



Enterprise Level EAS Management



EAS MANAGEMENT USED TO BE EASY

Fast forward, we're now 20 years into EAS and the landscape has changed considerably – and continues to evolve at an accelerating pace. Now EAS devices must handle far more inputs and outputs to a variety of equipment. What was once a simple task in setup and management has become a complex series of menus and configurations and in this interconnected world a single, misconfigured device could impact thousands if not millions of customers not just locally, but hundreds or even thousands of miles away! Not so easy any more.

COMPLIANCE IS COSTLY – HOW TO REDUCE THOSE COSTS

EAS regulations and content distribution technologies continue to evolve – exposing an environment where upgrades and configuration management require near continuous attention. Add FCC requirements continually being updated making compliance progressively more complex and, most importantly, organizations who fail or are unable to keep up face increasingly significant fines. Maintenance and compliance costs are non-trivial as any updates to an EAS device requires a minimum, a virtual “visit” to each and every device, multiply this by the number of devices and even a simple change quickly becomes a large labor cost. Also, every access increases the opportunity for configuration errors further increasing costs and possible customer or regulator dissatisfaction. This level of attention takes specialized expertise requiring a much higher level of understanding across a number of departments; Engineering, Operations, IT Security, Compliance, and Legal, sometimes with multiple members of each department being held responsible for managing different aspects of EAS management and compliance. Allowing each group open access is a recipe for disaster.

To reduce EAS costs and complexities requires managing these devices in a central fashion, with the minimal amount of proper staffing to perform all necessary functions.

HALO offers truly comprehensive enterprise-wide EAS/CAP device management

INTRODUCING HALO - THE HOMOGENOUS ALERT OVERSEER

Digital Alert Systems has created HALO to answer the need for a highly-specialized management system capable of overseeing all EAS encoder/decoders, providing an enterprise-wide command of all the EAS devices in connected organization – the most effective way to combine operational and compliance focus under a unified configuration control, EAS log reporting and error/alarm monitoring program.

Companies need no longer rely on a loose-fitting method to manage the hundreds of critical EAS devices as HALO provides a collective point where multiple users can monitor the overall EAS equipment “health”, manage and compare configuration settings, manage software updates, receive timely notifications regarding equipment status changes, configuration changes, and alerts, then generate accurate FCC compliance and inventory reports – all elements which streamline the complex processes performed throughout the organization and, more than anything, decreases the time spent on EAS related matters while simultaneously reducing errors, increasing efficiencies and proactively addressing any potential compliance or subscriber issues.

Think of HALO as the guardian of the EAS infrastructure – overseeing the health and status of each EAS device, alerting key personnel of critical changes, centralizing the management of configuration settings, managing software updates, and consolidating FCC mandated EAS test results.

By gathering and presenting users with a completely new level of comprehensive information HALO provides a far more complete picture of the EAS landscape offering situational awareness over all devices as never before. HALO is intelligent software supervising any number of distributed EAS devices. Now those with proper rights have access to a wealth of information within seconds, that otherwise could take days to assemble by any other means. For example, under the FCC's Sixth Report and Order¹ national EAS tests must be reported through the online EAS Test Reporting System (ETRS) meaning each national test requires participants to report at least 81 individual data fields for each EAS device! Consolidating this information is a major time consuming and time critical task. HALO provides all the information within minutes of test ending – something just not possible without HALO.

And HALO goes beyond simple EAS log gathering to provide a far more comprehensive enterprise-wide management system by gathering a wide range of data from each device including; received, decoded, and forwarded alerts, configuration changes, operational status, current software/hardware versions, monitoring sources both analog and digital – things like radio frequency, signal strength, CAP inputs, a vast amount of summary details for each and every device under HALO's umbrella.



HALO MODULES - SIZED TO FIT ANY SIZE.

HALO is designed in a modular fashion so users can scale the perfect solution to fit their specific environment or needs and can be installed on stand-alone hardware or integrated into a large data center in virtual machine environments. Besides scalability, HALO supports redundancy with automatic failover, so have a dozen units to manage? Easy. Have hundreds? No problem.

Each of the optional HALO modules provides a different view or level of interactivity to meet specific user's requirements. Everything works via a secure IP connection between EAS devices and the HALO Core Module (HALO-CM), sending information when requested, or when necessary all through a comprehensive database. From this information HALO Core allows other HALO modules to "act" on the data for sophisticated queries, searches, visual representations, geographic-based displays, and a host of other applications including those timely and critical FCC reports.



Core Module [HALO-CM]

The Core Module is the central point for EAS device communications, data storage, and connections to other HALO modules. All data is stored in a highly-reliable SQL database where users, permissions, and groups administration is performed through the simple user interface. The Core Module also serves as the secure communications connection point for the data exchanged between EAS devices. Verbose logging and a unique ability to add a note to any event speeds troubleshooting tasks.



