database connection to use for recording agent history.

Archiving

Archive Location

Manual ▾

If "Automatic", the system will manage the location of the Agent archive. If "Manual", the path below will be used.

Archive Path

C:\eam-archive

The file path to save Gateway backups, archived modules, and other files.

Low Disk Space Threshold

1024

Value is in megabytes. Errors will be reported in this Gateway when the disk used for archiving drops below this value.

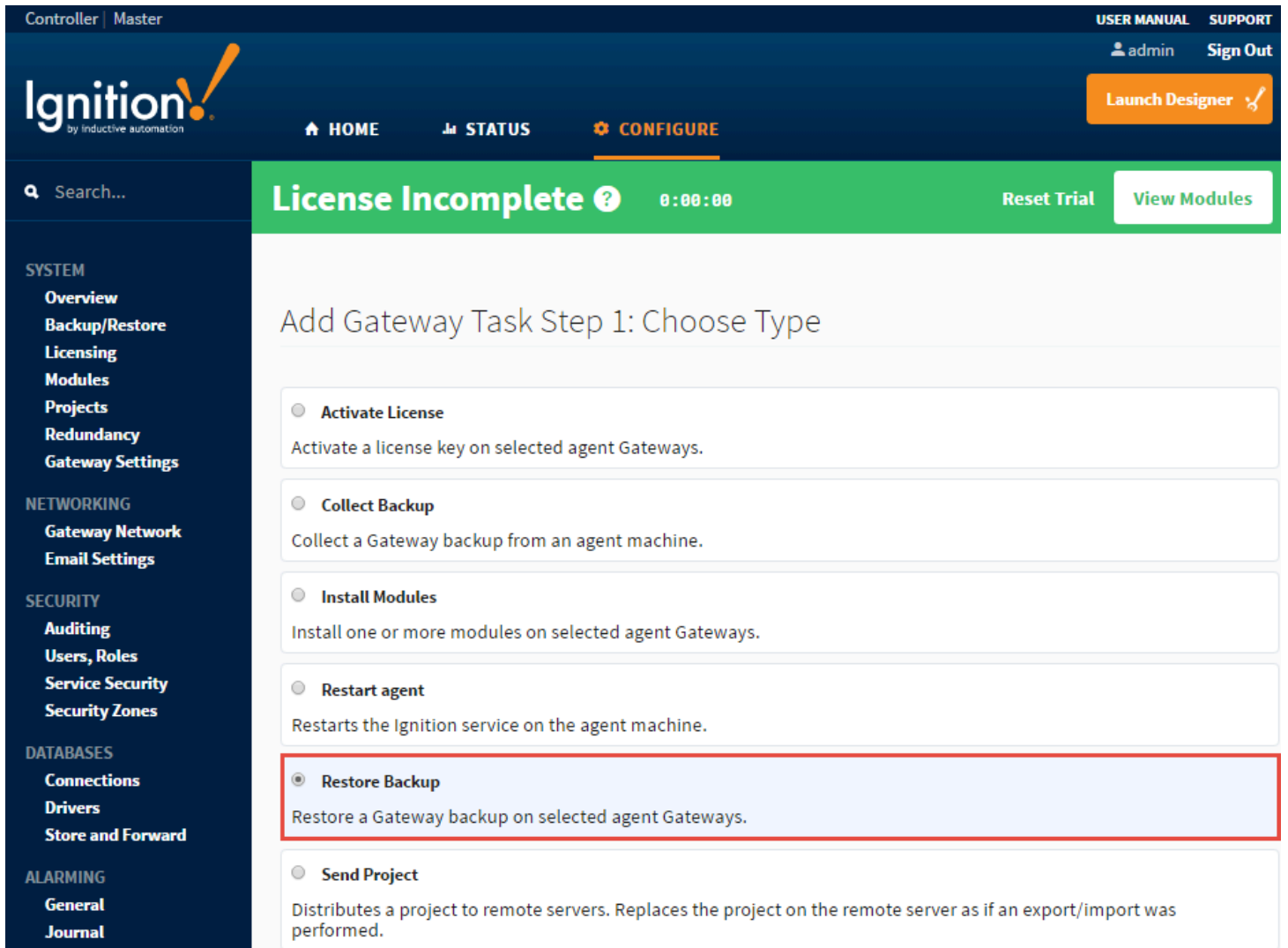
Restore Backup

Now, let's restore a Gateway backup on the selected Agent.

AGENT NAME AND RESTORING

When restoring from a backup using this task, the newly restored agent will retain its previous name.

1. On the **Controller**, navigate to **Configure > Enterprise Administration > Agent Tasks**, and click on the **Create new Gateway Task** link. Select the **Restore Backup**, and press **Next**.



The screenshot shows the Ignition Gateway Controller interface. The top navigation bar includes 'Controller | Master', 'USER MANUAL', 'SUPPORT', 'admin', 'Sign Out', and a 'Launch Designer' button. The main navigation menu on the left lists categories: SYSTEM (Overview, Backup/Restore, Licensing, Modules, Projects, Redundancy, Gateway Settings), NETWORKING (Gateway Network, Email Settings), SECURITY (Auditing, Users, Roles, Service Security, Security Zones), DATABASES (Connections, Drivers, Store and Forward), and ALARMING (General, Journal). The main content area is titled 'Add Gateway Task Step 1: Choose Type' and displays a list of tasks: 'Activate License', 'Collect Backup', 'Install Modules', 'Restart agent', 'Restore Backup' (highlighted with a red box), and 'Send Project'. A green banner at the top of the main content area indicates 'License Incomplete' with a timer and buttons for 'Reset Trial' and 'View Modules'.

SCREENSHOTS

Some screenshots will not be duplicated. You can refer to the screenshots in the Collect Backup section as you work your way through each topic.

2. Schedule the **Restore Backup** task from any of the listed scheduling options. This example uses **Execute Immediately**, and press **Next**.

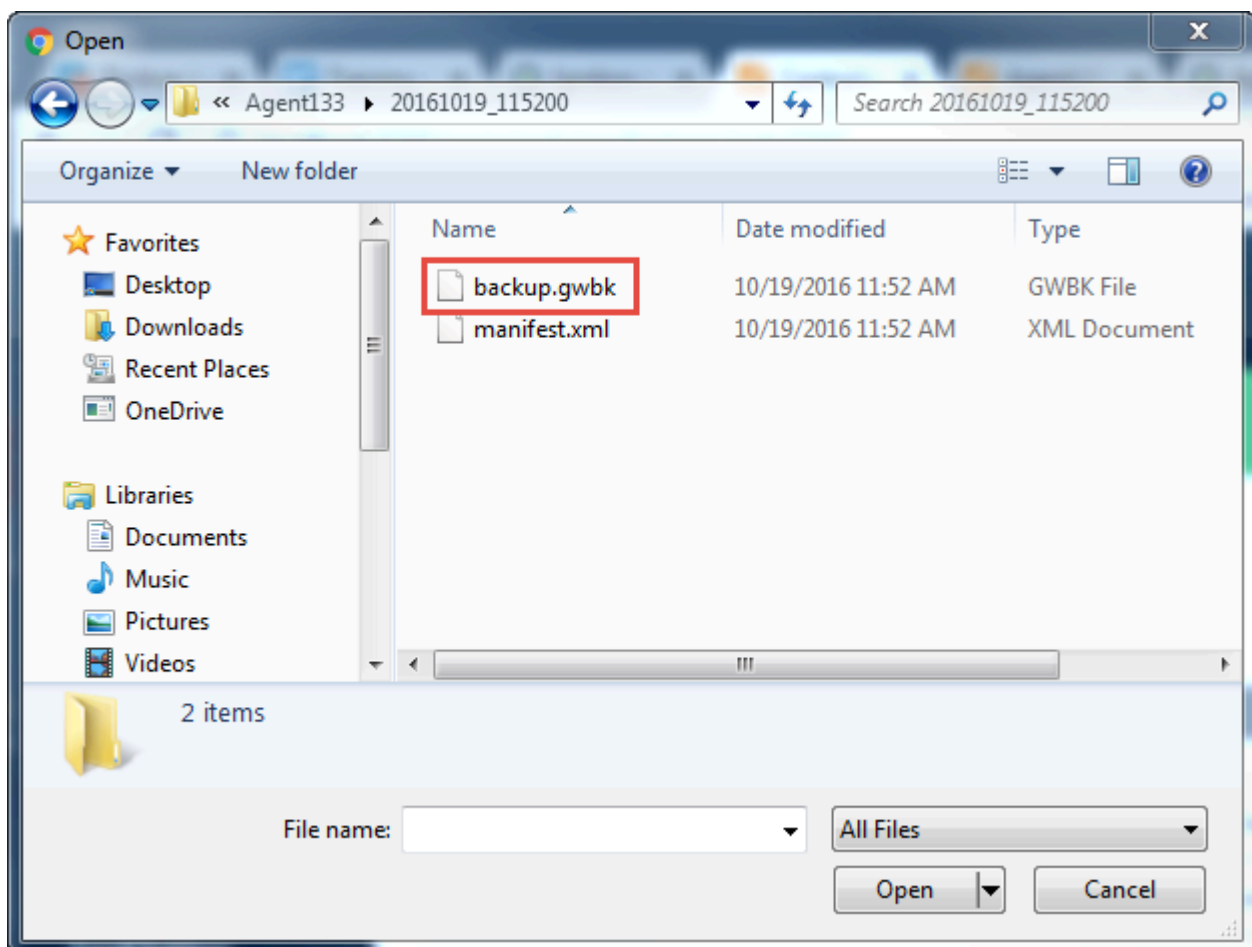
3. Select the **Agent**, and press **Next**.
4. If your Archive Path was set to Manual when you created your Controller, you will have to select the **Choose File** button, and navigate to the folder on your computer to locate the Gateway Backup file. If you are unsure about your Archive Path, refer to your **Controller Settings**.

Restore Backup

Settings

Gateway Backup Path	Choose File No file chosen This Gateway backup will be distributed to the selected agents. Each agent will then restart.
Restore Disabled	☐ If checked, all projects, database connections, OPC connections, etc will be disabled upon restart of each agent.

5. Navigate to the folder on your computer to locate the Gateway Backup file. Select the **backup.gwbk**, and click **Open**. Press **Next** on the Restore Backup task.



6. Review the **Restore Backup Task Summary**, and press **Finish**. Once the Restore Backup task completes, you will receive a successful message from the Gateway Task.

7. Now go to your **Agent**, and click **Home**. It takes a few moments to bring up the Gateway. You will see a progress bar while the Gateway is starting up. Once it's complete, you will see all your projects uploaded and ready to go.

