

MERCURY

DIGITAL DASHBOARD

Release Notes

Mercury-1.5.0



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1 Configuration Items

----- None -----

2 Release Notes

Type	Release Note
Mercury-1.5.0	
Added	The ability to preview imports in raw JSON format.
	Password fields will be obscured in the preview.
Added	The following API commands: <ul style="list-style-type: none"> • "set runtime" (socket API) • "/rest/v1/runtime/" HTTP PUT/POST endpoint (REST API) <p>These behave the same as "set feature" or "/rest/v1/feature" except the change will only affect the current state of the sign and will not be saved to the database.</p>
Added	Background image enhancements: <ul style="list-style-type: none"> • The ability to apply opacity to the background image • The ability to create a border around the canvas (color, width and opacity) <p>Note: If active, the canvas border will move all elements inward (border will not sit on top of logos, messaging, icons, etc.)</p>
Resolved	An issue related to the creation of multiple API sessions. Users are now restricted to a single API session.
Improved	Web UI to include a notice on the Configurations Import/Export/Factory reset page that features data does not include custom images.
Updated	802.1X log messages.
	Messages will now appear in the normal Mercury log file instead of in a separate 802.1X log.
Updated	The "factoryreset" command on the serial interface (Freeport provided cable required).
	Factory reset options are: security, features, network, logFiles, dateTime, integrations, and portSecurity. If no option is given, all options will be reset. Commands and options should be case insensitive.
	Example: FactoryReset security FEATURES Network
Added	Font selection and styling options to all text fields and clocks.

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	<p>Messages, icon labels, clocks, clock names, clock group names, and dates now have a dedicated "Styler" which allow you to edit:</p> <ul style="list-style-type: none"> • Font (Type, Bold, Italics) • Clock Type (various digital clock fonts) • Background (color with opacity level) • Border (color, opacity level, border width and radius)
Added	<p>All new styling options have also been added to the Mercury API.</p> <p>The ability to create multiple clock groups. In landscape orientation clock groups will be stacked on top of each other, in portrait orientation clock groups will be stacked side by side.</p> <p>Each clock group has the following features:</p> <ul style="list-style-type: none"> • Name: Group name can be shown or hidden • Visible: Entire clock group can be shown or hidden
Added	<p>The ability to send real time alerts via SNMP traps or inform messages.</p> <p>Traps/informs will currently be sent for two events:</p> <ol style="list-style-type: none"> 1. Audit failure, e.g. disk is full and can't write to the audit log 2. If heartbeat traps are enabled, send periodic traps. This is useful for configuring SNMP manager systems to communicate with Mercury. <p>Currently traps can only be sent to one SNMP manager. A reboot is required to apply SNMP configuration.</p> <p>Several trap configuration options are available:</p> <ul style="list-style-type: none"> • Support SNMPv2c or SNMPv3 traps and informs. • For inform messages, retries and timeouts can be configured. Mercury will resend the inform message until a response is received or retries are exhausted. • A heartbeat interval can be configured resulting in periodic messages. • For SNMPv2c, a community string can be configured. • For SNMPv3, several authentication and encryption schemes are supported. If authentication type is not None, an authentication key (password) is required. If encryption type is not None, a private key is required. The SNMP engine ID is displayed on the user interface.

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Added	<p>SNMP settings are exported, imported and factory reset along with security settings.</p> <p>The ability to set a custom video output resolution. If a non-zero width or height is entered, the sign will resize to those dimensions rather than using the entire screen.</p> <p>Use cases include:</p> <ul style="list-style-type: none"> • A display with an unusual aspect ratio or inaccurate EDID table, e.g. 1920x360 • Using Mercury to fill a specific portion of an image wall
Added	<p>The custom resolution settings will be imported, exported, factory reset with feature data.</p> <p>Support for FIPS 140-2 compliant hash and encryption algorithms.</p>
Improved	<p>When activated via the "System Settings > Security" page of the Web UI, openssl on the Mercury will only use FIPS 140-2 compliant hash and encryption algorithms.</p> <p>Active Directory integration:</p> <p>Added simple authentication option to Active Directory integration. Both simple authentication and NTLM are now supported. For simple authentication, usernames should be entered as User Principal Name (e.g. user@domain). For NTLM, usernames are entered as Domain\User. NTLM does not work when the Mercury has FIPS mode activated. When entering Admin Users and API users, specify the username in the same format as the user will enter it.</p> <p>Added the ability to optionally specify a domain name for Active Directory integration. If a domain name is configured, users should enter only their username at the login prompt and the configured domain name will be added. This will use simple authentication. If a domain name is specified, Admin Users or API Users should be entered without the domain name.</p> <p>Add the ability to assign API and Admin roles via Active Directory user groups.</p> <p>Added a setting to optionally override the context used when searching for Active Directory user groups. Mercury will try to determine the context from the server response. The LDAP context can be overridden if the context cannot be determined automatically. The format is CN=MYLDAP,DC=COMPANY,DC=COM.</p>

