



InfoLink® Administrator Guide

InfoLink® Software version 4.6.0



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Because Crown is continually improving its products, specifications are subject to change without notice.

"Crown", the color beige, "Crown Lift Trucks", "One Source Lift Truck Parts", "MoveMore", "Wave", "Work Assist Vehicle", "Access 1 2 3", "InfoPoint", "Quick Pick", "Quick Coast", "Site Simulator", "FleetKeeper", "Innovation at Work", and the "Momentum" symbol are trademarks of Crown Equipment Corporation. All other trademarks are the property of their respective owners.

Crown Equipment Corporation InfoLink® Data Retention Policy

Purpose. This InfoLink® Data Retention Policy (the "Policy") sets forth the retention period applicable to customer InfoLink® data that Crown has possession of by hosting the data (as defined in the Master Software & Services Agreement) or which Crown contracts with a third party cloud provider to host.

Types of Data Covered. This Policy covers electronic data obtained through use of Crown's InfoLink® product that is hosted by Crown or a third party cloud provider at Crown's request. The data may be operator data or equipment data specific to a particular customer.

Retention Period. Crown shall keep the data for a period of seven (7) years (the "Retention Period") subject to the following exceptions:

Aggregated Data. Data that is aggregated and made anonymous by Crown will be kept permanently. Data is considered aggregated if it is not identifiable to either a particular customer or a particular operator.

Records Retention Suspension. Crown Legal may suspend the Retention Period by providing written notice to both the InfoLink® Support Team and Crown IS. In such an event, Crown Legal will explain what data needs to be retained and why (for example, governmental investigation or pending litigation). Once the Retention Period is suspended, the data will be maintained until revoked in writing by Crown Legal.

Live Data. While Crown shall keep hosted InfoLink® data for seven (7) years, live data viewable through the website will only be available for the prior calendar year and year-to-date current calendar year. Information older than the previous calendar year will be archived by Crown. If Customer requests data that has been archived, a fee may be charged for Crown's time in providing the data. Access to the website is governed by the terms and conditions of the Master Software & Services Agreement.

Additional Information. Questions relating to this policy can be sent to Crown's InfoLink® Support Center, which can be reached either via email at infolinksupport@crown.com or by calling (419) 629-6300.

California Disclosure

Crown Equipment Corporation is committed to eliminating human trafficking and slavery. To that end, Crown trains those individuals responsible for management of the supply chain and vendor selection on identifying behaviors that indicate human trafficking or use of slave labor. All potential suppliers must pass a rigorous evaluation before Crown will do business with them. Part of this process entails Crown employees investigating both the direct supplier and the direct supplier's supply chain for human trafficking and slave labor. Crown requires their suppliers to comply with all national, state, provincial or local laws, ordinances, rules, and regulations. Crown requires each supplier to have a code of conduct that includes avoiding the use of forced labor. Potential suppliers who fail to meet the established criteria are not used. Crown does not end its evaluation of suppliers upon selection. Rather, there is continuous evaluation of each supplier Crown uses. This includes unannounced audits performed by Crown personnel at the supplier's facilities. If at any point a supplier has not met its obligations as laid out in the supplier contracts, including the use of slave labor or human trafficking, Crown discontinues the use of that supplier. Employees who fail to follow established guidelines are subject to disciplinary action up to and including termination.

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Introduction to InfoLink

InfoLink is a web-based, wireless fleet management system designed, manufactured and supported by Crown Equipment Corporation and its distribution channel. With InfoLink, you can reduce your cost of equipment ownership, increase operator productivity, and improve industrial equipment safety, equipment utilization, and equipment maintenance efficiency.

InfoLink includes tools that assist with many fleet management tasks.

- Equipment fleet size evaluation
- Operator authorization management
- Operator license management
- Paperless OSHA pre-operational checklists
- Automatic scheduling and notification of vehicle maintenance
- Automatic notification of impacts

InfoLink consists of one or more InfoLink Modules (ILM) mounted on the trucks and InfoLink application software running on a server. The InfoLink Modules and software are connected using wireless network technology complying to IEEE 802.11b or 802.11gn standards.

Available Languages

InfoLink is available in many languages.

Available languages include:

- Dutch
- English (United States)
- English (Australia)
- English (United Kingdom)
- French
- German

- Italian
- Portuguese (Brazil)
- Russian
- Spanish (Chile)
- Spanish (Spain)
- Spanish (United States)

InfoLink Pre-Installation Checklists

Use the following checklists to ensure that you have everything you need when setting up InfoLink.

- [Software installation checklist](#) on page 10
- [InfoLink set-up checklist](#) on page 11

Software installation checklist

Before installing InfoLink and supporting software, you must have the following items available.

Required:

- An available network connection
- Company logo
: The company logo is not required. The Crown logo is used.
File type: JPEG or GIF
Size in pixels: 120 (width) x 81 (height)
- IP address and DNS name of the server that hosts InfoLink

Optional but recommended:

- SMTP Server name and port number of your email server (for email notifications)

InfoLink set-up checklist

Before you can begin using InfoLink, you must provide information about your equipment, location, and employees who will be operating and maintaining the equipment. Collect the following information before beginning the set-up process.

Required information:

- Equipment list containing truck name, serial number, model, location, model year, and manufacturer. See [Upload equipment records](#) on page 64.
- Company headquarters address and time zone
- User list containing employee's first name, employee's last name, employee number, e-mail address, equipment and/or web role, equipment and/or web login ID, and location (see [User Data Uploads](#) on page 87)
- Default language for the InfoLink interface and up to 3 additional languages
- Training certification list containing employee's first name, employee's last name, employee number, license number, equipment type, trainer's first name, trainer's last name, training date, expiration date, and performance level (see [Upload operator certification](#) on page 96)
- Equipment model list (example: FC4040-60)
- Equipment types list (example: FC)
- Location name

Optional but recommended information:

- If applicable, the email address that will be sending notifications and SMTP server name of the email server

Optional information:

- Map and "nicknames" of the access points in each location (a nickname represents the location of the access point; example: Aisle 52)
- Planned maintenance (PM) history
- PM schedule (examples: hour meter, day, hour and day)

- Equipment availability schedule (normal operating hours for each equipment item)
- Inspection checklist questions
- Vendors (company name, address, contact names)
- User equipment access
- User notification lists (lists of users to notify when events occur, such as impacts, inspection failures, or PM due)

InfoLink Pre-Launch Checklist

Before you begin using InfoLink in a live work setting, you must ensure that you have the following information.

Required:

- Module MAC address
- Equipment hour meter
- Wireless network settings

InfoLink Installation

The InfoLink installation disk provides an installation wizard that assists you with the InfoLink installation process.

Note: Make sure you have administrator privileges before beginning the installation to avoid errors or an incomplete installation.

During installation, you will be prompted to select a SQL database (MySQL or Microsoft SQL Server). If you select MySQL, the installer will create a database named 'infolink' for you. If you select Microsoft SQL Server, you must create a database manually after completing the InfoLink installation (see [Additional SQL Server Configuration](#) on page 14).

Note: If you select MySQL but choose to not run the configuration scripts during the installation, you can run them after completing the installation (see [Additional MySQL Configuration](#) on page 14).

As part of InfoLink installation, Java Development Kit (JDK 1.7.0_09), and Application Server (WildFly 8.0) will be installed and configured on your system.

1. Insert the InfoLink disk.

The installation wizard launches automatically.

Note: If the wizard does not launch automatically, you can launch it from the **Start** menu.

Click **Start > Run**. Browse to your CD-ROM drive and select **WindowsFormsApplication1.exe**. Click **OK**.

2. Choose to install either the **Windows 32-bit** or **Windows 64-bit** version of the application and then click **Run**.
3. Follow the instructions provided in the installation wizard to complete your InfoLink installation.

After you have completed the installation and have exited the wizard, you must complete your SQL database configuration.

Additional MySQL Configuration

1. During installation, if you chose to run the MySQL scripts manually, you need to run the scripts now. The scripts are located in the Program Files\InfoLink installation folder.
 - a) Run **createScript_4.6.0.sql** to create the necessary tables.
 - b) Run **InitialInstall_4.6.0.sql** to populate the tables.
2. Confirm the InfoLink services are running.
 - a) Click **Start > Control Panel**.
 - b) Navigate to **Services**.
 - c) In the Services list, ensure that InfoLink is listed with a Status of Started.

Additional SQL Server Configuration

After installing InfoLink with the SQL Server database option, you must configure your SQL database and run the provided SQL scripts to create your database tables.

Use the Microsoft SQL Server Management tool or equivalent SQL database management tool to configure your database.

1. Launch your SQL database management tool.
2. Log into SQL Server.
3. Create a database named "infolink".
4. Create a user named "ilappuser".
 - a) In the **SQL Server Authentication Password** field, type crown.
Note: This password is the default that is used during InfoLink installation. You can use a custom password, but you must also update the password in the InfoLink database connection information. Open file standalone-full.xml located in the InfoLink install folder. Follow this path: \AppServer\standalone\configurations.
 - b) Clear the **Enforce Password Expiration** check box.
 - c) In the **Default Database** field, type infolink.

- d) In the **Default Language** field, choose your default language.
 - e) In the Users mapped to this login region, click the **InfoLink Database Map** check box.
 - f) In the Database role membership region, click the **DB_DATAREADER** and **DB_DATAWRITER** check boxes.
5. When you have finished creating the user, click **OK**.
 6. Run the SQL scripts located in the **Program Files\InfoLink** installation folder.
 - a) Run **createScript_4.6.0.sql** to create the necessary tables.
 - b) Run **InitialInstall_4.6.0.sql** to populate the tables.
 7. Start the InfoLink services.
 - a) Click **Start > Control Panel**.
 - b) Navigate to **Services**.
 - c) In the Services list, select **InfoLink** in the list and click **Start**.

Note: During installation, **icons** are created on the desktop. Use the **icons** to start InfoLink also.

InfoLink Feature Overview

InfoLink provides you with many different tools for managing, tracking, and improving your fleet operations.

InfoLink tools are organized into three main categories:

- [Vehicle Management](#) on page 17
- [Operator Management](#) on page 17
- [Equipment Maintenance Planning](#) on page 18

Vehicle Management

InfoLink provides real-time and historical views of fleet usage and vehicle operating hours. Evaluate how your fleet is operating and make informed decisions when modifying your fleet size or making productivity improvements with these views.

Operator Management

With InfoLink manage who is authorized to operate your fleet equipment, manage their licenses, automate vehicle inspection protocol, and maintain training records.

Operator authorization and license management

Automate who can use your fleet equipment and get live insight into equipment operation.

InfoLink allows you to track every aspect of equipment use.

- Operators must log in to use fleet equipment
- Authorize operator use for a specific piece of equipment or by equipment type

- Automatically disable an operator's authorization when their license expires
- Automatically log off idle operators
- View live equipment use

Inspection checklist management

Use InfoLink to manage vehicle inspection.

- Automatically log operator responses to inspection questions as well as their time to respond to questions
- Prevent equipment from being operated until they pass inspection
- Configure inspection questions by equipment type
- Configure inspections by operator or by truck
- Automatically issue inspection alerts to your maintenance department
- Automatically lock down equipment based on responses to specific inspection questions
- Automatically lock down equipment if the inspection time exceeds a specified duration

Refresher training and evaluation

InfoLink maintains all operator training records. You can identify operator training needs and track training completion within Infolink's database.

Equipment Maintenance Planning

InfoLink allows you to easily schedule equipment maintenance.

- Schedule planned maintenance based upon actual hours of operation rather than days in use
- View real-time overviews of your equipment's upcoming, due, and overdue maintenance status
- Automatically send email notifications when equipment maintenance is due

InfoLink Main Navigation

InfoLink organizes your fleet and operator information in three primary sections: Monitor, Manage, and Reports. These sections contain menu links to detailed information and management utilities.

Monitor section

The Monitor section provides you with a real-time view into all aspects of your fleet and operators.

The Monitor section has up to six menus depending on your configuration:

- **Dashboards:** view detailed information about operator performance, based on user preferences, and fleet status
- **Assets:** view the status of the equipment in operation
- **Batteries:** view the status of batteries in operation and in charging stations
- **Certificates:** view operators whose certifications are expired or expire soon
- **Alarms:** view the current and past alarms generated by the system

Manage section

Use the Manage section to manage your company's fleet, operators, and InfoLink settings.

The Manage section has up to seven menus depending on your configuration:

- **Assets:** add, edit, and delete information about your equipment, inspection checklists, InfoLink modules, and other physical assets
- **Place:** manage all location and contact information for your company headquarters, fleet locations, manufacturers, vendors, InfoLink access points and control module settings by location
- **Users:** manage all of your InfoLink users, InfoLink and equipment login IDs, and user roles for equipment and InfoLink access
- **Settings:** control all of your InfoLink system settings, including email notifications, maintenance and use schedules, impact settings, training, and module settings

- Uploads: upload user, certificate, equipment, battery, and event code information from spreadsheets (mass upload)
- Schedules: manage the frequency and types of automated reports generated by InfoLink
- Productivity: manage the systems and activities that will be used to track fleet productivity

Reports section

Use the Reports section to generate detailed reports about any aspect of your fleet and operators. Reports can be generated in HTML format for on-screen viewing, PDF for printing, or in XLS or CSV format for use in spreadsheets and in other tabular data applications.

The Reports section has up to seven categories of reports depending on your configuration. Each menu contains a selection of reports that you can run.

- Compliance: generate reports on all aspects of operator and equipment certification and reports on inspection results by equipment, by operator, and by equipment failures
- Impacts: retrieve a record of impacts collected on equipment or on an operator
- Productivity: track your operators' hours and performance productivity
- Utilization: generate reports on your equipment utilization by location, equipment type, and unit including hourly use, idle time, and peak use times
- Energy: view reports about all aspects of battery and fuel use
- Service: track your equipment availability, maintenance details and history, event codes by equipment or frequency of event, and projected maintenance
- Admin: lists web user logon and logoff times, and modules that have not been active for a selectable number of hours

InfoLink Server Requirements

Before installing and configuring InfoLink, ensure that your server and infrastructure meet the minimum requirements.

Note: You can install the InfoLink Application Server, InfoLink Module Server and Database on separate machines to improve performance.

Hardware Requirements

The minimum processor and memory requirements to run InfoLink vary based on the number of InfoLink Devices that you are using.

Number of InfoLink devices	Minimum processor (CPU) requirement	Minimum memory (RAM) requirement
0–500	dual-core processor	4 GB (expandable)
501–2500	quad-core processor	12 GB (expandable)
2501–7500	dual quad-core processors	16 GB (expandable)

Operating System Requirements

InfoLink runs on the following operating systems in either 32-bit or 64-bit versions.

- Microsoft Windows Server 2008
- Microsoft Windows Server 2008 R2
- Microsoft Windows Server 2012
- Microsoft Windows Server 2012 R2

Note: Virtual environments are supported.

Port Configurations

For easy setup, InfoLink is pre-configured to use specific network communication ports. If these ports are being used by other devices or are unavailable, you can configure InfoLink to use different ports.

The following ports must be allowed to communicate through your firewall.

Ports	Name	Purpose
80	HTTP	Hosts the InfoLink Application on the InfoLink Web Server.
25	Email	Used by the InfoLink Web Server to send email notifications to a mail server.
4545 and 4580	InfoLink Communication	Used by the InfoLink Modules (wireless devices) to communicate via TCP/IP with the InfoLink Web Server. The InfoLink Modules initiate the conversation with the InfoLink Web Server
3307	MySQL Database	Used for the database communication from the InfoLink Web Server to the database via TCP/IP.
1433	Microsoft SQL Server Database	Used for the database communication from the InfoLink Web Server to the database via TCP/IP.

Note: Only one of the two will be used, depending on which database platform you choose.

Database Requirements

InfoLink supports the following databases in either 32-bit or 64-bit formats.

- Microsoft SQL Server 2005
- Microsoft SQL Server 2008
- Microsoft SQL Server 2008 R2
- Microsoft SQL Server 2012
- Microsoft SQL Server 2012 R2

- MySQL 5.0
- MySQL 5.5

Data Storage Requirements

The data storage requirements for InfoLink vary based on a number of factors.

- The number of InfoLink devices (trucks)
- The scale of use (how often each device transmits data)
- The number of shifts
- The number of hours in use
- The number of work days

On average, InfoLink will store 34 KB of data per truck per day, or 12 MB per truck per year. Based on these numbers, we recommend the following data storage allowances.

Number of InfoLink devices	Disk space required per year
1	12 MB
up to 500	6 GB
501–2500	30 GB
2501–7500	88 GB

Wireless Network Requirements

The network traffic generated by an InfoLink device is small. The average transaction size is less than 100 bytes and the average communication is about 47 bytes/sec.

You can customize the frequency of wireless communication to your needs. Crown offers wireless network solutions that are specifically designed for InfoLink.

Security Protocol Requirements

InfoLink supports the following security protocols and encryption algorithms.

- WEP 64
- WEP 128
- WPA-PSK + TKIP
- WPA-LEAP + TKIP
- WPA2-PSK + AES
- WPA2-PEAP-MSCHAPv2 + AES
- WPA2-TLS + AES

Network Information Requirements for InfoLink Modules

Truck-mounted InfoLink modules must be configured with your wireless network settings in order to communicate with the InfoLink server.

The following wireless network information and settings are required.

- The SSID of your wireless network
- The IP address of your InfoLink server (where the web application is installed)
- The InfoLink Communication port numbers (see [Port Configurations](#) on page 22)
- The security protocol that your wireless network uses (see [Security Protocol Requirements](#) on page 24)
- Your wireless network password

Note: If you are using EAP authentication, include your wireless network username and password.

You must also choose a method for configuring your modules.

Preprogrammed during manufacturing

This is the most popular option. Provide Crown with your wireless settings before shipping and they will be encrypted and loaded into the modules at the manufacturing facility. When your modules arrive they will connect to your wireless network automatically. Contact your InfoLink Project Manager to arrange a secure settings transfer.

Manual configuration

Use the interface and keypad on the module to program it with your network information.

Note: You must manually configure each module individually.

Push configuration

We offer hardware that you can use to connect a laptop or PC to a module and push the wireless settings through a software program. The module can be mounted to the equipment when performing the configuration. Use a CAN connection to connect the module for the push configuration. Contact your InfoLink Project Manager to order the necessary hardware.

Note: Once the module is connected to your network, you can update the network settings via wireless download to the module through the InfoLink Web Application.

Web Browser Requirements

The InfoLink Web Application requires at least Microsoft Internet Explorer 9, Chrome, or FireFox.

InfoLink Passwords and System Access

Users and administrators use the same InfoLink login screen. Their account login credentials determine what level of access they have.

InfoLink uses a generic username and password for administrator access when it is installed. These credentials are located in a readme file on the installation disc. For security purposes, administrators should change this password when they first log into the system.

Administrators initially create user accounts. Once users log on to InfoLink, they can update their account profiles and change their passwords as needed.

Log On to InfoLink

Users and administrators use the same InfoLink login screen.

1. Open a web browser and navigate to the InfoLink server address (URL).
2. In the **Language** list, click your preferred language.
3. In the **Username** field, type your InfoLink username.
4. In the **Password** field, type your InfoLink password.
5. Click **Login**.