The following feature is new in Ignition version 7.9.13 Click here to check out the other new features

Restoring an Agent Backup with the Option to Install Modules

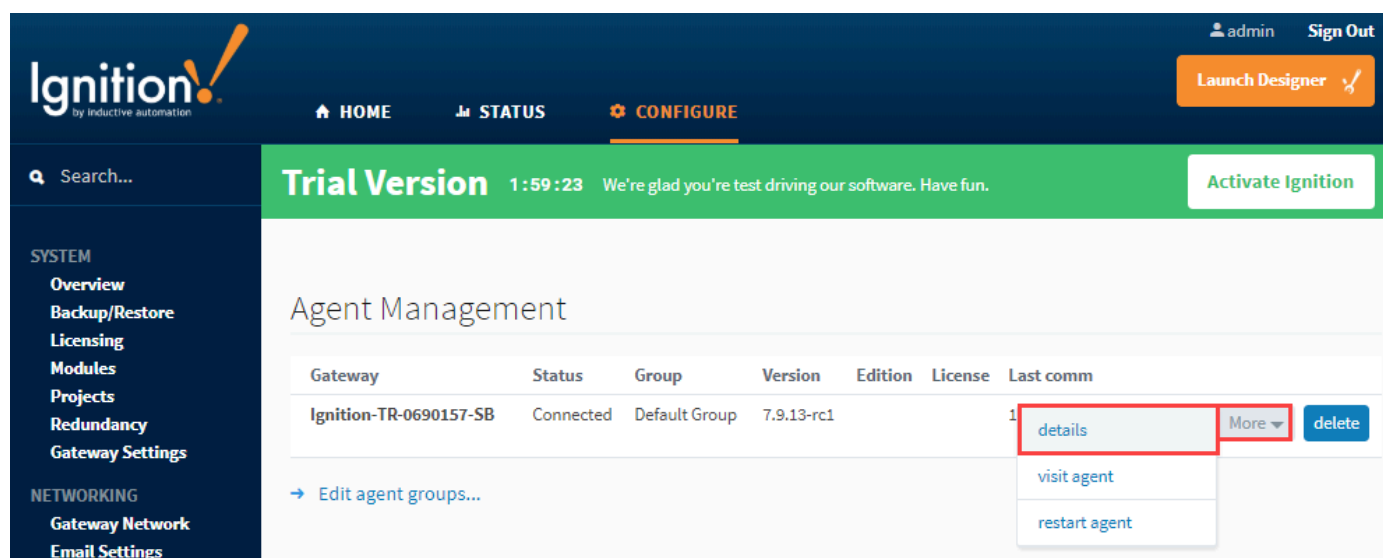
New in 7.9.13

You can also restore a Gateway backup on a selected Agent with the option to install modules, giving you the opportunity to install modules while, at the same time, restoring from an Agent backup.

THE INSTALLING MODULES OPTION IS NOT BACKWARDS COMPATIBLE IN PRIOR VERSIONS OF IGNITION

Restoring an Agent backup with the option to install modules works where the Controller and the Agent(s) are on versions 7.9.13 or newer. This functionality is not backward compatible.

1. From the **Controller**, go to **Configure > Enterprise Administration > Agent Management**. You'll see a list of all your Agents and their status.
2. Click the **More** button and select **details** for the Agent that you want to restore the backup for.



The screenshot displays the Ignition web interface. The top navigation bar includes 'HOME', 'STATUS', and 'CONFIGURE'. The left sidebar lists various system and networking settings. The main content area is titled 'Agent Management' and contains a table of agents. The table has columns for Gateway, Status, Group, Version, Edition, License, and Last comm. A dropdown menu is open for the 'details' button, showing options: 'details', 'visit agent', and 'restart agent'. The 'details' option is highlighted.

Gateway	Status	Group	Version	Edition	License	Last comm
Ignition-TR-0690157-SB	Connected	Default Group	7.9.13-rc1			

3. This opens the **Agent Details** screen with a list of options for the selected Agent. Click the link for the **View saved Gateway backups for this agent**.

[< back](#)

Agent Details

→ [View saved Gateway backups for this agent](#)

→ [View details about the license assigned to this agent](#)

→ [Display a list of modules currently installed on this agent](#)

→ [View details about projects on this agent](#)

4. Here you'll see a list of Gateway Backups for the selected Agent. Under the **Modules** column, you'll see the number of modules included in each backup. Click the **show modules** link to see all the modules that are included in the Agent backup, then click **hide modules** to close the module list.

[< back](#)

Ignition-TR-0690157-SB Backup Archive

Gateway Backups

Name	Archive Date	Modules	
backup.gwbk	Tue Dec 03 09:49:51 PST 2019	Alarm Notification 4.9.13-rc1 (b2019112515) Allen-Bradley Driver 4.9.13-rc1 (b2019112523) DNP3 Driver 2.9.13-rc1 (b2019112523) Logix Driver 3.9.13-rc1 (b2019112523) Mobile 4.9.13-rc1 (b2019112523) Modbus Driver 5.9.13-rc1 (b2019112523) Omron Driver 2.9.13-rc1 (b2019112523) OPC-UA 4.9.13-rc1 (b2019112515) OpcCom 4.9.13-rc1 (b2019112523) Reporting 4.9.13-rc1 (b2019112523) SFC 3.9.13-rc1 (b2019112523) Siemens Drivers 4.9.13-rc1 (b2019112523) SMS Notification 4.9.13-rc1 (b2019112523) SQL Bridge 8.9.13-rc1 (b2019112515) Symbol Factory 5.9.13-rc1 (b2019112523) Tag Historian 2.9.13-rc1 (b2019112515) UDP and TCP Drivers 4.9.13-rc1 (b2019112523) User Manual 4.9.13-rc1 (b2019112523) Vision 9.9.13-rc1 (b2019112515) Web Browser 3.9.13-rc1 (b2019112523) hide modules	Restore Backup
backup.gwbk	Tue Dec 03 09:42:23 PST 2019	19 module(s) backed up show modules	Restore Backup

5. To restore the Agent backup, click the **Restore Backup** link to the right of the Module column.
6. The **Confirm Gateway Restoration** screen will popup and ask you to confirm restoring the backup on your Agent. Be sure to check the **Install Modules** box if you want to install all the modules that were running on your Gateway at the time this specific backup was taken. Click **Confirm**.

Confirm Gateway Restoration

Are you sure that you want to restore this Gateway backup on agent 'Ignition-TR-0690157-SB'?

Settings	
Selected Backup	Backup taken on 2019-12-03 at 09:49:51
Restore Disabled	☐ If checked, all projects, database connections, OPC connections, etc will be disabled upon agent restart.
Install Modules	☒ If checked, modules that were installed at the time the backup was taken will be re-installed during the restoration. This action may result in newer versions of modules being replaced with older versions after restoration. Modules that are installed on the agent but are not archived will not be modified.

[Cancel](#) [Confirm](#)

7. After the backup is complete, go back to the **Agent Details** screen to see the list of modules installed. Click on the **Display a list of modules currently installed on this agent** link.

[< back](#)

Ignition-TR-0690157-SB Installed Modules

Name	Version	Description	License	State
Alarm Notification	4.9.13-rc1 (b2019112515)	Provides alarm notifications via email	Trial	RUNNING
Allen-Bradley Driver	4.9.13-rc1 (b2019112523)	Allen-Bradley driver suite for the OPC-UA module.	Trial	RUNNING
DNP3 Driver	2.9.13-rc1 (b2019112523)	A driver supporting DNP3 (Distributed Network Protocol) device.	Trial	RUNNING
Enterprise Administration	2.9.13-rc1 (b2019112523)	A remote Gateway administration system, allowing you to manage Gateways and automate tasks from a single controller.	Trial	RUNNING
Logix Driver	3.9.13-rc1 (b2019112523)	A driver for communicating with Allen-Bradley Logix5000 series PLCs, and includes firmware version 21 support	Trial	RUNNING

Install Modules

This task allows you to install one or more modules on an Agent. You may pass in the modules to install while creating the task, or choose from the archived modules. Modules are archived in the [Collect Backup task](#).

As an example, suppose you accidentally uninstalled the Alarm Notification and OPC-UA Modules from your Agent. Let's go ahead and reinstall them using the Install Modules task.

1. Go to the **Controller**, and navigate to **Configure > Enterprise Administration > Agent Tasks**. Click the **Create new Gateway Task** link. Select the **Install Module** task, and press **Next**.

Ignition! by Inductive automation

admin Sign Out

Launch Designer

HOME STATUS CONFIGURE

Search...

License Incomplete 0:00:00 Reset Trial View Modules

SYSTEM

- Overview
- Backup/Restore
- Licensing
- Modules
- Projects
- Redundancy
- Gateway Settings

NETWORKING

- Gateway Network
- Email Settings

SECURITY

- Auditing
- Users, Roles
- Service Security
- Security Zones

DATABASES

- Connections
- Drivers
- Store and Forward

Add Gateway Task Step 1: Choose Type

- ☐ **Activate License**
Activate a license key on selected agent Gateways.
- ☐ **Collect Backup**
Collect a Gateway backup from an agent machine.
- ☒ **Install Modules**
Install one or more modules on selected agent Gateways.
- ☐ **Restart agent**
Restarts the Ignition service on the agent machine.
- ☐ **Restore Backup**
Restore a Gateway backup on selected agent Gateways.

2. Schedule the **Install Modules** task from any of the listed scheduling options. This example uses **Execute Immediately**, and press **Next**.
3. Select the **Agent**, and press **Next**.
4. From the list of **Archived Modules**, click the **Add** buttons for **Alarm Notification** and the **OPC-UA** modules. You will notice, that once you click the **Add** button next to a module, it will show up in the **Selected Modules** box at the bottom of the screen. You can choose as many modules as you need, and when you're finished, press **Next**.

Install Modules

[Choose Files](#) No file chosen

Archived Modules

Module Name	Module Version	
Alarm Notification	4.9.0.2016101208	add
Alarm Notification	3.8.2.2016030813	add
Allen-Bradley Driver	4.9.0.2016101215	add
Allen-Bradley Drivers	3.8.2.2016030813	add
DNP3 Driver	2.9.0.2016101215	add
DNP3-Driver	1.8.2.2016030813	add
Logix Driver	3.9.0.2016101215	add
Logix Driver	2.8.2.2016030813	add
Mobile	4.9.0.2016101208	add
Mobile	3.8.2.2016030813	add
Modbus Driver	5.9.0.2016101215	add
Modbus Driver v2	4.8.2.2016030813	add
OPC-UA	4.9.0.2016101215	add
OPC-UA	3.8.2.2016030813	add
Omron Driver	2.9.0.2016101215	add

Selected Files

Alarm Notification 4.9.0.2016101208	remove	add
OPC-UA 4.9.0.2016101215	remove	

[< Previous](#)

[Next >](#)

[Finish](#)

- Review the **Install Modules Task Summary**, and press **Finish**. Once the Install Module task completes, you will get a successful message from the Gateway Task.
- Go back to your **Agent**, and navigate to **Status > Modules** to verify that both the Alarm Notification and OPC-UA modules were installed and are running successfully.



