

Certification Authority for AEP Net Key Management

The central key management platform for the AEP Net range of IP encryptors requires a Certification Authority (CA) to certify public keys, revoke certificates and sign Certificate Revocation Lists (CRLs).

Approved by the UK Government's CESG Assisted Products Scheme (CAPS) to Enhanced Grade level AEP Net CA is a hardware platform that provides the high assurance digital signing and key storage mechanisms necessary to support the sophisticated central management of the AEP Net encryption solution.

The CAPS certification of Net CA together with the certified security mechanisms in AEP Net encryptors enables a key management solution that minimises key handling and eliminates the need for any key handling at the local encryptor.

AEP Net CA enables the management operations staff to process key updates quickly and simply providing the tools to support very large encryption communities. Encryption systems of 1000's of devices can be keyed in a matter of hours.

Encryption may need to be deployed into environments where there is a high threat of units being lost or stolen (e.g. mobile field officers). AEP Net CA provides the functionality to revoke a unit's certificate at the management centre. This feature enables operations staff to cryptographically isolate a lost or stolen encryptor from the secure network. Additionally, if required, the community of encryptors can be rekeyed simply and quickly.

Uniquely, the AEP Net encryption solution supports Cryptographic Communities of Interest (CCOIs) for assured data separation between encryptors managed from a common management system. AEP Net CA provides the tools for an authorised officer to manage CCOI policies.

Operator actions and cryptographic events are audited within AEP Net CA's secure cryptographic kernel with a GUI interface provided for access to audit data and archive management

Certificates and CRLs are written to industry standard LDAP directories. This data is also recorded to enable the LDAP directory to be reconstructed or the Net CA module to be replaced if required.



FEATURES & BENEFITS

- Hardware based, tamper reactive boundary
- Eliminates key handling at remote encryptor
- Bulk key signing in a "select and click" operation
- Increased CA availability and hence security
- Approved by CESG to Enhanced Grade Key Management and Storage
- Support very large encrypted communities, centrally
- Operational and management via low specification Windows platform

Technical Specifications

Physical Interface	LAN	10/100 Base-T Ethernet auto negotiation (N-way)
	Serial Port	v24
Environmental	Temperature	Operating: 5°C (41°F) to 40°C (104°F) Storage: -15°C (5°F) to 65°C (149°F)
	Humidity	25% - 90% non-condensing
Physical Dimensions	Height	51mm (2 in)
	Width	223mm (8.78 in)
	Depth	244mm (9.6 in)
	Weight	< 4 Kg (8.82 lbs) including power supply
Power	100V to 240V, 47 - 63 Hz auto-sensing external inline mains AC to DC converter, 40VA maximum	
Electrical Safety	EN 60950: 199/A2, 1993	
EMC	EN 50082-1, EN 55022 Class B	
MTBF	50,000 hrs based on British Telecom HRD5 standard	

AEP Net CA in Operation

An AEP Net CA module is installed at the management centre for an AEP Net encryption system.

Whenever an encryptor is commissioned and at key update intervals certificate requests are received at the management centre for processing.

Operations staff issue certificates using the Net CA GUI interface. New certificates are automatically posted to LDAP.

Operations staff can revoke a certificate and publish a new CRL whenever required. New CRLs are automatically published by Net CA at the intervals determined by the user organisation's policy.

Operations staff authenticate to Net CA to perform manual actions. There are 2 classes of user: Standard operator – able to process certificate requests and revoke certificates. Administrator – able to modify certificate policies and update the CA keys stored in Net CA

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