Log Off of InfoLink

When you are done using InfoLink, log off to prevent other users from using your account.

1. At the top right of the screen, click **Logout**.

Edit Your InfoLink Profile

Every user and administrator has an InfoLink profile. This profile stores your name, email, time zone, and language.

1. At the top right of the screen, click **My Profile**.
2. Edit the User Information fields as needed.

Note: Fields marked with an asterisk (*) are required.

3. Click **Save**.

Change Your InfoLink Password

Change your password when you log on to InfoLink for the first time. You may change your password at any time after that as needed.

Note: Passwords must consist of letters (uppercase and lowercase) and numbers only. Do not use special characters or spaces in your password.

1. At the top right of the screen, click **My Profile**.
2. To the right of the User Information box, click **Change Password**.
3. In the **Current Password** field, type your current password.
4. In the **New Password** field, type your new password.
5. In the **Retype Password** field, retype your new password.
6. Click **Save**.

Place Management and Configuration

After installing InfoLink, you must first configure Place information about your facilities and operations. This includes company information, locations, manufacturers, possible vendors and access points. This information is needed in order to configure users and equipment.

Begin configuring Place with your company headquarters information and your facility locations. Then continue by adding manufacturer and vendor information for the equipment that your company uses.

After you have finished configuring Place, continue with Settings, Assets, Uploads, and Users.

Company Configuration

The Company section stores basic information about your company. This section must be completed before any other settings can be configured.

1. Click the **Manage** tab and then click **Place**.
2. On the left menu, click **Company**.
3. Click **Edit**.
4. Enter or edit company information as needed.

Note: Fields marked with an asterisk (*) are required.

Note: The Language field sets the default language when uploading user information.

5. Click **Save**.

Add or edit company contacts

Company Contacts is a directory containing contact information for personnel. For example, a listing of contacts could include the medical contact within your company or the person responsible for the maintenance of a specific piece of equipment.

1. On the Company page, to the right of the Company Information box, click **Company Contacts**.

2. Click **Create**.

Note: To edit an existing contact, click the contact's name and then click **Edit**.

3. Type the contact's name, phone number, and email address into the Contact Information fields.

Note: Fields marked with an asterisk (*) are required.

4. Click **Save**.

Enable or disable duplicate employee numbers

Employee Numbers allows duplicate employee numbers to be used in InfoLink. If you have multiple locations, you can enable this feature to allow the same employee number to be used in different locations.

1. On the Company page, to the right of the Company Information box, click **Employee Numbers**.

2. Click **Edit**.

3. To allow duplicate employee numbers, click **Yes**. To disable this feature, click **No**.

4. Click **Save**.

Note: If you disable this feature and InfoLink detects duplicate employee numbers in user records, a list of the duplicates will appear. Assign each duplicate a new unique employee number and then click **Save**.

Location Management

The Locations listing contains information about all available locations (plants/buildings) within the company in which equipment resides. By default, only the Administrator and the creator of the location can access the specified location. Additional users can be granted management access to a specific location as needed.

InfoLink supports up to four languages in a single location. You can specify one primary language and up to three additional language options for each location.

Note: The default language will be used for all users in a location unless a user is configured to use one of the additional language options. See [User Management](#) on page 81.

View locations

1. Click the **Manage** tab and then click **Place**.
2. On the left menu, click **Locations**.

Add a location

1. On the Locations page, click **Create**.
2. Enter information as needed.
Note: Fields marked with an asterisk (*) are required.
3. Click **Save**.

Edit a location

1. On the Locations page, click the **Edit** icon  next to the location that you want to edit.
2. Modify the information as needed.
Note: Fields marked with an asterisk (*) are required.
3. Click **Save**.

Delete a location

You can only delete a Location that does not have equipment associated with it. Any users associated with the location will be automatically disassociated from that location.

1. On the Locations page, click the **Delete** icon  next to the location that you want to delete.

Configure module settings by location

You can configure module settings for equipment assigned to a specific location. These settings configure keypad and proximity reader use, idle time-outs, and emergency overrides.

Module settings affect all equipment in the location. You can override specific equipment settings as needed (see [Module settings for individual equipment](#) on page 65) or change using a global setting.

Note: Fields marked with an asterisk (*) are required.

1. On the Locations page, click a location name.
2. To the right of the Location Information box, click **Module**.
3. In the Disable Keypad setting, choose **Yes** to disable the module keypad or **No** to allow the keypad to be used.

Note: This feature is only available in the Advantage package. Only disable this feature if your location mandates that operators must use HID cards instead of using the keypad. If the 811 emergency override feature is enabled, the keypad can still be used in case of emergency to unlock the equipment.

4. In the Read Format setting, select the format for your HID card reader.
Note: The 26-bit format is an industry standard. 34-bit and 35-bit formats are also available.
5. In the Read Facility Code setting, choose **Yes** to allow duplicate HID number entries or choose **No** to restrict HID number use.

Note: If you use multiple locations within InfoLink and need to allow the same HID number to be used in more than one location, enable this feature.

6. In the Idle Time setting, enter the amount of time equipment should sit idle before logging the operator off.

Note: The Idle Time setting is ignored for any equipment in 'maintenance mode'.

7. In the Enable Override setting within the Emergency Override Information settings group, choose **Yes** to enable emergency overrides or **No** to disable this feature.

The emergency override activates the equipment when the operator enters the 811 emergency ID on the keypad. The activation occurs immediately, and is not dependent on inspections or training certifications. After the equipment has been used in emergency override, the InfoLink module will display the message, "Equipment is Locked out."

Note: Emergency override can be used multiple times.

While in emergency mode, InfoLink cannot detect the name of the operator.

If you enable the emergency override feature, configure the following settings:

- a) In the Enable Duration setting, enter the amount of time that the equipment can be operated during an emergency 811 event. The equipment will remain operational for that duration, and if actively being used beyond the set duration, will lock out when idle for 5 seconds.
- b) In the Auxiliary On setting, choose **Yes** if equipment has emergency lighting or an audible alarm; choose **No** if equipment does not use additional emergency lights or alarms.

Note: Audible alarm kits are available as an option.

8. Click **Save**.

Department Management

The Departments section associates users and equipment operators to groups representing their respective working department. You can filter reports using these department groups.

Note: In the Standard InfoLink package, this feature is maintained by Crown InfoLink Support.

View departments

1. Click the **Manage** tab and then click **Place**.
2. On the left menu, click **Departments**.

Add a department

1. On the Departments page, click **Create**.
2. Enter information as needed.
Note: Fields marked with an asterisk (*) are required.
3. Click **Save**.

Edit a department

1. On the Departments page, click the **Edit** icon  next to the department that you want to edit.
2. Modify the information as needed.
Note: Fields marked with an asterisk (*) are required.
3. Click **Save**.

Delete a department

1. On the Departments page, click the **Delete** icon  next to the department that you want to delete.

Shift Management

The Shifts section associates users and equipment operators to groups representing their respective working shift. You can filter reports using these shift groups.

Note: In the Standard InfoLink package, this feature is maintained by Crown InfoLink Support.

View shifts

1. Click the **Manage** tab and then click **Place**.
2. On the left menu, click **Shifts**.

Add a shift

1. On the Shifts page, click **Create**.
2. Enter information as needed.
Note: Fields marked with an asterisk (*) are required.
3. Click **Save**.

Edit a shift

1. On the Shifts page, click the **Edit** icon  next to the shift that you want to edit.
2. Modify the information as needed.
Note: Fields marked with an asterisk (*) are required.
3. Click **Save**.

Delete a shift

1. On the Shifts page, click the **Delete** icon  next to the shift that you want to delete.

Manufacturer Management

The Manufacturers section displays all available manufacturer types of equipment and batteries within a company. You can have multiple manufacturers within a company. You can associate manufacturers with equipment models and with vendors.

Note: When uploading equipment files, the manufacturer of the equipment must exist within InfoLink or the file will not upload properly.

View manufacturers

1. Click the **Manage** tab and then click **Place**.
2. On the left menu, click **Manufacturers**.

Add a manufacturer

1. On the Manufacturers page, click **Create**.
2. Enter information as needed.
Note: Fields marked with an asterisk (*) are required.
3. Click **Save**.

Edit a manufacturer

1. On the Manufacturers page, click the **Edit** icon  next to the manufacturer that you want to edit.
2. Modify the information as needed.
Note: Fields marked with an asterisk (*) are required.
3. Click **Save**.

Delete a manufacturer

1. On the Manufacturers page, click the **Delete** icon  next to the manufacturer that you want to delete.
Note: You can only delete a manufacturer if it is not associated with any equipment.

Manufacturer contact management

Manufacturer Contacts serves as a directory of contacts such as repair shops or parts manufacturers. You must create a Manufacturer in InfoLink before adding contacts.

View manufacturer contacts

1. On the Manufacturers page, click the name of a manufacturer.
2. To the right of the Manufacturer Information box, click **Manufacturer Contacts**.

Add a manufacturer contact

1. On the Manufacturer Contacts page, click **Create**.
2. Enter information as needed.
Note: Fields marked with an asterisk (*) are required.
3. Click **Save**.

Edit a manufacturer contact

1. On the Manufacturer Contacts page, click the **Edit** icon  next to the contact that you want to edit.
2. Modify the information as needed.
Note: Fields marked with an asterisk (*) are required.
3. Click **Save**.

Delete a manufacturer contact

1. On the Manufacturer Contacts page, click the **Delete** icon  next to the contact that you want to delete.

Vendor Management

The Vendors section serves as a directory of contacts such as the company that services your equipment. Vendors can be associated with specific equipment.

Add a vendor

1. On the Vendors page, click **Create**.
2. Enter information as needed.
Note: Fields marked with an asterisk (*) are required.

3. In the Manufacturers region, select a manufacturer to associate with the vendor and click an arrow button.

You can move manufacturers between the Available Mfg. and Associated Mfg. lists.

>	Move the selected items from the Available list to the Associated list.
>>	Move all items from the Available list to the Associated list.
<	Move the selected items from the Associated list to the Available list.
<<	Move all items from the Associated list to the Available list.

4. Click **Save**.

Edit a vendor

1. On the Vendors page, click the **Edit** icon  next to the vendor that you want to edit.
2. Modify the information as needed.

Note: Fields marked with an asterisk (*) are required.

3. In the Manufacturers region, select a manufacturer to associate with the vendor and click an arrow button.

You can move manufacturers between the Available Mfg. and Associated Mfg. lists.

>	Move the selected items from the Available list to the Associated list.
>>	Move all items from the Available list to the Associated list.
<	Move the selected items from the Associated list to the Available list.
<<	Move all items from the Associated list to the Available list.

4. Click **Save**.

Delete a vendor

1. On the Vendors page, click the **Delete** icon  next to the vendor that you want to delete.

Note: You can only delete a vendor if it is not associated with any equipment.

Manage vendor contacts

Vendor Contacts serves as a directory of contacts such as specific technicians who work on your equipment. You must create a Vendor in InfoLink before adding contacts.

1. On the Vendors page, click the name of a vendor.
2. To the right of the Vendor Information box, click **Vendor Contacts**.

Add a vendor contact

1. On the Vendor Contacts page, click **Create**.
2. Enter information as needed.

Note: Fields marked with an asterisk (*) are required.

3. Click **Save**.

Edit a vendor contact

1. On the Vendor Contacts page, click the **Edit** icon  next to the contact that you want to edit.
2. Modify the information as needed.

Note: Fields marked with an asterisk (*) are required.

3. Click **Save**.

Delete a vendor contact

1. On the Vendor Contacts page, click the **Delete** icon  next to the contact that you want to delete.

View vendors

1. Click the **Manage** tab and then click **Place**.
2. On the left menu, click **Vendors**.

Access Point Management

The Access Points section lists all access points used to communicate data between InfoLink modules and the InfoLink system. Access points are listed by location once the InfoLink module has communicated with the server through that access point.

Only the InfoLink Administrator has the ability to view and maintain access points. A new access point cannot be created within the InfoLink application. Administrators can only edit access points to name them (typically a nick-name describing its location within the facility) and to assign access point locations.

Tip: The **Name** field represents the location of the access point. When the InfoLink module communicates with this specific access point, it relays the name you choose for this access point. This provides you with the equipment's approximate location for tracking purposes.

Edit an access point

1. Click the **Manage** tab and then click **Place**.
2. On the left menu, click **Access Points**.
3. Click the **Edit** icon  next to the access point that you want to edit.

Note: A blank Name field represents a new module communication. Your IT department will supply you with the location of the access point. The MAC address listed is the MAC address of the access point.

4. Modify the information as needed.
5. Click **Save**.

InfoLink Settings

InfoLink Settings control system notifications, planned maintenance and projected use schedules, and control how InfoLink responds to impacts and expired certifications. You can also manage event codes for trucks, and how InfoLink interacts with modules.

Notification Settings

The Notification section allows you to configure your site email address and configure what kinds of notifications you want to receive. Automatic email notifications can be issued for the following notification types:

- Advanced
- Battery
- Certificate
- Emergency
- Impact
- Inspection
- Planned Maintenance (PM)
- Truck Event Codes

Each type can be created multiple times and can be configured for a specific location or all locations. The Notification Users list is filtered based on the location you select.

For example, when a specific location is selected, Notification Users will only contain those users with access to the specified location. If All is selected, all users will be listed. The same rule applies for Department and Shifts. If a specific Department or Shift is selected, only those associated users will receive e-mail notifications.

Note: Notification Users only contains users that have an e-mail address in the system.

Depending on the rights of the user, they may or may not be able to modify or delete a notification. If the user is included in a notification with other users in locations that they do not have access to, they will not be able to alter the configurations or delete the notification. They must contact a Site Administrator.

Note: In the Standard InfoLink package, this feature is managed by Crown InfoLink Support.

Note: Notification settings are only available if the email server is configured. If the email server is not configured, you will see the following message on the Notifications page:

"Email Notification is currently not configured."

The ReadMe file on the InfoLink install CD contains email server configuration instructions. For assistance, contact the InfoLink Support Line.

Enable notifications and configure email

To enable email notifications and configure your email address, follow these steps:

1. Click the **Manage** tab and then click **Settings**.
2. On the left menu, click **Notifications**.
3. Click **Edit**.
4. Click **On**.

You can click **OFF** to turn notifications off at any time.

5. Type the email address you want to use for notifications into the **Site Email Address** field.
6. Click **Save**.

Add a notification

Note: Fields marked with an asterisk (*) are required.

1. On the Notification page, click **Create**.
2. Choose a notification type from the **Select Type** list.

Note: The notification options will vary based type of notification you choose. See [Notification types](#) on page 43.

3. Type a name for the notification into the **Name** field.

4. Type a short description of the notification into the **Description** field.
5. Select the location for this notification from the **Location** list.
6. Associate departments, shifts and other items with the notification.

You can move items between the Available and Associated lists.

>	Move the selected items from the Available list to the Associated list.
>>	Move all items from the Available list to the Associated list.
<	Move the selected items from the Associated list to the Available list.
<<	Move all items from the Associated list to the Available list.

7. Enter other information as needed.
8. Click **Save**.

Edit a notification

1. On the Notification page, click the **Edit** icon  next to the notification that you want to edit.
2. Modify the information as needed.

Note: Fields marked with an asterisk (*) are required.

3. Click **Save**.

Delete a notification

1. On the Notification page, click the **Delete** icon  next to the notification that you want to delete.

Notification types

Each notification type has its own custom configuration settings. These settings reflect specific types of events and other criteria that can trigger a notification.

Advanced settings configuration

Use Advanced Settings to create notifications for the following non-configurable settings within InfoLink.

Impact Sensor Error	Send a notification when an impact sensor error is received on the equipment.
Module Communication	Send a notification if an InfoLink module has not communicated in the allotted number of hours.
Operator Usage	Send a notification if operator usage has not been received within the allotted number of hours.
Notification Users	Select the users who will receive this notification.

Battery configuration

Use Battery to create notifications when batteries run low on water, register a high temperature or missed an equalization charge.

Batteries	Select the batteries that you want to monitor for notifications.
Department	Select the departments that you want to monitor for notifications.
Shift	Select the shifts that you want to monitor for notifications.
Equipment Type	Select the equipment types that you want to monitor for notifications.
Equipment Model	Select the equipment models that you want to monitor for notifications.
Battery Notification Type	Choose the types of battery issues that will trigger a notification.
Weekdays	Select which days of the week you want to receive the notification. Note: If no days are selected, email notification will not be sent.
Time Range	Specify the time of day you want to receive the notification. Note: The default range setting is 00:00 to 23:55.

Disable Notification	Specify how long (hours) a module must be out of communication with InfoLink to disable notifications for equipment events. If the module has not communicated with the InfoLink server within the allotted time, then you will not receive any notifications about events that occur during that time.
Notification Users	Select the users who will receive this notification.

Certificate configuration

Use Certificate to create notifications for expired training certifications.

Department	Select the departments that you want to monitor for notifications.
Shift	Select the shifts that you want to monitor for notifications.
Equipment Type	Select the equipment types that you want to monitor for notifications.
Notification Users	Select the users who will receive this notification.

Emergency configuration

Use Emergency to create notifications when the 811 Emergency Operation is used.

Weekdays	Select which days of the week you want to receive the notification. Note: If no days are selected, email notification will not be sent.
Time Range	Specify the time of day you want to receive the notification. Note: The default range setting is 00:00 to 23:55.

Disable Notification	Specify how long (hours) a module must be out of communication with InfoLink to disable notifications for equipment events. If the module has not communicated with the InfoLink server within the allotted time, then you will not receive any notifications about events that occur during that time.
Notification Users	Select the users who will receive this notification.

Impact configuration

Use Impact to create notifications when an impact occurs.

Department	Select the departments that you want to monitor for notifications.
Shift	Select the shifts that you want to monitor for notifications.
Impact Type	Choose the impact thresholds that will trigger a notification.
Weekdays	Select which days of the week you want to receive the notification. Note: If no days are selected, email notification will not be sent.
Time Range	Specify the time of day you want to receive the notification. Note: The default range setting is 00:00 to 23:55.
Disable Notification	Specify how long (hours) a module must be out of communication with InfoLink to disable notifications for equipment events. If the module has not communicated with the InfoLink server within the allotted time, then you will not receive any notifications about events that occur during that time.
Notification Users	Select the users who will receive this notification.

Inspection configuration

Use Inspection to create notifications when an inspection discrepancy occurs.

Department	Select the departments that you want to monitor for notifications.
Shift	Select the shifts that you want to monitor for notifications.
Equipment Type	Select the equipment types that you want to monitor for notifications.
Equipment Model	Select the equipment models that you want to monitor for notifications.
Inspection Type	<p>Select the types of inspection results that will trigger a notification. You can select any number of results.</p> <ul style="list-style-type: none"> • Select Failed Operational to be notified when a checklist question is answered unfavorably but did not result in an equipment lock out. • Select Failed Lock to be notified when a checklist question is answered unfavorably and resulted in an equipment lock out. • Select Canceled to be notified when the operator cancels the inspection two consecutive times, resulting in an equipment lock out. • Select Timed Out to be notified when the operator allows the inspection checklist to time out two consecutive times, resulting in an equipment lock out.
Weekdays	<p>Select which days of the week you want to receive the notification.</p> <p>Note: If no days are selected, email notification will not be sent.</p>
Time Range	<p>Specify the time of day you want to receive the notification.</p> <p>Note: The default range setting is 00:00 to 23:55.</p>

Disable Notification	Specify how long (hours) a module must be out of communication with InfoLink to disable notifications for equipment events. If the module has not communicated with the InfoLink server within the allotted time, then you will not receive any notifications about events that occur during that time.
Notification Users	Select the users who will receive this notification.