[HOME](#)
[STATUS](#)
[CONFIGURE](#)

[admin](#)
[Sign Out](#)

[Launch Designer](#)

License Incomplete ? 0:00:00

[Reset Trial](#)
[View Modules](#)

SYSTEMS

[Overview](#)
[Performance](#)
[Alarm Pipelines](#)
[Gateway Scripts](#)
[Modules](#)
[Redundancy](#)
[Reports](#)
[SFCs](#)
[Voice Alarming](#)
[Tags](#)
[Transaction Groups](#)

CONNECTIONS

[Databases](#)
[Designers](#)
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[Gateway Network](#)
[Store & Forward](#)
[OPC Connections](#)
[OPC-UA Server](#)
[Vision Clients](#)

DIAGNOSTICS

[Execution](#)
[Logs](#)
[Threads](#)

Systems

Modules

Running Modules

21 / 21

Licensed Modules

19 / 21

License Details

License Key	AAA-AAA
Version	7
developer	true
edition	standard

Inductive Automation, LLC

Name	Version	License	Status
Alarm Notification	4.9.0 (b2016101208)	Activated ?	✓ RUNNING
Allen-Bradley Driver	4.9.0 (b2016101215)	Activated ?	✓ RUNNING
DNP3 Driver	2.9.0 (b2016101215)	Activated ?	✓ RUNNING
Enterprise Administration	2.9.0 (b2016101215)	Activated ?	✓ RUNNING
Logix Driver	3.9.0 (b2016101215)	Activated ?	✓ RUNNING
Mobile	4.9.0 (b2016101208)	Activated ?	✓ RUNNING
Modbus Driver	5.9.0 (b2016101215)	Activated ?	✓ RUNNING
OPC-UA	4.9.0 (b2016101215)	Activated ?	✓ RUNNING
Omron Driver	2.9.0 (b2016101215)	Activated ?	✓ RUNNING
OpcCom	4.9.0 (b2016101215)	Activated ?	✓ RUNNING
Reporting	4.9.0 (b2016101208)	Activated ?	✓ RUNNING
SFC	3.9.0 (b2016101215)	Activated ?	✓ RUNNING
SMS Notification	4.9.0 (b2016101208)	Trial	✓ RUNNING
SQL Bridge	8.9.0 (b2016101208)	Trial	✓ RUNNING
Siemens Drivers	4.9.0 (b2016101215)	Activated ?	✓ RUNNING

Restart Agent

On the **Controller**, lets create another Gateway Task to restart the agent. This task will stop the Ignition service on the Agent and start it back up again.

- Go to the **Controller**, and navigate to **Configure > Enterprise Administration > Agent Tasks**. Click on the **Create new Gateway Task** link. Select the **Restart Agent**, and press **Next**.

The screenshot shows the Ignition Gateway configuration interface. The top navigation bar includes 'Controller | Master', 'USER MANUAL', 'SUPPORT', 'admin', and 'Sign Out'. The main navigation menu on the left lists categories: SYSTEM (Overview, Backup/Restore, Licensing, Modules, Projects, Redundancy, Gateway Settings), NETWORKING (Gateway Network, Email Settings), SECURITY (Auditing, Users, Roles, Service Security, Security Zones), and DATABASES (Connections, Drivers, Store and Forward). The main content area is titled 'Add Gateway Task Step 1: Choose Type' and displays a list of task options: 'Activate License' (Activate a license key on selected agent Gateways), 'Collect Backup' (Collect a Gateway backup from an agent machine), 'Install Modules' (Install one or more modules on selected agent Gateways), 'Restart agent' (Restarts the Ignition service on the agent machine), and 'Restore Backup' (Restore a Gateway backup on selected agent Gateways). The 'Restart agent' option is selected and highlighted with a red border. A green banner at the top of the main content area indicates 'License Incomplete' with a timer at 0:00:00 and buttons for 'Reset Trial' and 'View Modules'.

2. Schedule the **Restart Agent** task to **Execute Immediately**, and press **Next**.
3. Select the **Agent**, and press **Next**.
4. Review the **Restart Agent Task Summary**, and press **Finish**. Once the Restart Agent task completes, you will receive a successful message from the Gateway Task.
5. Go to your **Agent** and refresh your page. You will see a progress bar while the Gateway is starting up. This will take a few moments, and once this task completes, your Agent will be up and running.

This is documentation for **Ignition 7.9**, which is no longer actively maintained.

For documentation on the latest stable release, see the [latest version](#) (8.3).

Agent Task - Licensing



INDUCTIVE
UNIVERSITY

Agent Task - Licensing

[Watch the video](#)

Three of the many tasks that the Enterprise Administration Module (EAM) allows you to perform are License Activations, License Updates, and License Unactivations. This section demonstrates how to activate, update, and unactivate a license from the Controller.

! BEFORE ACTIVATING A LICENSE

- This section assumes you already have your [Controller](#) and [Agent](#) created.
- Make sure you know your License Key serial number.
- Refer to [Agent Tasks](#) for some more useful tips with this section.

For clarity, each Gateway webpage is identified with either a Controller or Agent label in the header (top left) so it's clear which machine you are working on.

Activate License

1. On your **Agent**, go to the Gateway webpage and select **Configure > Licensing**. You can see that no license is currently installed.

Agent133

USER MANUAL SUPPORT

admin Sign Out

Launch Designer

Ignition
by Inductive automation

HOME STATUS CONFIGURE

Search...

SYSTEM

- Overview
- Backup/Restore
- Licensing
- Modules
- Projects
- Redundancy
- Gateway Settings

NETWORKING

- Gateway Network
- Email Settings

SECURITY

- Auditing
- Users, Roles
- Service Security
- Security Zones

DATABASES

- Connections

Trial Version 1:59:45 We're glad you're test driving our software. Have fun. Activate Ignition

Licensing

Active Licenses

No License Installed

You may use the trial version of Ignition as long as you'd like to get a feel for our product. Every two hours, the trial will expire and will need to be reset. When you're ready to purchase, get a license and activate it here.

Get a License

License Management

Activate a License

Have a license key to activate? Click below to activate Ignition instantly.

Activate Online

Online
(Internet access required)

2. Activating a license on an Agent must be done from the Controller. On your **Controller**, go to the Gateway webpage and select **Configure > Enterprise Administration > Agent Tasks**. Click on the '**Create new Gateway Task**' link.
3. Activating a License key is one of several tasks you can perform under **Gateway Tasks**. Click **Activate License**, and press **Next**. The EAM wizard will walk you through each step of the license activation process.

Controller | Master

USER MANUAL SUPPORT

admin Sign Out

Launch Designer

Ignition
by Inductive automation

HOME STATUS CONFIGURE

Search...

SYSTEM

- Overview
- Backup/Restore
- Licensing
- Modules
- Projects
- Redundancy
- Gateway Settings

NETWORKING

- Gateway Network
- Email Settings

SECURITY

- Auditing
- Users, Roles
- Service Security
- Security Zones

License Incomplete ? 0:00:00 Reset Trial View Modules

Add Gateway Task Step 1: Choose Type

- ☒ **Activate License**
Activate a license key on selected agent Gateways.
- ☐ Collect Backup
Collect a Gateway backup from an agent machine.
- ☐ Install Modules
Install one or more modules on selected agent Gateways.
- ☐ Restart agent
Restarts the Ignition service on the agent machine.

- The Activate License task has several **scheduling options**. For this example, select **Execute Immediately**, and press **Next**.
- Select the **Agent** you want to activate the license on, and press **Next**. In this example, Agent133 was selected.

Activate License

Agent Selection

☐ Default Group

☒ **Agent133**

☐ Ignition-ubuntu

☐ Remote

No Gateway Agents found in group

< Previous

Next >

Finish

- Enter your license key. You can enter it one of two ways: type it in the **License Key field** if you know it, or press **Auto Assign the License** and the license key will auto populate. Press **Next**.

Activate License

License Selection

Agent133

License Key AAA-AAA

→ Auto Assign Licenses

< Previous

Next >

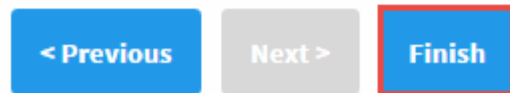
Finish

- The Activate License page will refresh so you can validate your licensing information. Press **Finish**.

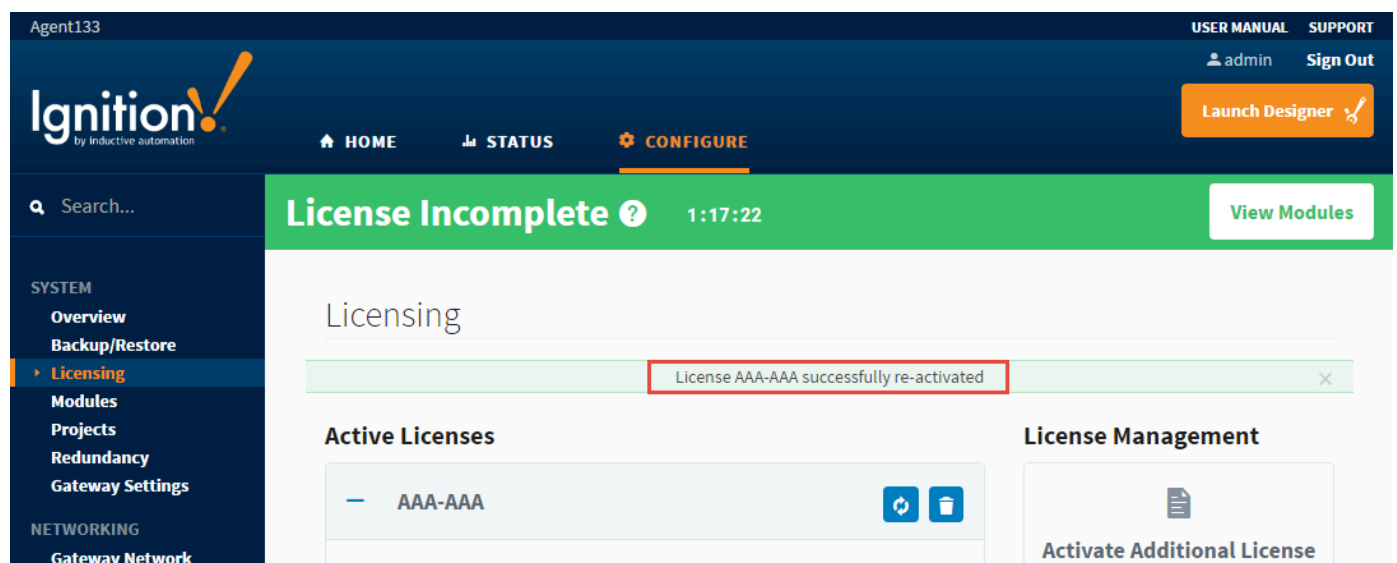
Activate License

Task Summary

Task Name	Activate License
Task Type	Activate License
Schedule	Execute Immediately
Target Groups/Agents	Agent133
License Keys	AAA-AAA to Agent133



The screen will refresh to the Gateway Tasks window. A message will be displayed stating that the license was activated successfully.



