

New Product Announcement:

CEM Systems AC2000 v10.0

[Johnson Controls](#) is pleased to announce the latest release of **CEM Systems AC2000** suite of access control and security management software.

CEM Systems AC2000, AC2000 Airport and **AC2000 Lite** are now available with a number of new features that improve functionality along with a range of new integration interfaces that increase the performance, simplicity and scope of the system.

Features at a glance

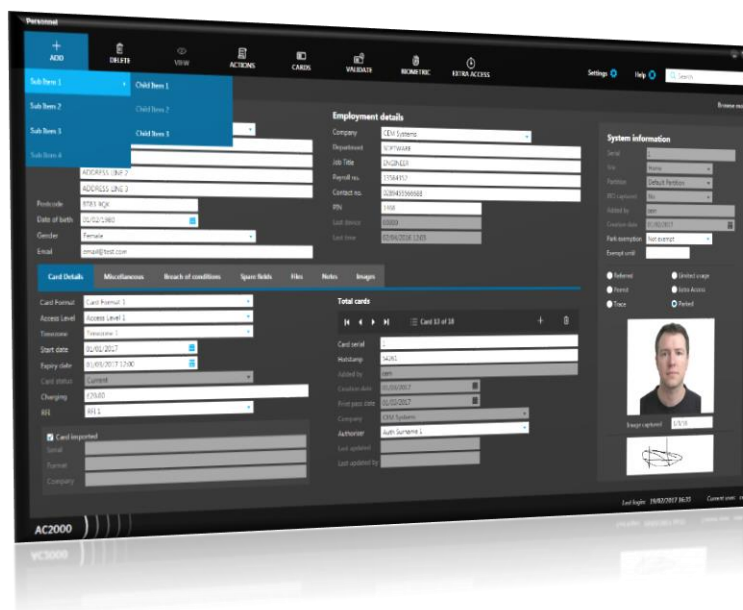
- **AC2000 v10.0** includes:
 - **New improved user interface** with options of **light and dark themes** for AC2000
 - **User Options** updated to allow an unrestricted number of AC2000 authorisation levels via user groups
 - **Visitor Escort** feature added to Visitor application
 - Enhanced **AC2000 Enterprise** offering with new **AC2000 Enterprise Server** and **AC2000 Enterprise Local Server** architecture that features:
 - Multi-version support for ease of upgrading
 - Global Security Hub – Centralised alarms
 - Global time zone support
 - Global reporting
 - Personnel/Card exports
 - Enterprise access levels
 - Global 'Oneshots' and broadcasts
- New **AC2000 integration** interfaces and **OEMs** include:
 - New **AC2000 SnapShell® ID and passport scanner interface**
 - Support for **Suprema Bio Mini enrolment** as an alternative to S610 bio enrolment

CEM Systems AC2000 v10.0 Features

User interface modernization

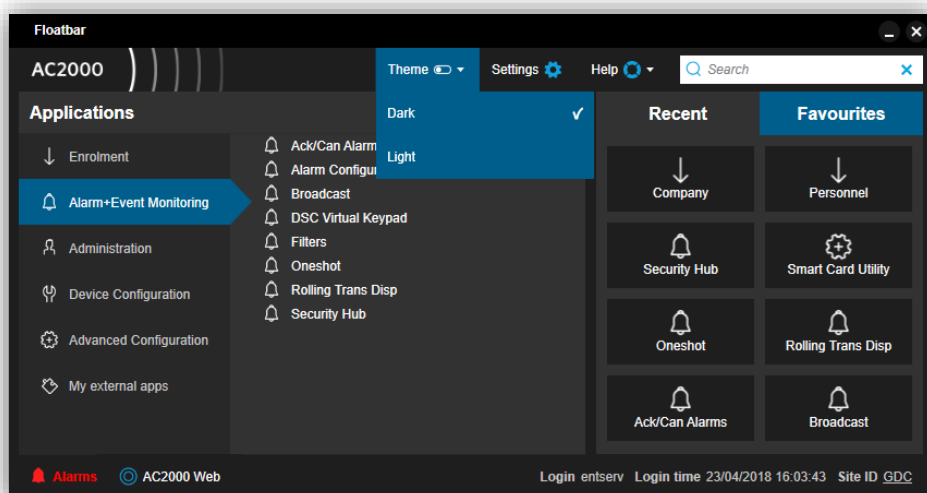
AC2000 Workstation Client applications have been re-styled with a modern, clean and intuitive interface. The restyle has focused on the user experience with improvements to all visual elements of the applications including the simplified colour palette, layout of applications, navigation of the menu bar, and restyled simplified icons across all applications.

The modern, clean and highly intuitive interface presents the information, selections and actionable content the user requires, when the user requires them.