Planned maintenance (PM) configuration

Use PM to create notifications when equipment is due for planned maintenance.

Equipment Type	Select the equipment types that you want to monitor for notifications.
Equipment Model	Select the equipment models that you want to monitor for notifications.
Weekdays	Select which days of the week you want to receive the notification. Note: If no days are selected, email notification will not be sent.
Time Range	Specify the time of day you want to receive the notification. Note: The default range setting is 00:00 to 23:55.
Notification Users	Select the users who will receive this notification.

Truck event code configuration

Use Truck Event Code to create notifications of event codes received from the equipment.

Equipment Type	Select the equipment types that you want to monitor for notifications.
Equipment Model	Select the equipment models that you want to monitor for notifications.
Event Code Type	Select the type of event codes that will trigger a notification.

Weekdays	Select which days of the week you want to receive the notification. Note: If no days are selected, email notification will not be sent.
Time Range	Specify the time of day you want to receive the notification. Note: The default range setting is 00:00 to 23:55.
Disable Notification	Specify how long (hours) a module must be out of communication with InfoLink to disable notifications for equipment events. If the module has not communicated with the InfoLink server within the allotted time, then you will not receive any notifications about events that occur during that time.
Notification Users	Select the users who will receive this notification.

PM Schedules

Planned maintenance (PM) can be scheduled based upon actual hours of operation, days in use, or both. You can view real-time overviews of trucks with upcoming maintenance, maintenance due, and maintenance overdue.

Equipment can be associated to either a default or custom PM schedule. Each PM schedule must have a unique name and contain at least one interval type. The interval type determines how often PM must be performed.

Intervals can be measured based on equipment hour meters or specified in days. When using the hour meter, specify the number of hours that should elapse before the next PM is due. When using days, specify the number of days that should elapse before the next PM is due. If you choose both interval types, PM will be triggered by whichever interval is exceeded first.

Add a PM schedule

1. Click the **Manage** tab and then click **Settings**.
2. On the left menu, click **PM Schedules**.
3. Click **Create**.

4. Enter information as needed.

Note: Fields marked with an asterisk (*) are required.

5. Click **Save**.

Edit a PM schedule

1. On the PM Schedules page, click the **Edit** icon  next to the schedule that you want to edit.

2. Modify the information as needed.

Note: Fields marked with an asterisk (*) are required.

3. Click **Save**.

Delete a PM schedule

1. On the PM Schedules page, click the **Delete** icon  next to the schedule that you want to delete.

Assign a PM schedule to multiple equipment

1. Click the **Manage** tab and then click **Settings**.
2. On the left menu, click **PM Schedules**.
3. Click a schedule name.
4. To the right of the Schedule Information box, click **Equipment**.
5. Filter the list of equipment as needed using the **Location**, **Type**, and **Model** lists.

6. Click **Add**.

7. Select the equipment that you want to assign to the PM schedule.

Tip: Click the check box next to the **ID** column heading to select all equipment.

8. Click **Save**.

9. Click **OK** on the confirmation message.

Assign a PM schedule to individual equipment

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Equipment**.
3. Click an equipment ID.
4. To the right of the General Information box, click **PM Schedule**.
5. Click **Edit**.
6. Select the PM schedule that you want to use for the equipment.
7. Click **Save**.

Projected Use Schedules

Projected use schedules set the amount of time the truck is available for operation and help to measure truck utilization. A piece of equipment can be classified as “available” by hours and minutes, with a maximum available time of 24 hours and 0 minutes per day. You can associate equipment with a default projected use schedule or a custom schedule for a specific location.

For example, your company has one shift that runs 10 hours per day Monday through Friday. You have 30 minutes for breaks and 20 minutes for lunch. The truck is available for 9 hours and 10 minutes per day Monday through Friday, and is available for 0 Hours and 0 Minutes on Saturday and Sunday.

Note: This feature is only available in the Advantage InfoLink package.

Add a projected use schedule

1. Click the **Manage** tab and then click **Settings**.
2. On the left menu, click **Projected Use Schedules**.
3. Click **Create**.
4. Enter information as needed.

Note: Fields marked with an asterisk (*) are required.

5. Click **Save**.

Edit a projected use schedule

1. On the Projected Use Schedules page, click the **Edit** icon  next to the schedule that you want to edit.
2. Modify the information as needed.
Note: Fields marked with an asterisk (*) are required.
3. Click **Save**.

Delete a projected use schedule

1. On the Projected Use Schedules page, click the **Delete** icon  next to the schedule that you want to delete.
Note: You cannot delete schedule that is currently associated to equipment. You must assign the equipment to a new or different schedule before deleting the current schedule.
The default projected use schedule cannot be deleted, but can be modified.

Assign a projected use schedule to multiple equipment

1. Click the **Manage** tab and then click **Settings**.
2. On the left menu, click **Projected Use Schedules**.
3. Click a schedule name.
4. To the right of the General Information box, click **Equipment**.
5. Filter the list of equipment as needed using the **Location**, **Type**, and **Model** lists.
6. Click **Add**.
7. Select the equipment that you want to assign to the PM schedule.
Tip: Click the check box next to the **ID** column heading to select all equipment.
8. Click **Save**.

Assign a projected use schedule to individual equipment

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Equipment**.
3. Click an equipment ID.
4. To the right of the General Information box, click **Projected Use Schedule**.
5. Click **Edit**.
6. Select the projected use schedule that you want to use for the equipment.
7. Click **Save**.

Impact Settings

For equipment with impact sensors, InfoLink can record impacts that may be harmful to equipment or people. InfoLink provides real-time reporting of impacts by operator and equipment. Management can use this information to decide if training is needed to change behavior.

Impact sensors detect g-forces (g) on a horizontal plane, front to rear and side to side. To disable impact detection, set the X (forward and reverse) and Y (side to side) Axis to 0. Impact settings can be assigned to multiple pieces of equipment at a time or individually.

Configure impact settings for multiple equipment

To assign the same impact settings to multiple pieces of equipment, follow these steps:

1. Click the **Manage** tab and then click **Settings**.
2. On the left menu, click **Impact**.
3. Filter the list of equipment as needed using the **Location**, **Type**, and **Model** lists, then click **Filter**.
4. Click **Edit**.
5. In the Impact Thresholds box, enter the **Low** and **High** impact values for **X** and **Y**.

Note: The maximum value for X is 70. The maximum value for Y is 35.

6. If you want to lock the equipment after an impact, select **Yes** from the **Automatic Lockout** list.

Note: For safety reasons, equipment will not automatically shutdown on impact. Equipment must sit idle for 5 seconds before a lockout occurs.

7. If you want to sound an audible alarm or activate a flashing light upon impact, select **Yes** from the **Auxiliary On** list.

Note: Audible alarm kits are available as an option.

8. Enter the number of times a low impact must occur before sending a notification in the **Occurrences Allowed** field.

Tip: If you want a notification for every impact, set **Occurrences Allowed** to 1.

Note: If an alarm kit is installed on the truck, the alarm will sound when the notification is sent.

9. To register an impact when equipment is idle, select **Yes** from the **Sense At Idle** list.

When Sense At Idle is set to Yes, if an impact occurs when the truck is idle and the impact is greater than 0 but the captured value is 0, an impact will be registered. When Sense At Idle is set to No, if an impact occurs when the truck is idle, an impact will not be registered if the captured value is 0.

10. If you want to automatically acknowledge the low impact alarm, select **Yes** from the **Auto Acknowledge Alarm** list.
11. Select all equipment that you want to apply these settings to and then click **Save**.

Configure impact settings for individual equipment

You can configure custom impact settings for specific pieces of equipment that may operate in specific conditions. For example, equipment that operates on rough surfaces might need to be programmed with a different impact threshold than equipment operating on smooth surfaces.

To configure impact settings for specific pieces of equipment, follow these steps:

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Equipment**.

3. Click an equipment ID.
4. To the right of the General Information box, click **Impact Settings**.
5. Click **Edit**.
6. In the Impact Thresholds box, enter the **Low** and **High** impact values for **X** and **Y**.
Note: The maximum value for X is 70. The maximum value for Y is 35.
7. If you want to lock the equipment after an impact, select **Yes** from the **Automatic Lockout** list.
Note: For safety reasons, equipment will not automatically shutdown on impact. Equipment must sit idle for 5 seconds before a lockout occurs.
8. If you want to sound an audible alarm or activate a flashing light upon impact, select **Yes** from the **Auxiliary On** list.
Note: Audible alarm kits are available as an option.
9. Enter the number of times a low impact must occur before sending a notification in the **Occurrences Allowed** field.
Tip: If you want a notification for every impact, set **Occurrences Allowed** to 1.
Note: If an alarm kit is installed on the truck, the alarm will sound when the notification is sent.
10. To register an impact when equipment is idle, select **Yes** from the **Sense At Idle** list.

When Sense At Idle is set to Yes, if an impact occurs when the truck is idle and the impact is greater than 0 but the captured value is 0, an impact will be registered. When Sense At Idle is set to No, if an impact occurs when the truck is idle, an impact will not be registered if the captured value is 0.
11. If you want to automatically acknowledge the low impact alarm, select **Yes** from the **Auto Acknowledge Alarm** list.
12. Click **Save**.

Module Settings

Use module settings to customize your InfoLink modules for your needs. You are able to configure module keypads and proximity ID readers, global timeouts, and emergency overrides.

Note: All module settings are globally applied to all equipment within InfoLink.

Configure InfoLink modules

1. Click the **Manage** tab and then click **Settings**.
2. On the left menu, click **Module**.
3. Click **Edit**.
4. In the Disable Keypad setting, choose **Yes** to disable the module keypad or **No** to allow the keypad to be used.

Note: This feature is only available in the Advantage package. Only disable this feature if your location mandates that operators must use HID cards instead of using the keypad. If the 811 emergency override feature is enabled, the keypad can still be used in case of emergency to unlock the equipment.

5. In the Read Format setting, select the format for your HID card reader.

Note: The 26-bit format is an industry standard. 34-bit and 35-bit formats are also available.

6. In the Read Facility Code setting, choose **Yes** to allow duplicate HID number entries or choose **No** to restrict HID number use.

Note: If you use multiple locations within InfoLink and need to allow the same HID number to be used in more than one location, enable this feature.

7. In the Idle Time setting, enter the amount of time equipment should sit idle before logging the operator out.

Note: The Idle Time setting is ignored for any equipment in maintenance mode.

8. In the Enable Override setting within the Emergency Override Information settings group, choose **Yes** to enable emergency overrides or **No** to disable this feature.

Note: The emergency override activates the equipment when the operator enters the 811 emergency ID on the keypad. The override

occurs immediately, and is not dependent on inspections or training certifications. After the equipment has been used in emergency override, the InfoLink module will display the message, "Equipment is Locked out."

Note: Emergency override can be used multiple times.

While in emergency mode, InfoLink cannot detect the name of the operator.

If you enable the emergency override feature, configure the following settings:

- a) In the Enable Duration setting, enter the amount of time that the equipment can be operated during an emergency 811 event. The equipment will remain operational for that duration, and if actively being used beyond the set duration, will lock out when idle for 5 seconds.
- b) In the Auxiliary On setting, choose **Yes** to activate the audible alarm.

Note: Audible alarm kits are available as an option.

9. Click **Save**.

Truck Event Codes

The Truck Event Codes section provides a list of the truck models whose event code information has been uploaded to InfoLink. The data within the files is used in the Monitor section and Service dashboard, Recent Events and is limited to Crown CAN-based equipment only.

Note: This feature is only available in the Advantage InfoLink package.

View truck event codes

1. Click the **Manage** tab.
2. Perform one of the following:
 - Click **Settings**.
 - Click **Uploads**.
3. On the left menu, click **Truck Event Codes**.

Upload truck event codes

1. On the Truck Event Codes page, click **Browse**.
2. Locate and select your event code .iltc file, then click **Open**.
Note: Contact the Crown Insight Service Department for updated .iltc files.
3. Click **Upload**.

Asset Management and Configuration

Use the Assets section to add, edit, and delete information about your equipment, inspection checklists, InfoLink modules, and other physical assets.

Manage Equipment Types

Use Equipment Types to configure InfoLink with all types of equipment used by your company. Equipment types are associated with equipment models. Once you create equipment types, you can add model numbers to track and manage specific equipment models.

View equipment types

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Equipment Types**.

Add an equipment type

1. On the Equipment Types page, click **Create**.
2. Enter information as needed.
Note: Fields marked with an asterisk (*) are required.
3. Click **Save**.

Edit an equipment type

1. On the Equipment Types page, click the **Edit** icon  next to the equipment type that you want to edit.
2. Modify the information as needed.
Note: Fields marked with an asterisk (*) are required.
3. Click **Save**.

Delete an equipment type

You can only delete an equipment type that does not have equipment models associated with it.

1. On the Equipment Types page, click the **Delete** icon  next to the equipment type that you want to delete.

Manage Equipment Models

Use Equipment Models to enter your equipment model numbers. You must create Equipment Types before adding models.

To view equipment models, follow these steps:

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Equipment Models**.

Add an equipment model

1. On the Equipment Models page, click **Create**.
2. From the **Choose creation method for model** list, choose **Manual** or **Upload**.

Note: If using the Upload creation option, browse to your equipment model .xml file.

3. Enter information as needed.

Note: Fields marked with an asterisk (*) are required.

4. If your model has a CAN Based IO configuration, click the **CAN Based IO** check box.

Note: Refer to your Service and Parts Manual to determine if the model has a CAN Based IO configuration.

5. Click **Save**.

Note: If you click CAN Based IO, operator skill level for truck performance can be configured. See [Enable operator performance levels](#) on page 62.

Edit an equipment model

1. On the Equipment Models page, click the **Edit** icon  next to the equipment model that you want to edit.
2. Modify the information as needed.

Note: Fields marked with an asterisk (*) are required.

3. Click **Save**.

Delete an equipment model

You can only delete an equipment model that does not have equipment associated with it.

1. On the Equipment Models page, click the **Delete** icon  next to the equipment model that you want to delete.

IO Settings

IO Settings refers to the input/output mappings for the pins wired on the equipment. The IO mappings tell the module what actual hardware is used on the equipment.

IO Settings should only be configured by trained Crown service technicians and engineers. These technicians and engineers must reference the Crown InfoLink Service and Parts Manual for detailed IO information.

Improper configuration may result in any number of the following:

- hour meters not advancing properly
- detection of an "idle condition" resulting in vehicle shut-down
- hour meters may improperly advance, causing inaccurate hour readings

Meter Settings

Meter Settings are mappings of individual meters that are tracked by InfoLink. Signals from the IO pin configuration are used to indicate how an hour meter should increment.

Currently there are six hour meters to configure:

- usage
- hydraulics
- travel
- open wire detection
- presence
- work
- custom meter 1
- custom meter 2

An hour meter will only increment properly when programmed conditions are met. Precondition is a state that must be met before conditions will be taken into consideration. See the Crown InfoLink Service and Parts Manual for more detail.

Enable operator performance levels

InfoLink can control equipment operator performance levels.

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Equipment Models**.
3. Click the name of the equipment model for which you want to set a performance level.
4. Click **Edit**.
5. In the Operator Skill Level to Truck Performance Level Mapping box, select a performance level from each **Level** list.
6. Click **Save**.

Edit the User Certificate to the correct operator skill level. See [Renew an operator's training certification](#) on page 98 and [Manually create a training certification record](#) on page 96 for more information.

Note: User Performance must be disabled on the equipment after configurations are made within the application. Contact your Service Technician for instructions.

Manage Equipment

InfoLink provides two methods of entering equipment records:

- upload a spreadsheet
- enter records individually

If you have a large number of equipment records to input, then the upload method is preferred. However, if you need to create only a few records, then entering them individually will suffice.

Tip: Entering a few records individually can help you get acquainted with InfoLink and how the various sections of the application work together.

You can add multiple equipment records at once by uploading a spreadsheet (mass upload) in .CSV format to InfoLink. Use the equipment list that you compiled during project setup (as described in [InfoLink set-up checklist](#) on page 11) for your first upload.

The .CSV file must contain the following information, in the order shown in [Figure 1: Sample equipment spreadsheet](#) on page 64:

- **Equipment Number (ID):** alphanumeric; up to 20 characters in length
- **Serial Number:** alphanumeric; up to 50 characters in length

Note: The serial number must be unique.

- **Equipment Model:** alphanumeric; must match an existing equipment model name in InfoLink

Note: This model name must also have a matching manufacturer specified in the .CSV file (model is specific to a manufacturer)

- **Location:** alphanumeric; must match an existing location in InfoLink
- **Manufacturer:** alphanumeric; must match a manufacturer in InfoLink

Note: The Equipment Model, Manufacturer name, and Location must already exist within InfoLink. If not, the upload will fail with errors.

Other types of information that you can upload in the .CSV include:

- **Model Year:** 4-digit year
- **Service Weight:** numeric; up to 5 digits in length
- **Service Weight Unit:** must be either lb or kg
- **Capacity:** numeric; up to 5 digits in length
- **Capacity Unit:** must be either lb or kg
- **Currency:** must be USD, AUD, BRL, CAD, CLP, EUR, GBP, RUB, or MXN
- **Battery:** alphanumeric; values include Conventional Charge, Conventional Charge, Opportunity Charge, Rapid Charge, or the field can be blank
- **Maintenance Limit:** numeric; up to 6 digits in length

Note: This feature is only available in the Advantage InfoLink package.

Figure 1: Sample equipment spreadsheet

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	*Truck ID	*Serial No.	*Model Description	*Location	Model Year (Install Date)	*Manufacturer	Battery	Service Weight	S/W Unit	Capacity	Capacity Unit	Maintenance Limit	Currency
2	RR1	6A123456	RR5700	Plant 12	2012	Crown	Charge	8500 lb		3350 lb		1200	USD
3	RR2	6A123457	RR5700	Plant 12	2012	Crown	Charge	8750 lb		3950 lb		1200	USD
4	RR3	6A123458	RR5700	Plant 12	2012	Crown		8750 lb		3950 lb		1200	USD
5	FC1	1A123456	FC4000	Plant 4	2011	Crown	Charge	12500 lb		4200 lb		1000	USD
6	FC2	1A123457	FC4000	Plant 4	2010	Crown	Charge	12500 lb		4200 lb		750	USD
7	FC3	1A123458	FC4000	Plant 4	2009	Crown		12500 lb		4200 lb		500	USD

Upload equipment records

1. Click the **Manage** tab and then click **Uploads**.
2. On the left menu, click **Equipment**.
3. Click **Browse** and select your .CSV file.

Tip: If your .CSV file contains a header row, click the **Header Row Included** check box.

4. Click **Upload**.

The records from the .CSV file will appear in the listing area.