- Now, go to the **Agent** to validate that the Agent license was activated. You may see an Access Denied message. This is because the page was automatically updated. Don't panic! Click on the 'Return to home page' link to refresh the Ignition Home page on your Agent.
- Click on **Configure > Licensing** and verify your License Key on the Agent. This page shows all the modules on your license as well as the versions they are licensed for.

ABOUT TRIAL MODE

If you are running Ignition in Trial Mode on your Agent, there is a chance that the trial timer expired, and the license activation will fail. If this happens, reset the trial timer and resume the activation for the Agent. You can check the status of the installed modules by going to **Configure > Modules**. Modules you are licensed for will not expire, only the modules that are being used in Trial Mode.

10. It's a good idea to check to see if all your modules are activated. You can check the status of your modules by going to the Gateway webpage and selecting either **Configure > Modules**, or **Status > Modules**. If any modules are still in trial mode, that means your license key didn't include those modules, or there is a newer version than your license allows.

The screenshot shows the Ignition Gateway web interface. The top navigation bar includes 'HOME', 'STATUS', and 'CONFIGURE'. The left sidebar has a search bar and a list of system components, with 'Modules' highlighted. The main content area shows a 'License Incomplete' warning with a timer at 0:39:07. Below this, there are two boxes: 'Running Modules' showing 21 / 21 and 'Licensed Modules' showing 19 / 21. To the right, a 'License Details' box shows the license key 'AAA-AAA', version '7', developer 'true', and edition 'standard'. At the bottom, a table titled 'Inductive Automation, LLC' lists various modules and their status.

Name	Version	License	Status
Alarm Notification	4.9.0 (b2016101208)	Activated	✓ RUNNING
Allen-Bradley Driver	4.9.0 (b2016101215)	Activated	✓ RUNNING
DNP3 Driver	2.9.0 (b2016101215)	Activated	✓ RUNNING
Enterprise Administration	2.9.0 (b2016101215)	Activated	✓ RUNNING
Logix Driver	3.9.0 (b2016101215)	Activated	✓ RUNNING
Mobile	4.9.0 (b2016101208)	Activated	✓ RUNNING
Modbus Driver	5.9.0 (b2016101215)	Activated	✓ RUNNING
OPC-UA	4.9.0 (b2016101215)	Activated	✓ RUNNING
Omron Driver	2.9.0 (b2016101215)	Activated	✓ RUNNING
OpcCom	4.9.0 (b2016101215)	Activated	✓ RUNNING
Reporting	4.9.0 (b2016101208)	Activated	✓ RUNNING
SFC	3.9.0 (b2016101215)	Activated	✓ RUNNING
SMS Notification	4.9.0 (b2016101208)	Trial	✓ RUNNING
SQL Bridge	8.9.0 (b2016101208)	Trial	✓ RUNNING

Update a License

In the event you need to reload or update a license on your Agent, go to the **Controller**, and navigate to **Configure > Enterprise Administration > Agent Tasks**. Click the 'Create new Gateway' link.

Select **Update License**, and press **Next**. The EAM Wizard will guide you through the license update steps. Refer to steps 4 through 10.

Add Gateway Task Step 1: Choose Type

☐ **Activate License**

Activate a license key on selected agent Gateways.

☐ **Collect Backup**

Collect a Gateway backup from an agent machine.

☐ **Install Modules**

Install one or more modules on selected agent Gateways.

☐ **Restart agent**

Restarts the Ignition service on the agent machine.

☐ **Restore Backup**

Restore a Gateway backup on selected agent Gateways.

☐ **Send Project**

Distributes a project to remote servers. Replaces the project on the remote server as if an export/import was performed.

☐ **Send Project Resources**

Distributes project resources, like windows and templates, to remote servers.

☐ **Unactivate License**

Unactivate a license key on selected agent Gateways.

☒ **Update License**

Update the license on selected agent Gateways.

Next >

Unactivate a License

If you need to unactivate a license, go to the **Controller**, and navigate to **Configure > Enterprise Administration > Agent Tasks**. Click the 'Create new Gateway Task' link.

Select **Unactivate License**, and press **Next**. Once again, the EAM Wizard will guide you through the unactivate license steps. Refer to steps 4 through 9.

Add Gateway Task Step 1: Choose Type

☐ **Activate License**

Activate a license key on selected agent Gateways.

☐ **Collect Backup**

Collect a Gateway backup from an agent machine.

☐ **Install Modules**

Install one or more modules on selected agent Gateways.

☐ **Restart agent**

Restarts the Ignition service on the agent machine.

☐ **Restore Backup**

Restore a Gateway backup on selected agent Gateways.

☐ **Send Project**

Distributes a project to remote servers. Replaces the project on the remote server as if an export/import was performed.

☐ **Send Project Resources**

Distributes project resources, like windows and templates, to remote servers.

☒ **Unactivate License**

Unactivate a license key on selected agent Gateways.

☐ **Update License**

Update the license on selected agent Gateways.

Next >

This is documentation for **Ignition 7.9**, which is no longer actively maintained.

For documentation on the latest stable release, see the [latest version](#) (8.3).

Agent Task - Send Project



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UNIVERSITY

Agent Task - Send Project

[Watch the video](#)

Agent Tasks have the ability to send projects and project resources from a Controller to an Agent.

New in 7.9.18 As of release 7.9.18, you can send projects and project resources across major Ignition platform versions, for example from release 7.9 to 8.1.

CAUTION

Project resources are uniquely identified for agent tasks. If a resource is overwritten by a project import, please verify that it is correctly listed in any standing tasks.

Send Project Task

On the **Controller**, under the **Configure** section of the Gateway webpage, go to **Enterprise Administration > Agent Tasks**. Here you can create a Gateway Task to send a project from the Controller to an Agent.

1. Click the '**Create new Gateway Task**' link. The EAM wizard will guide you through each step of the Send Project task.

Controller | Master

USER MANUAL SUPPORT

admin Sign Out

Launch Designer

HOME STATUS CONFIGURE

Search...

License Incomplete ? 0:00:00 Reset Trial View Modules

SYSTEM

- Overview
- Backup/Restore
- Licensing
- Modules
- Projects
- Redundancy
- Gateway Settings

NETWORKING

- Gateway Network
- Email Settings

Agent Tasks

Available Tasks Running and Scheduled Tasks Task History

Name	Repeats?	Next Scheduled	Current State	Targets
No Gateway Tasks				
→ Create new Gateway Task...				

2. Not only will the Send Project send a project from the Controller to the Agent, but if the project already exists on the Agent, it will replace it. Scroll down the list of Gateway Tasks, and select **Send Project**. Press **Next**.

Controller | Master

USER MANUAL SUPPORT

admin Sign Out

Launch Designer

HOME STATUS CONFIGURE

Search...

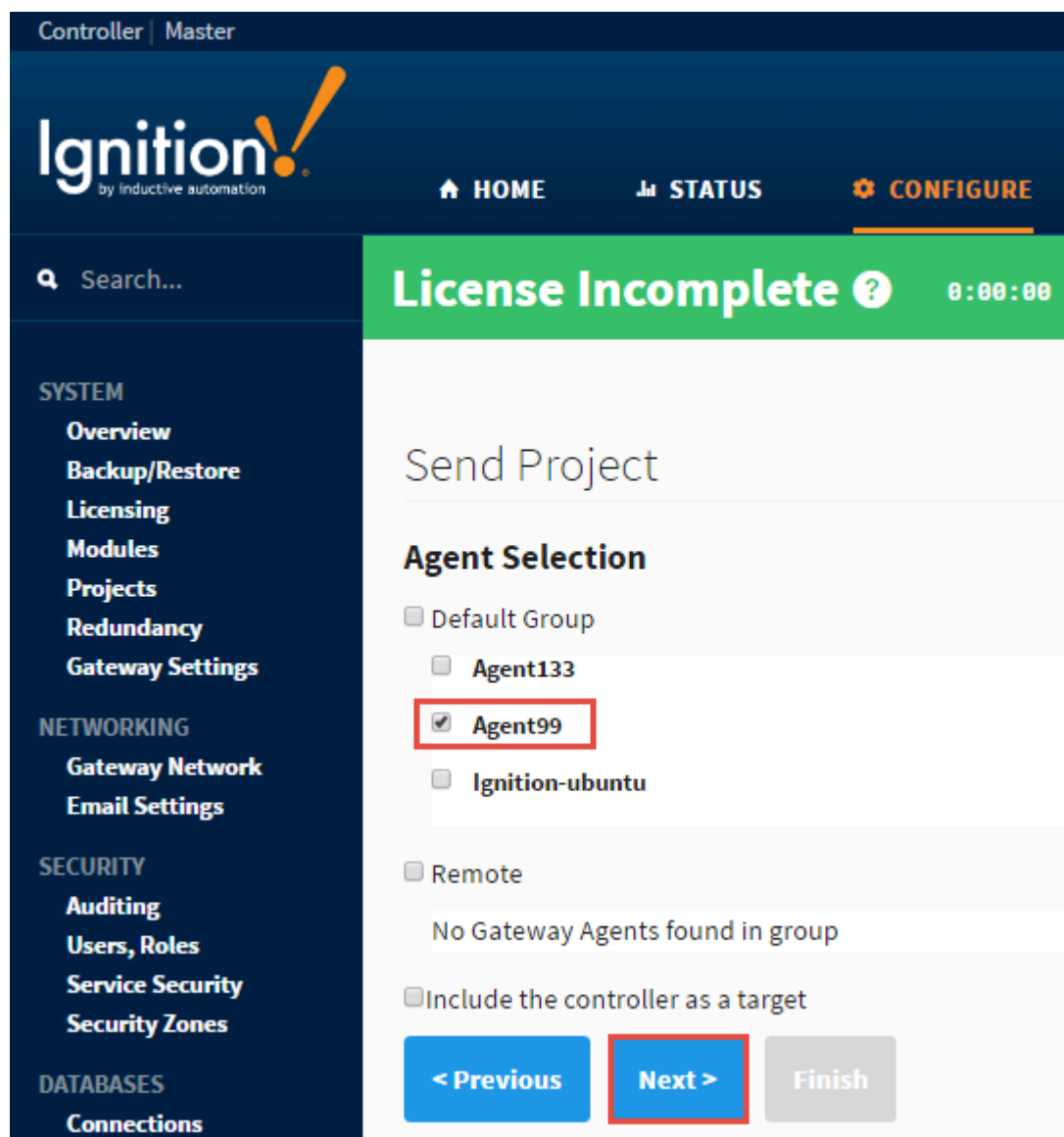
License Incomplete ? 0:00:00 Reset Trial View Modules

Add Gateway Task Step 1: Choose Type

- ☐ **Activate License**
Activate a license key on selected agent Gateways.
- ☐ **Collect Backup**
Collect a Gateway backup from an agent machine.
- ☐ **Install Modules**
Install one or more modules on selected agent Gateways.
- ☐ **Restart agent**
Restarts the Ignition service on the agent machine.
- ☐ **Restore Backup**
Restore a Gateway backup on selected agent Gateways.
- ☒ **Send Project**
Distributes a project to remote servers. Replaces the project on the remote server as if an export/import was performed.