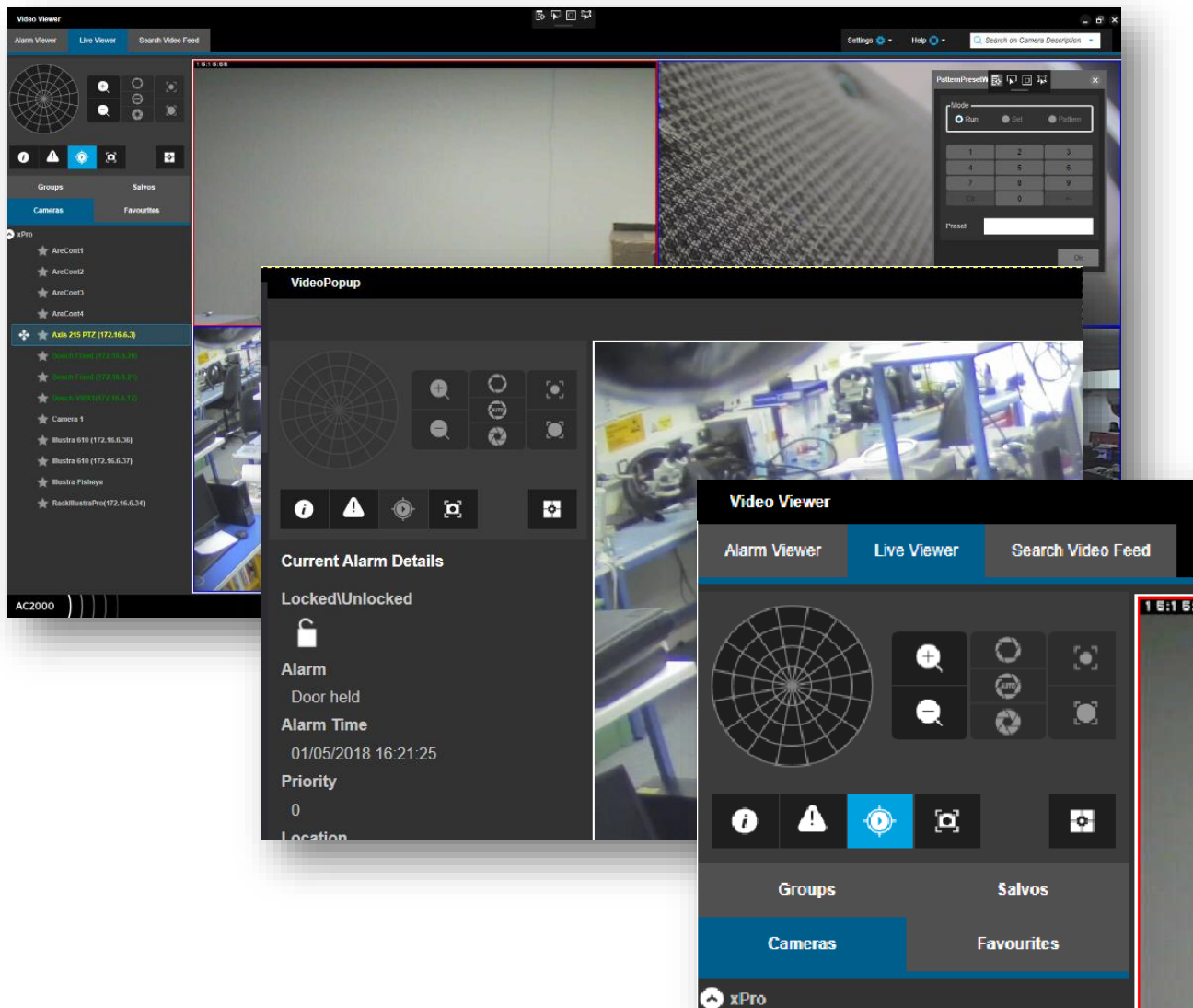


AC2000 v10.0 Workstation Client application with new modern look and feel

The restyle coincides with the AC2000 Security Hub application to ensure a consistent modern look and feel across all AC2000 applications, with intuitive icons as well as improvements to the top menu bar and drop down menu navigation.



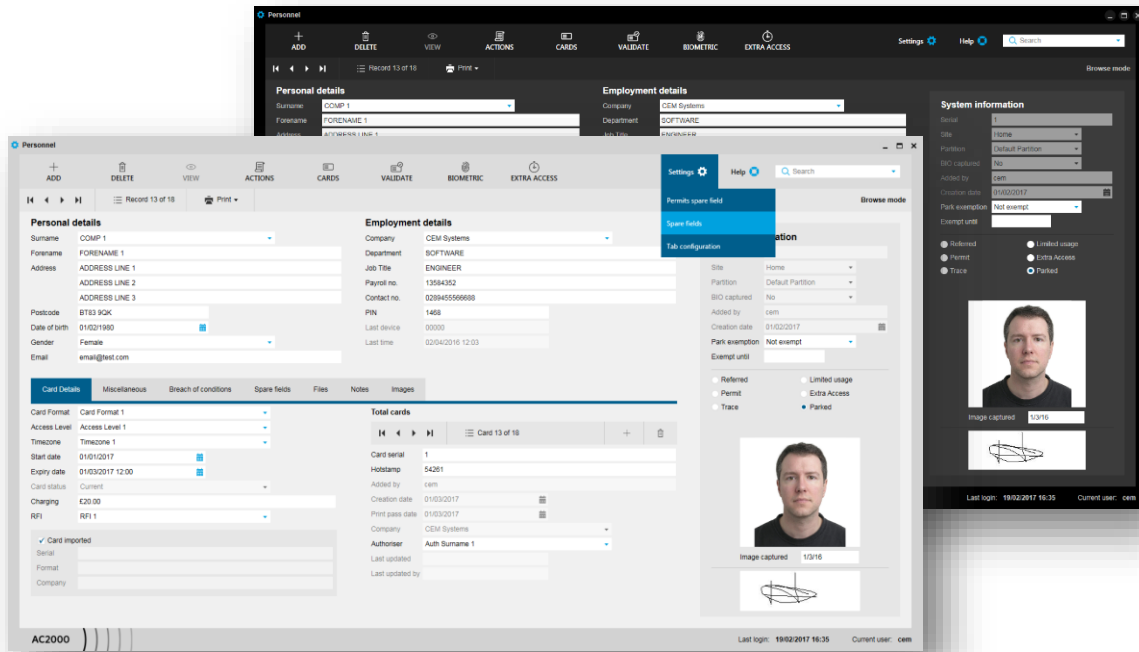
Video Viewer and Video Popup user interfaces have also been updated with a new modern look and feel. Improvements to the video controls and information on display provides an enhanced user experience when monitoring and controlling video integrations via AC2000.



