

Ignition 7.9 User Manual — Reference Pages and Tutorials

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This is documentation for **Ignition 7.9**, which is no longer actively maintained.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

Reference Pages

This section is for various reference pages that may fall outside of a specific section in the User Manual.

Gateway Configuration File Reference

This section details the various configuration changes that can be made to the Gateway's configuration file: igniti...

Gateway Port Reference

The following table describes the default ports an Ignition server may use for communication.

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Gateway Configuration File Reference

This section details the various configuration changes that can be made to the Gateway's configuration file: `ignition.conf`. Before the Gateway starts, a wrapper service checks the configuration file for parameter values, and then attempts to start the Gateway using parameters. This means changes made to the configuration file will only occur on startup, and making changes to the configuration file while the Gateway is already running will not have any impact until a restart.

Configuration File Location

On **Windows** and **OSX** the Gateway's configuration file can be found at

`%IgnitionInstallationDirectory%/data/ignition.conf`.

On **Linux**, the file is located at `etc/ignition/ignition.conf`.

Once you have located the file, open it in your text editor of choice to start making changes.

Comments in the File

Many lines in the configuration file are commented out, either to provide some documentation in the file, or to omit certain parameters, such as some options under the Java Additional Parameters header. The `"#"` character is used to comment lines in the configuration file.

```
# this line is commented
this line is not commented
```

Gateway Memory Allocation



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Changing Gateway Memory Allocation

[Watch the video](#)

On a standard installation, the Gateway is initially allocated a fixed amount of heap (memory). Increasing this allows the Gateway to utilize more of the server's memory. To determine if this is necessary, navigate to the **Performance** page under the Status section of the Gateway webpage. Generally speaking, if the Memory Trend shows a saw tooth pattern that peaks towards the maximum amount of memory, that's expected behavior. However, if memory usage usually floats around maximum allocated, and slow response events occur more than occasionally, then it may be time to consider increasing the maximum allocated memory, assuming the server has available memory.

To increase the maximum amount of memory allocated to the Gateway, open the Gateway configuration file, and search for `wrapper.java.maxmemory`. It should look something like following:

```
# Maximum Java Heap Size (in MB)
wrapper.java.maxmemory=1024
```

The number at the end of the line represents the maximum amount of memory allocated to the Gateway (in megabytes). To change the amount of memory allocated to the Gateway, simply change this number, save the configuration file, and restart the Gateway. Once the Gateway starts up again, it will attempt to use the amount of memory specified.

The new heap size shouldn't exceed the amount of memory available, nor should you allocate all of the server's memory to the Gateway because the server likely has other applications (including the host operating system) that also need to make use of the system's resources.

Changing Java Additional Parameters

CAUTION

Adding or modifying parameters in the configuration file is considered an advanced configuration change. Most installations don't require any additional parameters, nor do they require modification to existing parameters. We generally discourage most users from making changes

to parameters in the configuration file, as doing so could result some unintended behavior or security vulnerabilities. We list the parameters on this page for the sake of transparency.

If you choose to add or modify parameters in the the configuration file, you do so at your own risk.

A section of the configuration file contains a header stating "Java Additional Parameters". This section allows for a large number of configuration changes, and merits having some discussion on how to add new parameters. On install, the Java Additional Parameters section may look like the following:

```
# Java Additional Parameters
wrapper.java.additional.1=-Ddata.dir=data
#wrapper.java.additional.2=-Xdebug
#wrapper.java.additional.3=-
Xrunjdwp:transport=dt_socket,server=y,suspend=n,address=:8000
```

When adding a new parameter, the `wrapper.java.additional.#` prefix must be added to a new line. Each parameter contains a **prefix** (`wrapper.java.additional.#`), a **key**, and a **value** that the key will be set to. Generally speaking, each parameter in the file should follow the pattern below:

```
wrapper.java.additional.1=-key=value
```