Basic Configuration Module [HALO-BCM]

The HALO Basic Configuration Module provides critical support for EAS operations by assuring the latest configuration settings are stored and readily retrievable streamlining initial setup or replacements and any configuration changes on an EAS device are automatically stored in HALO as a chronological list of configuration files. In combination with automated backups, HALO users are assured the most current configurations for every EAS devices are saved and accessible.

No matter how large or how small, HALO helps manage them all

Standard asset management systems or spreadsheets are woefully inadequate for managing active EAS devices since these methods are static and 'disconnected', unable to provide timely or mission critical information.

HALO consistently monitors key elements from every site to assure there's no operational compliance issue or potential loss of service by introducing a more comprehensive idea – the HealthBeat™. A HealthBeat provides greater detailed information of an individual unit which HALO consolidates as a singular overall health of the EAS environment assuring users' greater confidence everything is functioning properly, while simultaneously notifying key personnel or triggering alarms to invoke preventative actions to fix an issue BEFORE it becomes a compliance problem.

The HALO device management increases security in the form of a "trust circle" accepting information only from those devices which meet specific criteria, thereby preventing alerts propagating without being properly vetted. Only those devices whose configurations and other settings deemed acceptable are able to submit alert information to the rest of the system and only those devices with proper license can communicate with HALO. Moreover, using HALO, an operator can "push" updates such as software, device license keys, new or modified configurations, to units in the field, critical for quickly and efficiently replacing or restoring service without requiring a high level of knowledge at the local site – on-site personnel need merely connect and turn on the device – configuration is managed through the HALO operator's expertise.

[1] FCC Document FCC-15-60A1.pdf released June 3, 2015



Advanced Configuration Module [HALO-ACM]

Adding the Advanced Configuration Module (ACM) significantly enhances device management enabling users to review, compare and edit configuration settings directly within the HALO user interface, allowing complex configuration comparisons and modifications far easier than ever before. Using the ACM configuration files, software updates, or rollbacks on a single or multiple EAS devices can be performed remotely saving a substantial amount of time. Now test releases or mass updates can be done quickly without having to individually deal with each device greatly reducing manpower requirements and increasing reliability.



EAS Logging Module [HALO-ELM]

This module provides simple filtering and sorting features of basic EAS alert data; alerts decoded, forwarded, and originated, event codes, FIPS codes, Originators, EAS Station IDs, and Date/Time) for the simplest types of overall report generation. The EAS Logging Module is the basis for the expanded features available in the Advanced Reporting Module [HALO-ARM].



Advanced Reporting Module [HALO-ARM]

As its name implies, the Advanced Reporting Module expands the level and detail of reporting beyond the basic reports of the EAS Logging Module. Additional reporting features include; date ranges, filtering, sorting, histograms, charts and calendars. Customizable report templates may be saved for easy recall and generation of new reports following a user-defined set of criteria, say weekly, or monthly reports by region or group, or combine information to assemble an EAS Test Reporting System (ETRS) spreadsheet – greatly streamlining this labor-intensive process. The EAS Logging Module [HALO-ELM] is required.



License Key Module [HALO-LKM]

Many features are enabled through license keys and managing these on each device can be very time-consuming. The HALO License Key Module manages and automates this process providing a unique global view of license keys, even enabling users to remotely enable/disable licensed features and manage license keys across the entire HALO environment.



Alarm Notification Module [HALO-ANM]

Monitoring HALO Core Module data for potential problems with EAS devices is the purvey of the Alarm Notification Module. Setting customizable notifications regarding any number of parameters, fault conditions, changes in HealthBeats, access, configuration changes, a nearly unlimited number of parameters of alarms can be assigned. Each notification may be sent in a variety of manners; via e-mails, SMS messages, and/or on-screen displays, and a consolidated SNMP MIB from a single source rather than from hundreds of individual devices streamlines interfacing with other alarm notification tools. The HALO EAS Logging Module [HALO-ELM] is required.