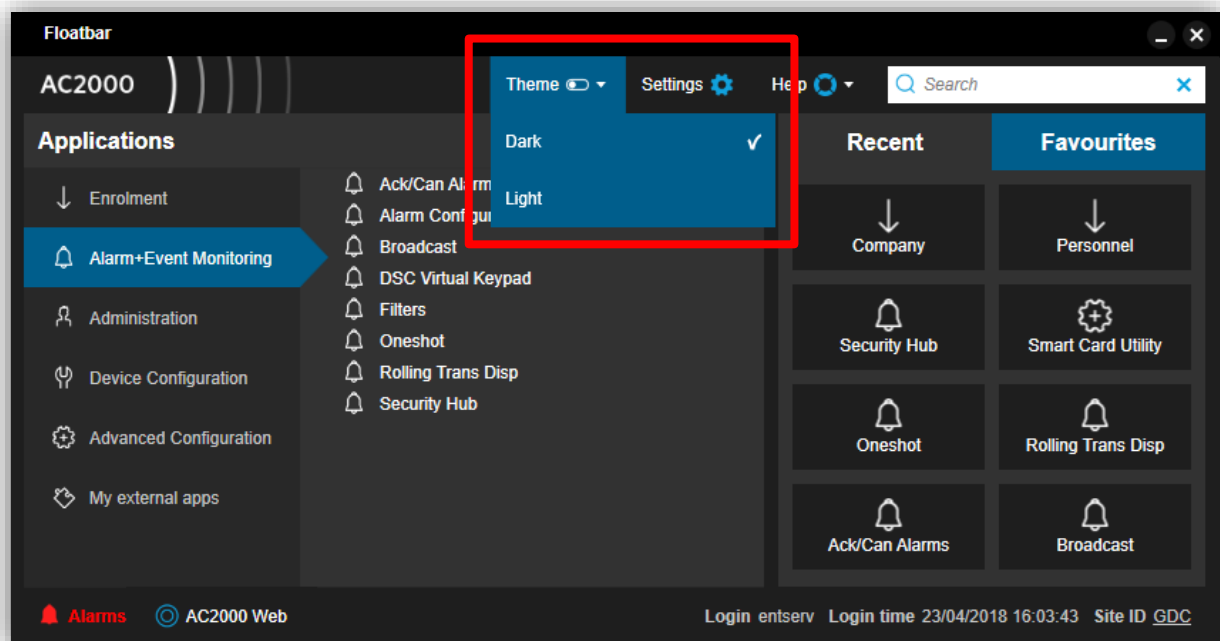
Video Viewer and Video Popup modern look and feel

Dark and light themes

Operators are now able to select their preferred theme (light or dark) to run their AC2000 Workstation Client applications.



On the AC2000 Floatbar, users have the ability to select their preference of running AC2000 applications in a light or dark theme to reflect their taste. Depending on the user's working environment the choice of the light or dark theme may improve the visibility and usability of the system.



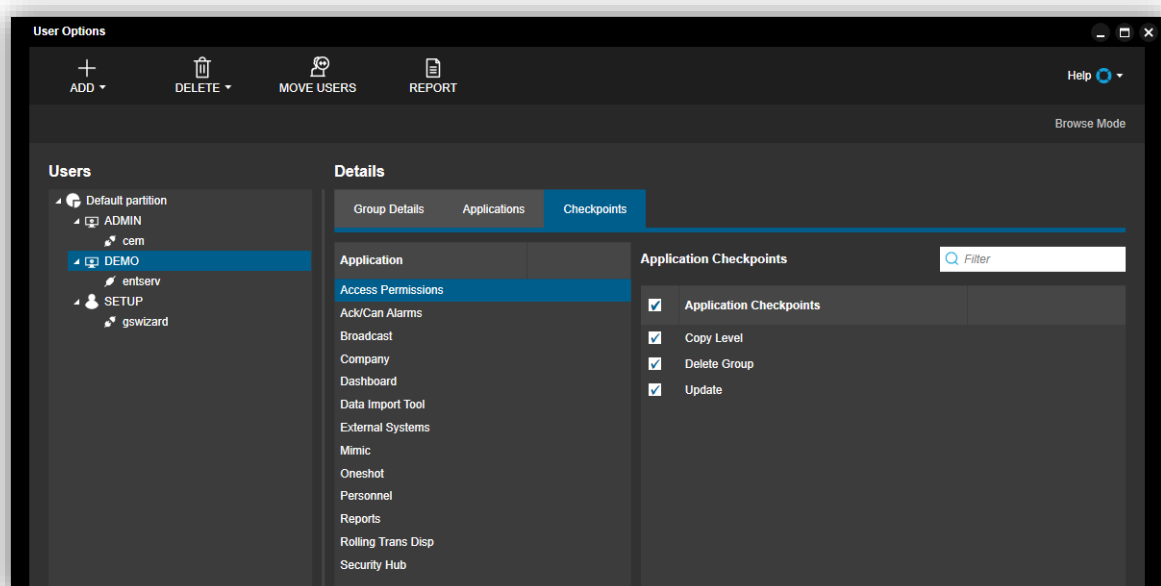
User Options - Unrestricted AC2000 authorisation levels

AC2000 v10.0 no longer limits system administrators to a maximum of five Authorization Levels in User Options. Instead system administrators can create an unrestricted number of User Groups that are presented in a Windows tree structure environment, with Users being associated to a specific Group.



System administrators can set up any number of Admin and User groups, and define group templates based on:

- Applications
- Field and Application Check Points
- 'Oneshot' Restrictions
- Company Restrictions



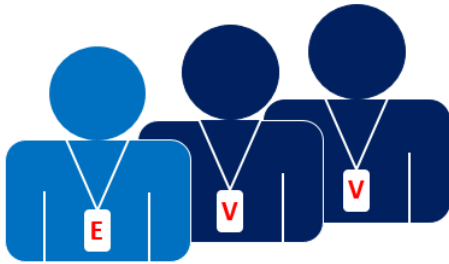
AC2000 User Options

A user's system privileges will then be linked to the Group that they have been assigned. Changes to the group or template definition are automatically applied to all group members.