Uncommented parameters should be listed in ascending numerical order, based on the number at the end of the prefix, as shown below.

```
# Add parameters like this:
wrapper.java.additional.1=-Ddata.dir=data
#wrapper.java.additional.2=-Xdebug
#wrapper.java.additional.3=-
Xrunjdwp:transport=dt_socket,server=y,suspend=n,address=:8000
wrapper.java.additional.2=-some.thing=foo
wrapper.java.additional.3=-some.other.thing=bar

# Avoid skipping commented numbers:
wrapper.java.additional.1=-Ddata.dir=data
#wrapper.java.additional.2=-Xdebug
#wrapper.java.additional.3=-
Xrunjdwp:transport=dt_socket,server=y,suspend=n,address=:8000
wrapper.java.additional.4=-some.thing=foo
```

Suppressing Error Message Details

New in 7.9.17 By default, error messages in the Designer and Client report a stack trace, which provides granular information about the source of the error. However in some cases, these stack traces may include sensitive information from the Gateway. You can restrict the amount of information presented in these error messages with the following parameter:

Example

`wrapper.java.additional.#=-Dignition.xmlrpc.errorDetailSuppression=%Value%`

Where %Value% is one of the following values:

Value	Description
NONE	Errors are not suppressed at all. This is functionally the same as not specifying the parameter at all. (default behavior)
CLIENT	Error messages for client sessions will be suppressed, but not designer sessions.
ALL	Error messages for both clients and the designer will be suppressed.

EAM Collect Backup Transfer Timeout

New in 7.9.20 By default, the EAM Collect Backup task will timeout if the Agent takes longer than 60 minutes to transfer the backup to the Controller over the Gateway Network. This setting can be adjusted by adding the following parameter, which expects an integer value in milliseconds:

`wrapper.java.additional.1=-Dignition.eam.task.collectBackup.transferTimeout=3600000`

Thread Pool Counts

In some testing and troubleshooting scenarios, it may be required to increase threadpool counts from their default settings. By default, the threadpool count is set to 5.

 CAUTION

While there is no limit on how high threadpool counts can be increased, be aware that resource usage such as CPU and RAM will also increase.

```
wrapper.java.additional.1=gateway-tagprovider-default-sc=10
```

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Gateway Port Reference

Port Reference

An Ignition server uses many ports to manage information between itself and other Ignition servers, OPC servers, devices, and other services such as SMTP and ERP servers. The following table describes the default ports an Ignition server may use for communication. Most are configurable and some of these ports may be on a computer other than the one Ignition is installed on (that is, if MySQL is installed on a different computer, the Ignition server will not be using port 3306). This is not a complete list of TCP ports, and there are a few UDP and broadcast ports in the list. Ignition will potentially use other ports if you are connecting to additional services or devices. Setting ports may be possible for some of the following, but will depend on their respective software.

Ignition Ports

Port	Operation	Protocol	Configurable	Description
8088	Listening	tcp	Yes	Default port setting to access the Ignition Gateway . Also the non SSL port for the Gateway Network.
8043	Listening	tcp	Yes	Default SSL port setting to access the Ignition Gateway
8060	Listening	tcp	Yes	Default SSL port setting for the Gateway Network (metroSSLPort in the Gateway XML file)
4096	Listening	tcp	Yes	Default port for Ignition OPC-UA server
4446	Listening	udp/broadcast	Yes	Default receive port for multicast messages that makes the Gateway discoverable on a local network.
5500	Listening	tcp	Yes	Default port for OPC browse of external Tags.
6501	Listening	tcp	No	Server fallback port
8750	Listening	tcp	No	Port used for Redundancy/Network Configuration
17342	Listening	tcp	No	Receive Port for SMS with Alarming