5. To complete the upload, click **Commit**. The records are added to the Equipment section.

To cancel the upload, click **Empty**.

Add individual equipment records

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Equipment**.
3. Click **Create**.
4. Follow the steps in the wizard. To complete one step and move on to the next, click **Save**.

Note: Fields marked with an asterisk (*) are required.

Note: If you exit the wizard, all information saved up to that point will be retained. You can return to the wizard by editing the record.

Edit an equipment record

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Equipment**.
3. Click the **Edit** icon  next to the equipment record that you want to edit.
4. Make changes to the fields as necessary.

Note: Fields marked with an asterisk (*) are required.

5. Click **Save**.

Delete an equipment record

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Equipment**.
3. Click the **Delete** icon  next to the equipment record that you want to delete.

Module settings for individual equipment

You can customize an InfoLink module for the needs of a specific piece of equipment in a specific location.

Note: These module settings only affect the equipment being modified. To enable module settings for multiple equipment by location, see [Configure](#)

[module settings by location](#) on page 32. To enable global settings for all equipment, see [Module Settings](#) on page 56.

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Equipment**.
3. Click the ID of the equipment you want to customize.
4. To the right of the General Information box, click **Module**.
5. Click **Edit**.

The following sections explain the customization options for the module:

- [Keypad Information](#) on page 66
- [Idle Timeout Information](#) on page 66
- [Emergency Override Information](#) on page 67

Keypad Information

Operators use the keypad or proximity reader (if equipped) to log on to the equipment. Disable the keypad only if your location mandates that operators must use HID cards instead of using the keypad. If the 811 emergency override feature is enabled, the keypad can still be used in case of emergency to unlock the equipment.

Note: This feature is only available in the Advantage InfoLink package.

Idle Timeout Information

Idle timeout is the amount of time allotted for the equipment to sit idle before InfoLink automatically logs out the operator. This setting can be global, by location, or by equipment. You can customize the timeout for specific pieces of equipment as needed.

Note: Idle timeout is ignored for any equipment in maintenance mode.

Emergency Override Information

The emergency override activates the equipment when the operator enters the 811 emergency ID on the keypad. The override occurs immediately, and is not dependent on inspections or training certifications. After the equipment has been used in emergency override, the InfoLink module will display the message, "Equipment is Locked out."

Note: Emergency override can be used multiple times.

While in emergency mode, InfoLink cannot detect the name of the operator.

If you enable the emergency override feature, configure the following settings:

- In the Enable Duration setting, enter the amount of time that the equipment can be operated during an emergency 811 event. The equipment will remain operational for that duration, and if actively being used beyond the set duration, will lock out when idle for 5 seconds.
- In the Auxiliary On setting, choose **Yes** to activate audible alarms.

Note: Audible alarm kits are available as an option.

Manage Batteries

InfoLink has two battery management solutions: Simple Battery Management or Battery Health Monitor.

The Simple Battery Management feature tracks overall battery cycles, battery runtime, and battery warranty status. Simple Battery Management requires special HID cards, which are purchased from Crown.

The Battery Health Monitor (BHM) (HD1500) provides insight to the health of the battery. It is installed directly on the battery. The InfoLink module communicates with the BHM using a Bluetooth connection, providing data for:

- Missed charges
- Deep discharge
- High Temperature
- Low Water
- Missed Equalizations

- Short Charge Cycles
- Early Battery Charges
- Battery Usage Summary

BHM also tracks battery warranties, cycles, and operating properties such as voltages and hour ratings.

For more information, please contact a Crown Insite Technical Advisor.

Note: Battery Management must be enabled on the equipment. See [Module settings for individual equipment](#) on page 65.

Upload Battery Information

InfoLink provides two methods of entering battery records:

- enter records individually
- upload using a spreadsheet

You can add batteries individually. See [Add a battery](#) on page 70.

You can add multiple battery records at once to InfoLink by uploading from a spreadsheet (mass upload) in .CSV format.

The .CSV file must contain the following column headers, in the order shown, left to right:

- **Battery (ID)*:** alphanumeric; up to 30 characters in length
Note: Fields marked with an asterisk (*) are required.
- **Battery Health Module Equipped:** Yes or No
- **Battery FOB ID:** numeric; unique value.
Note: This field is required if the battery is NOT equipped with the Battery Health Monitor module. Must use battery FOBs available only from Crown.
- **Battery Serial No*:** alphanumeric; up to 50 characters in length.
Note: The serial number must be unique.

- **Battery Group:** one of four possible; selected from a list in InfoLink.
Note: This field is available only when Battery Health Module Equipped is checked.
 - Conventional Charge
: Using keyword Change in this column cell will populate field with Conventional Charge
 - Conventional Charge
: Using keyword Charge in this column cell will populate the field with Conventional Charge.
 - Opportunity Charge
 - Rapid Charge
- **Manufacturer:** alphanumeric; selected from a list in InfoLink.
- **Location*:** alphanumeric; selected from a list in InfoLink.
- **Battery Type*:** selected from a list in InfoLink.
- **Battery Voltage*:** selected from a list in InfoLink.
- **Amp Hour Rating*:** for batteries with Battery Health Monitor module this is a numeric entry field, for batteries set up as Simple Battery this is a selection from a list.
- **Battery Temperature Limit (C)*:** numeric; entry in degrees Centigrade only on lift trucks with Battery Health Monitor module
- **Purchase Date*:** date format; MM/DD/YYYY
- **Manufacturer's Warranty in Months:** numeric; up to 3 characters.
- **New Battery:** select for Yes.
- **Approximate Battery Cycles:** numeric; up to 4 characters.
Note: This field available only if New Battery is not selected.

Upload battery records

Seven filters are provided with drop down selections. When the upload .csv file does not contain required information, use a selection in the drop down window. The selection will also over write any information in the .csv file. Helpful when moving batteries to a new location.

1. Click the **Manage** tab and then click **Uploads**.
2. On the left menu, click **Battery**.
3. Click **Browse** and select your .CSV file.

Tip: If your .CSV file contains a header row, click the **Header Row Included** check box.

4. Click on the drop down window next to the label Encoding.
5. Select the universal code type of the .CSV file.

Note: UTF-8 is a common encoding.

6. Click **Upload**.

The records from the .CSV file will appear in the listing area.

7. To complete the upload, click **Commit**. The records are added to the Battery section.

To cancel the upload, click **Empty**.

Add a battery

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Batteries**.
3. Click **Create**.

: Associated Battery Health Module: choose module from drop-down list. This field is available only when the Battery Health Module Equipped box is checked.

The Battery Health Module MAC address is present only if the module is installed and has communicated.

4. Enter battery information as needed.

Note: Fields marked with an asterisk (*) are required.

5. Click **Save**.

Edit a battery

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Batteries**.
3. On the Batteries page, click the **Edit** icon  next to the battery that you want to edit.
4. Edit battery information as needed.

Note: Fields marked with an asterisk (*) are required.

5. Click **Save**.

Delete a battery

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Batteries**.
3. On the Batteries page, click the **Delete** icon  next to the battery that you want to delete.

Manage Inspection Checklists

An inspection checklist is a paperless OSHA pre-operational checklist. The inspection checklist provides a list of configurable questions that the operator must answer to determine that the equipment is safe to operate.

InfoLink records the operator responses to the inspection questions and records the duration of the inspection. You can configure inspection checklists to notify other personnel depending on the operator answer.

For example, if the checklist asks if there are any leaks and the operator answers yes, InfoLink can send a notification to the maintenance department. Also, answers to questions can also lock out a vehicle. Equipment operation depends on completion of the checklist.

Equipment is fully functional during the inspection time period. By default, the operator has two 15-minute opportunities to complete the inspection checklist. If the operator fails to complete the inspection checklist the second time, the equipment locks.

Creating inspection checklists is a multiple step process based on the number of languages configured for the location. First, configure general checklist properties that control inspection time, expiration, and

confirmation messages. Next, create the questions along with the answer options:

- Expected answer
- Whether the question is mandatory or not
- Whether the question triggers a lockout or not
- Order in which the questions appear throughout the checklist.

By default, every new checklist contains the same mandatory question: “Is the equipment safe to operate?” This question is the last question in your checklists. If the equipment is unsafe to operate, the equipment is locked.

If your location supports multiple languages, complete the master inspection checklist first. Upon completion, you can add translations as needed.

Note: The standard InfoLink package contains 11 fixed questions. These questions cannot be modified, nor can new questions be added. Questions can be randomized and can also be disabled for a particular checklist.

The Confirmation Message feature is not available in the standard package.

Add an inspection checklist

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Inspection Checklists**.
3. Click **Create**.
4. On the Inspection Checklist-Step 1 of 2 page, configure all general checklist information as follows.
 - a) From the **Location** list, select the location in which to use the checklist.
 - b) If you want to use an existing checklist as a template for a new one, select the existing checklist from the **Copy Questions From** list.
 - c) To set the amount of time an operator has to complete the checklist before timeout, enter that duration in the **Max Inspection Time** fields.
 - d) To set the amount of time that must elapse before a checklist must be completed again, enter that duration in the **Expire Time** fields.

- e) Select whether the expire time corresponds to one of the following from the **Expire Time Mode** list.
- Individual operator use of the equipment or
 - Every operator use of the equipment
- f) Select when you want to prompt the operator with a "Are You Sure?" confirmation question from the **Confirmation Message** list.

: Operators must answer the confirmation message with a 'yes' or 'no' response. If the operator responds with 'yes', the inspection checklist will continue with the next question unless question triggers a lockout. If the operator responds with 'no', the inspection checklist displays the same question for the operator to answer again.

None: No confirmation message appears for any question in the checklist.

All: A confirmation message appears whenever any question is answered unfavorably.

Mandatory: A confirmation message appears whenever a mandatory question is answered unfavorably.

- g) Click the **Randomize Questions** check box to reorder the inspection checklist each time it is used.

Note: Fields marked with an asterisk (*) are required.

5. Click **Save**.
6. On the Inspection Checklist-Step 2 of 2 page, add questions to the inspection checklist as follows.

- a) Click **Add Question**.
- b) Type your question into the two **Question** fields.

Note: Each field can only contain up to 20 characters. Keep your questions brief.

- c) Type the answer choices for the question into the **Answers** fields. Each question must have two possible answers.

- d) Select the expected answer from the **Expected Response** list.
- e) Specify whether the question is mandatory by selecting **Yes** or **No** from the **Mandatory** list.

Note: If the question is mandatory and the operator does not choose the expected answer, InfoLink locks the equipment.

Note: If necessary to change the order of questions, click the up and down arrows   next to the question you want to move.

7. Continue adding questions as needed.
8. Click **Save**.

Edit an inspection checklist

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Inspection Checklists**.
3. To modify a checklist's settings, click the **Edit** icon  next to the checklist that you want to edit. To modify the checklist questions, click the checklist Name and then click **Inspection Checklist Questions** to the right of the Checklist Information box.
4. Edit information as needed.

Note: Fields marked with an asterisk (*) are required.

5. Click **Save**.

Translate an inspection checklist

You can supply additional language translations for each checklist. Each checklist translation must be entered manually.

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Inspection Checklists**.
3. Click the Name of the checklist that you want to translate and then click **Inspection Checklist Questions** to the right of the Checklist Information box.
4. Click the **Add Translation** tab.
5. Select the language you are translating into from the **Language** list and then click **Select**.

Note: Select only a language that you have configured for the location.

6. Type the translations into the **Question** and **Answers** fields.
7. Click **Save**.
8. Complete this process for each language translation you need to add.

Delete an inspection checklist

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Inspection Checklists**.
3. On the Inspection Checklists page, click the **Delete** icon  next to the checklist that you want to delete.

Assign an inspection checklist to multiple equipment

To assign an inspection checklist to multiple pieces of equipment at once, follow these steps:

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Inspection Checklists**.
3. Click the name of the checklist that you want to assign to equipment.
4. To the right of the Checklist Information box, click **Equipment**.
5. Filter the equipment list as needed using the **Location**, **Type**, and **Model** lists and then click **Filter**.
6. Click **Add**.
7. Click the check box next to the equipment that you want to apply to the checklist.
8. Click **Save**.
9. Click **OK**.

Assign an inspection checklist to individual equipment

To assign an inspection checklist to a single piece of equipment, follow these steps:

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Equipment**.
3. Click the ID of the equipment that you want to assign the checklist to.

4. On the Equipment Detail page, click **Inspection Checklist**.
5. Click **Edit**.
6. Select the checklist that you want to assign to the equipment.
7. Click **Save**.

Module Associations

The Module section associates an InfoLink module to specific equipment. A module that does not have an associated Equipment ID or an Equipment Serial Number is currently not configured or associated to equipment.

If the InfoLink module display reads "Unconfigured Module - truck is operational", then the module is not associated with the equipment (and therefore is not active within InfoLink).

Associate a module with equipment

All equipment information including inspection checklist, users, and location, must exist in InfoLink before you can associate modules with equipment. Also, make sure that the key in the equipment that you are associating is turned on for at least 20 seconds after successful communication with the module.

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Modules**.
3. Select **No Locations** in the filter list to only show unassociated modules.

Note: To see the modules that are associated, change the filter to a specific location.

4. Click the MAC address for the module that you want to associate with equipment.
5. Verify that the Current Protocol field has a value (for example, Wired, PDO version 1, or PDO version 0).

Note: If the Current Protocol field does not contain a value, confirm that the equipment's key is turned on and that the equipment has completed its self-test.

6. Click **Associate Module**.
7. In the **Attached Equipment** list, select the equipment ID or Serial Number of the equipment that you want to associate with the module.
Note: The equipment shown in the Attached Equipment list currently do not have associated modules.
Note: Make sure that the module's MAC address matches the ID of the equipment to which it is physically attached. Associating the wrong equipment to the wrong module can result in invalid data.
8. If the Current Protocol field contains 'Wired', the Installation Hour Meter field appears after you select equipment. Type the hour meter reading shown on your equipment's H1 meter into the **Installation Hour Meter** field.
Note: If the equipment is CAN based, an hour meter is not required.
9. Click **Save**.

Edit a module association

Only modules without an assigned Equipment ID and Equipment Serial Number can be modified.

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Modules**.
3. Select **No Locations** in the filter list to only show unassociated modules.
Note: To see the modules that are associated, change the filter to a specific location.
4. Click the **Edit** icon  next to the MAC address of the module that you want to edit.
5. Edit information as needed.
6. Click **Save**.

Remove a module association

Only modules with an associated equipment ID can have their association removed. Before removing an association, confirm that no users are logged into the InfoLink module. You must remove the association before physically removing a module from a piece of equipment.

CAUTION: You can perform a forced removal if the module is not communicating with the server, but it is not recommended. Contact the factory before performing a forced removal.

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Modules**.
3. Select your equipment's location in the filter list to show associated modules.
4. Click the **Delete** icon  next to the module to remove its equipment association.

Tip: You can also click the module's MAC address and then click **Remove Association**.

Module Firmware and WLAN Updates

Occasionally, the InfoLink modules require firmware updates. InfoLink provides a means of updating module firmware and wireless settings. These updates are loaded into InfoLink and then pushed out to the modules over your wireless network.

Firmware updates can only be performed by trained Crown service technicians and engineers. Instructions for updating firmware are included in the InfoLink Service and Parts Manual.

WLAN updates can be performed by an InfoLink administrator. These updates change the modules' wireless network settings. Use the InfoLink Module Utility first to create a .ilmd file containing the new settings. Then upload the file to InfoLink and apply the settings to the modules.

Update InfoLink modules with new wireless settings

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Downloads**.

3. To the right of the Filter box, click **WLAN**.
4. If the .ilm file does not appear on the Downloads page, click **Browse** to locate the settings file.
5. Select the file and click **Open**.
6. Click **Upload** to add the settings file to the list on the Downloads page.
7. On the Downloads page, select the file and click **Select**.
8. On the Module Selection page, choose a location from the filter list.
9. Click the check box for each module you want to update.
10. Click **Update**.

Icon Explanation

The In Transfer icon is a visual indication that the transfer of the file to the module is in process. To end the process and leave the module intact, click on the icon.

Figure 2: In Transfer



The In Download icon is a visual indication that the download and install of the update is in process. To end the process and leave the module intact, click on the icon.

Figure 3: In Download



The Error icon is a visual indication that the transfer, download, or install has failed. Click on the MAC address or the icon for details about the failure.

Figure 4: Download Error



User Management

All users that are managed within InfoLink must be assigned a Role. These roles ultimately govern how users interact with InfoLink.

There are two types of roles that you can assign to users: Web Roles and Equipment Roles. These roles correspond to the type of work the users perform. Web roles are reserved for users who log on and use the InfoLink web-based software. Equipment roles are reserved for users who operate the equipment that are managed and monitored in InfoLink.

Web Templates

Equipment users have specific procedures and instructions to follow when interacting with equipment. Web users need specific permissions and restrictions when using InfoLink. These permissions are managed in InfoLink with Web Templates.

Note: You cannot modify web templates in the Standard InfoLink package. Contact Crown InfoLink Support if you require web template modifications to the Standard package.

Each web template grants different levels of access to the features within InfoLink. The number of web templates you need depends on the number of different web roles (types of web users) you have.

There are four levels of access to each InfoLink feature:

1. Delete
2. Add
3. Update
4. View

Delete is the highest level of access and has all lower levels of access. For example, users with delete access to equipment can also view, update, and add equipment. Users with add access can add, update, and view equipment; they cannot delete equipment.

Default templates

InfoLink contains five default web templates:

- **Template-Administrator Access**

The Administrator Access web template comes pre-configured and cannot be modified. Administrators are granted the highest level of access to InfoLink. They are the only users who can manage equipment roles, web roles, and web templates. The administrator can create a custom web role with any roles.

- **Template - DEF-TMPL-LOCADMIN**

The LOCADMIN template grants users the ability to view all dashboards, fully manage all users and equipment, and view all reports. Users assigned to this template can manage all aspects of operations, but cannot manage templates nor modify most settings within InfoLink.

- **Template - DEF-TMPL-SPRVR**

The SPRVR web template gives almost complete access to InfoLink with minimal ability for changing. This template also gives users full access to view, update, add, and delete notifications.

- **Template - DEF-TMPL-READ**

The READ web template grants users with read-only access to all InfoLink areas.

- **Template - DEF-TMPL-VISIT**

The VISIT web template grants users limited view-only access to InfoLink, and restricts them from the management areas completely. Users assigned to this template can view assets, certificates, alarms, and reports.

Add a web template

1. Click the **Manage** tab and then click **Users**.
2. On the left menu, click **Web Templates**.
3. Click **Create**.
4. Type a name for the template in the **Name** field.
5. Type a short description of what the template allows access to or for what type of users it is intended for in the **Description** field.

6. To use an existing template as a starting point, select the existing template from the **Copy From Template** list.
7. Select the permissions that you want to enable and disable in the template.
8. Click **Save**.

Edit a web template

1. Click the **Manage** tab and then click **Users**.
2. On the left menu, click **Web Templates**.
3. Click the **Edit** icon  next to the template that you want to edit.
Note: The administrator template cannot be edited.
4. Edit information as needed.
5. Click **Save**.

Delete a web template

1. Click the **Manage** tab and then click **Users**.
2. On the left menu, click **Web Templates**.
3. Click the **Delete** icon  next to the template that you want to delete.
Note: The administrator template cannot be deleted.