Multiple users can be assigned to a single group, reducing the time it takes to configure user system privileges.

The 'Move User' tool simplifies user configuration by allowing multiple users to be assigned to a single group. The systems administrator first selects the target group and then selects all the users that are to be reassigned to the group.

Visitor Escort



The new **Visitor Escort** functionality, in the client Visitor application of AC2000 v10.0, allows system administrators to assign an escort to each visitor. Once assigned, visitors can only gain access through secured areas when accompanied by their escort.

To gain access the visitor(s) need to first swipe their valid card followed by a valid swipe from their assigned escort within 30 seconds of the visitor swipe. The system checks that the escort is the cardholder that has been assigned as an escort to the visitor(s) that have just previously swiped the same card reader. Once confirmed access is granted. The visitor(s) and escort swipes are recorded with exactly the same time for report linking purposes.

It is possible to configure whether an escort is **Always** required, **Never** required or **Optional** for visitors.

As **Visitor Escort** is implemented in the RTC, the functionality is available on all card readers connected to the RTC (with the exception of biometric readers).

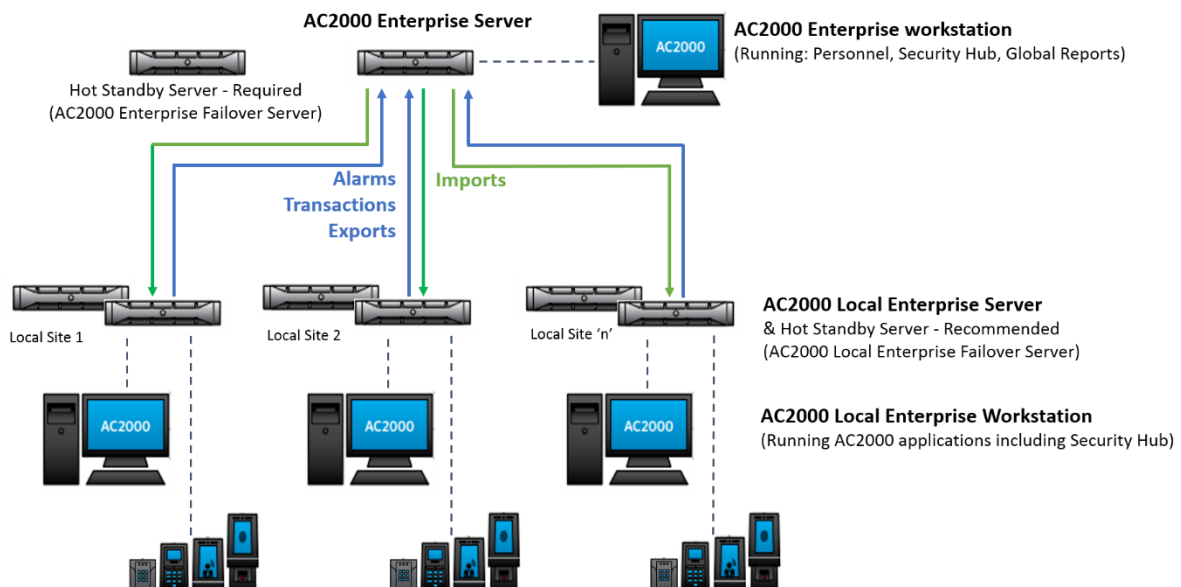
AC2000 Enterprise - Enhanced enterprise architecture

A major feature of AC2000 version 10 is the enhancements to the AC2000 Enterprise offering for AC2000, AC2000 Lite and AC2000 Airport editions.



Designed around a single **AC2000 Enterprise server** centrally connected to an unrestricted number of **AC2000 Local Enterprise servers**, the enhanced enterprise system provides centralised access control and monitoring capability where wide geographical distribution occurs, or where departmental or business unit separation is necessary. The new architecture improves reporting, alarm processing and personnel management across multiple site locations.

A business or organisation can scale its single site AC2000 access control system to a multi-site enterprise solution, while at the same time unifying policy requirements and reducing administrative and operational costs. Each business unit can be administered at a local, and/or centralised level depending on the daily operational requirements.



AC2000 Enterprise server and AC2000 Local Enterprise server information flow

AC2000 Enterprise server

The **AC2000 Enterprise server** holds all personnel and card information from all connected sites, along with all card swipe and alarm information.



AC2000 Enterprise Server splash screen

AC2000 Local Enterprise server

In the AC2000 Enterprise architecture a large number of local AC2000 servers called **AC2000 Local Enterprise servers** can be supported from a single central **AC2000 Enterprise server** (provided the AC2000 Enterprise server is of a sufficient specification).

Each AC2000 Local Enterprise server has almost full AC2000 functionality.



AC2000 Local Enterprise server operators have full control of data added at the AC2000 Local Enterprise site including Personnel, Devices, Security Hub and Reporting. Operators can also export cards and assign access to imported records at the local site.

To enable centralized reporting and monitoring the following limitations have been applied at AC2000 Local Enterprise server:

- AC2000 Company application is primarily “view only” on the AC2000 Local Enterprise servers with no ability to add or edit. Instead Company records (including company logo and notes) are added at the central AC2000 Enterprise server and automatically replicated to the local sites. This makes it possible to system-wide query by Company and enables the central AC2000 Enterprise server reports to display company information and use companies in report criteria.
- User defined alarms and alarm priorities are added at the central AC2000 Enterprise server and not the AC2000 Local Enterprise server so that centralized alarm monitoring and reporting are possible.