Port	Operation	Protocol	Configurable	Description
45900	Listening	tcp	No	Callback port for the mobile module
44818	Listening	tcp	No	Allen Bradley Drivers (Ethernet/IP Symbolic/General)
4445	Outgoing	udp/broadcast	Yes	Default send port for multicast messages that makes the Gateway discoverable on a local network.
17341	Outgoing	tcp	No	Send port for SMS with Alarming
1883	variable	tcp	No	MQTT Unencrypted. Outgoing port if using an external MQTT broker, Listen port on Ignition if using the Distributor module
8883	variable	tcp	No	MQTT SSL/TLS. Outgoing port if using an external MQTT broker, Listen port on Ignition if using the Distributor module

Other Common Software/Hardware Ports

Port	Operation	Protocol	Configurable	Description
102	Listening	tcp	No	Siemens Step7
2222	Listening	tcp	No	Allen Bradley Drivers (Ethernet/IP I/O DMA)
5060	Listening	tcp/SIP	No	Send Voice Notification to SIP server
5500	Listening	tcp	Yes	Default port for OPC browse of external Tags
6501	Listening	tcp	No	Server fallback port
8000	Listening	tcp/RTP	No	Transfer/com for SIP server
9600	Listening	tcp	No	Omron FINS
135	Outgoing	tcp	No	Default port for DCOM communication (old OPCDA servers)
389	Outgoing	tcp	Yes	Default port for Active directory if this is being used
465	Outgoing	tcp	No	SMTP protocol used if Alarming is configured
502	Outgoing	tcp	Yes	Default Modbus port
1433	Outgoing	tcp	Yes	Default MSSQL port used for connection
1521	Outgoing	tcp	Yes	Default Oracle port used for connection

Port	Operation	Protocol	Configurable	Description
3050	Outgoing	tcp	Yes	Default Firebirdsqli port used for connection
3306	Outgoing	tcp	Yes	Default MySQL port used for connection
5432	Outgoing	tcp	Yes	Default Postgresqli port used for connection
50000	Outgoing	tcp	Yes	Default IBM DB2 port used for connection
49320	Outgoing	tcp	Yes	Default Kepware port used for connection

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New in this Version

About Version Features

This section is devoted to new features introduced to Ignition. Any pages in this user manual that contain features that were added will be highlighted like this:

New in 7.9.X

Upgrading Ignition

See the [Installing and Upgrading](#) page

New in 7.9.18

Transaction Groups

- Enabling the [Set DB Values to Default](#) setting will clear the latched value, setting it to a default value.

EAM

- 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.

New in 7.9.17

Gateway Redundancy Setting

Backported the Master Node "Config Update Queue Size" [Redundancy setting](#) which is the maximum size of config updates allowed before a full transfer is performed.

Gateway Configuration File Reference

Added an option to control how much information is given to clients/designers in **error messages**.

Designer Find/Replace

The Designer **Find and Replace** now includes Tag property values as well as substrings in Tag Event Scripts.

New in 7.9.16

The Ignition 7.9.16 version contains only bug fixes and no new features.

New in 7.9.15

Scale Out Architecture

As of 7.9.15, launching clients behind a **load balancer** works, but the projects on each gateway MUST have identical UUIDs, meaning that all visualization gateways must be restored from the same Gateway backup, as project imports won't work.

SECS/GEM Messages

As of 7.9.15, custom response handlers will execute when receiving messages over the **SECS-1 (serial) protocol**.

New in 7.9.14

OPC-UA

Added "Advanced Configuration" page when configuring new UA client connections and automatic host override.

Logix Driver

The port on Logix driver device connections can now be configured.

Active Directory

The Cache Validation Timeout property can all now be disabled if set to a number less than zero on all user sources.

Gateway Configuration File Reference

New in 7.9.13

Cloud Templates have been migrated to the new [Ignition Exchange](#).

Audit Profiles

Ignition Gateways can now create an Internal [Audit Profile](#) allowing an Ignition Gateway to store audit records without an external SQL database.

Connecting to a SLC Device

Added a Browse Cache Enabled setting to [SLC device connections](#), which determines if browse results for the device should be cached.

File Menu

Ignition Exchange added as function in the [File Menu](#) of the Designer.