3. Just like with any Gateway Task, the Send Project task needs to be scheduled. There are several scheduling options available, but for this example, schedule the task to **Execute Immediately** and press **Next**.

4. Select the **Agent** where you want to send your project, and press **Next**.



Controller | Master

Ignition! by Inductive automation

HOME STATUS CONFIGURE

Search...

SYSTEM

- Overview
- Backup/Restore
- Licensing
- Modules
- Projects
- Redundancy
- Gateway Settings

NETWORKING

- Gateway Network
- Email Settings

SECURITY

- Auditing
- Users, Roles
- Service Security
- Security Zones

DATABASES

- Connections

License Incomplete ? 0:00:00

Send Project

Agent Selection

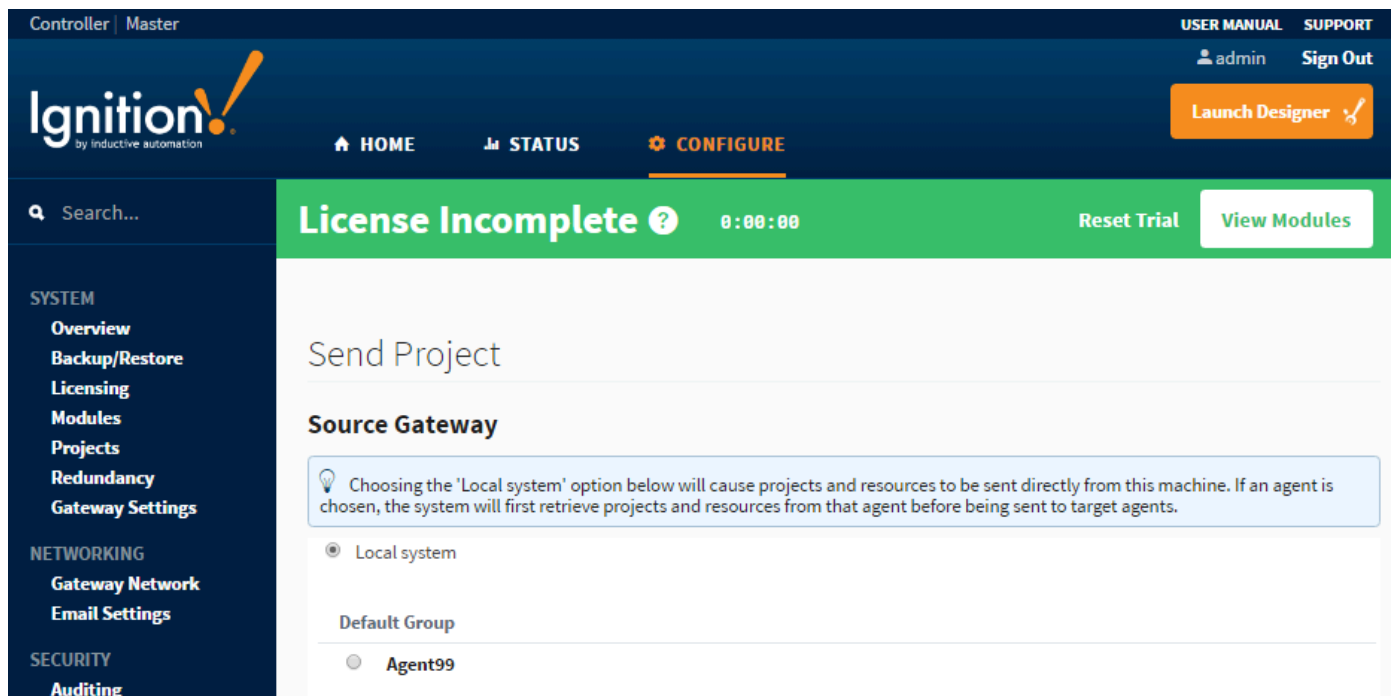
- ☐ Default Group
 - ☐ Agent133
 - ☒ Agent99
 - ☐ Ignition-ubuntu
- ☐ Remote

No Gateway Agents found in group

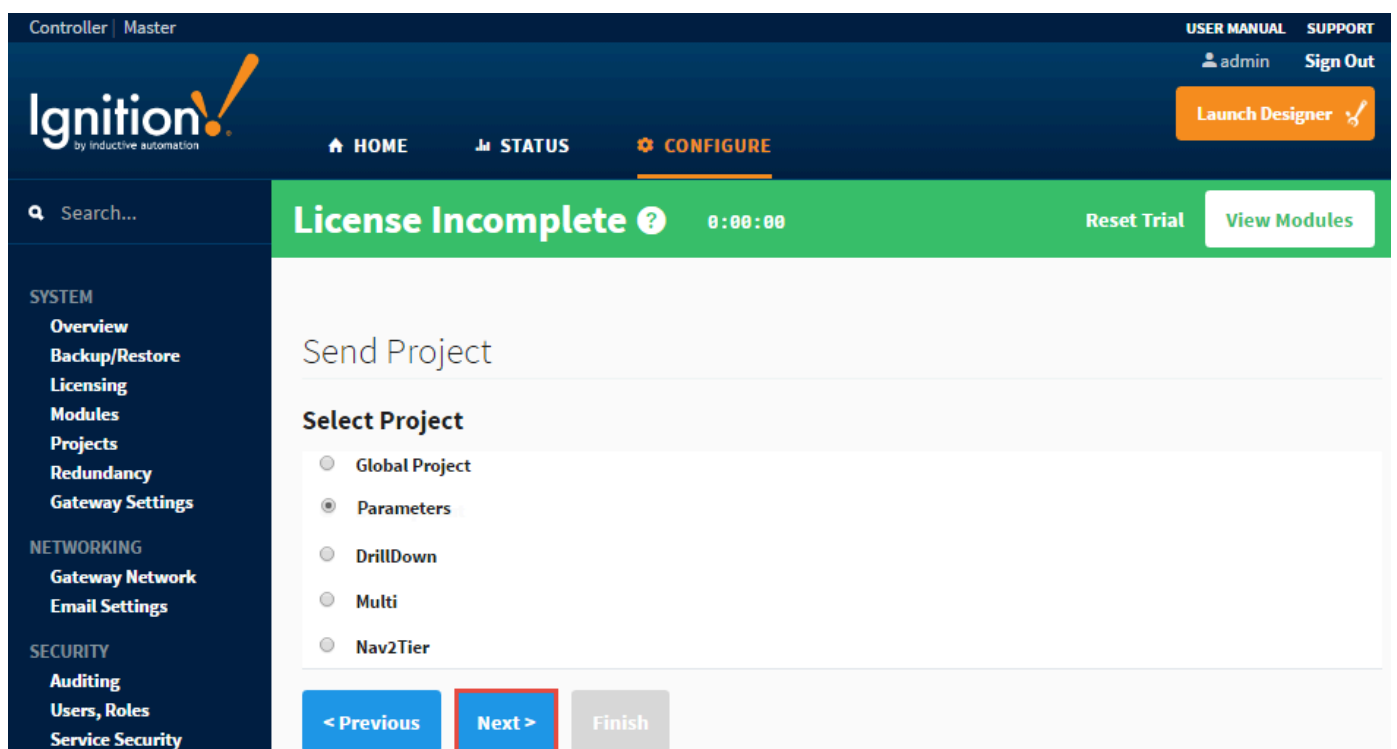
☐ Include the controller as a target

< Previous Next > Finish

5. The EAM wizard knows your controller and agent configuration. It's going to prompt you to choose the machine where your project is located. In this example, the project that you want to send is located on the Controller or Gateway Source so select **Local System**, and press **Next**.



6. The EAM wizard will display all your projects from your local system. Select the project you want to send to your Agent, and press **Next** (If you select your Agent on the previous screen, the EAM wizard will display all your projects running on your Agent that were sent over previously from the Controller).



7. The EAM wizard summarizes all the information for you to review. Press **Finish**, and your project will be sent from the **Controller** to the **Agent**.

Controller | Master

Ignition!
by inductive automation

HOME STATUS **CONFIGURE**

Search...

License Incomplete ? 0:00:00

SYSTEM

- Overview
- Backup/Restore
- Licensing
- Modules
- Projects
- Redundancy
- Gateway Settings

NETWORKING

- Gateway Network
- Email Settings

SECURITY

- Auditing
- Users, Roles
- Service Security

Send Project

Task Summary

Task Name	Send Project
Task Type	Send Project
Schedule	Execute Immediately
Target Groups/Agents	Agent99
Target the Controller	false
Source Gateway	Local system
Project to Send	Parameters

< Previous Next > **Finish**

8. The EAM wizard will execute the task, the screen will refresh, and a message will pop up stating that your Send Project task was successful.
9. To verify that your project was sent, go to your **Agent**, click on the **Configure** tab on the Gateway webpage, and **select Projects**. In this example, you can see that the Parameters project was created by the EAM controller. If you don't see your sent project, refresh the screen by clicking **Projects**.

Agent99

USER MANUAL SUPPORT

admin Sign Out

Launch Designer

Ignition!
by inductive automation

HOME STATUS **CONFIGURE**

Search...

Trial Version 0:48:21 We're glad you're test driving our software. Have fun. **Activate Ignition**

SYSTEM

- Overview
- Backup/Restore
- Licensing
- Modules
- Projects**
- Redundancy
- Gateway Settings

NETWORKING

- Gateway Network
- Email Settings

Projects

Name	Description	Authentication	Default Database	Default Tag Provider
Parameters		default	MySQL ⚠	default

More edit

→ Create new Project...

→ Upload project from a *.proj backup file...

MYSQL WARNING MESSAGE

Notice that for the "Parameters" project there is an warning icon next to the "MySQL" database. This is because the project was configured to use a default database connection named "MySQL" on the Controller, but the Agent that the project has been restored on does not have a database connection named "MySQL".

Send Project Resources Task

You can also send project resources, such as project templates, windows, transaction groups, pipelines and even script modules from the Controller to an Agent.

CAUTION

If a Send Project Resources Task is set up, and a project import is done on that project before the task executes, the Send Project Resources Task may not work properly, since new resource IDs are created for the imported project resources, even if the import keeps things the same.

