

# AC2000 Failover

## FEATURES

### OVERVIEW

The CEM AC2000 Failover server provides the highest level of system resilience. Irrespective of expenditure on the highest specification RAID server for a clients AC2000 Server, there is still the realisation that after a long period of constant processing 24 hours per day, 7 days a week, that the main server hardware may eventually fail.

#### Why use AC2000 Failover?

If users have a hardware maintenance contract in place, it is likely that the server will be repaired or replaced. However, until the AC2000 Server is restored, there is always a period of time where all ID Badging stops, where it is impossible to update/stop existing cards and where the AC2000 AED (Alarm Event Display) is offline.

Even if the most recent backup can be used, a certain amount of data is always lost when restoring a primary server; namely all changes that have been made since the last successful backup finished and the machine crashed. This will include cards that have been issued or updated, new or updated images, transaction/alarm information and all other database changes.

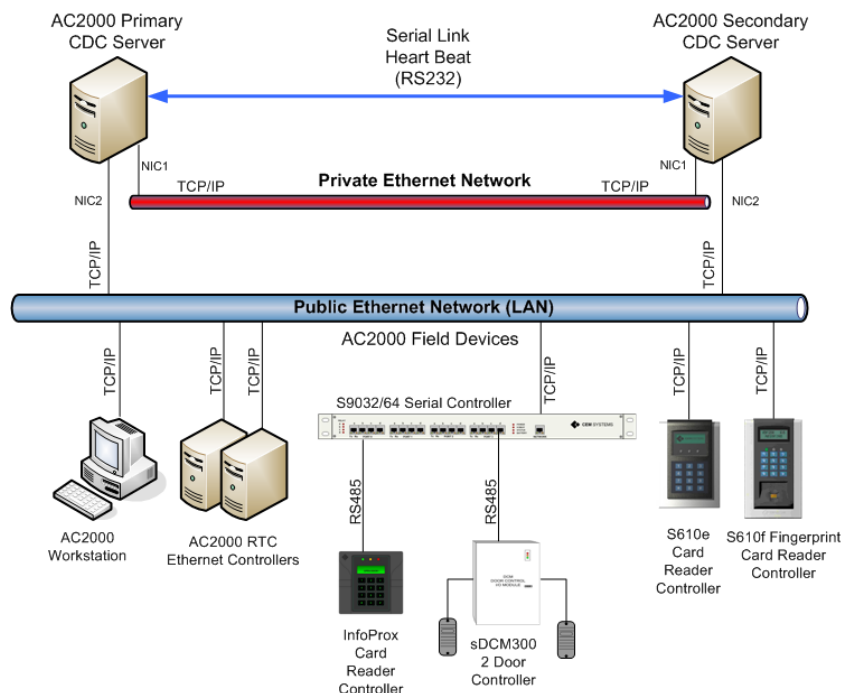
Using AC2000 Failover, clients are provided with a failsafe secondary server and the highest assurance of system reliability should the central AC2000 server hardware fail.

#### How Failover works...

Failover is achieved by using two machines running AC2000 (Standard Edition or Airport Edition). The first machine is defined as Primary and the second machine is defined as Secondary (standby). The software is installed on both servers and comes with a step-by-step installation guide. When this Failover system is used, no CEM intervention is required, and there is no painstaking reading of backup tapes and minimal data loss. The system users and administrators are given clear notification that there is a problem with one of the servers.

- Failover/High Availability
- Negligible System Downtime - no effect on company productivity
- Zero Data Loss
- Upon system failure there is minimal affect on users - they simply logoff and login into their AC2000 workstation software again
- Cost Effective, no intervention from a support engineer needed
- Automatic, no buttons to press or long list of steps to take

## SOFTWARE HIGHLIGHTS



### Failover Connections

Between the two servers there must be a serial connection and a reliable, dedicated, high speed network connection (min 100 Mbps).

Should the Primary server fail, the Secondary server detects this and will:

- 1) Adopt the IP address of the Primary AC2000 CDC server
- 2) Launch the CDC software
- 3) Service the RTCs, Door Controllers, Ethernet readers and AC2000 system workstations

### User Notification

The AC2000 AED (Alarm Event Display) application will show 'Server Went Offline' then a 'Server Failed Over' alarm. Absolutely NO user intervention is required, as the AED automatically connects to the Secondary CDC server. Readers, Door Controllers, and RTC's also automatically connect to the Secondary server. The only user intervention required is on the workstations, where the user merely needs to close any applications he/she may be using and then re-launch them. Once the faulty server has been repaired, it can be restored to the role of Primary server.

### What is Needed?

- 2 x functional Servers, as per AC2000 CDC specification (e.g. Raid 5, Dual network cards (NICs) and a Backup device).
- Network cross-over cable for private network link between the Primary and Secondary servers.
- Serial Cable for Serial Link/Heartbeat connection (RS232).

### Failover Components Explained

#### CDC Primary Server

The Server on which the CEM application software (AC2000) and users will normally be running on/connected to.

#### CDC Secondary Server

The server that maintains a mirrored, concurrent copy of the CEM AC2000 application software. This system is ready to take over operation if the Primary System fails.

### Private Network

There is an Ethernet connection between the primary and secondary system through which all data is transferred between the mirrored file systems.

### Serial Link

The serial link is used by the Failover Software on the Secondary System to check the status of the Primary System. The serial link allows the monitor program to distinguish between a network failure and a system failure.

### HeartBeat

The Heartbeat program is one of the core components of the Failover system. Heartbeat makes sure each of the servers it manages are running at all times. When heartbeat packets are no longer received, the server is assumed to have failed, and any CEM services (resources) it was providing are "failed over" to the other server.

### Product Code

SYS/102/00F

### Description

CDC Failover Server (Incl. latest RAID5 Server with AC2000 SE Failover Software - SWFAIL)

SWFAIL

AC2000 SE Failover Server software licence

The High Availability/Failover option is available from AC2000 SE/AE Release 4.6 onwards of the CDC Server software.

The AC2000 Failover is not available for the CEM AC2000 Lite system.

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