Key AC2000 Enterprise Features

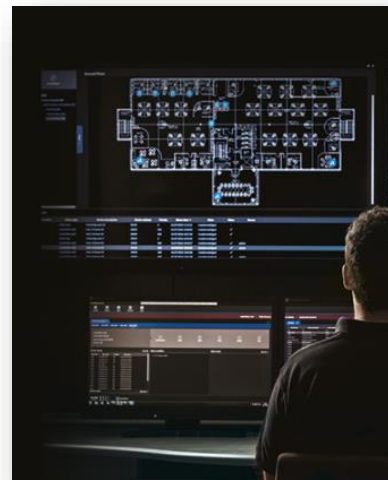
- **Multi-version support for ease of upgrading**



AC2000 Local Enterprise servers can be upgraded independently with no requirement to have all connected enterprise servers running the same AC2000 version. For example, the enterprise link functionality will continue to function when you upgrade one site to AC2000 v10.1 leaving the other sites running AC2000 v10.0.

- **Global Security Hub – Centralised alarms**

AC2000 Security Hub command and control application can be run on the AC2000 Enterprise server, providing access to all AC2000 Local Enterprise site maps, devices and alarms. Alarms can be acknowledged and cancelled at both the central and local sites and 'oneshots' can also be issued centrally from the AC2000 Enterprise server. A centralised operator can open doors in the absence of the local operator and allows for additional resources to be utilised across multiple sites in the deployment. The consolidation of data across multiple sites also provides a holistic view of the deployment for enhanced decision making.



- **Global time zone support**

As a global enterprise solution, the central AC2000 Enterprise server and each AC2000 Local Enterprise are not tied to a single time zone. Each server can be located and operate in different time zones with each server set to its local time and still able to connect to the central AC2000 Enterprise server.

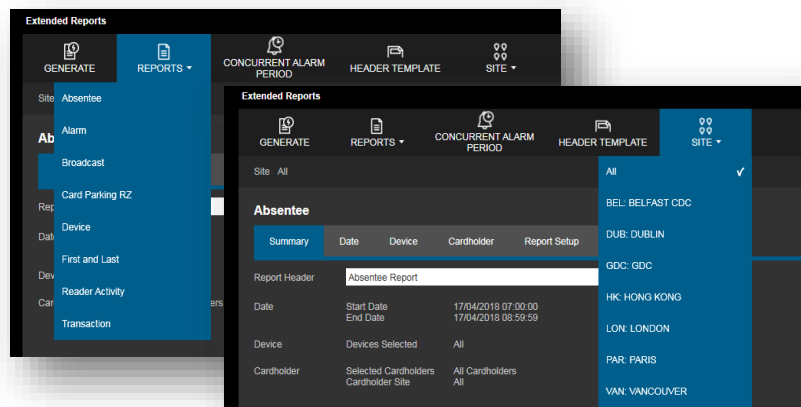


- **Global Reporting**

With AC2000 Enterprise it is possible to report on all activities (e.g. transactions) of a company or card holder across all sites.

Global Reports available on the AC2000 Enterprise server include:

- Absentee
- Alarm
- Card Parking
- Device (Alarm & Transaction)
- First and Last
- Reader Activity
- Transaction
- Broadcast (Only shows the broadcasts issued from the central Enterprise server)



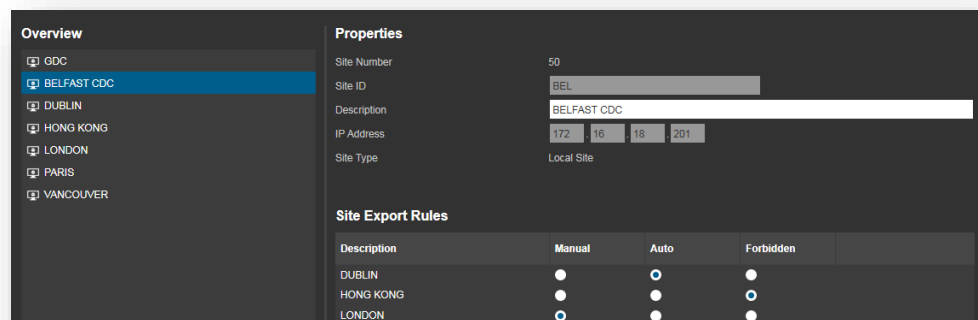
AC2000 Extended Reports on AC2000 Enterprise server

- **Personnel/Card Exports**

Records can be exported from each AC2000 Local Enterprise site to some or all of the other connected enterprise sites.

At the central AC2000 Enterprise server it is possible to specify which sites it can export to and whether the exports are:

- **Auto** – all records are immediately exported to this site
- **Manual** – the operator selects which records are exported
- **Forbidden** – no exports are allowed



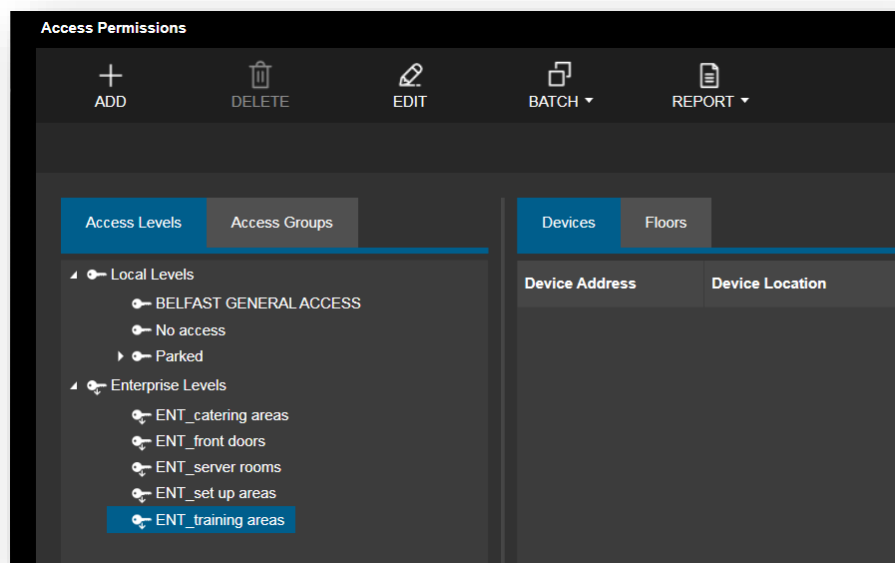
Site Export Rules for AC2000 Local Enterprise sites

- **Enterprise Access Levels**

A powerful feature which enables centralised access level assignments and reduces operator intervention.