Sending Global Resources

New in 7.9.6 Global Resources may now be sent with the Send Project Resources Task. Resources such as Shared Scripts and Alarm Pipelines may be sent to any Agent. When selecting a destination project, Global resources may only be sent to the "Global project" on the Agent.

Sending Project Resources Example

1. On the **Controller**, under the **Configure** section of the Gateway webpage, go to **Enterprise Administration > Agent Tasks**. Let's create another Gateway Task to send project resources from the Controller to the Agent. Click the '**Create new Gateway Task**' link. The EAM wizard will guide you through each step of the Send Project Resources task.

REFERENCE SCREENSHOTS IN THE SEND PROJECT SECTION

You can refer to some of the screenshots in the Send Project Task section as you work your way through the examples in this Send Project Resources Task.

2. Click on the **Send Project Resources** radio button, and press **Next**.

Controller | Master

USER MANUAL SUPPORT

admin Sign Out

Launch Designer

Ignition
by Inductive automation

HOME STATUS CONFIGURE

Search...

License Incomplete ? 0:00:00 Reset Trial View Modules

SYSTEM

- Overview
- Backup/Restore
- Licensing
- Modules
- Projects
- Redundancy
- Gateway Settings

NETWORKING

- Gateway Network
- Email Settings

SECURITY

- Auditing
- Users, Roles
- Service Security
- Security Zones

DATABASES

- Connections
- Drivers
- Store and Forward

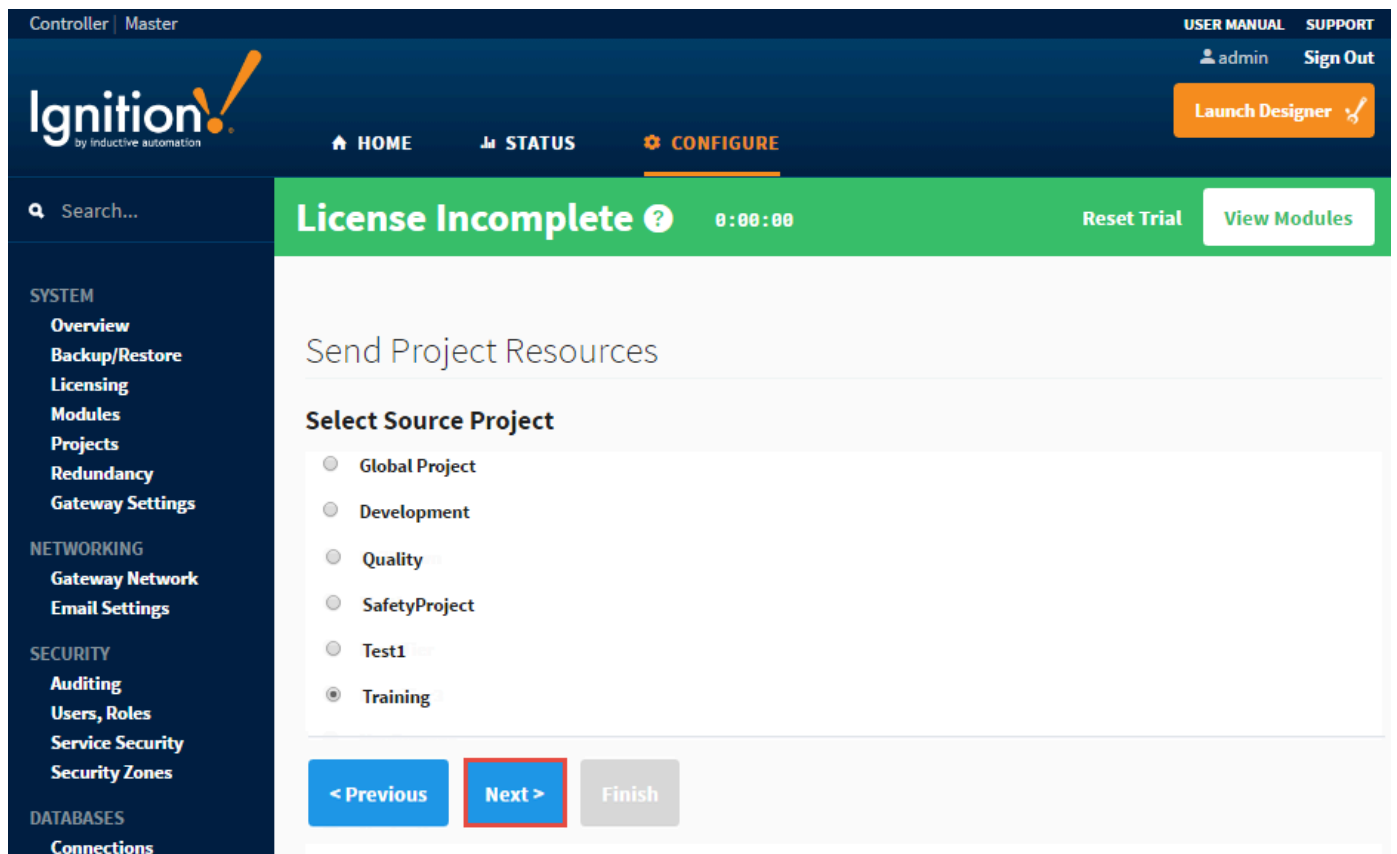
ALARMING

- General
- Journal
- Notification
- On-Call Rosters
- Schedules

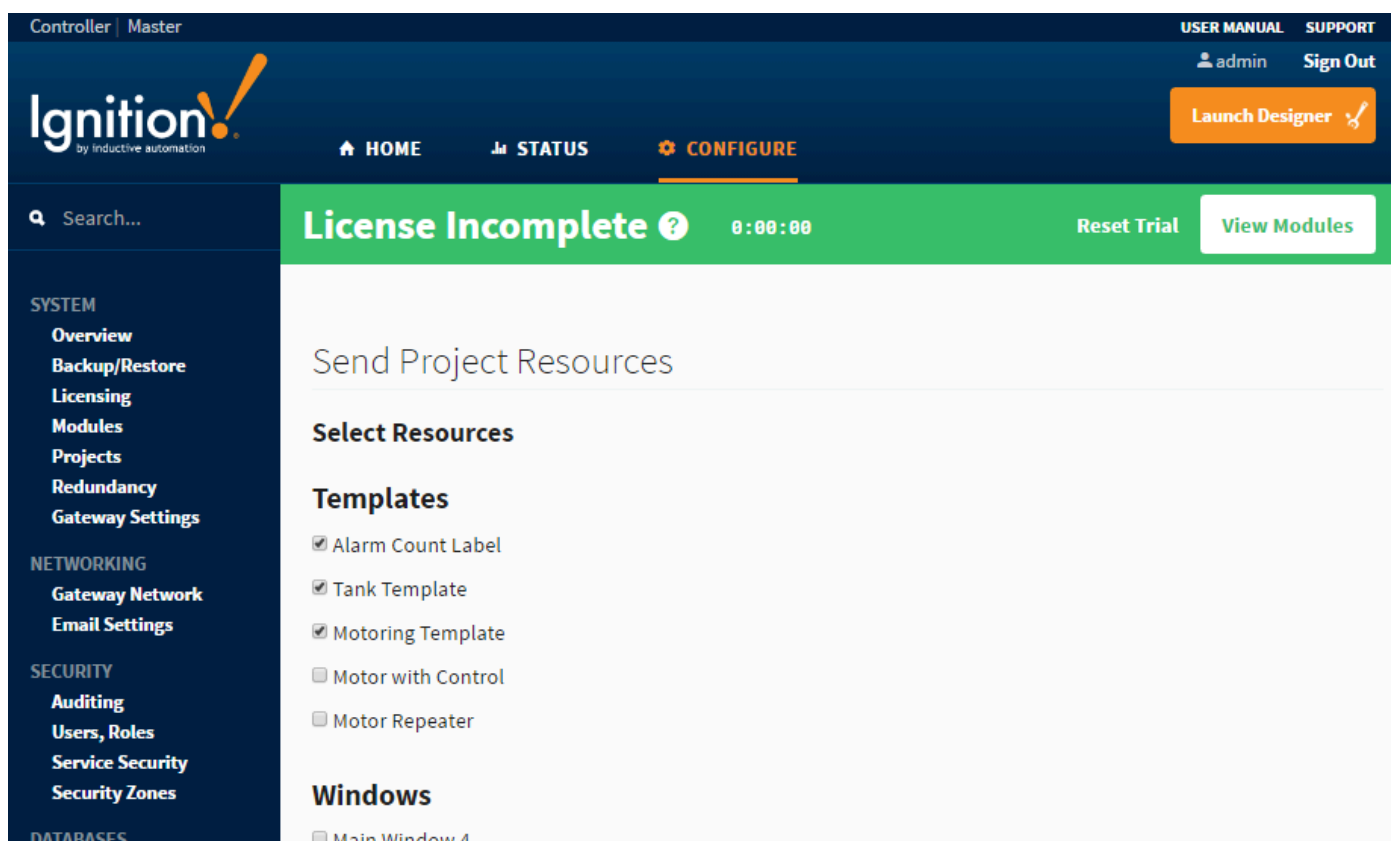
Add Gateway Task Step 1: Choose Type

- ☐ **Activate License**
Activate a license key on selected agent Gateways.
- ☐ **Collect Backup**
Collect a Gateway backup from an agent machine.
- ☐ **Install Modules**
Install one or more modules on selected agent Gateways.
- ☐ **Restart agent**
Restarts the Ignition service on the agent machine.
- ☐ **Restore Backup**
Restore a Gateway backup on selected agent Gateways.
- ☐ **Send Project**
Distributes a project to remote servers. Replaces the project on the remote server as if an export/import was performed.
- ☒ **Send Project Resources**
Distributes project resources, like windows and templates, to remote servers.

- Schedule the Send Project Resources task to **Execute Immediately**, and press **Next**.
- Select the **Agent** on the Agent Selection window, and press **Next**.
- Select the Source Gateway/**Local System** where your project resources reside, and press **Next**.
- This example sends selected resources from the Training project on the Controller to the Agent. Select **Training**, and press **Next**.



7. You can see all the resources inside of the Training Project. Of course, real projects will have many more useful project resources than are shown here. It can include templates, windows, transaction groups, pipelines and script modules. Choose whatever resources you want to send to the agent, and press **Next**.



8. You have the option of either merging the project resources into an existing project or creating a new project on the Agent. In this example, let's create a new project. Select **Other**, and enter a

new project name. Press **Next**.