Web Roles

Web roles are the grouping of web users having a similar function or position. InfoLink provides five default web roles.

- DEF-Web-LOCADMIN (location-specific administrator)
- DEF-Web-MGT (management)
- DEF-Web-SITEADMIN (InfoLink administrator role)
- DEF-Web-SPRVR (supervisor)
- DEF-TEMP-VISIT (visitor)

Each default web role is linked to a default web template (see [Default templates](#) on page 82), which allows various levels of authorization to different areas within the InfoLink software.

Note: Only users with web roles associated with an administrator web template can add, edit, and delete other web templates.

Standard InfoLink users cannot make any modifications to web roles. Contact Crown InfoLink Support if you require modifications to the Standard package.

Add a web role

1. Click the **Manage** tab and then click **Users**.
2. On the left menu, click **Web Roles**.
3. Click **Create**.
4. Enter information as needed.

Note: Fields marked with an asterisk (*) are required.

5. Click **Save**.

Edit a web role

1. Click the **Manage** tab and then click **Users**.
2. On the left menu, click **Web Roles**.
3. Click the **Edit** icon  next to the role that you want to edit.
4. Edit information as needed.
5. Click **Save**.

Delete a web role

1. Click the **Manage** tab and then click **Users**.
2. On the left menu, click **Web Roles**.
3. Click the **Delete** icon  next to the role that you want to delete.

Equipment Roles

Equipment roles are the grouping of equipment users having a similar function or position. These roles have different combinations equipment rights. These rights are:

- **Remove Lockout**

Users can remove a truck from lockout mode by logging on and then logging off of the module.

- **Hardware Diagnostics**

Users can run hardware diagnostics on equipment based on model type.

- **Reset PM/Maintenance Mode**

Users can notify InfoLink that a PM has been performed. The notification resets the PM schedule for equipment. This right intended for personnel that perform maintenance on the equipment. Maintenance Mode keeps track how long the equipment is out of production due to maintenance reasons.

- **Inspection Not Required**

Users are not required to perform a pre-use inspection when logging into equipment.

- **Set Lockout Mode**

Users can force the equipment into lockout mode at the module.

- **No Certification Required**

Users do not need certification to use equipment. (Only an equipment location needs to be associated to the user for the equipment to be available.)

InfoLink provides four default equipment roles with the following rights:

- **DEF-EQUIP-ADMIN**
Remove Lockout, Hardware Diagnostics, Reset PM/Maintenance Mode, Inspection Not Required, Set Lockout Mode, No Certification Required
- **DEF-EQUIP-MAINT**
Remove Lockout, Hardware Diagnostics, Reset PM/Maintenance Mode, Inspection Not Required, Set Lockout Mode, No Certification Required
- **DEF-EQUIP-SPRVR**
Remove Lockout, Inspection Not Required, Set Lockout Mode, No Certification Required
- **DEF-EQUIP-OPRTR**
Operators do not have additional equipment rights, and are required to have training certification and must complete inspection checklists.

Add an equipment role

1. Click the **Manage** tab and then click **Users**.
2. On the left menu, click **Equipment Roles**.
3. Click **Create**.
4. Enter information as needed.

Note: Fields marked with an asterisk (*) are required.

5. Click **Save**.

Edit an equipment role

1. Click the **Manage** tab and then click **Users**.
2. On the left menu, click **Equipment Roles**.
3. Click the **Edit** icon  next to the role that you want to edit.
4. Edit information as needed.
5. Click **Save**.

Delete an equipment role

1. Click the **Manage** tab and then click **Users**.
2. On the left menu, click **Web Roles**.
3. Click the **Delete** icon  next to the role that you want to delete.

User Data Uploads

If you have several user records to input, use the upload feature to import a spreadsheet of user records into InfoLink. Create a spreadsheet with the required fields and save it as a .csv file.

Tip: You can use Microsoft Excel to create the spreadsheet.

The spreadsheet must contain the following required information, in the order shown in [Figure 5: Sample user spreadsheet](#) on page 88:

- **First Name:** alphanumeric; up to 15 characters in length
- **Last Name:** alphanumeric; up to 25 characters in length
- **Employee Number:** alphanumeric; up to 20 characters in length

Include the following information in the spreadsheet:

- **Middle Initial:** alphanumeric; 1 character in length
- **Email Address:** follow standard email address format; up to 50 characters in length
- **Equipment Role:** the exact name of the equipment role to assign to the user; if unknown, leave blank to apply the role specified in the upload filters

Note: If left blank and a role is not specified in the upload filters, then no role will be created for the user.

- **Equipment Login:** numeric; cannot match an existing login ID; if left blank, no equipment role or login will be assigned (this can be assigned later)

- **Web Role:** the exact name of the web role to assign to the user; if unknown, leave blank to apply the role specified in the upload filters

Note: If left blank and a role is not specified in the upload filters, then no role will be created for the user.

- Web Login:** alphanumeric; between 4 to 20 characters in length; if left blank, a login will be created upon upload using the first character in the user's First Name and the first 7 characters in their Last Name

Note: If a Web Role isn't specified, a Web Login will not be created for the user even if a Web Login is entered into the spreadsheet.
- Location:** the exact name of the user's location as entered in InfoLink; if unknown, leave blank to apply the location specified in the upload filters

Note: If left blank and a location is not specified in the upload filters, then no location will be created for the user. Locations are then set with the drop-down menu.

Tip: To enter multiple locations for a single user into the spreadsheet, use a "|" (pipe character) to separate the location entries.
- Department:** alphanumeric; up to 100 characters in length

Note: The department name must be entered exactly as entered in InfoLink.
- Shift:** alphanumeric; up to 100 characters in length

Note: The shift name must be entered exactly as entered in InfoLink.

Figure 5: Sample user spreadsheet

	A	B	C	D	E	F	G	H	I	J	K	L
	First Name*	Middle Initial	Last Name*	Employee Number*	Email address, if applicable	Equipment Role	Equipment Login	Web Role	Web Login	Location(s)	Department	Shift
1	Jane		Hernandez	5873		DEF-EQUIP-OPRTR	2206			Plant 8 Plant 7 Plant 9	072	1
2	Jeff		Smith	3758	jsmith@crowm.com	DEF-EQUIP-SPVR	5573	DEF-WEB-SPVR	jsmith	Plant 8	072	1
3	Jimmy		Jones	2871	jjones@crowm.com	DEF-EQUIP-MAINT	3723	DEF-WEB-MAINT	jjones	Plant 8 Plant 7	071	2
4	Denise		Acers	18717	dacers@crowm.com	DEF-EQUIP-ADMIN	18777	DEF-WEB-SITEADMIN	dacers	Plant 8 Plant 7 Plant 9		

Upload a user spreadsheet

- Click the **Manage** tab and then click **Uploads**.
- On the left menu, click **Users**.
- Click **Browse**.
- Locate and select the .csv spreadsheet file.
- If your .csv file contains a header row, click **Header Role Included**.
- If desired, select the optional default parameters within the File Upload section.

Note: The selections made in the User Default section will be used if they are not specified in the spreadsheet.

- Click **Upload**.

The user records appear in the listing area.

Note: If you receive the error "Line 1 Unable to load user. Reason: Equipment login is invalid", your spreadsheet contains a header row but you did not click Header Row Included.

8. If user records appear as intended in the listing, click **Commit**. If the upload results in an error or you do not want to keep the uploaded records, click **Empty**.

Manage Individual Users

You can add, edit, and delete users one at a time directly in InfoLink. While this is not an efficient process for adding all users in your organization, it is useful when adding new hires or specific users with specific roles or permissions. The process for editing a user is very similar to adding a user.

There are three types of users in InfoLink: web users, equipment users, and web and equipment users. The type of user depends on the role that you select when adding the user. The role also changes the types of information that you must enter for the user.

When adding users, much of the information needed is the same as that used when uploading multiple users (mass upload). See [User Data Uploads](#) on page 87 for details about this information.

Add a web user

A web user is a user who has an InfoLink login ID. Access is dependent on the role selected for the user.

1. Click the **Manage** tab and then click **Users**.
2. On the left menu, click **User Management**.
3. Click **Create**.
4. On the User Detail page, enter all basic details about the user and then click **Save**.
5. On the User Roles page, select a web role from the **Select Web Role** list and then click **Save**.

6. On the Web Role/Login page, enter the user's InfoLink login credentials and then click **Save**.

Note: If you do not have the user's login credentials, click **Skip**. You can add this information later by editing the user.

7. On the User Locations page, select all locations that apply to the user and then click **Save**.
8. On the Departments/Shifts page, select the user's department and shift and then click **Save**.

Note: If you do not know the user's department or shift, click **Skip**. You can add this information later by editing the user.

Add an equipment user

An equipment user is a user who has a login ID for operating equipment. Access is dependent on the role selected for the user.

1. Click the **Manage** tab and then click **Users**.
2. On the left menu, click **User Management**.
3. Click **Create**.
4. On the User Detail page, enter all basic details about the user and then click **Save**.
5. On the User Roles page, select an equipment role from the **Select Equipment Role** list and then click **Save**.
6. On the Equipment Role/Login page, enter the user's equipment login ID and then click **Save**.

Note: Valid numbers when using a key fob are from 10 to 65535. Valid numbers when using the keypad 10 to 9999999999. IDs cannot begin with 0.

Note: If you do not have the user's login credentials, click **Skip**. You can add this information later by editing the user.

7. On the User Certificate page, enter the user's equipment certification information and then click **Create**.

Repeat this step for each certificate that the user has.

8. Click **Next**.
9. On the User Locations page, select all locations that apply to the user and then click **Save**.

10. On the Departments/Shifts page, select the user's department and shift and then click **Save**.

Note: If you do not know the user's department or shift, click **Skip**. You can add this information later by editing the user.

11. On the User Equipment page, select all equipment that you want to associate with the user and then click **Save**.

Note: The equipment listed corresponds with what the user is certified to operate.

Add a web and equipment user

A web and equipment user is a user who has an InfoLink login and a login ID for operating equipment. Access is dependent on the role selected for the user.

1. Click the **Manage** tab and then click **Users**.
2. On the left menu, click **User Management**.
3. Click **Create**.
4. On the User Detail page, enter all basic details about the user and then click **Save**.
5. On the User Roles page, select a web role from the **Select Web Role** list, select an equipment role from the **Select Equipment Role** list, and then click **Save**.
6. On the Equipment Role/Login page, enter the user's equipment login ID and then click **Save**.

Note: Valid numbers when using a key fob are from 10 to 65535. Valid numbers when using the keypad 10 to 9999999999. IDs cannot begin with 0.

7. On the Web Role/Login page, enter the user's InfoLink login credentials and then click **Save**.

Note: If you do not have the user's login credentials, click **Skip**. You can add this information later by editing the user.

8. On the User Certificate page, enter the user's equipment certification information and then click **Create**.

Repeat this step for each certificate that the user has.

9. Click **Next**.
10. On the User Locations page, select all locations that apply to the user and then click **Save**.
11. On the Departments/Shifts page, select the user's department and shift and then click **Save**.

Note: If you do not know the user's department or shift, click **Skip**. You can add this information later by editing the user.

12. On the User Equipment page, select all equipment that you want to associate with the user and then click **Save**.

Note: The equipment listed corresponds with what the user is certified to operate.

Edit a user

1. Click the **Manage** tab and then click **Users**.
2. On the left menu, click **User Management**.
3. Click the **Edit** icon  next to the user record that you want to edit.
4. Follow the steps in the wizard. To complete one step and move on to the next, click **Save**.

Note: Fields marked with an asterisk (*) are required.

Note: If you exit the wizard, all information saved up to that point will be retained. You can return to the wizard by editing the record.

Delete a user

1. Click the **Manage** tab and then click **Users**.
2. On the left menu, click **User Management**.
3. Click the **Delete** icon  next to the user record that you want to delete.

Assign a Language to a User

You can change a user's default language to one of the configured additional languages. Each user requiring a different default language must be edited individually.

Note: You cannot change users' default languages in the Standard InfoLink package.

1. Click the **Manage** tab and then click **Users**.
2. On the left menu, click **User Management**.
3. Click the **Edit** icon  next to the user that you want to edit.
4. Select the default language for the user in the **Language** list.
5. Click **Save**.

Associate Equipment with Users

Once you have users entered into InfoLink you can associate them with the equipment they need to operate. You can associate equipment with users in two ways:

- Associate equipment by user: add one or multiple equipment to a single user
- Associate user by equipment: add one or multiple users to a single piece of equipment

Associate equipment by user

1. Click the **Manage** tab and then click **Users**.
2. On the left menu, click **User Management**.
3. Click the name of the user who you want to associate equipment with.
4. To the right of the User Information box, click **User Equipment**.
5. Click **Edit**.

6. Select the equipment that you want to associate with the user.

Tip: To associate all equipment with the user, click **Select All**.

Note: If there is no equipment available to associate with the user, confirm that the user has a location set, a training certificate for the specified equipment, or an assigned equipment role.

7. Click **Save**.

Associate user by equipment

1. Click the **Manage** tab and then click **Assets**.
2. On the left menu, click **Equipment**.
3. Click the ID of the equipment that you want to associate users with.
4. To the right of the General Information box, click **Equipment Users**.
5. Click **Edit**.
6. Move users as necessary from the Available list to the Associated list.

>	Move the selected items from the Available list to the Associated list.
>>	Move all items from the Available list to the Associated list.
<	Move the selected items from the Associated list to the Available list.
<<	Move all items from the Associated list to the Available list.

Note: If there are no users available to associate with the equipment, confirm that users have a location set, a training certificate for the specified equipment, or an assigned equipment role.

7. Click **Save**.

Manage Training Certification

InfoLink provides several means of managing users' training certification. You can upload a spreadsheet in .csv format that contains certification information for multiple users, add individual user certification information, identify upcoming training needs, and control how and when certification is renewed and removed.

If the equipment is Crown CAN Based, InfoLink can control the performance level of the equipment operator. An Operator's performance level, once configured, can be modified at anytime. The operator's performance setting must be configured for each training certification (equipment type). All equipment of that type will allow the operator to login at the same level based on their certification.

If you have a number of certification records to input, use the upload feature to import a spreadsheet of records into InfoLink. Create a spreadsheet with the required fields and save it as a .csv file.

Tip: You can use Microsoft Excel to create the spreadsheet.

The spreadsheet must contain the following required information, in the order shown in [Figure 6: Sample certification spreadsheet](#) on page 96:

- **First Name:** alphanumeric; up to 15 characters in length
- **Last Name:** alphanumeric; up to 25 characters in length
- **Employee Number:** alphanumeric; up to 20 characters in length
- **License Number:** alphanumeric; up to 24 characters in length
- **Equipment Type:** alphanumeric; must match an equipment type in InfoLink
- **Trainer First Name:** alphanumeric; up to 15 characters in length
- **Trainer Last Name:** alphanumeric; up to 25 characters in length
- **Training Date:** MM/DD/YYYY format; must start at least 1 day prior to the Expiration Date; cannot be more than 10 years prior to the current date or start more than 1 year after the current date
- **Expiration Date:** MM/DD/YYYY format; must start at least 1 day after the Training Date and cannot expire more than 15 years from the current date

The spreadsheet can also contain the following information:

- **Middle Initial:** alphanumeric; 1 character in length
- **Trainer Middle Initial:** alphanumeric; 1 character in length
- **Skill Level:** must be L1, L2, or L3

Figure 6: Sample certification spreadsheet

	A	B	C	D	E	F	G	H	I	J	K	L
	First Name*	Middle Initial	Last Name*	Employee Number*	License Number*	Equipment Type*	Trainer First Name*	Trainer Middle Initial	Trainer Last Name*	Training Date* (Date MM/DD/YYYY)	Expiration Date (MM/DD/YYYY)	Skill Level (L1, L2, L3)
1	Jane		Hernandez	5879	1254	TSP	John		Davis	11/01/2009	11/01/2012	L1
2	Jane		Hernandez	5879	1254	RC	John		Davis	11/01/2009	11/01/2012	L2
3	Jane		Hernandez	5879	1254	RC	John		Davis	11/01/2009	11/01/2012	L3
4	Jerry		Smith	5489	1807	FC	John		Davis	11/01/2009	11/01/2012	

Upload operator certification

1. Click the **Manage** tab and then click **Uploads**.
2. On the left menu, click **Certificates**.
3. Click **Browse**.
4. Locate and select the .csv spreadsheet file.
5. If the .csv file contains a header row, click **Header Role Included**.
6. Click **Upload**.
7. To assign all equipment access to the users, select **Yes** in the **Assign Equipment** list.
8. Click **Commit**.

Manually create a training certification record

1. Click the **Manage** tab and then click **Users**.
2. On the left menu, click **User Management**.
3. Click the name of the user for whom you want to create a certification record.
4. To the right of the User Information box, click **User Certificates**.
5. Click **Create**.

6. Enter information as needed.

Note: Fields marked with an asterisk (*) are required.

Note: Enter a Skill Level only if performance levels are turned off on the equipment. Performance levels are configured for CAN equipment models.

7. Click **Save**.

Remove user access privileges upon certification expiration

You can have InfoLink remove an equipment operator's access from equipment when their training certificate expires. The operator will not be able to log into the equipment until the certificate has been renewed within InfoLink.

Note: This feature applies to all users when their certification expires.

1. Click the **Manage** tab and then click **Settings**.
2. On the left menu, click **Training Certification**.
3. Click **Edit**.
4. Click **Remove user access from equipment upon certificate expiration**.
5. Click **Save**.

Automatically acknowledge training alarms upon certificate renewal

InfoLink can automatically acknowledge certificate alarms upon renewal of the operator's training certification.

1. Click the **Manage** tab and then click **Settings**.
2. On the left menu, click **Training Certification**.
3. Click **Edit**.
4. Click **Auto acknowledge training alarms with certificate renewal**.
5. Click **Save**.

Renew an operator's training certification

You can renew operator training certificates directly within InfoLink. Once an operator has completed refresher training on a piece of equipment, you can edit their user record with new training and expiration dates.

1. Click the **Manage** tab and then click **Users**.
2. On the left menu, click **User Management**.
3. Click the name of the user for whom you want to create a certification record.
4. To the right of the User Information box, click **User Certificates**.
5. Locate the certificate you want to renew and click **Renew**.
6. Enter the new training date and expiration date.
7. Click the **Acknowledge Current Alarm** check box to have InfoLink automatically acknowledge the current certification alarm.
8. Click **Save**.

Renew multiple certificates

1. Click the **Manage** tab and then click **Settings**.
2. On the left menu, click **Training Certification**.
3. To the right of the Certificate Expiration Information box, click **Renew Certificates**.
4. Select the certificates you want to renew and then click **Add**.
5. Click **OK**.
6. Click **Renew**.
7. Complete the required **Certificate Renewal Information** fields and then click **Save**.
8. Click **OK**.

Instant Messaging

You can send messages from within InfoLink to the InfoLink console on your fleet's equipment. These messages can contain multiple answer options for the operator to choose from in response. In the Message Log, you can view the messages that have been previously sent to the operators and their responses.