On the central AC2000 Enterprise server up to 1,000 enterprise access levels can be created and assigned to any card holders on the enterprise system as extra access. Each AC2000 Local Enterprise site specifies which of their devices (if any) are included in each Enterprise access level.

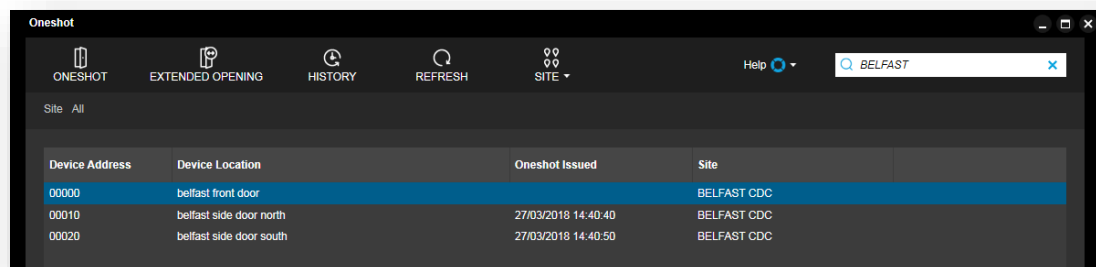
To distinguish between local and enterprise access levels, Enterprise access levels names are prefixed with 'ENT'.



Enterprise and local access levels in Access Permissions

- **Global 'Oneshots' and Broadcasts**

Workstations connected to the central AC2000 Enterprise server can issue 'oneshot' and individual device broadcast commands to any device on the enterprise system. The broadcast zones created at the AC2000 Local Enterprise sites are replicated to the central Enterprise server, allowing its users to open/close broadcast zones at the remote sites.



'Oneshot' command issued at AC2000 Enterprise server

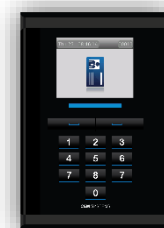
- **AC2000 independence at local sites**
Full control of the data added at the local site, e.g. Personnel, Devices, Security Hub and Reporting. Each site can maintain independent control which helps prevent unnecessary downtime in the event of a loss of communication with the central AC2000 Enterprise server.



Additional v10.0 features

Additional features in CEM Systems AC2000 v10.0 include:

- Copy previous card details option added in the Personnel application – allowing operators to save time and steps required to configure new cards that are based on current card privileges in the system.
- Control the TAB order on User Fields – users can now specify the field/tab order to improve the user experience.
- Cyber security toughening - code toughening to protect against cyber security issues and a new option to insist on at least 1 special character within a password e.g. ! # \$ & () * , . / : < = > ? @ [] ^ _ ` { | } ~
- Stronger password control defaults:
 - Min_password_length – default is now **8**
 - Check_password_chars – now at least **1 letter and 1 number are required**
- Support for the latest Omnikey model (5422) added to the SmartCard Utility.
- **S700e and S700s intelligent card readers** now supported in **LockDown** and **Threat Levels**.



CEM Systems AC2000 Integrations and OEMs

Suprema Bio Mini support for biometric enrolment

Biometric enrolment on AC2000 v8 Feature Pack 1 and higher can now be captured via the Suprema Bio Mini unit, providing an alternative to the S610f enrolment reader.



AC2000 SnapShell ID and passport scanner interface



The AC2000 system now contains a fully integrated passport and ID scanner using the SnapShell® Passport scanners. This allows the user to transfer a cardholder's passport or driver's license information (surname / forename / document ID / issue date) onto the AC2000 Visitors application.

The SnapShell scanner capture cardholder details at the press of a button in the AC2000 SnapShell interface and only requires a USB 2.0 connection.

This integration improves the efficiency of your identity registration and on boarding mechanism with data capture which reduces data input errors.



SnapShell Passport scanner

For full details of all integrations supported on AC2000, please contact CEM Systems
cem.info@tycoint.com

Frequently Asked Questions

CEM Systems AC2000 v10.0

Q. What AC2000 products are being released as version 10.0?

A. AC2000 version 10.0 is being released for the core AC2000 product, AC2000 Airport and AC2000 Lite editions.

Q. Is there an upgrade path for previous AC2000 installations (AC2000 version 8 and lower)?

A. It is possible to upgrade in one step from AC2000 v6.9, v7.1 or v8.0 straight to v10.0. In each case the upgrade process involves a 2 stage process:

- I. run an unload script on the current server to extract the data and
- II. run an upload script to convert the data and load it into your new v10.0 system (whether it is installed on the current server/VM or a new server/VM)

Q. My current system has a third party interface using AC2000 API. Will it still work after I upgrade to AC2000 10.0?

A. API Integrations written for pre AC2000 v8.0 systems may require updates when upgrading to v10.0. Please contact CEM Systems for details.

For further details of integrations supported at v10.0 at the time of launch please view the [AC2000 Integrations Matrix](#).

If your integration is not currently listed/supported then please contact CEM Systems to discuss expected lead time and options available.