The screenshot shows the Ignition Gateway web interface. The top navigation bar includes 'Controller | Master', 'USER MANUAL', 'SUPPORT', 'admin', 'Sign Out', and a 'Launch Designer' button. The main header has 'HOME', 'STATUS', and 'CONFIGURE' tabs. A green banner at the top indicates 'License Incomplete' with a timer at 0:00:00 and buttons for 'Reset Trial' and 'View Modules'. The left sidebar contains a search bar and a menu with categories: SYSTEM (Overview, Backup/Restore, Licensing, Modules, Projects, Redundancy, Gateway Settings), NETWORKING (Gateway Network, Email Settings), and SECURITY (Auditing, Users, Roles, Service Security). The main content area is titled 'Send Project Resources' and 'Select Target Project'. A light blue box contains a note: 'The selected resources will be sent to this project on the specified agents. If the project does not exist on the agent, the project will be automatically created.' Below this, the 'Other' radio button is selected, and 'NewProject' is entered in the text field. At the bottom, there are three buttons: '< Previous', 'Next >' (highlighted with a red box), and 'Finish'.

9. The EAM wizard summarizes all the information for you to review. Press **Finish**.

10. The Gateway Task for Send Project Resources will execute, the screen will refresh, and a message will appear stating that the task was successful.

11. To verify that the Training project resources were sent, go to your **Agent**, click on the **Configure** tab on the Gateway webpage, and select **Projects**. You can see in this example that 'NewProject' was created by the EAM controller. If you don't see your new project, refresh the screen by clicking **Projects**.

The screenshot shows the Ignition Gateway web interface for an Agent. The top navigation bar includes 'Agent99', 'USER MANUAL', 'SUPPORT', 'admin', 'Sign Out', and a 'Launch Designer' button. The main header has 'HOME', 'STATUS', and 'CONFIGURE' tabs. A green banner at the top indicates 'Trial Version' with a timer at 1:55:28 and a message 'We're glad you're test driving our software. Have fun.' and an 'Activate Ignition' button. The left sidebar contains a search bar and a menu with categories: SYSTEM (Overview, Backup/Restore, Licensing, Modules, Projects, Redundancy, Gateway Settings), NETWORKING (Gateway Network, Email Settings), and SECURITY. The 'Projects' menu item is highlighted with a red box. The main content area is titled 'Projects' and contains a table with the following data:

Name	Description	Authentication	Default Database	Default Tag Provider	
NewProject	Created by EAM controller	None	None	None	More edit
Parameters		default	MySQL ⚠	default	More edit

Below the table, there are two links: 'Create new Project...' and 'Upload project from a *.proj backup file...'.

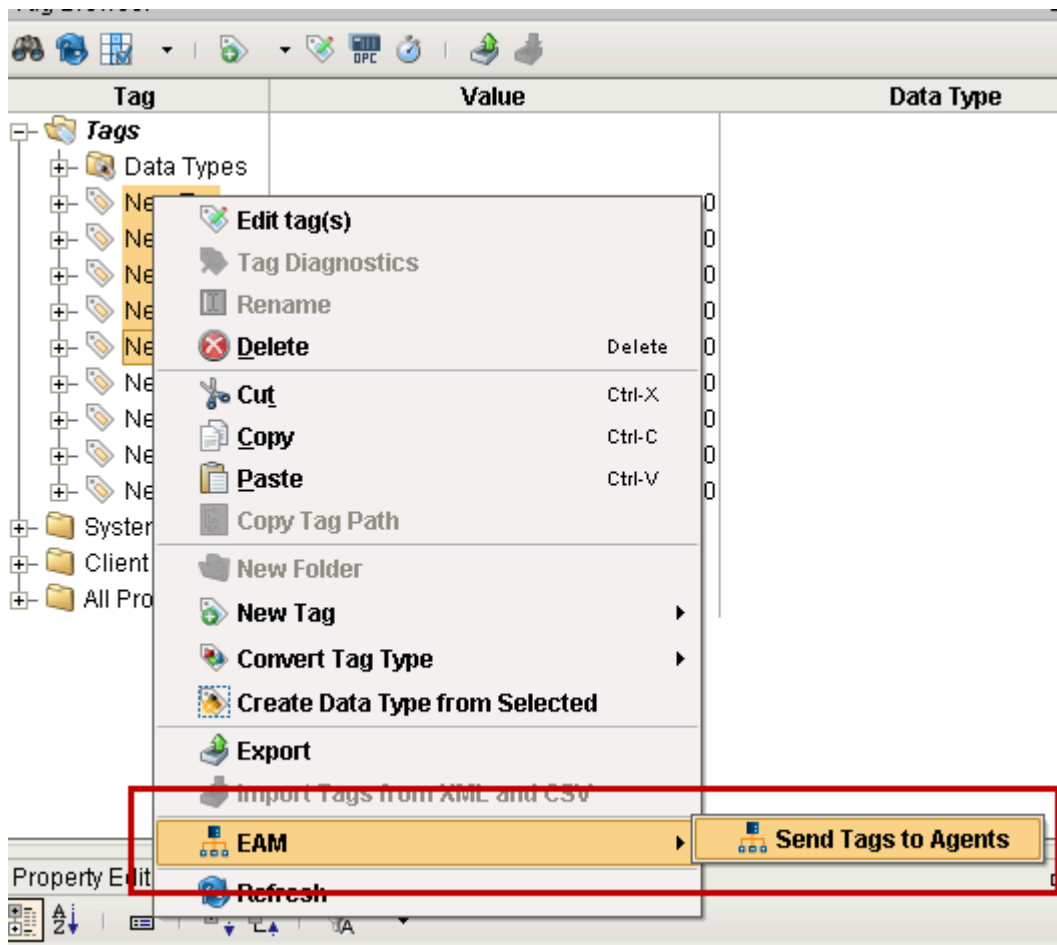
Once your project and project resources are sent to the Agent, you need to complete the installation of your project. You need to setup your authentication profile, database, and Tag providers. Once this

is completed, you are ready to use the project and project resources on your Agent.

Send Tags Task

New in 7.9.5 Sending Tags from a Controller Gateway to an Agent Gateway works a little differently than the other Agent Tasks, since the Send Tags Task is executed from the Designer. Within the Controllers Designer, you can select any number of Tags from the Tag Browser that you want to send to any number of Agents.

Right clicking on the Tags brings up the right click context menu, which now has a new **EAM > Send Tags to Agents** option.



Selecting the **Send Tags to Agents** option brings up a new window, allowing you to remove any accidentally selected Tags, as well as select which Agents will be receiving the Tags and the Tag Provider to insert them into. Clicking the **OK** button will begin the process of sending the Tags to the Agents. Once the Tags have all been sent, you will get a new popup, letting you know of the success.

While you can't initiate this task from the Gateway Webpage, you will be able to see it as a running task, as well as find it listed in your task history after running.

Send Tags to Agents

Selected Tags

New Tag

New Tag 1

New Tag 2

New Tag 3

New Tag 4

remove tags

Target Tag Provider

default

Remote Agents

Default Group

Ignition-WIN-VKBBHTNTPDV

all

none

OK

Cancel

This is documentation for **Ignition 7.9**, which is no longer actively maintained.

For documentation on the latest stable release, see the [latest version](#) (8.3).

Agent Task - Scheduling



INDUCTIVE
UNIVERSITY

Agent Task Scheduling

[Watch the video](#)

Agent Gateway Tasks

Agent Gateway tasks are enormously useful for applying an action to many agent Gateways at once. To create a new task, or to view running tasks, navigate to **Configure > Enterprise Administration > Agent Tasks**. The Gateway Tasks page will display scheduled tasks, currently executing tasks, unscheduled tasks that can be run on demand, and task history.

To create a new task, click the **Create new Gateway Task** link. The EAM wizard will guide you through each step of a Gateway task.

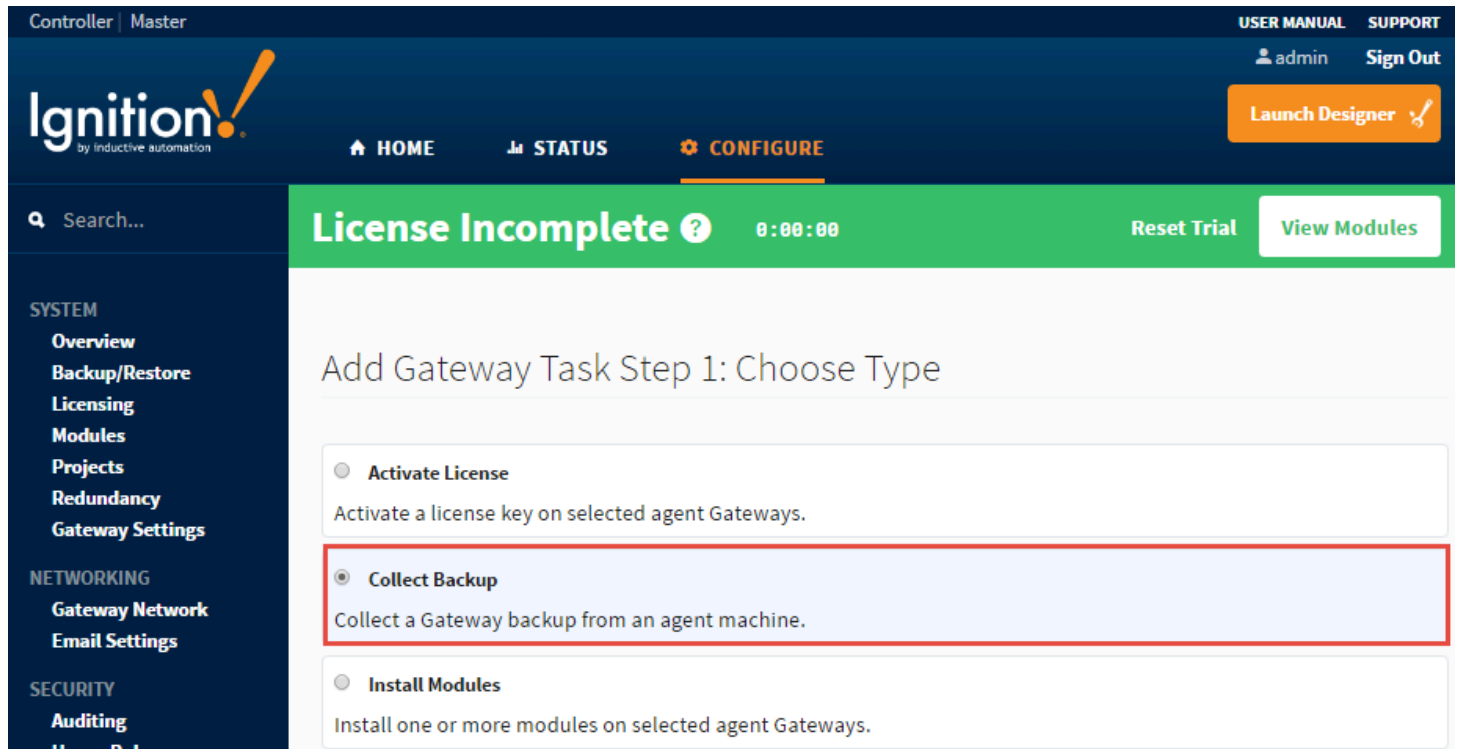
The screenshot shows the Ignition web interface. The top navigation bar includes 'Controller | Master', 'USER MANUAL', 'SUPPORT', 'admin', 'Sign Out', and a 'Launch Designer' button. The main navigation bar has 'HOME', 'STATUS', and 'CONFIGURE' (which is active). A green banner indicates 'License Incomplete' with a timer at 0:00:00 and buttons for 'Reset Trial' and 'View Modules'. The left sidebar lists 'SYSTEM' (Overview, Backup/Restore, Licensing, Modules, Projects, Redundancy, Gateway Settings) and 'NETWORKING' (Gateway Network, Email Settings). The main content area is titled 'Agent Tasks' and has three tabs: 'Available Tasks', 'Running and Scheduled Tasks' (selected), and 'Task History'. Below the tabs is a table with columns: Name, Repeats?, Next Scheduled, Current State, and Targets. The table currently shows 'No Gateway Tasks'. A red box highlights a link at the bottom: '→ Create new Gateway Task...'.