Messages can only be sent from the InfoLink application; operators cannot send messages (other than responses) from the InfoLink module. Only web users with web roles that allow messaging can send messages.

For example, the Maintenance Department receives a notification that a PM is due on a piece of equipment. Instead of the Maintenance Department going to the equipment operator, the Maintenance department can send a message telling the operator to bring the truck to the Maintenance Department for a PM.

Note: This feature is only available in the Advanced InfoLink package.

Send Instant Messages to Equipment

1. Below the InfoLink logo, click **Messages**.
2. In the Filters section, select **Operator** or **Equipment**, and then select additional filters as needed to locate the operators or equipment that you want to send the message to.
3. At the bottom of the Filter section, select the operators or equipment that you want to send the message to.

You can hold down the Ctrl key to select multiple message recipients.

Note: Only active operators or equipment (the InfoLink module had communicated with the server within the past 5 minutes) can be sent a message.

Note: An asterisk (*) next to the operator or equipment name indicates that their module does not support responses to messages. They can only acknowledge that the message was received.

4. In the Message section, type your message. Each Message field can support up to 20 characters.
5. If you want operators to respond to the message, click the **Response** check box and type the responses that operators can choose from. Each Response field can contain up to 10 characters.

Note: If you enable responses, you must enter at least 2 response choices.

6. Click **Send**.

Monitor

The Monitor section provides a quick view of day-to-day operations. You can view live information about equipment (assets), batteries, certificates and alarms. You also can access dashboards that organize information about operators and equipment in convenient lists and graphs.

Dashboards

The Dashboards section presents real-time data in a rich visual format that is useful for monitoring and managing your fleet and operators.

You can configure each dashboard to signal warnings or alerts based on the activity of your fleet or operators. These warnings and alerts color representations on the dashboard.

The indicators use the following color coding:

- **Gray (no color):** indicator preferences are not configured
- **Green:** no warnings or alerts have occurred
- **Yellow:** the warning trigger has occurred

Note: The warnings required to trigger this indication is configurable and is set in preferences.

- **Red:** the alert trigger has occurred

Note: The alerts required to trigger this indication is configurable and is set in preferences.

In addition to the indicators, each management module on the dashboard displays a quick description of what triggered the warning or alert.

Compliance dashboard

The Compliance Dashboard tracks recent inspection failures including:

- **Failed Operational:** An inspection checklist question was answered unfavorably but the question was not configured to lock the equipment.
- **Failed Lock:** An inspection checklist question was answered unfavorably and the question was configured to lock the equipment.
- **Canceled:** Operator canceled the inspection checklist two consecutive times.
- **Timed Out:** Operator allowed the inspection checklist to time out two consecutive times.

The notifications and individual events are captured but lockout does not occur until one of the following occurs:

- There are two consecutive time-out events
- There are two consecutive canceled events
- There are two events, one time-out event and one canceled event

Configure Compliance dashboard preferences

1. Click the **Monitor** tab and then click **Dashboards**.
2. Click **Compliance**.
3. Click + to expand Compliance Preferences.
4. Click **Edit**.
5. Use the filters at the top to define what the dashboard monitors.

Filters include:

- **Date:** the window of time in which the dashboard monitors and displays information.
- **Location:** the location being monitored
- **Department:** the department being monitored
- **Shift:** the shift being monitored
- **Equipment Type:** the equipment types being monitored
- **Equipment:** the equipment being monitored

6. Click the check box next to the preferences that you want to activate and set the Warning and Alert thresholds as needed.

Warning and alert settings include:

- **Recent Inspection Failures: Inspection Failures Received**
Recent inspection failures are inspection checklists that the operator failed. These failures include all categories.
: The number of failures in the list is selectable in increments of the last 1, 5, 10, or 25 failures.
- **Safety Checklist Totals: Total Checklist Failures**
Total checklist failures are the total number of failed inspection checklists.
- **Safety Checklist-Completion Details: Elapsed Time Too Short**
Elapsed time too short represents that the inspection checklists are being completed in less than the time allotted within the preferences. Operators are possibly completing the inspection checklists without actually inspecting the equipment.
- **Safety Checklist-Completion Details: Elapsed Time Too Long**
Elapsed time too long represents inspection checklists being completed in more than the time allotted within the preferences. Operators are taking too much time to complete inspections.
- **Certification Expiration: Certificate Expiration Forecast**
The certificate expiration forecast provides a list of training certificates that are expired, expiring within one week, two weeks, and three weeks.
- **Less than '#' minutes are too short for an inspection**
The amount of time (in minutes) in which it is determined that inspections would be completed too quickly.
- **More than '#' minutes are too long for an inspection**
The amount of time (in minutes) in which it is determined that inspections would be completed too slowly.

7. Click **Save**.

Recent Inspection Failures

The Recent Inspection Failures portion of the Compliance dashboard lists the most recent inspection failures. The list box at the upper right allows you to change the number of recent failure alarms to display (1, 5, 10, 25).

You can view and acknowledge alarms and view information about who acknowledged an alarm and their comments.

To view details about an alarm, hover the cursor over the alarm identification in the category column. The Action column allows you to perform a quick acknowledgment by clicking the blue check-mark  or acknowledge with comments by clicking the white clipboard . After acknowledging an alarm, hover the mouse over the green check-mark  to view who acknowledged the alarm and their comments, if added.

InfoLink's Messaging feature can also be used from this screen. When available, the telephone icon  indicates that the operator is currently logged into the InfoLink module, is within range of an access point, and can be contacted using the messaging feature.

Safety Checklist Totals

The Safety Checklist Totals portion of the Compliance dashboard graphs real-time data of inspection checklists status. The graph shows the total number and percentage of failed inspection checklists as well as a breakdown of failures by category.

Detailed information can be viewed by clicking on the individual bar.

Safety Checklist - Completion Details

The Safety Checklist - Completion Details portion of the Compliance dashboard graphs real-time data of inspection checklist statuses. The graph includes total number of checklists completed and the average completion time. The top 10 operators who are finishing the inspection checklist too quickly and the top 10 operators taking too much time to complete the inspection checklists are also listed.

Detailed information can be viewed by clicking on the individual bar.

Certification Expiration

The Certification Expiration portion of the Compliance dashboard graphs a forecast of training certificates that are already expired and those that will expire this week, next week, within 2 weeks, and within 3 weeks from the current date.

Detailed information can be viewed by clicking on the individual bar.

Impacts dashboard

The Impacts dashboard provides a real-time view of impact information.

Configure Impacts dashboard preferences

1. Click the **Monitor** tab and then click **Dashboards**.
2. Click **Impacts**.
3. Click **+** to expand Impact Preferences.
4. Click **Edit**.
5. Use the filters at the top to define what the dashboard monitors.

Filters include:

- **Date:** the window of time in which the dashboard monitors and displays information.
 - **Location:** the location being monitored
 - **Department:** the department being monitored
 - **Shift:** the shift being monitored
 - **Equipment Type:** the equipment types being monitored
 - **Equipment:** the equipment being monitored
6. Click the check box next to the preferences that you want to activate and set the Warning and Alert thresholds as needed.

Warning and alert settings include:

- **Recent High Impacts: High Impacts Received**
List of the high impact alerts that are received. Equipment with an impact sensor allows InfoLink to record impacts that are harmful to the equipment or operator.
: The number of failures in the list is selectable in increments of the last 1, 5, 10, or 25 failures.
- **Impact Totals: Total Equipment Impacts**
List of the total number of impacts for all equipment that have high and low impact configurations.
- **Impact Totals: Total Equipment High Impacts**
List of the total number of high impacts for all equipment.
- **Impact Totals: Total Equipment Low Impacts**
List of the total number of low impacts for all equipment.
- **Impact Totals: Operators with Most Impacts**
List of the most impacts, both high and low impacts, during the specified date range.
- **Impact Totals: Operators with Most High Impacts**
List of the operators with the largest number of high impacts during the specified date range.
- **Impact Totals: Operators with Most Low Impacts**
List of the operators with the smallest number of high impacts during the specified date range.

7. Click **Save**.

Recent High Impacts

The Recent High Impacts portion of the Impacts dashboard lists the most recent high impacts recorded. You can view and acknowledge alarms and view information about who acknowledged an alarm and their comments. The InfoLink Messaging feature can be used from this screen.

When available, the telephone icon  indicates that the operator:

- Is logged in to InfoLink
- Is within range of an access point
- Can be contacted using messaging

The list box at the upper right allows you to change the number of recent impact events to display (1, 5, 10, 25). There can be numerous access points to InfoLink throughout a facility. When an impact occurs, the access point communicating with the module is recorded. This access point is listed. The Action column allows you to perform a quick acknowledgment by clicking the blue check-mark  or acknowledge with comments by clicking the white clipboard . After acknowledging an alarm, hover the mouse over the green check-mark  to view who acknowledged the alarm and their comments, if added.

Impact Totals

The Impact Totals portion of the Impacts dashboard graphs the total number of impacts as well as the operators with the most impacts.

Detailed information can be viewed by clicking on the individual bar.

Impacts By Locations and Equipment Type

The Impacts By Locations and Equipment Type portion of the Impacts dashboard graphs the total number of impacts by location, the average number of impacts by location, the total number of impacts by equipment type, and the average number of impacts by equipment type.

Detailed information can be viewed by clicking on the individual bar.

Productivity dashboard

The Productivity dashboard provides a real-time view of equipment and operator productivity, and helps to identify top and bottom performers.

Note: This feature is only available in the Advantage InfoLink package.

Configure Productivity dashboard preferences

1. Click the **Monitor** tab and then click **Dashboards**.
2. click **Productivity**.
3. Click **+** to expand Productivity Preferences.
4. Click **Edit**.
5. Use the filters at the top to define what the dashboard monitors.

Filters include:

- **Date:** the window of time in which the dashboard monitors and displays information.
 - **Location:** the location being monitored
 - **Department:** the department being monitored
 - **Shift:** the shift being monitored
 - **Equipment Type:** the equipment types being monitored
 - **Equipment:** the equipment being monitored
 - **Equipment Role:** the equipment role being monitored
6. Click the check box next to the preferences that you want to activate and set the Warning and Alert thresholds as needed.

Warning and alert settings include:

- **Travel/Lift Time per Hour: Avg. Travel/Lift per Hour- All Operators**
Travel/Lift Time per Hour is the average amount of time, per hour, that the operator is traveling or lifting.
- **Exclude Operators with less than '#' login Hours per Day**
This preference excludes operators with less than the set amount of login time from the Travel/Lift per Hour and Productivity Detail widgets.

7. Click **Save**.

Travel/Lift per Hour

The Travel/Lift per Hour portion of the Impacts dashboard graphs the average fleet travel/lift time per hour and average travel/lift time per hour by Equipment Type.

Detailed information can be viewed by clicking on the individual bar.

Productivity Detail

In the Productivity Detail window of the Productivity dashboard, select the Equipment Type from the drop down menu. A graph displays the percentage of time spent for travel, lift, blending, stopped, and no operator.

Select a Productivity Detail from the drop down menu to view two additional graphs that compare the lowest ranked operators and the highest ranked operators.

Detailed information can be viewed by clicking on the individual bar.

Utilization dashboard

The Utilization dashboard provides a real-time view of the total amount of equipment in use (Logged On), the status of the equipment that is in use (Travel/Lift, Stopped, No Operator), equipment that is not in use (Logged Off), and the equipment that is in maintenance mode (Service). The Utilization dashboard also provides a summary of equipment utilization by average hours and simultaneous login.

Configure Utilization dashboard preferences

1. Click the **Monitor** tab and then click **Dashboards**.
2. click **Utilization**.
3. Click + to expand Utilization Preferences.
4. Click **Edit**.
5. Use the filters at the top to define what the dashboard monitors.

Filters include:

- **Date:** the window of time in which the dashboard monitors and displays information.
 - **Location:** the location being monitored
 - **Equipment Type:** the equipment types being monitored
 - **Equipment:** the equipment being monitored
6. Click the check box next to the preferences that you want to activate and set the Warning and Alert thresholds as needed.

Warning and alert settings include:

- **Current Equipment Status: Total Logged On**

Total Logged On indicates the total amount of equipment that is in use (number of operators signed into an InfoLink module).

- **Equipment Utilization Summary: Avg. Equipment Logon Hours**

Average Equipment Logon Hours refers to the average number of hours the equipment is logged on (Travel/Lift, Stopped, or No Operator on the equipment), along with the average number of hours the equipment is in Maintenance Mode (Service).

7. Click **Save**.

Current Equipment Status

The Current Equipment Status portion of the Utilization dashboard graphs the total number and percentage of equipment that is in use (Logged On), the status of the equipment that is in use (Travel/Lift, Stopped, No Operator on equipment), equipment that is not in use (Logged Off), and the equipment that is in “Maintenance Mode” (Service).

Detailed information can be viewed by clicking on the individual bar.

Equipment Utilization Summary

The Current Equipment Status portion of the Utilization dashboard graphs averages of equipment in use (Logged On), the status of the equipment that is in use (Travel/Lift, Stopped, No Operator on equipment), equipment that is not in use (Logged Off), and the equipment that is in “Maintenance Mode” (Service).

Detailed information can be viewed by clicking on the individual bar.

Simultaneous Equipment Login Peak

The Simultaneous Equipment Login Peak portion of the Utilization dashboard graphs the peak number of equipment in use at the same time by hour of the day. This graph is useful for analyzing equipment usage patterns during shifts or across shifts.

Detailed information can be viewed by clicking on the individual bar.

Note: This feature is only available in the Advantage InfoLink package.

Energy dashboard

The Energy dashboard provides a real-time view of energy use. Includes:

- Low water, low BDI, and high temperature occurrences
- Missed charge equalizations
- Total battery changes
- Early battery changes
- Battery changes due to short charge cycle
- Total time for battery change
- Percentage of normal to irregular battery changes
- Overall battery cycles
- Battery run time
- Battery warranty data on electric lift trucks
- Total fuel used, total tank changes, and fuel run out events on the Crown C-5 IC truck

This information only appears if the related assets exist in InfoLink.

Note: This feature is only available in the Advantage InfoLink package.

Configure Electric-General dashboard preferences

1. Click the **Monitor** tab and then click **Dashboards**.
2. Click **Energy**.
3. Click **Electric-General** and then click + to expand Electric-General Preferences.
4. Click **Edit**.
5. Use the filters at the top to define what the dashboard monitors.

Filters include:

- **Date:** the window of time in which the dashboard monitors and displays information.
 - **Location:** the location being monitored
 - **Installed New:** whether the battery was new when installed in the truck
 - **Amp Hour Rating:** the capacity of the batteries being monitored
 - **Battery Voltage:** the voltage of the batteries being monitored
 - **Battery Group:** the battery group being monitored
6. Click the check box next to the preferences that you want to activate and set the Warning and Alert thresholds as needed.

Warning and alert settings include:

- **Energy Quick Status: Percentage of Batteries in Alert Status**
A quick status of which batteries are in a low water state, a high temperature state, or a battery at or below the low BDI.
- **Low Water Occurrences: Most Occurrences per Battery**
Batteries that are low on water and are being used for extended period of times cause battery damage, decrease its life, and increase operation costs through battery replacement.
- **High Temp Occurrences: Batteries with Most Occurrences**
Batteries that are used over a certain temperature for an extended time cause battery damage, decrease its life, and increase operation costs through battery replacement.
- **Missed Equalization: Total Number of Missed Equalization**
A battery maintenance treatment that improves battery performance and efficiency. If batteries are not equalized properly, they are unable to reach a full charge which leads to a short battery life.

- **Missed Equalization: Missed Equalization Limit per Battery**
The maximum number of times that a battery is allowed to miss an equalization.
- **Battery Warranty: Batteries out of Warranty**
Uses the manufacturer warranty (in weeks) to show batteries that are in Good Standing, Near End Warranty, and those batteries that are out of warranty.

7. Click **Save**.

Configure Electric - Change dashboard preferences

1. Click the **Monitor** tab and then click **Dashboards**.
2. click **Energy**.
3. Click **Electric - Change** and then click **+** to expand Electric - Change Preferences.
4. Click **Edit**.
5. Use the filters at the top to define what the dashboard monitors.

Filters include:

- **Date:** the window of time in which the dashboard monitors and displays information.
 - **Location:** the location being monitored
 - **Department:** the department being monitored
 - **Shift:** the shift being monitored
 - **Equipment Type:** the equipment types being monitored
 - **Equipment:** the equipment being monitored
 - **Installed New:** whether the battery was new when installed in the truck
 - **Amp Hour Rating:** the capacity of the batteries being monitored
 - **Battery Voltage:** the voltage of the batteries being monitored
 - **Battery:** the specific battery being monitored
6. Click the check box next to the preferences that you want to activate and set the Warning and Alert thresholds as needed.

Warning and alert settings include:

- **Number of Battery Changes: Number of Changes per Day**
The number of times a battery was changed on the equipment.
- **Early Battery Changes: Equipment with Most**
Early Changes are batteries being changed before the desired discharge value is met. This is based on the BDI percentage per battery change. A battery change is recorded when a new battery is installed with at least 30% change in BDI.
- **Early Battery Changes: Operators with Most**
Operators with Most Early Changes are operators changing batteries too early. This is based on the BDI percentage per battery change. A battery change is recorded when a new battery is installed with at least 30% change in BDI.
- **Early Battery Changes: Batteries with Most Charge Cycles**
Early Changes are batteries being changed before the desired discharge value is met. Batteries with Most Charge Cycles monitors the number of times a battery is charged.
- **Short Charge Cycles: Equipment with Most**
The Equipment with Most Short Charge Cycles is the total number of times a battery was replaced with a battery that is not fully charged.
- **Short Charge Cycles: Operators with Most**
Operators with Most Short charge Cycles are operators who are most frequently replacing batteries with ones that are not fully charged.
- **Battery Change Time: Equipment by Longest Avg Change Time**
Equipment with Longest Avg Change Time tracks the equipment with the longest average battery change time.
- **Battery Change Time: Operators by Longest Avg Change Time**
Operators with Longest Avg Change Time tracks the operators who spend the most time, on average, changing batteries.

- **Total Change Cycles: Batteries with Most Charge Cycles**

Batteries with Most Charge Cycles monitors batteries with the most cycles being used outside of the specifications.

- **Work Time Hours: Batteries with Lowest Work Time Avg**

Batteries with Lowest Work Time Avg monitors batteries for the average number of work hours they are used per battery cycle.

7. Click **Save**.

Configure IC Equipment dashboard preferences

1. Click the **Monitor** tab and then click **Dashboards**.
2. click **Energy**.
3. Click **IC Equipment** and then click **+** to expand IC Equipment Preferences.
4. Click **Edit**.
5. Use the filters at the top to define what the dashboard monitors.

Filters include:

- **Date:** the window of time in which the dashboard monitors and displays information.
 - **Location:** the location being monitored
 - **Department:** the department being monitored
 - **Shift:** the shift being monitored
 - **Equipment Type:** the equipment types being monitored
 - **Equipment:** the equipment being monitored
6. Click the check box next to the preferences that you want to activate and set the Warning and Alert thresholds as needed.