Q. Is Alarm & Event Display (AED) supported at AC2000 v10.0?

A. No. AED is not supported at v10.0 but [AC2000 Security Hub](#) is available. AC2000 Security Hub is the state of the art central command and control application for AC2000. AC2000 Security Hub offers modern, centralized security management for the real-time monitoring and control of alarms and events across multi-sites and multiple security systems including access control, video, fire, intruder and building systems.

Standard Security Hub is included with AC2000 Security Management software and is not licensed; however if Graphical Maps functionality is required then an additional licence will be needed. Please note that AC2000 Lite already includes a maps licence free of charge.

Q. If I upgrade my AC2000 system and migrate from using Alarm & Event Display (AED) to Security Hub will I retain the AED map and device configuration?

A. A conversion tool is available. Please contact CEM Systems for further details.

CEM AC2000 v10.0 Enterprise Deployments

Q. How is AC2000 Enterprise licensed? Are there separate licenses for AC2000 Enterprise Server and AC2000 Local Enterprise Server?

A. The AC2000 enterprise architecture consists of a single **central** AC2000 Enterprise server and one or more AC2000 **Local** Enterprise servers. When moving from a standalone standard AC2000 solution to Enterprise, a) an AC2000 Enterprise license needs to be purchased for the central Enterprise server and b) an AC2000 Local Enterprise server license is also required for each Local Enterprise server.

Q. Can AC2000 Enterprise and AC2000 Local Enterprise Servers support data partitioning?

A. AC2000 Local Enterprise servers can be partitioned for use cases where multiple sites and/or multi-tenant buildings need to be controlled by a single AC2000 access control system, making AC2000 Enterprise a flexible solution that is able to meet the requirements of even the most demanding system users. Please note that the central AC2000 Enterprise server cannot be partitioned.

Q. What are the limitations of the AC2000 Enterprise Server?

A. The central AC2000 Enterprise server is very powerful and is able to provide system-wide information that is not available at the local level. However, there are some applications not available at the central AC2000 Enterprise server. For example:

- Devices application can only be run at the AC2000 Local Enterprise sites and the device details are centralised to the central AC2000 Enterprise server for global reporting and alarm management purposes.
- Devices cannot be added to the central Enterprise server which means that on-line validation cannot be used at the central server.
- Visitor and Vehicle data is not uploaded from local sites to the AC2000 Enterprise server.
- Threat levels are only available at AC2000 Local Enterprise sites.

The following reports are not available on the AC2000 Enterprise server:

- Device Access - who has access
- Device Access Levels
- Guard Tours
- Occupancy Zones
- Personnel (access levels, time zones and card formats not uploaded)
- Visitor

The following client applications are not be available on the AC2000 Enterprise server:

Anti-passback zones	Configure reader messages	Devices
Cross partition access	Guard tours	Keypad commands
Lift control	Lift mimic	Lockdown
Muster zones	Partition card formats	TEA areas
Occupancy zones	Threat level definition	Threat level indicator
TEA areas	Threat level setter	Vehicles
Visitors	Partition card formats	Visitors

Q. What Security Hub functionality is supported on the AC2000 Enterprise Server?

A. The Device, Alarms, Alarm Processing (including alarm and device notes), RTD and Maps views are available plus Reports, the ability to ACK and CAN alarms and to issue 'oneshots'. Maps are configured at each AC2000 Local Enterprise server and automatically uploaded to the central AC2000 Enterprise server (approx. every 15 mins). Local workflows can be configured on each AC2000 Local Enterprise server and the central AC2000 Enterprise server but they are not exported. Alarm Escalation can be configured on each AC2000 Local Enterprise server and the central AC2000 Enterprise server but they are not exported. AC2000 Enterprise server and AC2000 Local Enterprise server off-line alarms are also supported.

Please note that it is not possible to configure maps on the central AC2000 Enterprise Security Hub workstation.

Q. What functionality is not available on AC2000 Local Enterprise server?

A. To make it possible to export company information and to report by company at the central server and other sites, companies are now only defined at the central Enterprise server. Likewise to make centralised alarm management possible, user defined alarms can only be defined at the central AC2000 Enterprise server.

Q. What is the installation process for the AC2000 Enterprise and AC2000 Local Enterprise servers?

A. There is one server ISO used for all server installs. The central Enterprise server should be installed first. To create a central AC2000 Enterprise server, you must install a central Enterprise server licence via the web pages and then run the appropriate configuration script.

To create an AC2000 Local Enterprise server, you must install an AC2000 Local Enterprise server licence via the web pages and then run the appropriate configuration script.

If you currently have a standard single site AC2000 system and wish to expand to a multi-site enterprise solution then, you must install the Central Enterprise server before you add the second AC2000 Local Enterprise server.

You must install the central AC2000 Enterprise server, then convert the current AC2000 standard server into an AC2000 Local Enterprise server (CEM Systems assistance required) and then install the second AC2000 Local Enterprise server.

Q. Is it possible to edit imported personnel and card records?

A. Only the home/owner site (i.e. where the record was added) can edit all personnel and ID card fields, e.g. change the surname.

At an importing site it is only possible to modify the following fields:

- Access Level
- Time-zone
- Remote app group
- Status Options
- Static & User defined spare fields

Q. Is there a requirement to have failover on AC2000 Enterprise Server and AC2000 Local Enterprise Servers?

A. AC2000 Enterprise server requires a hot standby failover server. For AC2000 Local Enterprise servers, a hot standby failover server is recommended but not essential. Please note that failover is not available for any local enterprise sites running AC2000 Lite.

