

CLOUD REPORTING



In this Chapter...

Cloud Reporting	4-2
Why Cloud Reporting?	4-2
How Does Cloud Reporting Work?	4-2
Configure Cloud Reporting On Your Device	4-2
Activate Cloud Reporting in the Admin App	4-3
Set Up a Data Source.....	4-3
Log your Data.....	4-4
Visualize or Export your Data.....	4-4
Test Utility.....	4-5
Managing your Cloud Reporting License	4-6
Activate Cloud Reporting	4-6
Extend Cloud Reporting.....	4-6
Transfer a Cloud Reporting license to another device.....	4-7

Cloud Reporting



NOTE: Model SE-SL3001 does not support data logging.

Why Cloud Reporting?

Cloud Reporting gathers remote data from your control components. The data is transmitted in the StrideLinx Cloud for administrative, monitoring and analytical purposes. Our goal is to give you an insight in the performance of your machine and/or installation.

How Does Cloud Reporting Work?

Cloud Reporting (previously called Cloud Logging) enables you to log data from your machine and view it in the StrideLinx Cloud. The data can be visualized in various components, like a graph, that can be viewed in the Portal. It can also be exported as CSV or periodically e-mailed to you in the form of a PDF report.

Cloud Reporting is a completely cloud-based solution. All the values you have programmed in the PLC can be logged by the StrideLinx logger, easily and securely. Cloud Reporting does not use your PLC for processing or data storage; the router retrieves the data and stores it on the StrideLinx Cloud.

If there is no internet connection available for the StrideLinx router, your data is not lost. The StrideLinx router will then continue logging data and can store it locally for months at a time, depending on how much data you log. This data is locally not accessible. Once the internet connection has been restored, the logged data will be sent to the cloud (requires StrideLinx router firmware 3.12 or higher).

The StrideLinx Cloud has a crucial role in the functioning of Cloud Reporting. All settings and data points to be logged are set via the StrideLinx Fleet Manager. The StrideLinx Studio allows you to create multiple custom views of your processes, including real-time data and historical trending. Once everything is set up, the StrideLinx Portal is your central location for monitoring your equipment, connecting to it, and exporting data.

The support pages at the Online Help link to the right will answer questions about Cloud Reporting, and guide you through setting up the service.

[Online Help](#)

Configure Cloud Reporting On Your Device

To use Cloud Reporting, you'll need:

- a StrideLinx account with a router configured and online
- a Cloud Reporting activation code, purchasable at AutomationDirect.com

The rest of this chapter gives an overview of setting up and using Cloud Reporting. Details are available in the Online Help pages, and linked throughout the chapter.

Activate Cloud Reporting in the Admin App

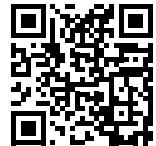
Online Help

You can purchase a Cloud Reporting license from automationdirect.com and activate it in the Admin App.

1. Go to the **Admin** app, which is accessible via the **Apps menu** in the top right corner when logged into your StrideLinx account.
2. Open the **main menu** , select **Licenses** and click [+ Add new license].
3. Enter your activation code and click [Activate].
4. If the license you're activating should apply to a specific router, select a device from the list of available devices and click [Activate]. The newly assigned license will be added to the selected device, and will deactivate any incompatible existing license from the device.
5. Any deactivated license goes into the pool of unassigned licenses and becomes available to activate on a different device.



NOTE: To see StrideLinx Cloud Reporting in action, please scan the QR code or visit <https://go2adc.com/vpn-cloud> and click the StrideLinx demo site link to sign up for an interactive product tour.



Now that you've activated your license, you're ready to set up a data source.

More options for managing your Cloud Reporting license are covered later in this chapter, or at the Online Help link above.

Set Up a Data Source

Online Help

The second step in Cloud Reporting is setting up a data source. This is done by selecting a communication protocol and defining the variables.

The specific steps will vary slightly depending on the selected communication protocol. The table below lists the supported protocols, with a link to the Online Help page with details for setting up each protocol.

Data Source Types	
Protocol	Online Help Link
Modbus TCP/IP	https://support.stridelinx.com/hc/en-us/articles/360019030157-Modbus-TCP-IP
Siemens S7	https://support.stridelinx.com/hc/en-us/articles/360019145098-Siemens-S7
Ethernet/IP	https://support.stridelinx.com/hc/en-us/articles/360019029957-Ethernet-IP
OPC-UA	https://support.stridelinx.com/hc/en-us/articles/360019030337-OPC-UA
MELSEC Communication Protocol	https://support.stridelinx.com/hc/en-us/articles/360019146238-MELSEC-Communication-Protocol
BACnet/IP	https://support.stridelinx.com/hc/en-us/articles/360019146318-BACnet-IP
Universal Robots	https://support.stridelinx.com/hc/en-us/articles/360019146398-Universal-Robots
Digital Input	https://support.stridelinx.com/hc/en-us/articles/360019146138-Digital-Input
SMTP	https://support.stridelinx.com/hc/en-us/articles/360019146438-SMTP
Plain-text TCP	https://support.stridelinx.com/hc/en-us/articles/360019030697-PlainTextAPI

Log your Data

The third step in Cloud Reporting is to set up logging your data. To do so, you'll configure data tags, and define custom log triggers if desired.

Configure the data tags

[Online Help](#)

Data tags describe how you wish to log your variables. You can choose to log them at a static interval (100ms to 1hr), when their values change, or on a custom trigger. Additionally, you define how long the data should be stored (retention policy).

The Online Help link above will walk you through adding data tags, either manually or by importing from another router or a .csv file, and testing them.