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	Save the "Login to Active Directory" checkbox on the login page in local storage.
Improved	<p>Added a wait cursor to the login page as Active Directory logins may take some time.</p> <p>Configuration import/export security.</p> <p>The data in export files is now encrypted. It is no longer possible to export, edit, and re-import export files. The user will be prompted to provide a password to encrypt the exported data. This same password will be required to import the data.</p> <p>Imports will support both encrypted and unencrypted data (exports from previous Mercury versions). If the file was encrypted during export, the user will be prompted for the password before importing.</p> <p>Image management.</p> <ul style="list-style-type: none"> Removed the ability to upload SVG images, as these may be a security risk Added support for JPEG in addition to PNG
Updated	The 2nd Network Interface port to default to DHCP on a new system or after a network factory reset.
Improved	The preview of the Messages text in the Web UI. The text now accurately displays any changes made using the "Styler" (background color, border, font, etc.).
Added	The ability to integrate a Mercury unit with an Epiq Solutions' Flying Fox Enterprise wireless detection sensor to provide real time alerts for detection of Bluetooth, Cellular, and WiFi devices.
Improved	<p>Audit logging. When a user makes a change to the system via the Web UI, socket API, or REST API, include the details of what has changed in the audit log.</p> <p>Note that the audit logs may not be grammatically correct.</p> <p>Example:</p> <p>2023-04-05 18:32:07,044 UTC - User sysop from "192.168.5.82": Save feature set "Landscape Sample 3" succeeded (background.type: daylightClock => image)</p>
Resolved	An issue where API commands would change the preset selection on the "Features" page of the Web UI.

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	<p>Steps to reproduce in a previous build:</p> <ol style="list-style-type: none"> 1. Select a preset that is not the running preset. 2. Issue an API command to change something within the running preset, e.g. "set feature message 1 text: "Hello World" <p>=> The running preset will now be selected.</p> <p>Added Additional settings to the "Features" page of the Web UI:</p> <ul style="list-style-type: none"> • Ability to show/hide the Clock Name • Ability to adjust the size of a Icon and the Icon Label • Ability to adjust the Logo hieght and width
Added	<p>For upgrades, presets will get default values for the new settings, but they may need to be adjusted.</p> <p>An embedded preview of the canvas to the Features page of the Web UI.</p> <ul style="list-style-type: none"> • On page load, the preview will show the currently running preset • Any changes to the canvas will be updated in real time on the preview, multiple users editing features will see each other's changes • The preview can also be viewed in a separate window by navigating to <a href="https://<host>/#/sign/preview">https://<host>/#/sign/preview • The preview aspect ratio can be adjusted to simulate different displays by setting the width and height
Improved	<p>Notes:</p> <ul style="list-style-type: none"> - If "Live Preview" is turned on, changes will be shown on the preview AND the connected display - On page load, the preview size will be taken from the connected display. If no connected display is detected, the width and height will be restored to the last value used. Initially, a default of 1920x540 will be used. <p>Image management via the Web UI. All image management has been moved to a separate setup page.</p> <ul style="list-style-type: none"> • New image filenames will be compared to existing ones and the user will be given the choice to overwrite the existing image or create a new image with a new name • Added a preview of all images currently loaded • An image cannot be deleted if it is used by one or more active presets