Q. How does the enhanced AC2000 v10.0 Enterprise system compare to AC2000 v8 Standard System Link?

A. As an improvement to the AC2000 Standard System Link enterprise solution, configuration of new sites on the enterprise system has been simplified. When a new AC2000 Local Enterprise server is added it is configured on the central AC2000 Enterprise server and automatically added to all linked sites. On the new AC2000 Enterprise server there is the ability to add personnel, cards, produce badges and export to other sites. The card holder's company details are also exported. There is also the ability to run a number of global reports and AC2000 Security Hub on the AC2000 Enterprise server.

AC2000 Standard System Link	AC2000 v10.0 Enterprise
<ul style="list-style-type: none"> • When a new site was added to the Link, it had to be added to each local site separately. • Card holder's company details NOT exported. • On the Global server there is no data added at the Global server. • Overview Mimic – text list of total number of alarms at each site. • Two reports – Alarm & Transaction. 	<ul style="list-style-type: none"> • When a new site is added to the Enterprise system, it is configured on the Central server and is automatically added to all linked sites. (Much simpler configuration) • Card holder's company is exported. • On the central AC2000 Enterprise server ability to add Personnel, cards, produce badges at the Enterprise server and to export to other sites. • Global command and control via Security Hub with maps and alarms from all linked sites. • Eight reports can be run on the system-wide data.

Note: Professional services will be required for existing sites wanting to upgrade and merge isolated or Standard System Link systems into a v10.0 Enterprise Link system.

CEM Systems AC2000 Integrations

Q. What version of AC2000 supports SnapShell?

A. AC2000 v8 Feature Pack 1 and higher supports SnapShell.

Q. What version of AC2000 supports Suprema Bio Mini?

A. Suprema Bio Mini is supported on AC2000 v8 Feature Pack 1 and higher.

Feature	Function	Benefit
User interface modernization across all AC2000 workstation applications	AC2000 user interface has been modernized with improvements to all visual elements of the system from the colour palette and layout of applications, through to the menus and icon sets.	Improved user experience with a modern, highly intuitive user interface and consistency across all AC2000 applications, which are in line with the recently modernized AC2000 Security Hub application.
Options of light and dark themes for AC2000	On AC2000 Floatbar users have the ability to select their preference of running the AC2000 system in a light or dark theme.	Improved user experience with option to change AC2000's look to reflect the user's taste. Choose the light theme or the default dark theme which is in line with the AC2000 Security Hub interface.
Enhanced AC2000 enterprise offering designed around a single AC2000 Enterprise server centrally connected to an unrestricted number of AC2000 Local Enterprise servers	Provides superior centralised access control and monitoring capability where wide geographical distribution occurs, or where departmental or business unit separation is necessary. AC2000 Enterprise server holds all personnel, card, card swipe, and alarm information from all linked sites.	The new enterprise architecture improves reporting, alarm processing and personnel management across multiple site locations. Administrative and operational efficiencies can be achieved through the centralised monitoring and processing.
	Multi-version support for ease of upgrading.	Multi-version support for ease of upgrading, reducing the cost and complexity of adding or updating enterprise sites.
	Global Security Hub – AC2000 Security Hub command and control application supported.	Centralised operator can open doors in the absence of the local operator. Additional resources can be utilised across multiple sites in the deployment Consolidation of data across multiple sites provides a holistic view of the deployment for enhanced decision making.
	Each server set to its local time and still able to connect to the central AC2000 Enterprise server	Local site operates can manage their site in local time while still being linked across different time zones.
	Global Reporting - Report on all activities (e.g. transactions) of a company or card holder across all sites.	Consolidation of data across multiple sites provides a holistic view of the deployment for enhanced decision making. Saving the end user time collating multiple reports.
	Records can be exported from each AC2000 Local Enterprise site to some or all of the other connected enterprise sites.	Reduces the need for the user to enrol at every site they visit, saving operator and card holders time.
	Up to 1,000 enterprise access levels can be created and assigned to any card holders.	Reduces operation intervention and improves the site to site movement of approved card holders.

	<p>Issue 'oneshot' and individual device broadcast commands to any device on enterprise system.</p> <p>Almost full AC2000 functionality at local sites.</p>	<p>Centralised operator can open doors in the absence of the local operator, enabling additional resources to be utilised across the multiples sites in the deployment.</p> <p>Maintain independent control at each local site. Prevents unnecessary system downtime in the event of a loss of communication with the central AC2000 Enterprise server.</p>
Unrestricted AC2000 Access Levels	AC2000 v10.0 no longer limits system administrators to a maximum of five Authorization Levels in User Options. Ability to create an unrestricted number of Admin and User Groups where users are assigned to a Group.	<p>Reduces configuration time across the system.</p> <p>Reduces time when making changes to the system.</p>
Visitor Escort	Assign an escort to one of more visitors. Visitors can only gain access through secured areas when accompanied by their escort.	Enhanced visitor management for sensitive or high security sites that wish to restrict the free movement of visitors and ensure they are not left unaccompanied.
Support for Suprema Bio Mini enrolment	Support for Suprema Bio Mini enrolment added to AC2000 system.	Provides a cost-effective alternative to S610 bio enrolment. USB option means you do not require a S610f at the desk.
Support for SnapShell ID and passport scanner interface	SnapShell interface and support in AC2000.	This integration improves the efficiency of your identity registration and on boarding mechanism with data capture which reduces data input errors.

New Product Codes

Product Code	Description
SYS/205/000	Dell Rack-mount RAID-5 Server Hardware with Enterprise Server License SWAC2ENT-E
SWAC2ENT-E	Enterprise Server License
SWAC2ENT-L	Enterprise Local Server License Requires CDC Server Licenses (Bundled Systems or Software Only)
HDS/420/000	Acuant Snapshell Passport Scanner
HDS/087/002	Suprema BioMini Plus 2 USB 2.0 Fingerprint Validation Scanner

For more information email cem.info@tycoint.com or contact your account manager.