Configure the log triggers

[Online Help](#)

Log triggers allow you to log data based on the state of any variable.

They allow you to record the value of any number of data tags at the moment that the trigger condition is met. There is no limit to the number of triggers you can define, and you can use the same trigger for different data tags.

The Online Help link above will walk you through creating and managing log triggers.

Visualize or Export your Data

Finally, once your data is being logged you'll need a way to use it. StrideLinx lets you export your data to a .csv file, or visualize it on the StrideLinx Cloud.

Visualize your data

[Online Help](#)

Visualization does not affect your Cloud Reporting credit (data points per hour). However, the configuration of your data tags, i.e. the effectively logged data, does. There are two ways to visualize your data: Through data reports and through live monitoring. The data is displayed on detailed pages for each router. These views are created in StrideLinx Studio, and viewed online in StrideLinx Portal.

Visualize production counters

[Online Help](#)

Machines often contain production counters that count the total number of operations completed. The help article linked to the right gives specific tips on how you can best visualize these to gain insight into how well the machine is doing and whether it's reaching its desired production rates.

Export your data

[Online Help](#)

You can easily export your Cloud Reporting data in a .csv format, which you can then use in Microsoft Excel, 3rd party business intelligence tools, or other programs for more advanced analytics. Log triggers allow you to log data based on the state of any variable. They allow you to record the value of any number of data tags at the moment that

the trigger condition is met. There is no limit to the number of triggers you can define, and you can use the same trigger for different data tags.

The Online Help link above will walk you through exporting your data.

Email your data as PDF reports

[Online Help](#)

Machine data that is logged using Cloud Reporting can be periodically e-mailed to you in the form of a PDF report.





With Report Generator you can:

- Create multi-page report templates of your machine data.
- Schedule a report to be sent to you periodically, in PDF format.
- Manually send a report to yourself or other users, in PDF format.

The Online Help link above will walk you through emailing a PDF report.

Test Utility

The test utility is used to check if all the variables are set correctly, and is normally run during the creation of data tags. It shows the communication status with the PLC and displays each variable's current value if everything is configured correctly. If not, the values will stay empty. The test utility will attempt to update values every 0.5 seconds. Please follow the steps below to test your variables.

1. Go to the **Fleet Manager**, which is accessible via the **Apps menu**  in the top right corner when logged into your StrideLinx account.
2. Open the **main menu** , select **Devices**  in the left menu, and select your router.
3. Expand the **Data source**  service, go to **[Variables]**, and click **[Run test]** at the top.

A connection will now be set up to stream the data directly to your computer, using:

Port: 443

Transport protocol: TCP

Application protocol: WebSocket

You will see live values of all variables, if the configuration is set up correctly.

If the test utility shows unexpected values, please check if the addresses and data types of all variables are entered correctly.

If you get no data at all, please also check that the above listed port and protocols are not being blocked by your computer's or company's firewall.






NOTE: To ensure Data Logger Test Utility provides accurate results, please update/refresh your browser prior to running the test, and make sure you have pushed the latest configuration to your router. The Test Utility displays raw data; Factor doesn't affect the data shown.

Managing your Cloud Reporting License

You can **activate** a new Cloud Reporting license, or **extend, change** or **transfer** an existing Cloud Reporting license. Further details are provided at the Online Help link at the right.

Activate Cloud Reporting





You can purchase a Cloud Reporting license from AutomationDirect.com and activate it in the Admin App.

1. Go to the **Admin** app, which is accessible via the **Apps menu**  in the top right corner when logged into your StrideLinx account.
2. Open the **main menu** , select **Licenses**  and click [+ Add new license].
3. Enter your activation code and click [Activate].
4. If the license you're activating should apply to a specific router, select a device from the list of available devices and click [Activate]. The newly assigned license will be added to the selected device, and will deactivate any incompatible existing license from the device.
5. Any deactivated license goes into the pool of unassigned licenses and becomes available to activate on a different device.

Extend Cloud Reporting

To maintain uninterrupted logging, activate a new license on the router before the current license expires. If the current license expires without a replacement, new logging will stop, but the existing data logs will be kept for up to two weeks. To retain the old logs and begin logging again, simply activate a new license on the router within that two-week period.

To extend a license:





1. Go to the **Admin** app, which is accessible via the **Apps menu**  in the top right corner when logged into your StrideLinx account.
2. Open the **main menu** , select **Licenses** .
3. Select **More options** , then select [Extend license].
4. Enter an activation code or select an available unassigned license.



NOTE: You should only activate one data logging license per router at a time as they will not queue up. Activating a second license on a router will cause the clock to start ticking on activation, not after the first license has expired.

Transfer a Cloud Reporting license to another device

You can transfer any previously activated Cloud Reporting license to another device by first **deactivating** Cloud Reporting on the current device and then **activating** Cloud Reporting on the new device using the license you just made available. Note that the time period for a previously activated license continues to count down while it is deactivated.

1. Go to the **Admin** app, which is accessible via the **Apps menu**  in the top right corner when logged into your StrideLinx account.
2. Go to **Licenses** , select **More options**  on the licenses you want to deactivate and select [**deactivate license for device**].
3. Select the Cloud Reporting license you just made available, select **More options**  and select [**activate license for device**].
4. Select a device and click [**Activate**].



WARNING: Data is only stored for as long as you maintain an activated Datalogging plan. Activation Codes are purchased at AutomationDirect.com. Data is only stored for the data retention duration of your license. If data older than that duration is important, please archive your data locally before the retention limit is reached.