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	<ul style="list-style-type: none"> The image list has been sorted alphabetically
Added	The ability to manage one admin and one API user account via the Freeport Management Suite (FMS). Once enabled these accounts will be read-only in the Mercury Web UI (a security factory reset is required to delete these accounts).
Resolved	An issue where the web server certificate "Revert" button remained disabled after selecting a private key file or editing the password (without selecting a certificate file).
Added	A port security option to the configuration page of the Web UI (import, export, and factory reset).
Improved	The style of the Web UI.
Added	<p>The following API commands:</p> <ul style="list-style-type: none"> get feature clock index namevisible set feature clock index namevisible: visible visible: Boolean (true false) get feature icon index font stateindex size set feature icon index font stateindex size: size size: Number (0..150) get feature icon index size stateindex set feature icon index size stateindex: size size: Number (0..1000) get feature logo index width set feature logo index width: width width: Number (0..1000) get feature logo index height set feature logo index height: height height: Number (0..1000)
Removed	<p>The following API commands:</p> <ul style="list-style-type: none"> get setup datetime ntp index set setup datetime ntp index: ntpserver <p>NTP currently supports two clients and one server. NTP configuration is not available via Mercury API.</p>
Added	IEEE 802.1X port security functionality for all network interfaces.
Resolved	Issue with mouse cursor. The mouse cursor has been removed from the active canvas. In previous builds the cursor could sometimes be seen as a single pixel in the bottom right corner of the canvas.
Added	NTP logs to the log files package.

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Added	The ability to view NTP peer information via the Web UI on the Date & Time page.
Mercury-1.4.1	
Added	Nginx webserver logs.
Resolved	An issue that was causing Mercury boot failures if the Freeport RTC was plugged in during startup.
Updated	The DHCP functionality. When a system is configured for DHCP, the configured gateway will now be shown in the Web UI along with the IP address and subnet mask.
Mercury-1.4.0	
Improved	The performance of the Freeport USB Real Time Clock.
Resolved	An issue where the reboot after a factory reset fails if the Mercury IP address was changed. A factory reset now always requires a reboot, whether it was initiate via the Web UI or serial port interface.
	If network or security options are selected to reset, the user interface will prompt the user to close and reopen the browser.
Added	An alert window to the top of the Web UI for potential issues.
	Added a Diagnostics (Issue, Description, Resolution) section to the Logs page.
	Potential diagnosis and alerts include:
	<ul style="list-style-type: none"> • Default credentials in use • User locked out due to failed logins • Loss of connectivity to the configured syslog server (TCP only)
Added	New options to the syslog configuration:
	<ul style="list-style-type: none"> • TCP • TLS Encryption • Certificate Verification • Hostname Check
Added	User details to the audit log messages.
	Tracked user details include account activation/deactivation, roles added or removed, and password expiration.
Improved	Modifications to the Date & Time page in the Web UI:

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	<ul style="list-style-type: none"> • Hide the NTP server encryption key or NTP client encryption key. The user can choose to view the key, a placeholder will indicate whether there is a key already saved. • If encryption is enabled, a key is required • If encryption is enabled for both client and server, the key numbers must be different • The NTP client server address can be a host name as well as an IP address • The user can save other modifications to the client or server settings without re-entering the key
Added	The option to import, export, and factory reset NTP settings. NTP server key and NTP client key will be encrypted if exported.
Improved	<p>The factory reset functionality.</p> <ul style="list-style-type: none"> • The user will be asked to reboot after a factory reset that includes security options (required to generate a new server certificate) • Delete the web server certificate and any certificate authorities during "security" factory reset • Fixed an issue where users were not being deleted during a "security" factory reset • Added an option to delete log files during factory reset (audit logs are not removed) • Resolved an issue where image files were not being reset during a "feature" factory reset
Added	<p>An option for socket API session timeout (in minutes).</p> <p>If the option is set to a non-zero value, API sessions will be disconnected after sufficient inactivity. For new installations and factory resets, the default value is 15 minutes. For upgrades, the default value is 0 (disabled) to preserve the previous behavior.</p>
Improved	Audit log messages to include "UTC" timestamp.
Improved	<p>Web UI logout functionality.</p> <p>Added a message box after logout with the previous username. Reworded the message box after session expiration to include previous username.</p>
Added	<p>The ability to configure the web session timeout, between 10 and 999999999 minutes.</p> <p>Existing web sessions will be updated with the new expiration interval.</p>