Gateway Security

Added the capability to set [custom SSL Key Store](#) alias and passwords.

Gateway Settings

Added Audit Profile option to [Gateway settings](#).

Tag Export Localization

When [exporting tags](#), we now include the designer's system locale and format numbers in the output according to that locale.

Web Browser Component

The **Web Browser** now has an Initialize extension function that triggers when the component is initialized.

Enterprise Administration

EAM Agent Restore Backup now includes an option to "Install Modules," providing an opportunity to apply modules while restoring from an Agent Backup.

Alarm Journal

- Ignition Gateways can now create an Internal **Alarm Journal Profile**, which stores journal entries in the Gateway's internal database, instead of an external SQL database.
- Added a local **Audit Profile** option to standard edition Gateways.

New in 7.9.12

Alarm Status Table

Added the Duration Format property to the **Alarm Status Table**. Format for the time units on the Active Duration column: Long, Short, Compact, and Abbreviated.

Voice Notification Module

Added a **non-interactive alarm feature** to stop any call scripts from being read by removing all text from that field.

OPC UA Endpoint

Two new server properties were added to the **OPC UA connection settings**.

Added Connect Timeout when opening a socket connection to a remote host, and Acknowledge Timeout to wait for an acknowledge message in response to the client's Hello message.

Audit Log

Updated the **Audit Log information** to include changes made directly to the Tags in the Tag Browser, as well as with scripting functions.

SECS/GEM Module

SECS/GEM Module added support for Oracle database.

Scripting Function `system.eam.runTask`

New scripting function `system.eam.runTask` is available. It takes the name of a task as an argument as a string (must be configured on the Controller before hand), attempts to execute the task. To run in the client, the user needs a **role-based permission**. This permission is disabled by default.

New in 7.9.11

Gateway Backups

Gateway Backup default filename format updated: **GatewayName_Ignition-backup-YYYYMMDD-HHMM.gwbk**

Added the option to change a Gateway Name when **restoring a GWBK file**.

Launching Clients

Applet launch option has been removed from Gateway home page, Client Launcher, and direct launch links. Applet client is still available if the exact url is used.

Launching Designer

Updated skeleton projects area available when creating a new project.

Expression Language

Added an Expression function to test Tag quality: **isGood()**.

Numeric Aggregate expressions now return null, instead of 0 when there are no valid inputs.

New in 7.9.10

Native Client Launcher

The **Native Client Launcher** now has Java 9 embedded in it, so java no longer needs to be installed to run the NCL.

Named Queries

Named Queries now return the fallback value when no value gets returned, lining up with SQL calls elsewhere in Ignition.

New in 7.9.9

Edge

The 500 tag limit in Edge **has been removed**. Edge can now support an unlimited number of tags, just like Ignition.

Mobile Module

Added the **Session Invalidation Retry Count property**, which allows mobile clients to attempt to reconnect if the session is invalidated.

MySQL

The installer contains a **JDBC driver that is compatible with MySQL 8.0+**. New installations of Ignition will utilize the new driver, while older installations that are upgraded to 7.9.9+ will use the older driver to preserve connections to legacy MySQL installations.

Named Queries

Named Query parameters **now support byte arrays**.

Scripting

The **system.util.getSessionInfo** function now supports the use of keyword arguments.

Vision

The Document Viewer component has been deprecated. Similar functionality can be achieved with other Input components by utilizing **HTML formatting**. Instances of the Document Viewer that were created before this version will still exist after upgrading, but new instances can not be created from the Component Palette.

New in 7.9.8

Alarming

A new **Label property** has been added to alarm configurations, allowing a dynamic name to be associated with each alarm.

Designer

When resolving conflicts during a **Project Restore**, you can now choose to Overwrite All or Skip All resources in the project file.

Expressions

Colors entered as strings with the **toColor** function can now use American or British English spelling throughout (eg, 'grey' or 'gray')

Reporting

When scheduling a report, the **Email Action** can now specified a "reply to" email address. Additionally, the **system.report.executeAndDistribute** function can also specify a "reply to" when emailing a report.