Advanced Authentication Module [HALO-AAM]

The Advanced Authentication Module enables HALO to support LDAP or RADIUS authentication for centralized username and password management while certain permissions are maintained within HALO



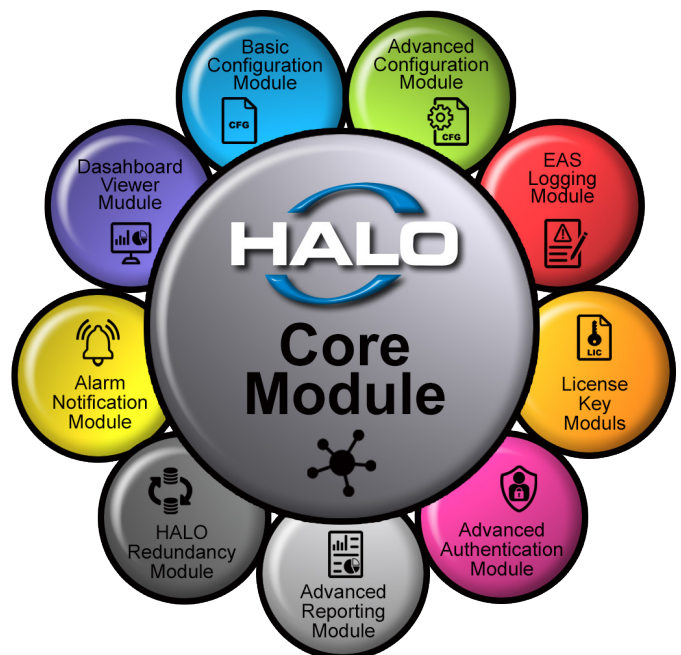
Redundancy Module [HALO-HRM]

The vast quantity and criticality of gathered data is essential so, the HALO Redundancy Module provides a secondary instance of the database to prevent a single point of failure. All data is mirrored on the second system and automated failover is performed using a separate 'watchdog' application to monitor and determine a need to switch operations between databases. Also, an administrator can force a manual changeover of the active server for maintenance or testing purposes. When the active server is changed, clients are automatically connected to the active server with no interaction necessary and minimal disruption to system control. Redundancy Module [HALO-HRM]



Dashboard Viewer Module [HALO-DVM]

Powerful visualization tools provide customizable information displays - dashboard views -for each HALO user or group. Dashboards include items like lists/tabular data, maps with data pins or shaded/affected areas. Rollover/mouse-over information provides device name, monitoring source status and last EAS alert information and with the unique browser integration users can directly access the EAS device within the same screen. Very useful when checking real-time information or making changes directly on a device. Using the Dashboard Viewer Module each user can see what's most important to them. The EAS Logging Module [HALO-ELM] is required.



HALO – KEY POINTS

FEATURE	BENEFIT
Centralize EAS management	Single aggregation of all EAS devices provides information and control to all users throughout an enterprise with one secure login
Customized User Interfaces	Customized dashboards, tables and screen layouts to display the information specific to individual job responsibilities (engineering, legal, compliance, etc.)
Highly Configurable User And Permissions Settings	Provide full functionality and access to specific individuals or groups, while limiting access/control to others
View And Interact With All Eas Devices Within A Single User Interface	Seeing entire network assures all sites are operating properly or quickly spot issues, while providing SME's fast access to make any necessary corrections
Master Configuration Management	Reduce manpower and errors by storing/retrieving all configuration files allowing only approved configuration settings to be pushed to single or groups of EAS devices
Alert Message Logging/Reporting	Track EAS-related information from a single user interface to create customized reports for compliance / inventory management
Automatic & Manual One-Net / DASDEC Registration	Quickly build connections and data exchanges with "Trust Circle" approvals ensuring only those devices are included
Software Update Management	Reduce manpower requirements by managing software updates directly from the HALO interface eliminating even "virtual visits" to each device
Master License Key Management	Enable/disable specific features selectively or universally to control functions of a single or groups of devices
HealthBeat™ Monitoring	Unique message exchange assures devices are operating at peak performance identifying potential issues early
Alarm Notifications	Create conditional alarms with message notifications and access to external monitoring systems from a single point rather than hundreds of separate sites
Highly Scalable	Manage from 1 to 1000's of devices and install specific HALO Modules befitting the requirements
High-performance SQL Database With Optional Hot-swap Redundancy	Store, view and archive data in a secure, reliable, and industry standard database with options to mirror data and monitor up-time performance and support 3rd party data access

HALO – THE CLEAR SOLUTION

Any operation managing or maintaining multiple EAS devices will benefit from HALO. The savings in labor costs alone are easily justified and preventing even a single mass customer outage is further value. Like all Digital Alert Systems products, HALO is based on decades of expertise, enhanced by critical customer input. So, along with being packed with useful features and extensive functionality, HALO is also customizable and intuitive to operate. It's also highly flexible to adapt to specific requirements and scale as customer's needs change and best of all it comes with Digital Alert Systems long history of industry leading EAS/CAP hardware and software, deep understanding of EAS rules, and strong customer support, make HALO the right choice for enterprise scale EAS device management.

Call or contact Digital Alert Systems at +1 **585-765-2254** or email support@digitalalertsystems.com to learn more about HALO and set up demonstration.



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