ARES 4.5 Security Management Software

The ARES 4.5 access control & security management software is designed to provide a range of new benefits to users. Enabling connectivity to Challengers using the Ethernet is its primary task. While this is currently possible using earlier versions of ARES, bandwidth usage is now minimised by utilising an event-driven protocol. Not only is bandwidth minimised but also speed of alarm delivery is greatly enhanced when compared to polling protocols. ARES 4.5 enables the use of the new Tecom Challenger Ethernet interface, TS0898 thus eliminating the need for third party devices.

While developing ARES 4.5, installers' and end users' needs have been further considered. An outcome is that ARES 4.5 and future versions, along with the necessary licences will be delivered preloaded on suitable hardware. This removes the complexity of loading the unfamiliar QNX operating system and eliminates the timely process of sourcing QNX compatible hardware. All hardware versions will also include a modem for remote diagnostics and technical support by the GE Interlogix team.

Another feature of version 4.5, in keeping with ARES high-end application status is the availability of several new high level interfaces suited to prison and watch house installations. They are for the Jacques intercom system and Ascom Nira duress and paging system.

Description:

ARES 4.5 security management software is a multi tasking and multi operator platform that is capable of controlling up to 128 Challengers from a single computer. The application is made more robust than most systems available because of the QNX operating system on which it operates.

QNX is a real time operating system that is designed to be deterministic. This trait, a legacy of its origins in industrial automation is a key feature of any high-performing, high security or large access control installation.

QNX on the other hand is scalable so that it is equally at home on a small system needing real time graphics or a more robust operating environment as it is in large prison and university installations. Wherever speed and reliability are critical in a security or access control system, the QNX operating system is the system of choice.

ARES, as a critical part of a security system that requires high levels of serviceability, is designed to run on its own independent network to ensure the integrity of the system. While this and the uniqueness of QNX make the system a desirable solution for a wide range of applications, operator interfaces can be configured to suit low skill levels where necessary. Use of touch screens can render a system highly manageable with the most complex of high level interfaces in operation.

The hardware solutions available take account of redundancy with RAID 1 and dual power supplies where required, as well as lower cost solutions where such features are not needed. Other standard options are 19 inch rack mounting, rocket port and additional serial cards. The hardware is supplied with all licences needed for an installation and tested in house by the GE Interlogix team prior to delivery. A three years on-site warranty ensures that the best support for critical security and access systems is provided.
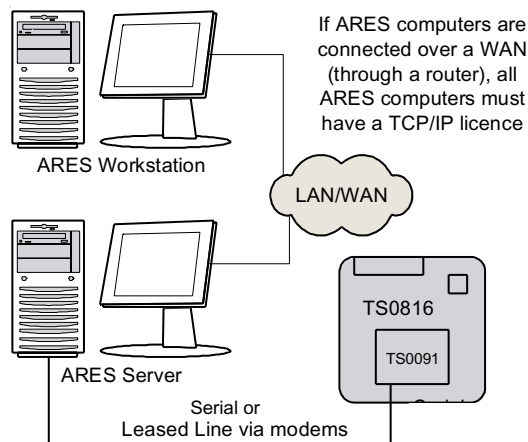
Features:

- Advanced event triggering logic.
- Advanced user and card management.
- Advanced Alarm monitoring.
- Advanced Operator access control.
- Event Driven Protocol for reduced network bandwidth.
- Real Time graphics.
- Native Ethernet communications to the Challengers System(s).
- A robust and secure operation system for increased reliability and availability on the management application
- CCTV and Matrix Switcher interfaces
- Installation with a very high number of transactions, typically more than 5000 events per day.

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Typical Setup examples:

Two ARES computers and serial Challenger

In this example, ARES is used as the access control and security management software to communicate to the Challengers via the TS0091 Computer Printer interface. A serial link is used between an ARES serial port and the TS0091 computer port via, either a direct serial connection or leased line via modems.

An additional ARES Workstation is connected using the Ethernet connection on the ARES computers.