Scripting

A new optional parameter has been added to both the **system.dataset.dataSetToExcel** and **system.dataset.exportExcel** functions. This parameter allows NULL values to be represented as empty cells, instead of defaulting to a 0.

Both **system.tag.editTag** and **system.tag.editTags** can now be used to edit members of a nested UDT instance.

Introduced the **system.math** library, providing quick access many common aggregates.

Security

The Gateway can now be configured to adhere to a **HTTP Strict Transport Security (HSTS)** policy.

SFC

The return parameters provided by the **Enclosing Step** can now be assigned to scope parameters.

Web Browser Component

The **Web Browser Component** has been updated to utilize version 6.18 of the JXBrowser.

New in 7.9.7

Scripting

Added the **system.dataset.formatDates()**, **system.dataset.appendDataset()**, **system.dataset.clearDataset()**, and **system.dataset.addRows()** functions to allow for greater control over datasets.

Added the **system.user.isUserScheduled()** and **system.user.getScheduledUsers()** functions to allow for greater control over datasets.

Reporting

The **configureChart** function that is present on all Report Charts can now access Report Parameters and Datasets.

Tags

Added new **Client System Tags** that provide Date Formats that change with Locale.

Added a new **Gateway System Tags** for system uptime (in seconds).

Logs

Added **MDC Key Filters** that allow you to filter the Logs in the Gateway by an MDC Key.

Security

Added the ability to shelve remote alarms. This has also added a new setting for **Service Security** under the Alarming section.

Transaction Groups

Added **two new properties** of Transaction Groups that will substitute in a default value for a group item, instead of using a value of NULL.

Components

The **Alarm Status Table** now has a getAlarms() function that will grab the alarms currently listed in the table.

SECS/GEM

Can now send a custom response when receiving certain messages from the equipment using the Message Handler system.

New in 7.9.6

Java 9

Ignition now supports Java 9 for the Gateway, Clients, and Designers.

Named Queries

Named Queries may now be called from **Client Tags**.

SQL Query bindings with an enabled Update Query that are converted to a Named Query will now create **two separate Named Queries**: a Select Query, and an Update Query.

EAM

Global Resources, as well as the whole Global Project, may now be selected as the source for the **Send Project and Send Project Resources** tasks.

OPC-UA

The **maximum number of references per node** on an OPC-UA server can now be configured.

Scripting

Added the **system.db.clearNamedQueryCache** and **system.db.clearAllNamedQueryCaches** functions to allow for more control over the cached generated by Named Queries.

Tags

Array OPC Tags can now write back to the device.

New in 7.9.5

Scripting

Added a scripting function **system.file.openFiles()** to allow for the opening of multiple files.

The scripting function **system.net.sendEmail()** now has a new `replyTo` property, allowing you to set a reply to field for your email.

Added the scripting functions **system.user.addRole()**, **system.user.editRole()**, and **system.user.removeRole()** to allow roles to be customized in scripting.

Expressions

Added **isAlarmActiveFiltered** expression function, which as a more filtered version of **isAlarmActive**, allowing you to more precisely control what triggers the expression.

Reports

The **Report Table component** can now have cells be multi selected using shift or alt. It also has new/modified table group properties `Start on New Page` and `New Page per Row`.

Added a Report Loading property into the **Report Viewer** component.

Reports can now be exported using the **XLS format** using the scheduled actions.

Datasets

PyDataSets can now be accessed using the Dataset functions.

User and Schedule Management

The **User Management component** and the **Schedule Management component** now have properties that allow you to customize their color schemes.

EAM

Added a new **Send Tags** task, which allows tags to be sent to other Gateways through EAM.

Text Area

The **Text Area component** now has a Tab Size property that allows you to set the size of tab characters.

SFCs

Sequential Function Charts now support redundancy and persistence.