Warning and alert settings include:

- **Total Fuel Used: Total Fuel Used per Day**

The Total Fuel Used measures the total fuel, by weight, used for Crown IC equipment. This allows you to monitor fuel usage per operator or equipment.
- **Total Fuel Used: Top 10 Equipment by Fuel Usage per Day**

Top 10 Equipment by Fuel Usage per Day lists the top 10 equipment with the highest pounds of fuel used for the date range selected.
- **Total Fuel Used: Top 10 Operators by Fuel Usage per Day**

Top 10 Operators by Fuel Usage per Day lists the top 10 operators with the highest pounds of fuel used based on the date range selected.
- **Total Fuel Used: Total Tank Changes per Day**

Total Tank Changes tracks the total number fuel tanks being changed on the Crown IC equipment in the past 24 hours. This helps you to better understand what equipment and operators have the most changes.
- **Total Fuel Used: Top 10 Equipment Tank Changes per Day**

Top 10 Equipment Tank Changes tracks the equipment with the most number of tank changes on Crown IC equipment.
- **Total Fuel Used: Top 10 Operator Tank Changes per Day**

Top 10 Operator Tank Changes tracks operators who have the highest count of tank changes on Crown IC equipment.
- **Fuel Run Out Events: Total Fuel Run Outs**

Fuel Run Out tracks equipment being run until the fuel tank becomes empty.
- **Fuel Run Out Events: Top 10 Equipment by Fuel Run Outs**

Top 10 Equipment by Fuel Run Outs tracks the equipment with the highest count of fuel run out events.

- **Fuel Run Out Events: Top 10 Operator by Fuel Run Outs**

Top 10 Operator by Fuel Run Outs tracks the operators with the highest count of fuel run out events.

7. Click **Save**.

Energy Quick Status

The Energy dashboard lists which batteries are currently in:

- Low water state
- High temperature state
- Low BDI state

When available, the telephone icon  indicates that the operator is:

- Currently logged in to the InfoLink module
- Within range of an access point
- Can be contacted using the messaging feature

The Action column (available only on low water events) allows you to:

- Perform a quick acknowledgment by clicking the blue check-mark 
- Acknowledge with comments by clicking the white clipboard .

After acknowledging an alarm, hover the mouse over the green check-mark

 to view who acknowledged the alarm and their comments, if added.

Battery Warranty

The Battery Warranty portion of the Energy dashboard graphs how many batteries are currently in good standing, out of warranty, and the ones nearing the end of it.

High Temperature Occurrences

The High Temperature Occurrences portion of the Energy dashboard graphs total number of high temperature occurrences per battery and a report with details of the occurrences.

Low Water Occurrences

The Low Water Occurrences portion of the Energy dashboard graphs the total number of low water occurrences per battery.

Missed Equalizations

The Missed Equalizations portion of the Energy dashboard graphs batteries that have missed an equalization. A battery should be equalized every 7 days. If batteries are not equalized properly, they are unable to reach a full charge which leads to a short battery life.

Number of Battery Changes

The Number of Battery Changes portion of the Energy Dashboard provides the total number of battery changes and average BDI value when the battery is changed. A battery change is recorded when a new battery is installed with at least 30% BDI change.

This view also provides an overview of the percentage of Normal Changes and Irregular Changes (Irregular Changes are Early Battery Changes and Short Charge Cycles). Total cost of battery changes, based on the cost per change, is also measured.

Early Battery Changes

The Early Battery Changes portion of the Energy Dashboard graphs the number of batteries being changed before the desired discharge value is met. The dashboard can be viewed by the top 10 equipment or the top 10 operators. Users can be alerted when an operator has too many early battery changes. The information in this dashboard is used to identify unsatisfactory operator behavior.

Click on any part of the graph to view additional information. The drill down Battery Disconnect Detail Report shows the total time for all battery changes and the average time per change for the fleet and operator.

Short Charge Cycles

The Short Charge Cycles portion of the Energy Dashboard graphs the most recent number of batteries being changed with a battery that is not fully charged (BDI reading of less than 80%). Users can be alerted when an operator has too many short charge cycles. This dashboard can be used to correct undesirable operator behavior.

Battery Change Time

The Battery Change Time portion of the Energy Dashboard graphs the most recent number of batteries being changed and equipment with the largest average battery change time. This chart can also be viewed by the average time it takes an operator to change a battery. This can be used to compare operator performance to the average performance and set future performance goals.

Total Change Cycles

The Total Change Cycles portion of the Energy dashboard monitors the total number of batteries that are in InfoLink, as well as batteries with the most cycles and which ones are being used outside the specifications.

Battery manufacturers only guarantee performance for a certain number of cycles. Total Change Cycles shows the number of batteries outside that cycle range, giving you a high level view of which batteries in the fleet are increasing in age and use.

Work Time Hours

The Work Time Hours portion of the Energy Dashboard tracks how many batteries are operating below their set expectations in relation to the current number of batteries. It also tracks batteries with the lowest average run time, showing how many hours a battery gets used between cycles, and shows when a battery is losing usability. Work Time Hours also includes the average run time per charge, which can help you judge battery performance based on the entire battery fleet.

Total Fuel Used

The Total Fuel Used portion of the Energy dashboard graphs the total weight of fuel used for Crown IC equipment and shows fuel usage per operator or equipment.

The graph breaks down fuel use for a selectable period of time and indicates the average fuel used per truck performance level. You can also see the total cost of fuel used, and a breakdown of cost per truck performance level shows the average cost per hour of all trucks.

Total Tank Changes

The Total Tank Changes portion of the Energy dashboard shows you the most recent total number of tank changes in your fleet. This graph helps you better understand what equipment and operators have the most total tank changes.

Fuel Run Out Events

The Fuel Run Out Events portion of the Energy dashboard shows you the top 10 most recent fuel run out events in your fleet. This helps you understand which equipment and operators have run out of fuel the most.

Service dashboard

Service Dashboards provide you with real-time service information beneficial to maintaining your equipment:

- immediate insight into which equipment is currently being serviced and its status
- equipment coming due for service
- maintenance history
- issues occurring at equipment (as reported by operators and by the equipment)
- productivity hours lost due to maintenance (Planned: PM or Unplanned: Other, Breakdown, Operator Error)
- equipment availability

Note: This feature is only available in the Advantage InfoLink package.

Configure Service dashboard preferences

1. Click the **Monitor** tab and then click **Dashboards**.
2. Click **Service**.
3. Click **+** to expand Service Preferences.
4. Click **Edit**.
5. Use the filters at the top to define what the dashboard monitors.

Filters include:

- **Date:** the window of time in which the dashboard monitors and displays information.
 - **Location:** the location being monitored
 - **Equipment Type:** the equipment types being monitored
 - **Equipment:** the equipment being monitored
6. Click the check box next to the preferences that you want to activate and set the Warning and Alert thresholds as needed.

Warning and alert settings include:

- **Equipment in Maintenance Mode: Number of Equipment in Maintenance Mode**

Number of Equipment in Maintenance Mode tracks service times by automatically prompting the maintenance person upon logging into the InfoLink module when maintenance mode is active. If Maintenance Mode is activated, a reason code must be selected. The reason codes are: PM, Operator Error, Breakdown, or Other.

- **Equipment Availability: Available: Scheduled Time**

Equipment availability is time the equipment is available for use (not in maintenance mode) within the Projected Use Schedule.

- **Failed checklist Events: Failed Checklists: Lockout or Operational**

Failed Checklist Events are inspection checklist questions answered unfavorably. Lockout or Operational checklist failures can indicate that operators are seeing issues with the equipment that may need to be addressed.

- **Failed Checklist Events: Equipment with Most Failed Checklists: Lockout or Operational per Day**

Equipment with the most reoccurring Lockout or Operational checklist failures on any given day.

- **Planned Maintenance Forecast: PMs Due**

Planned Maintenance Forecast tracks equipment approaching scheduled PM. This is used to help prevent a PM from becoming overdue.

7. Click **Save**.

Equipment in Maintenance Mode

The Equipment in Maintenance Mode portion of the Service dashboards shows what equipment is in maintenance mode. InfoLink records and displays real-time information explaining why:

- Equipment is in maintenance mode
- Maintenance was performed on the equipment

The Service dashboard then itemizes the reasons as planned maintenance (PM) or unplanned maintenance.

Maintenance Mode records service times by prompting maintenance personnel when they log in to the InfoLink module when maintenance mode is activated. If Maintenance Mode is activated, the maintenance worker must select a reason code, that InfoLink records.

There are four reason codes:

- PM (planned maintenance)
- Operator Error (unplanned maintenance-downtime)
- Breakdown (unplanned maintenance-downtime)
- Other (unplanned maintenance-downtime)

Note: This feature is only available in the Advantage InfoLink package.

You can assign a status and comment to each piece of equipment in maintenance mode by clicking the comment bubble icon.

Maintenance Mode Summary

The Maintenance Mode Summary portion of the Service dashboards shows the total amount of time that equipment has spent in maintenance mode. A pie charts shows the hours spent for planned maintenance (PM) compared to unplanned maintenance (Operator Error, Breakdowns, and Other). Maintenance Mode Summary also shows you the percentage breakdown for each reason the equipment was put into maintenance mode.

Each pie section has a click-through ability to view the detailed events that make up that section. The detailed information includes:

- Equipment ID
- Date and time maintenance mode was entered
- Hour Meter maintenance mode was entered
- Total time in maintenance mode
- User who exited maintenance mode

Equipment Availability

The Equipment Availability portion of the Service dashboard shows the total time that the equipment is available for use within a 24-hour schedule and Scheduled Time. The graphs are ordered from least to most available.

Information about individual equipment can be viewed by clicking on the graph. Viewing the overlap between when the equipment was scheduled and when it was down may help you understand the affect that maintenance is having on your operation.

Unplanned Maintenance History

The Unplanned Maintenance History portion of the Service dashboard shows a comparison between the equipment with the least and most unplanned maintenance over the past 12 months. Unplanned maintenance is broken down by reason: Breakdown, Operator Error, or Other. You can filter the graphs to display either all equipment or a specific equipment type.

The Least Mean Time Between graph displays the equipment with the least amount of time between unplanned maintenance. This can indicate that maintenance is being performed too often; equipment is costing more in maintenance and may need to be replaced.

The Most Mean Time Between graph displays the equipment with the most amount of time between unplanned maintenance. This can indicate that equipment is performing well and keeping maintenance costs down. Compare this graph with the Least Mean Time Between graph to set a benchmark for equipment.

Click the graph for detailed information about the equipment. The detailed information includes:

- a quarterly breakdown of unplanned maintenance and planned maintenance records showing the date and times
- hour meter showing scheduled versus actual maintenance
- the time the equipment was in maintenance mode
- who performed the maintenance.

Failed Checklist Events

The Failed Checklist Events of the Service dashboard shows the top 10 equipment inspection failures due to failed checklist questions. Tracked failures are Failed Locked or Failed Operational status.

Click the graph for detailed information. An Inspection Failures by Equipment report shows what questions were answered incorrectly.

Recent Equipment Events

The Recent Equipment Events section of the Service dashboard consists of two listings which separate Re-Key and Non Re-Key Events. You can filter equipment by Show All, In Maintenance Mode, and Not in Maintenance Mode. You can also filter the listings to show the Last 1, 5, 10, or 25 events.

Click the InfoPoint icon to view the troubleshooting section of the Service and Parts Manual, which provides information regarding the event code, step-by-step troubleshooting instructions, and wiring diagrams.

Equipment Event History

The Equipment Event History section of the Service dashboard shows the total number of events, the top 10 events (Re-Key and Non Re-Key Notification) that have occurred, and the top 10 equipment with the most events (Re-Key and Non Re-Key Notification) during the specified time period.

Click on the graphs for additional information. Clicking on the Most Re Key-Events and Most Non Re-Key Events for a piece of equipment generates an 'Event Codes by Equipment' report that shows each event with the details. Clicking on the Most Re-Key Action Events and Most Non Re-Key Notification Events bar for an event produces an 'Event Code by Frequency' report that shows each event with the details.

Planned Maintenance Forecast

The Planned Maintenance Forecast section of the Service dashboard displays the equipment that is due for a PM, how many hours overdue, and forecasts up to 10 pieces of equipment approaching their PM schedule to prevent a PM becoming overdue. Use the filter to switch between equipment on an hourly PM schedule and those equipment on a calendar based PM schedule.

Click the graph for additional detailed information. Click on the PMs Due bar to generate a 'Projected PM Due' report detailing the equipment due for a PM; sorted by the equipment most overdue. Click on an individual bar within the Time Overdue to generate a 'Projected PM Due' report detailing information for that equipment only. Click on an individual bar within the PM Forecast to generate a 'Projected PM Due' report detailing information for that equipment only.

Completed Planned Maintenance History

The Completed Planned Maintenance History portion of the Service dashboard shows the frequency that a piece of equipment is having planned maintenance events. You can filter the graphs to show all PM Schedules or a specific PM Schedule.

The Least Mean Time Between graph shows the equipment with the least amount of average time between PMs, indicating that PMs are being performed too frequently. The Most Mean Time graph shows the equipment with the most amount of average time between PMs, indicating that PMs are not being performed on time.

Assets

The Assets section provides a current overview of equipment operation within your facility. This section includes real-time information by equipment ID and type, showing:

- which operator is logged on to specific equipment
- the approximate location of the equipment within the facility (based on the current wireless access point being communicated with)
- the current equipment hour meter reading
- when the next PM will be due

Equipment List

The equipment list is located in the Assets group of the Monitor tab. This list shows the following details:

ID	The equipment identification number. To view the serial number and module MAC address, hover your cursor over the Equipment ID. If the equipment is a CAN based truck, the BDI percentage is displayed. If the equipment is IC, the fuel level is displayed.
Type	The equipment model type.
Location	The equipment location.
AP	The last known wireless access point that the equipment communicated with.
Current User	The last person to log in to the equipment.
Hour Meter	The current hour meter reading on the equipment.
PM Due (H/D)	The number of hours and days before the equipment next planned maintenance.
Last Update	The last date and time that the equipment InfoLink module communicated with the server.

Click any column heading to sort the list by the data in that column.

The equipment list highlights equipment in orange when:

- Module has not communicated with the server within the specified time period
- Module has communicated but no operator use is recorded

Hover the cursor over the alert icon  for details about the communication. A lightning bolt  indicates that the equipment is communicating with an access point.

The equipment list indicates if the equipment is locked out or in maintenance mode. Hover your cursor over the lock  or caution icon  for more information.

Note: This feature is only available in the Advantage InfoLink package.

The Equipment List is refreshed every 5 minutes. To refresh the list manually, click the refresh icon  at the top right of the Equipment List. Using the filter at the top left of the Equipment List filters the list by location. Find a specific piece of equipment by ID with the Equipment Search field located below the list.

View equipment detail

1. Click the **Monitor** tab and then click **Assets**.
2. Click the ID of the equipment you want to view.

View equipment inspection checklist

1. Click the **Monitor** tab and then click **Assets**.
2. Click the ID of the equipment you want to view.
3. To the right of Equipment Detail, click **Equipment Inspection Checklist**.

View equipment PM schedule

1. Click the **Monitor** tab and then click **Assets**.
2. Click the ID of the equipment you want to view.
3. To the right of Equipment Detail, click **Equipment PM Schedule**.

View truck event codes

1. Click the **Monitor** tab and then click **Assets**.
2. Click the ID of the equipment you want to view.
3. To the right of Equipment Detail, click **Truck Event Codes**.

Certificates

The Certificates section lists operators and their associated training certification, filtered by expiration date. This list shows the following details:

Name	The name of the operator.
License Number	The training certificate license number.
Type	The equipment type that the certificate pertains to.
Expiration	The certification expiration date.

Click on any column heading to sort the list by that column's data. Use the filter located at the top left of the Certificates List to filter the list by time until expiration date.

The alert icon  represents a training certificate that has expired.

Alarms

The Alarms List shows the system generated alarm notifications for:

- Certificate
- Emergency
- Impact
- Inspection
- Planned Maintenance (PM)

View and acknowledge alarms on a daily basis. This aids in InfoLink maintenance.

The Alarms List shows the following details:

Type	The type of alarm: Impact, Inspection, PM, Certification
Equip ID	The equipment ID associated with the alarm.
Equip Serial No.	The equipment serial number associated with the alarm.
Location	The location of the equipment.
Operator	The operator who triggered the alarm.
Unlocked By	The user who cleared the equipment lockout.
Date & Time	The date and time that the alarm was triggered.
Action	Indicates if the alarm requires acknowledgment.

Click on any column heading to sort the list by that column's data. Use the filters located at the top of the Alarms List to filter the list by location, status, type, date, and impacts. To manually refresh the list, click the refresh icon  located at the top right of the Alarms List.

View inspection alarm detail

With inspection alarms, there is the possibility of equipment being Locked Out. Equipment will be Locked Out if the alarm type is Inspection Canceled, Inspection Timed Out, or Inspection Failed.

An inspection alarm is generated when an operator fails an inspection checklist or when the inspection checklist times out.

1. Click the **Monitor** tab and then click **Alarms**.
2. Click the **Inspection** alarm type of the alarm you want to view.

The Inspection Alarm list provides the following information:

Field Name	Description
Operator	The user who attempted to complete the checklist.
Equip ID	The equipment identifier for which the user was completing the checklist.
Equip Serial No.	The equipment serial number.
Model	The equipment model.
Checklist Version	Internally used to keep track of the current checklist updates.

Field Name	Description
Checklist Name	The name of the checklist.
Alarm Type	Inspection Failed: Questions were answered unfavorably. Inspection Canceled: Checklist was canceled twice by User. Inspection Timed Out: Checklist reached max inspection time elapsed two times.
Alarm Date	The date and time the alarm occurred at the equipment.
Time Elapsed	The total amount of time it took the user to complete the checklist.
Location	The location where the equipment is located.
Questions Failed	Only when alarm type is Inspection Failed. A list of all the questions that were answered unfavorably.
Lock Symbol	Equipment has locked out.
Lock Cleared By	Person who cleared the lock at the equipment. Only if equipment is configured to lock out.
Lock Cleared Date	Date and time the lock was cleared on the equipment.

A lock icon  represents an equipment lockout.

The following information is provided if the alarm has been acknowledged:

Field Name	Description
Acknowledged By	The user who acknowledged the alarm within the InfoLink software.
Acknowledged Date	The date and time the user acknowledged the alarm.
Acknowledgment Comments	Comments added by the person who acknowledged the alarm.

View PM alarm detail

A PM Alarm indicates that planned maintenance is due for a piece of equipment.

An inspection alarm is generated when an operator fails an inspection checklist or when the inspection checklist times out.

1. Click the **Monitor** tab and then click **Alarms**.
2. Click the **PM** alarm type of the alarm you want to view.

The PM Alarm list provides the following information:

Field Name	Description
Equipment ID	The equipment identifier that requires a PM to be performed.
Equipment Serial No.	The equipment serial number.
Model	The equipment model.
Alarm Date	The date and time the alarm occurred at the equipment.
Hour Meter	The equipment hour meter when the truck first came in range to report a PM has not been performed.
PM Due	The hour meter and/or date the PM became due. (This will depend on the PM schedule chosen for this equipment.)
Location	The location where the equipment is located.

A lock icon  represents an equipment lockout.