ARES Workstation

If ARES computers are connected over a WAN (through a router), all ARES computers must have a TCP/IP licence

LAN/WAN

TS0816

TS0091

ARES Server

Serial or Leased Line via modems

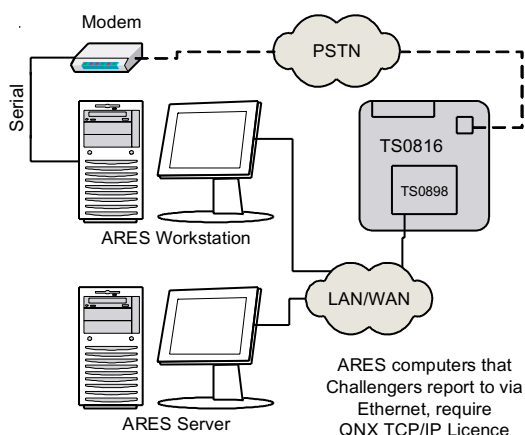### Two ARES nodes and Challenger/s via Ethernet, with dialler backup.

In this example, ARES is used as the access control and security management software to communicate to the Challengers via the TS0898 Ethernet Interfaces.

A LAN/WAN is used between an ARES Ethernet port and the TS0898 Ethernet port.
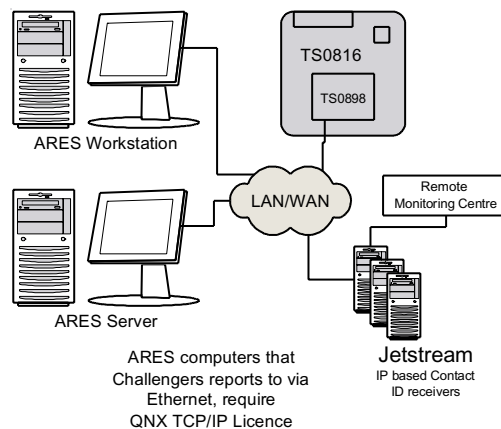
An additional ARES Workstation is connected using the LAN/WAN.

A QNX TCP/IP licence is required for the ARES Workstation if a Challenger is programmed to communicate to it.

On the event of a Challenger Ethernet failure, a modem may be connected to one of the ARES serial ports to receive events from the Challenger onboard dialler via the PSTN.

Modem

PSTN

Serial

TS0816

TS0898

ARES Workstation

LAN/WAN

ARES Server

ARES computers that Challengers report to via Ethernet, require QNX TCP/IP Licence

Two ARES nodes, Challenger/s and Jetstream/s via Ethernet

A Tecom Jetstream Contact ID receiver is connected to the LAN/WAN to pass CID events from the Challengers to a Remote Monitoring Centre. ARES and Jetstream do not communicate to each other.

ARES Workstation

TS0816

TS0898

ARES Server

LAN/WAN

Remote Monitoring Centre

Jetstream
IP based Contact ID receivers

ARES computers that Challengers reports to via Ethernet, require QNX TCP/IP Licence

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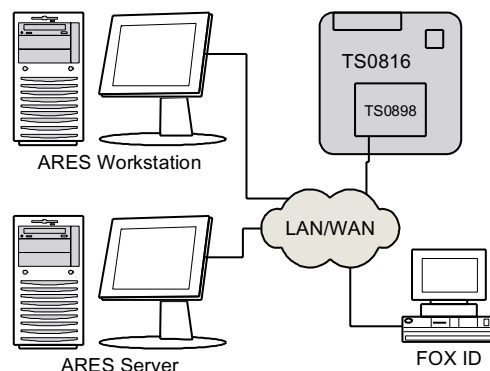TECOM | KALATEL | ARITECH | SENTROL | ESL

Two ARES nodes, Challenger/s and Fox Id via Ethernet

A Fox Id (photo Id) system is connected to the LAN/WAN to pass user pictures and limited information to the ARES Server.

An additional ARES node is connected using the LAN/WAN.