New in 7.9.4

Named Queries

Introduced **Named Queries**, a new resource that allows a project to request the execution of preconfigured queries. This includes the addition of a new type of binding, the **Named Query Binding**, a new type of report datasource, the **Named Query Datasource**, as well as a new scripting function, **system.db.runNamedQuery()**.

Client Permissions

Added Project Properties to **limit client access to certain tasks**. When restricted, access may be granted by Role and/or Security Zone.

Dynamic Rosters

Notification Blocks in Alarm Pipelines can now dynamically generate a Roster with the new **Calculated roster type**.

Linear Regression

Added a new **Calculated Pen** option for the Easy Chart.

Gateway Message Handler Security

Gateway Message Handlers now allow security to be set on them in the form of security zone and role name combinations.

User Management Extension Functions

The **User Management component** got a few new extension functions: onDeleteRole, onCreateRole, and onCreateUser.

Schedule Management Extension Functions

The **Schedule Management** component got a few new extension functions: onCreateSchedule, onDeleteSchedule, onCreateHoliday, onDeleteHoliday.

New in 7.9.3

Scripting

Added **system.util.sendRequest()** and **system.util.sendRequestAsync()**, both of which send a message using the message handlers and wait for a return.

Easy Chart

The **X-Trace Track Mouse** property has been added to the Easy Chart. This allows the X-Trace to automatically follow the mouse cursor.

New In 7.9.2

Ignition Edge

Introduced a new software called **Ignition Edge**. Based on the Ignition platform, Edge is scaled down to help reduce cost and is perfect for placing at the edge of the network where data collection and processing may be difficult.

OPC Optimistic Writes

Added an **OPC Optimistic Writes** setting to scan classes that will apply written values to OPC Tags immediately instead of waiting for confirmation from the plc.

Derived Tags

Added a new Tag Type called the **Derived Tag**, allowing you to refer to other Tags and use an expression on them to manipulate them into a new value.

Scripting

Added **`system.gui.getCurrentDesktop()`** to return the current Desktop Handle.

Remote Agent Upgrade

EAM Agent system upgrades may now be performed from the Controller by using the **Remote Upgrade** feature.

Email Notification

A **Simple One-way Email Notification** type has been added.

New In 7.9.1

Tags

Added a **"Trust Remote Roles"** option for other Gateways in the network. This allows remote users to satisfy Tag permissions as long as the remote rolename matches the source rolename.

Components

Added onDeleteUser Extension Function to the **User Management** component.

Alarming

Acknowledge messages are now customizable for **SMS notification pipeline blocks**.

Added an option to **acknowledge alarms via email using POP3**.

Scripting

Added **system.date.parse()** to convert a string into a date.

Reporting

Added the ability to **bind number and date formats** in Text Shape components.

New In 7.9

Gateway Webpage

Complete overhaul to look and feel of the **Gateway Webpage**. There are many updates to aid troubleshooting and self-diagnosis of your system. New logger system that gives better searching and filtering options. Automatically filtered loggers on each device/connection/etc. page, and the ability drill into any item.

Distributed Services

View and interact with Tags from any Gateway in your network. This allows for many more architectures including true scale-out systems.

- **Remote Tag Provider**: Read and write to Tags on a remote system from any Gateway in your network.
- **Remote History Provider**: View Historical Tag data from anywhere. Access data from any Ignition without dealing with additional database connections.
- **Remote Alarm Provider**: Manage your alarm notification systems in one place. Allows any alarm throughout the Gateway Network to access these Notification Profiles and Pipelines.

Global Templates

Create [templates](#) in the Global space to give all projects on your Gateway access to those templates.

Multi-Monitor Support

The Vision modules now lets you [open multiple client frames](#) sharing the same client resources (user credentials, Client Tags). Interact with windows in each client frame from any other frame.

Security Zones

[Restrict access](#) to various services (remote Tags, Alarms, Pipelines, etc.) based on the Gateway trying to access it.