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Improved	The password settings options. Added number entry boxes with minimum values.
Improved	Syslog message functionality. Messages will now be sent in a format compliant with RFC 5424. Newlines will be escaped within messages and a single newline will be added at the end of all messages.
Added	A serial port interface which provides factory reset, revert firmware, and reboot functionality. The baud rate is fixed at 115200.
	The current commands are "factoryreset", "revertfirmware", and "reboot".
Added	Support for NGINX logs.
Resolved	A issue related to leaving the Gateway empty when setting a static IP address via the Web UI.
Improved	NTP Client functionality. Added support for multiple NTP Clients, symmetric encryption, and server status (connected/disconnected).
	If a NTP Client is enabled then the NTP Server should be disabled and the external Freeport RTC should be removed.
New Feature	NTP Server functionality with symmetric encryption. The NTP Server is configured using the Web UI. Settings include enable/disable and encryption.
	If the NTP Server functionality is enabled then the NTP Client should be disabled.
Mercury-1.3.0	
New Feature	Added support for the Freeport Real Time Clock USB accessory.
	When the Freeport RTC is connected to a Mercury unit, the internal clock of the Mercury unit will be updated by the RTC in intervals of approximately 5 minutes.
	Manually setting the time via the Mercury Web UI will update the time stored in the RTC.
Resolved	An issue where the Save and Revert buttons in the Web UI would stay active after saving.
Mercury-1.2.0	
Improved	Functionality of the Daylight World Clock background was improved.
Improved	API updates related to Icon functionality.
Improved	API updates related to Logo functionality.
Improved	API updates related to Background Image functionality.

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New Feature	Added the ability to upload custom Background images (PNG or SVG files).
New Feature	Added the ability to Stretch, Fit, or Repeat Background images.
New Feature	<p>Added new AV Icon images:</p> <ul style="list-style-type: none"> • No Icon (Blank Placeholder) • Audio Call (Style 1) • Audio Call (Style 2) • DEFCON 1 • DEFCON 2 • DEFCON 3 • DEFCON 4 • DEFCON 5 • FPCON Alpha • FPCON Bravo • FPCON Charlie • FPCON Delta • FPCON Normal • Media Pause • Media Play • Media Record • Media Stop • Microphone (Style 1) • Microphone (Style 2) • Personal Electronic Device (Style 1) • Personal Electronic Device (Style 2) • Content Sharing (Style 1) • Content Sharing (Style 2) • Speaker (Style 1) • Speaker (Style 2) • Video Call (Style 1) • Video Call (Style 2) • Warning
New Feature	Added new API commands which allow you to recall a specific Preset via a third-party control system.
New Feature	Added sample Presets (two landscape and two portrait).
Mercury-1.1.0	
New Feature	<p>Added the ability to create, name, edit, and recall preset canvas layouts.</p> <p>Presets can also be deleted.</p>

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New Feature	Added "Demo Mode". Demo Mode will be enabled by default on all new Mercury systems.
	Demo Mode can be managed (enabled/disabled) via the web interface via the "Features" tab.
Improved	The API max values for analog and digital clock sizes was increased to 600 and 400 respectively.
New Feature	Clock improvements: <ol style="list-style-type: none"> 1. Added the ability to hide/show the seconds (both analog and digital versions) 2. Added the ability to resize the clocks to the desired footprint (both analog and digital versions)
New Feature	Display management : <ol style="list-style-type: none"> 1. Added the ability to mute/unmute the video output being sent to the connected display 2. Added the ability to view and select from the supported resolutions of the connected display <p>Notes:</p> <ul style="list-style-type: none"> - Both of these new features can be managed via the Mercury web interface and/or via the API - Supported resolutions of the connected display are dependent on the EDID information provided by the display
Improved	The Clock section of the web interface was updated so that it fills the entire width of page.
New Feature	Added Clock improvements and updates to the socket and REST API.
Improved	AV icon sizing and positioning was improved.
New Feature	Clock/Date improvements: <ul style="list-style-type: none"> • Color and size will now be handled discretely for analog clocks, digital clocks, clock names and dates
New Feature	The Mercury web interface session will expire due to inactivity after 15 minutes.
	Approximately two minutes before the session ends, a warning will be displayed showing the time remaining. When the session ends, the browser will redirect to the login page.
New Feature	System user account access is limited to a single web session. When a new session is started, any existing sessions will be invalidated.

Type	Release Note
New Feature	Added a system user setting for maximum failed logins. If too many failed logins, the user account will be locked out for 15 minutes.
New Feature	Added syslog integration to a configurable IP and UDP port number.
New Feature	Added audit logging.
New Feature	Added support for Active Directory integration
Improved	The startup procedure will now enforce the user-preferred video output resolution.
Resolved	An issue associated with the firmware reversion feature was resolved.
Improved	The use of a single logo/image will be centered and expanded to fit the entire width of the canvas (while maintaining aspect ratio and respecting 11% vertical height restriction) when the display orientation is vertical (portrait mode).
New Feature	<p>Added a new API command "setup".</p> <p>The "setup" command can be used to set/update the clock to ensure accurate time if an NTP server is not available.</p> <p>In addition, the "setup" command can be used to set or clear the NTP server.</p>