Name	Repeats?	Next Scheduled	Current State	Targets
No Gateway Tasks				

→ Create new Gateway Task...

Step 1: Choose Type

Select the type of task you wish to execute. After you selected a type of task, click the **Next** button.



Step 2: Task Scheduling

Set the task name to a descriptive name of your choice. The following scheduling options are available:

- **Execute Immediately:** the task will begin execution as soon as you complete the wizard.
- **Execute On Demand:** the task will not be scheduled, but is available for immediate execution at any time after you complete the wizard.
- **Execute Once, Scheduled:** the task will run once at the date and time that you specify.
- **Execute Once, Delayed:** the task will run once after the specified number of seconds, minutes, hours, or days.
- **Execute On Schedule:** this type of schedule uses UNIX cron type scheduling, where a pattern of 5 numbers determines the recurring schedule. For example, "30 3 * * *" means run a task every day at exactly 3:30 AM. Use the dropdowns next to the pattern textboxes to build out the pattern for the schedule.

After you determined your task schedule, click **Next**.

Controller | Master

USER MANUAL SUPPORT

admin Sign Out

Launch Designer

Ignition
by Inductive Automation

HOME STATUS CONFIGURE

Search...

License Incomplete ? 0:00:00 Reset Trial View Modules

SYSTEM

- Overview
- Backup/Restore
- Licensing
- Modules
- Projects
- Redundancy
- Gateway Settings

NETWORKING

- Gateway Network
- Email Settings

SECURITY

- Auditing
- Users, Roles
- Service Security
- Security Zones

DATABASES

- Connections
- Drivers
- Store and Forward

ALARMING

- General
- Journal
- Notification
- On-Call Rosters
- Schedules

TAGS

- History
- Realtime

OPC-UA SERVER

- Certificates
- Devices
- Settings

OPC CONNECTIONS

- Servers
- Quick Client

MOBILE

- Settings

ENTERPRISE ADMINISTRATION

- Event Thresholds
- Controller Settings
- Agent Management
- License Management
- Agent Tasks

Collect Backup

Task Scheduling

Task Name: Collect Backup

☐ Execute Immediately

☐ Execute On Demand

☐ Execute Once, Scheduled

10/28/16 9 : 00 AM

☐ Execute Once, Delayed

SECONDS

☒ Execute On Schedule

Common Settings Custom

Minutes 0 :00 (0)

Hours 2 2 a.m. (2)

Days * Every Day (*)

Months * Every Month (*)

Weekdays * Every Day (*)

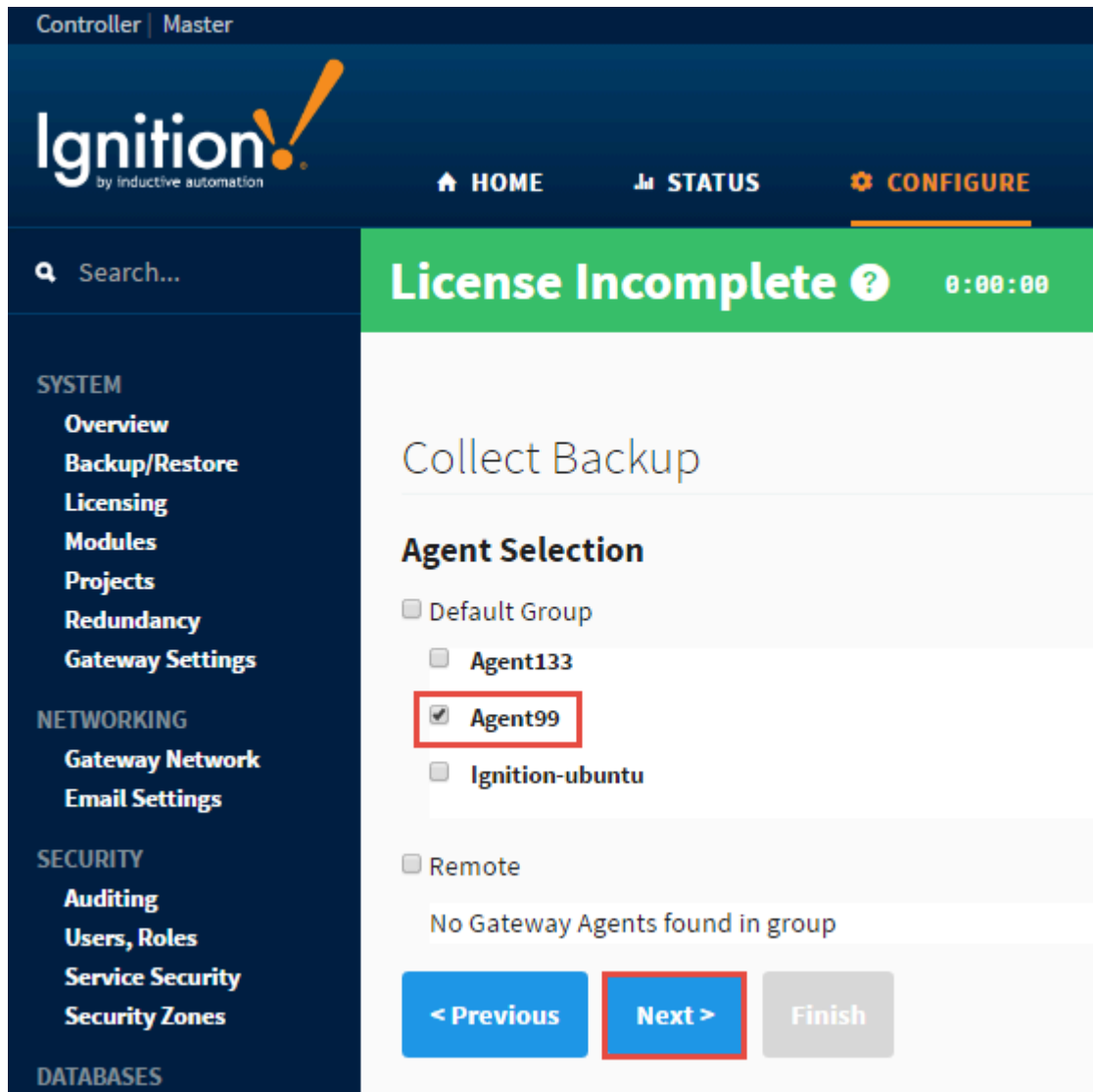
Expression Descriptor: At 2:00 AM (0 2 * * *)

< Previous Next > Finish

Step 3: Agent Selection

In this step, select the agent groups or individual agents that will be included when the task executes. You can select agents that are not currently connected, but you cannot select pending agents.

Depending on the type of task, you may need to complete another page to add some information required for that task. If not, you can click the **Finish** button to schedule the task.



Gateway Task Results

Gateway task execution is reported in the `agent_events` table in the controller's configured database. The individual result of the task execution for each agent is report as a separate entry. For example, the following query will return the results of all task executions:

```
select * from agent_events where event_category = 'task' order by event_time desc;
```

A task that completed normally for an agent will contain the text `NORMAL` in the `event_level` field. If an error occurred for an agent, the `event_level` field is set to `ERROR`, and the error message is recorded in the `message` field.

Running a Task Outside its Schedule

You can run any task outside the task's normal schedule by clicking the **More** button and “**run now**” link on the right side of the task. Keep in mind:

- Tasks that have been scheduled to run immediately are already running, and the “run now” link will not be visible.
- A task that has been scheduled to execute only once at a scheduled time or after a delay will be rescheduled to run immediately. The task will not run again after it has been rescheduled.
- A scheduled task will continue to run at its normally scheduled time, even if you run the task now.

Pausing and Canceling Tasks

Pause and Resume

After most tasks are created, they are put onto the task schedule. The exception to this is on demand tasks, which are not put on the schedule until you click the "run now" link. After a task has been added to the schedule, you can pause and resume the task. The state of the task (scheduled, running, waiting) and the scheduling configuration affect how the task is paused and resumed.

Task Configuration	Pause Action	Resume Action
Task is currently running or waiting	System will attempt to cancel outstanding calls to remote servers.	System will run the task again against any servers that were outstanding when the task was paused.
Task is scheduled once at a specific date and time	The task will be temporarily taken off the schedule.	If the specified time has not yet arrived, the task will be put back onto the schedule at the original time. If the specified time has already passed, the task will execute immediately upon resume.
Task is scheduled once after a specified delay	The task will be temporarily taken off the schedule.	The task will be put back onto the schedule at the original calculated time. For example, if the delay is set to 2 hours, and the task is paused for 1 hour, the task will fire in 1 hour after resume. If the delay period has already passed, it will fire immediately after resume.
Task is on a recurring schedule	All future iterations of the task will be temporarily taken off the schedule.	The task will not fire if task iterations have been missed when the task was paused. The task will return to firing on its normal schedule.

Controller | Master
USER MANUAL | SUPPORT
admin | Sign Out
Launch Designer

Ignition
by inductive automation
HOME STATUS CONFIGURE

Search...
License Incomplete ? 0:00:00 Reset Trial View Modules

SYSTEM
Overview
Backup/Restore
Licensing
Modules
Projects
Redundancy
Gateway Settings
NETWORKING
Gateway Network

Agent Tasks

Available Tasks Running and Scheduled Tasks Task History

Name	Type	State	Repeats?	Runtime	Progress	Message
Collect Backup	Collect Backup	Scheduled	true	10/29/16 2:00 AM	0.0%	pause

Cancel

Scheduled one-shot tasks can be cancelled at any time before the task starts. Scheduled one-shot tasks include tasks that are scheduled to fire once after a delay or fire at a specific time. Running tasks can also be cancelled, but there are no guarantees about how much of the task is processed at the time of cancel. Keep in mind that cancelling a task will cause also delete the task at the same time, and it cannot be retrieved after cancel.