The following information is provided if the alarm has been acknowledged:

Field Name	Description
Acknowledged By	The user who acknowledged the alarm within the InfoLink software.
Acknowledged Date	The date and time the user acknowledged the alarm.
Acknowledgment Comments	Comments added by the person who acknowledged the alarm.

View impact alarm detail

An impact alarm indicates an impact has been detected by the InfoLink system. This impact alarm could be for high or low threshold impacts. With impact alarms, there is the possibility of equipment being Locked Out. This will depend on the impact detection settings. If a lock out is generated an Equipment Locked message is displayed.

1. Click the **Monitor** tab and then click **Alarms**.
2. Click the **Impact** alarm type of the alarm you want to view.

The Impact Alarm list provides the following information:

Field Name	Description
Equipment ID	The equipment identifier that acquired the impact.
Equipment Serial No.	The equipment serial number.
Model	The equipment model.
Impact Date	The date and time the impact occurred.
Operator	The user logged into the equipment at the time of impact.
Location	The location where the equipment is located.
Access Point Location	The access point the InfoLink module was communicating with at the time of impact.
Impact Data	This will indicate the type (high or low) thresholds, the limit that was set for this equipment, and the value captured.
Lock Cleared By	Person who cleared the lock at the equipment. Only if equipment is configured to lock out.
Lock Cleared Date	Date and time the lock was cleared on the equipment.

A lock icon  represents an equipment lockout.

The following information is provided if the alarm has been acknowledged:

Field Name	Description
Acknowledged By	The user who acknowledged the alarm within the InfoLink software.
Acknowledged Date	The date and time the user acknowledged the alarm.
Acknowledgment Comments	Comments added by the person who acknowledged the alarm.

View certification alarm detail

A certification alarm indicates that an operator's training certification has expired. Depending on the Training Certification settings, there is the possibility of the operator's access being removed from associated equipment of the same equipment type. See [Manage Training Certification](#) on page 95.

1. Click the **Monitor** tab and then click **Alarms**.
2. Click the **Certificate** alarm type of the alarm you want to view.

The Impact Alarm list provides the following information:

Field Name	Description
Operator	The user whose certificate has expired.
Equipment Type	The equipment type to which the certificate is for.
License No.	The certificate license number.
Expiration Date	The date the certificate expired.
Alarm Date	The date the certificate alarm was generated.

A lock icon  represents an equipment lockout.

The following information is provided if the alarm has been acknowledged:

Field Name	Description
Acknowledged By	The user who acknowledged the alarm within the InfoLink software.
Acknowledged Date	The date and time the user acknowledged the alarm.
Acknowledgment Comments	Comments added by the person who acknowledged the alarm.

Acknowledge an alarm

Acknowledging an alarm ensures that the appropriate personnel are aware that an alarm was generated and is being taken care of in accordance to your company's policies and procedures. An alarm can be acknowledged with or without a comment. It is recommended to acknowledge alarms with comments.

After acknowledging an alarm, the alarm will be removed from the unacknowledged alarm listing. The alarm can be retrieved when viewing "all" alarms or "acknowledged" alarms listing, via the filter.

1. Click the **Monitor** tab and then click **Alarms**.
2. Filter the Alarms List as needed.
3. Perform one of the following:
 - To acknowledge the alarm only (without comments), click the acknowledge icon .
 - To acknowledge the alarm with comments, click the acknowledge with comments icon .
 - To view alarm details and then acknowledge the alarm, first click the alarm type. To acknowledge the alarm only, click **Acknowledge**. To acknowledge the alarm and leave a comment, click **Acknowledge w/ Comment**.
4. If leaving a comment, type your comment into the space provided and then click **Save**.

Add additional comments to an alarm

1. Click the **Monitor** tab and then click **Alarms**.
2. In the **Status** filter, select **Acknowledged** and then click **Filter**.
3. Locate and click the alarm type for the alarm you want to comment on.
4. Click **Add Comment**.
5. Type your comment into the **New Comment** field.

Tip: Click **Re-send alarm notification email with the above comments** to send the comment to everyone who originally received the first notification.
6. Click **Save**.

Reports

InfoLink provides real-time and historical reports by equipment and by operator that improves your fleet management. The reports help identify:

- Equipment abuse
- Operators in need of training

Finding these problems will:

- Reduce product damage
- Increase safety awareness
- Establish measurable levels of performance

InfoLink can even help identify facility conditions requiring attention, such as:

- Rough and damaged floors
- Uneven dock plates
- Damaged racks
- Debris on floors

InfoLink reports simplify fleet optimization with summaries by individuals, defined groups, or the entire fleet. You can produce reports in four different formats: HTML, PDF, XLS, and CSV. For best printing results, PDF is recommended.

Reports are organized into seven groups:

- Compliance
- Impacts
- Productivity
- Utilization
- Energy
- Service
- Admin

Compliance Reports

The following reports are available:

- **Certification by Operator**

This report lists user training certifications and groups the certificates by operator name. This report can be filtered by Equipment Type, Location, Equipment Role, and User. Information is grouped by operator, then equipment type. Summary provides total number of certificates and total number of users.

- **Certification by Equipment Type**

This report groups the user training certifications based on the associated equipment type for the certification. This report can be filtered by Equipment Type, Location, Equipment Role, and User. Information is grouped by equipment type, then by operator. Totals and averages are displayed by certificate and equipment type.

- **Certification by Expiration**

This report lists all user-training certifications due to expire within the input expiration period. This report can be filtered by Expiration Period, Equipment Type, Location, Equipment Role, and User. Information is grouped by equipment type, then by operator. Summary is displayed by certificate and equipment type.

- **Emergency Override Activation**

This report lists the 811 Emergency override usage. This report can be filtered by date, location, equipment type, and ID/Serial Number. Information is grouped by location then equipment ID. Totals are displayed by total number of times the override activation, 811 feature, was used.

- **Inspection Failure by Equipment**

This report lists each inspection that had at least one question answered as a failure. The report includes each failed question, expected answer, received answer, and whether the result generated a lock. The report also shows the date and time of the inspection, the amount of time it took to complete the inspection, and the operator who performed the inspection.

This detailed report can be filtered based on ID/Serial Number, equipment type, location, and the date of inspection. Information is grouped by location, equipment type, and then Equipment ID/Serial

Number. Summary data gives average elapsed time, number of inspections, number of questions failed, and if a lock is generated.

Note: This report collects numerous elements and is several pages in length. Limit the date range selection to the fewest number of days needed and specify a particular equipment ID/serial number to receive a result in a timely manner. The larger the date range, the longer it will take to receive the report.

- **Inspection Results by Equipment**

This report lists details of each inspection completed for the selected equipment. The report includes each question, expected answer, received answer, the result (pass or failure), and if the result generated a lock. The report also shows the date and time of the inspection, the amount of time it took to complete the inspection, and the operator who performed the inspection.

This detailed report can be filtered based on ID/Serial Number, equipment type, location, and the date of inspection. Information is grouped by location, then equipment type/serial number. Totals and averages will be displayed by elapsed time, total number of inspections, total number of questions failed, and whether a lock was generated.

- **Inspection Results by Operator**

This report lists details of each inspection completed by an operator. The report includes each question, expected answer, received answer, the result (pass or failure), and if the result generated a lock. The report also shows the date and time of the inspection, the amount of time it took to complete the inspection, and the equipment that was inspected.

This detailed report can be filtered based on operator, location, and the date of inspection. Information is grouped by Operator, then Equipment ID/serial number. Totals and averages will be displayed by average elapsed time, total number of inspections, total number of questions failed, and if a lock is generated. Report summaries and totals are included.

Note: This report collects numerous elements and is several pages in length. Limit the date range selection to the fewest number of days needed and specify a particular user to receive a result in a timely

manner. The larger the date range, the longer it will take to receive the report.

Impact Reports

The following reports are available:

- **Impacts By Operator**

InfoLink provides real-time reporting when impacts are experienced by an operator or equipment. This report can assist management in determining if additional training is needed to change operator behavior.

This report contains the following information:

- List of all impacts experienced by an operator.
- Differentiates between high and low impacts based on the threshold settings. Displays current settings and actual impact g force captured.
- The last access point the equipment communicated to.
- Can be filtered by Date of Impact, Location, Impact Type, Equipment Role, and User.

Information is grouped by operator, location, and then equipment ID. Totals will be displayed by total number of low impacts, total number of high impacts, total number of impacts, and total number of locks generated.

- **Impacts By Equipment**

This report lists all impacts collected by ID/Serial Number and User. The report can be filtered by impact date, location, impact type, equipment type, and ID/Serial Number. Information is grouped by location, equipment ID then by user. Totals are displayed by total number of low impacts, total number of high impacts, total number of impacts, and total number of locks generated.

Productivity Reports (Advantage version)

The following reports are available:

- **Login By Operator**

Login By Operator reports list the time and date the operator logs on and off the InfoLink module. The report includes the total number of logins and logoffs the operator performed during the time period selected.

- **Operator Hours**

The Operator Hours report features operator activity details. This report can assist in recognizing exceptional operators, or help you to determine which truck is best for the application.

Additional details include:

- Analysis of productivity with log-on vs. idle hours
- Data on operator-selected functions (for example, travel vs. lift/lower)

Information is grouped by operator, then Location, and then Equipment ID. Totals and averages will be displayed by Location and operator. Report totals are also included.

- **Operator Productivity - Travel/Lift Per Logged On Hour**

Operator Productivity - Travel/Lift Per Logged On Hour reports list total time spent in traveling/lifting, travel only, lift only, blending, stopped, and no operator for each user. Data is grouped by location then equipment type.

- **Operator Duplicate Login**

Operator Duplicate Login reports list the operators that are logged in on multiple equipment at the same time. The report includes Operator's name, equipment ID/Serial Number, and login and logoff times.

- **Productivity Summary**
Productivity Summary reports generate the summary of Operator Productivity.
- **Operator Scorecard**
This is an operator based report for a date range. The report shows the Operator, Location, Avg. Inspection Time, Logon Time, Impacts, and Impacts per Login Hour.

Utilization Reports

The following reports are available:

- **Equipment Hour Meter**
The Equipment Hour Meters report lists the hourly usage for each equipment within the data range specified. The report includes Logon hours, Idle hours, Travel hours, Hydraulic hours, and total Usage hours. The usage is grouped by location, equipment type, and individual equipment.
- **Equipment Utilization**
The Equipment Utilization report lists the hourly usage and utilization for all equipment within the date range specified. The report includes Logon hours, Usage hours, Available hours, and the Usage difference. The usage difference is the amount of difference between Usage hours and Projected Availability hours. The report is grouped by location, equipment type, and individual equipment.
- **Login By Equipment**
The Login By Equipment report lists the operator name, time and date the operator logs on and off the InfoLink module. The report displays the total number of logins by equipment during the time period selected.
- **Simultaneous Equipment Login Summary-H of D**
This report is a graphical representation (line graph) of the peak number of equipment being used at the same time during the hour of the day. The summary assists as an insight for analyzing usage patterns during shifts or across shifts. The graph also presents the current number of equipment available based upon the filter criteria.

The hourly figures are calculated based on the comparison of hourly updates tracked for each day specified in the date range.

- **Equipment Performance By Location**

This report lists the performance and utilization information of equipment by location.

Utilization Reports (Advantage version)

The following reports are available:

- **Equipment Logged On - Utilization Summary**

Equipment Logged On -Utilization Summary is a report of equipment utilization by equipment ID. The report lists total travel/ lift, stopped, no operator, and login time per user.

- **Simultaneous Equipment Login Summary - Daily**

This report is a graphical representation (line graph) of the peak number of equipment being used at the same time during the day. The overview by any date range shows trends in peak usage. The summary provides the information that was supplied in generating the report. This includes the date range, location, number of equipment types selected, and current fleet size.

Energy Reports (Advantage version)

The following reports are available:

- **Battery Disconnect Time Summary**

Battery Disconnect Time Summary is a report of battery disconnect time by equipment ID. The report lists user, date/time, BDI percentage, and duration for each battery disconnect event.

- **Equipment Battery Disconnect Detail**

The Equipment Battery Disconnect Detail report details each battery change/charge for a single equipment ID. It lists equipment serial number, equipment type, mode, model year, manufacturer, capacity, service weight, install date, install hour meter reading, last AP

information, current hour meter, PM schedule, next PM due, and battery disconnect time breakdown.

- **Fuel Run Out Events by Equipment**

The Fuel Run Out Events by Equipment report lists all fuel run outs by equipment ID with user, equipment role, date/time, and total fuel weight used before run out event.

- **Fuel Run Out Events by Operator**

The Fuel Run Out Events by Operator report lists all fuel run out events by user with equipment ID, equipment model, date/ time, and total fuel weight used before run out event.

- **Fuel Used by Equipment**

The Fuel Used by Equipment report lists total fuel used by equipment ID with user, total login time, total weight used, average weight/hour, and performance mode.

- **Fuel used by Operator**

The Fuel Used by Operator report lists total fuel used by user with equipment ID, total login time, total weight used, average weight/hour, and performance mode.

- **Operator Battery Disconnect Detail**

The Operator Battery Disconnect Detail report gives detailed results of each battery change/charge for a user. It lists user's employee number, equipment role, certified equipment types, department, shift, logged on hours, equipment types used, number of battery changes, average battery change time, and battery disconnect time breakdown.

- **Tank Changes by Equipment**

The Tank Changes by Equipment report lists all tank change events by equipment ID with user, equipment model, date/ time, and total fuel weight used before tank change.

- **Tank Changes by Operator**

The Tank Changes by Operator report lists all tank change events by user with equipment ID, equipment model, date/ time, and total fuel weight used before tank change.

- **Battery Use Detail**

The Battery Use Detail report provides details about which equipment a battery is being used on.
- **Battery Low Water Occurrences**

The Battery Low Water Occurrences report provides details about battery low water occurrences.
- **Battery High Temperature Occurrences**

Battery High Temperature Occurrences reports provide details about battery high temperature occurrences.
- **Battery High Temperature Occurrences by Operator**

The Battery High Temperature Occurrences by Operator report provides details about battery high temperature occurrences by operator.
- **Equipment Battery Charge Detail**

The Equipment Battery Charge Detail report provides details about each battery charge for a single equipment ID. It lists equipment serial number, equipment type, model, model year, manufacturer, capacity, service weight, install date, install hour meter reading, current hour meter, PM Schedule, next PM due, and battery charge time breakdown.
- **Battery Usage Summary**

Battery Usage Summary reports provide details about battery status and condition.
- **Battery Report Card**

The Battery Report Card is a report card for a given battery.

Service Reports

The following reports are available:

- **PM History**

InfoLink provides consistent service intervals based on actual hours of use at the component level, which assists in eliminating excessive

PMs typical with days-in-use calculations. PM History can help maximize up-time by leveling the Maintenance Department demands.

The PM History report lists the PM history for each equipment listing. This report includes the scheduled hour meter or date of the PM, the actual hour meter or date the PM was performed, and who performed the PM. The list is grouped by location, equipment type, and then equipment. Information is grouped by location then equipment ID. Totals will be displayed by total number of PM's performed.

- **Projected PM Due**

The Projected PM Due report lists each of the equipment and their projected PM due date or due hour meter. This report includes the current hour meter, last PM date or hour meter, the next PM date or hour meter, and the report indicates if the PM is currently due. The list is grouped by location, equipment type, and then equipment. Information is grouped by location then by equipment type. Totals will be displayed by total number of PM's due.

- **Module/Asset Summary**

This report aggregates the geographic and operational data of a module and its corresponding equipment.

This report is also available as an .csv export under the Manage tab. To access the report, click **Manage > Assets > Equipment**. Click the export icon  next to the print icon . The .csv consists of the following data: Equipment ID, Equipment Serial Number, Manufacturer, Equipment Type, Equipment Model, and Location.

Service Reports (Advantage version)

The following reports are available:

- **Equipment Availability - 24 Hour Schedule**

The Equipment Availability - 24 Hour Schedule report lists equipment availability as a percentage on a 24 hour schedule by equipment ID

with equipment, manufacturer, model, total time for duration, maintenance mode time, and availability percentage.

- **Equipment Availability - Scheduled Time**

This report lists equipment availability as a percentage based on equipment availability schedule by equipment ID with equipment, manufacturer, model, scheduled time for duration, maintenance mode time, and availability percentage.

- **Equipment Maintenance Detail**

The graphic representation of the maintenance mode events for an equipment ID including reason, time, and duration. Maintenance history is displayed categorized by planned and unplanned events.

- **Event Codes by Equipment**

This report lists all event codes by equipment ID with event code, time stamp and type as well as hour meter and BDI readings at event.

- **Event Codes by Frequency**

This report lists all event codes by frequency of occurrence of event code with equipment ID, time stamp and type as well as hour meter and BDI readings at event.

- **Maintenance Mode Summary**

This is a report of maintenance downtime by equipment ID which lists user, date/time in and out of maintenance, reason, and total time for each maintenance mode event.

Administrator Reports

The following report is available:

- **InfoLink Login Tracking**

The InfoLink Login Tracking report lists the InfoLink logon and the logoff times of the web users.

User Summary Report

The following report is available:

- **User Summary**

This report is available as an .csv export only. To access the report, click **Manage > Users > User Management**. Click the export icon  next to the print icon . The .csv consists of the following data: Name, Web Login, Web Role, Equipment Login, Equipment Role, e-Mail Address, Department, and Shift.

Operator Scorecard Report (Advantage version)

- **Operator Scorecard**

This is an operator based report for a date range. Access to the report is in the Productivity tab of the Advantage version. The report shows the Operator, Location, Avg. Inspection Time, Logon Time, Impacts, and Impacts per Login Hour.

Report Scheduler

InfoLink reports provide real-time and historical facts regarding operators and fleet. The report scheduler allows you to schedule when reports are run and automatically email you when they have been generated. You can schedule reports to run daily, weekly, or monthly.

Schedule individual reports

1. Click the **Reports** tab and then click a report sub-menu.
2. Click a report.
3. Click **Schedule**.
4. Configure the report as needed, including the Report and Report Type you want to schedule.

5. Click **Save**.

Note: If the error 'Profile does not have an email address specified...' appears, click **My Profile** at the top right of the screen and modify your profile to include your email address.

6. Select the report parameters and then click **Save**.
7. Choose an **Interval** (how often to run the report), enter the **Time** at which you wish to receive the report, and specify your **Time Zone**.
8. Click **Save**.

Schedule reports using the Scheduler

1. Click the **Manage** tab and then click **Schedules**.
2. On the left menu, click **Reporting**.
3. Click **Create**.
4. Configure the required parameters and select the Report and Report Type you wish to received.
5. Click **Save**.

Note: If the error 'Profile does not have an email address specified...' appears, click **My Profile** at the top right of the screen and modify your profile to include your email address.

6. Select the report parameters and then click **Save**.
7. Choose an **Interval** (how often to run the report), enter the **Time** at which you wish to receive the report, and specify your **Time Zone**.
8. Click **Save**.

Execute a scheduled report manually

Scheduled reports can be manually executed at any given time. The parameters within the report will be used.

1. Click the **Manage** tab and then click **Schedules**.
2. On the left menu, click **Reporting**.
3. Locate your scheduled report and then click the play icon  to execute the report.

InfoLink® Administrator Guide

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Revision C