A QNX TCP/IP licence must be used for ARES node one receiver to receive data from the Fox ID system.
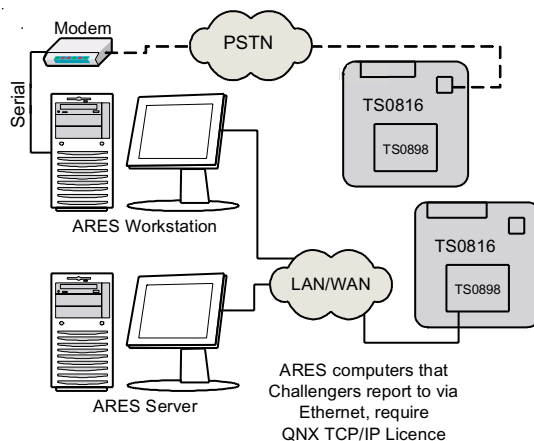
ARES Workstation

ARES Server

TS0816
TS0898

LAN/WAN

FOX ID

ARES computers that Challengers report to, or FOX ID interfaces with via Ethernet require QNX TCP/IP Licence

Two ARES computers, one Ethernet Challenger and one dialler Challenger

In this example, ARES is used as the access control and security management software to communicate to the Challengers. One via the Challenger Ethernet Interface, and the other via the Challenger onboard dialler.
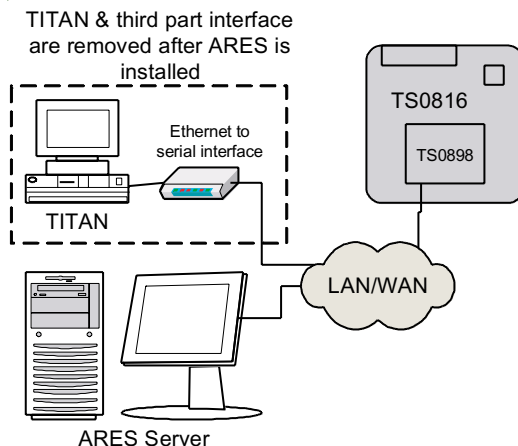
An additional ARES Workstation is connected using the Ethernet connection on the ARES computers.

Modem

Serial

PSTN

TS0816
TS0898

ARES Workstation

TS0816
TS0898

LAN/WAN

ARES Server

ARES computers that Challengers report to via Ethernet, require QNX TCP/IP Licence

Upgrade path from TITAN and third party interface to ARES 4.5

In this example, ARES is used as an upgrade path to replace the existing TITAN and third party interface. ARES will be used as the Security Management Software to communicate to the Challengers via the TS0898 Challenger Ethernet interfaces. A LAN/WAN is used between an ARES Ethernet port and the TS0898 Ethernet port.
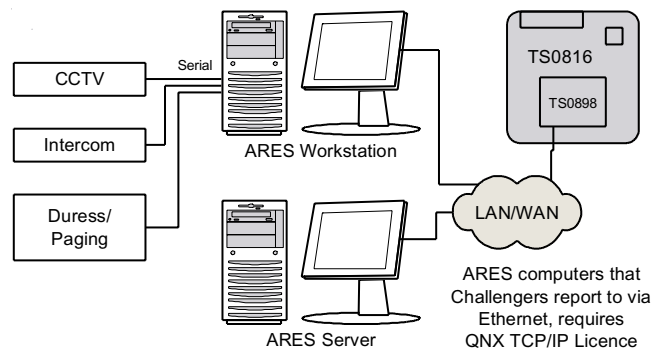
TITAN & third part interface are removed after ARES is installed

Ethernet to serial interface

TITAN

TS0816
TS0898

LAN/WAN

ARES Server

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Integration system with ARES nodes, Challengers, CCTV, Intercom and Duress/Paging devices.
In this example, a CCTV switcher, intercom master and Duress/Paging master are connected the ARES computer via a serial port using a high level interface protocol.

This would allow ARES to:
- control a CCTV switcher and PTZ functions,
- control and receive events from the intercom system,
- send events to a pager and receive alarms from the duress system.