User Password Policies

[Set password policies](#) for your users. Enforce password length and complexity, force password updates, and restrict re-use.

Multiple Licences

[Activate multiple licences](#) on one Ignition Gateway. Add 3rd party modules simply, or combine licenses with ease.

ARM Support

[Install Ignition](#) on ARM processors.

OPC Array Read/Write

Write support has been added to [array Tags](#).

Modbus Write Optimizations

Limit the size of [Modbus](#) OPC-UA writes.

Enable/Disable UA Connections

Enable or disable UPC-UA connections through scripting calls.

Power Table changes

Power Table component now has View Dataset property and Copy Selection.

OPC-COM Tunneller Module

The OPC-COM Tunneller Module is not part of the normal release cycle. It can still be downloaded from the 7.8.5 downloads page, and that version will work just fine with Ignition 7.9.

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Tutorials and Helpful Tricks

Mapping a Network Drive

Windows makes it possible to map drives on network servers to local drive letters so they can be accessed by us...

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Mapping a Network Drive

Windows makes it possible to map drives on network servers to local drive letters so they can be accessed by users as if they were a local drive. The problem, however, is that Windows is not very consistent about how it handles such mapped drives when accessed from a Windows Service, such as the Ignition Gateway. When the service is started manually, the drives will be available, but when the system is rebooted, the service will no longer be able to access them. There may be users that wish to read or write data in Ignition using shared drives, and don't want to manually set up shared drives each time.

! INFO

Must be using Ignition at least 7.5 and Java Service Wrapper 3.5.4

To make shared drives available to Ignition on startup, place the following lines in the `ignition.conf` file, which is located in the data folder of the main Ignition installation folder (usually `C:\Program Files\Inductive Automation\Ignition\data` for Windows users):

```
//Note that target "Z:" is the drive letter assigned to the mapped drive.  
  
wrapper.share.1.location=\\fileserver\folder  
wrapper.share.1.target=Z:  
wrapper.share.1.type=DISK
```

Then Stop the Gateway and Start the Gateway. Restarting does not enable this functionality.

Change the appropriate data for location and target to match the computer's actual setup. If your shared drives require authentication, add the following lines, filling in the appropriate data for user, domain, and password:

```
wrapper.ntservice.account=user  
wrapper.ntservice.password=password  
wrapper.share.1.account=domain\user  
wrapper.share.1.password=password
```

To turn on debugging to see what is causing network share connection issues, make sure to enable `wrapper.debug = TRUE` by removing the pound (#) sign in front of that line of code. The location of the log file is in the main Ignition installation folder as `wrapper.log`.

NOTE

Remember, the Gateway must be stopped then started to get the changes to the `ignition.conf` file to take effect. Restarting the Gateway will not work.

Other Notes:

Un-map drive on shutdown

```
wrapper.share.1.shutdown.unmap=TRUE
```

How often to retry server connection:

```
wrapper.share.1.startup.max_retries=2
```

What interval (seconds) between retries:

```
wrapper.share.1.startup.retry_interval=10
```

Set wrapper to fail to startup if network share not found:

```
wrapper.share.1.startup.failure=SHUTDOWN
```

Troubleshooting:

Here are a couple of the common problems that are encountered when mapping network shares:

Server not found

The debug output will show something like this if a drive can't be reached:

```
wrapper | Attempting to map the "\\filesERVER\folder" share to "S:"...  
wrapper | Unable to map "S:". Attempt #1 (The network name cannot be found.  
(0x43))  
wrapper | Attempting to map the "\\filesERVER\folder" share to "S:"...  
wrapper | Unable to map "S:". Trying to continue. (The network name cannot be  
found. (0x43))
```

Incorrect Login Data

If the configured account or password are incorrect (or are missing) then the mapping will fail with a message like the following:

```
wrapper | Attempting to map the "\\myfilesERVER\commonshare" share to "S:"...  
wrapper | Unable to map "S:". Trying to continue. (Access is denied. (0x5))
```