CCTV

Intercom

Duress/ Paging

Serial

ARES Workstation

ARES Server

LAN/WAN

TS0816

TS0898

ARES computers that Challengers report to via Ethernet, requires QNX TCP/IP Licence

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Technical Specifications

Hardware

CPU	Intel Pentium 4 1.5Ghz or higher
HDD	20Gb or higher. (RAID 1 in TS9070 series only)
Power supply	300 Watt (Redundant power supply in TS070)
Monitor	17" Acer or equivalent (refer to ordering info. for options)
Keyboard	Standard 101 or equivalent.
Mouse	PS2 mouse or equivalent
Case	Tower (4RU rack mount optional, refer ordering information)
Network Card	QNX compatible 10/100 Mbs
Modem	56k
Backup	Iomega 250Mb drive
Serial	2 DB9 (Rocket ports may be ordered to expand IO)
Parallel	1 DB25
Monitor	17" colour
Keyboard	Standard 101 key - PS2
Mouse	Standard 2 button - PS2
Warranty	3 years on site.

Software / Hardware

Software	Hardware
ARES 4.5 management software	TS9070, TS9071, TS9072 (and "R" variations)
QNX runtime version 4.2x	TS9070, TS9071, TS9072 (and "R" variations)
QNX Windows version 4.2x	TS9070, TS9071, TS9072 (and "R" variations)
QNX TCP/IP TS9056	TS9070, TS9072 (and suffixed variations)
	TS9071 requires TCP/IP TS9056 as noted in diagram.
ARES 4.5 upgrade software	All "H" variations of hardware are supplied with upgrade software and QNX licences already registered.
TS9075	Is the only variation of ARES available for on site installation.

System Capacities

Challengers per ARES node	128
Challengers per ARES system	1022
ARES nodes per system	40
Events per second	4
Serial ports per node	21 (5 ports are always reserved for Challengers)
VT100 Workstations, serial	640 (16 per node)
Printers, serial or parallel	360 (Text mode printer only)

Integration

CCTV	99 switchers (9999 cameras, 99 monitors per switcher)
Intercom	15 masters (255 stations per master)
Duress/Paging	99 masters (65000 Tx, 9999 Rx per master)

ARES Capacities

Remote Arming Stations (RAS)	16,352 (16 per Challenger)
Alarm Areas	16,352 (16 per Challenger)
Challenger Users	Limited by Challenger. 65,535
ARES operators	16 million (Dependent on HDD size and usage)
Maps	9,999
Live points per map	100

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Technical Specifications

Members	256
Member Groups	16 million (Dependent on HDD size and usage)
Time Zones	16 million (Dependent on HDD size and usage)
Holidays	16 million (Dependent on HDD size and usage)
Reader Controlled Doors	65,408 (64 per Challenger)
Alarm Inputs – Four State	261,632 (256 per Challenger)
Alarm Outputs	260,610 (255 per Challenger)

Network Utilisation

Two x ARES nodes Idle	Typically 0.1% of 10M bandwidth
ARES node two login	Typically 10% of 10M bandwidth over five second period.
Challenger to ARES node	Challenger events are 91 bytes or less.
Note:	Ethernet devices are designed to adapt to the available Ethernet bandwidth. Ethernet utilisation typically does not go above 80% of the link bandwidth.
	As an Ethernet link between two nodes is lowered, the average time of the ARES process would take longer to complete. We recommend a link of not less than 1 Mbs between ARES nodes be used for typical installations.

New ARES Upgrade Considerations

User PIN codes	In cases where multiple existing Challengers are newly connected to a single ARES system, user numbers may exceed the PIN code limit if IUM's are not fitted to the Challengers.

Ordering Information

When placing an order please specify the following part number:

TS9070	ARES Prime Server (with RAID 1)
TS9071	ARES Standard Server
TS9072	ARES Workstation
TS9070R	As for TS9070 but with 19 inch rack option
TS9070H	As for TS9070 but with TS9075 ARES upgrade loaded
TS9071H	As for TS9071 but with TS9075 ARES upgrade loaded
TS9072H	As for TS9072 but with TS9075 ARES upgrade loaded
TS9075	ARES 4.5 software upgrade for existing version 4.4 or earlier versions
TS9073	QNX Compatible 8 way Rocket port
TS9056	QNX TCP/IP licence for TS9071 when required
TS9059	Fox ID 32 interface licence
TS9074	QNX compatible 56k modem
TS9061	CCTV Interface Licence
TS9076	Additional Network Card
TS9077	17inch Touch Screen
TS9078	19inch Touch Screen

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