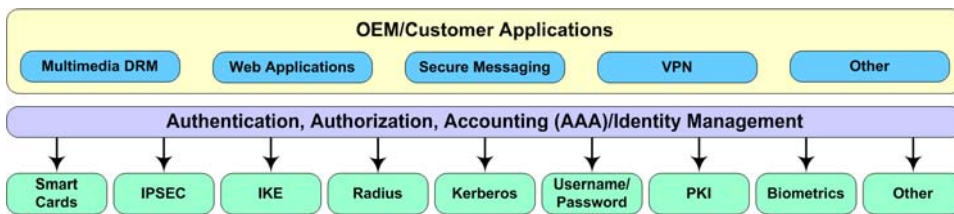


# PeerlessNet™ Security SDK

*Comprehensive authentication, authorization, accounting, and confidentiality solution for embedded devices*



The Security Software Development Kit (SDK) is one of the newest modules in the PeerlessNet™ suite of software tools. Its standards-based foundation, regulatory compliance, and unique value-added features make the PeerlessNet Security SDK a comprehensive, portable, and versatile solution that enables advanced network security for embedded devices. The SDK incorporates the leading authentication, authorization, and accounting protocols, provides a high-level abstract API for them, and combines individual security realms into a coherent solution for next-generation networked devices.



**Robust authentication.** The SDK supports the dominant authentication models currently in use—it provides devices with a local username/password database for standalone authentication requirements; supports Kerberos V5 for integration into an existing Kerberos environment, including support for the Microsoft extensions; and provides an advanced PKI Certificate management framework that manages certificate acquisition, revocation, and validation.

**Role-based authorization.** The software automatically authorizes users based on role information in an LDAP directory. It is interoperable with IETF standard LDAP schema and Microsoft Active Directory schema for authorization. The device can also derive roles through a local user-to-role mapping database that is maintained by the software itself, for use on an unmanaged network.

**Detailed accounting.** The SDK supports auditing of different types of security interactions that occur, such as authentication requests, authorization checks, and events coming from any OEM-specific application. The SDK can also be configured to monitor security related events coming from the platform operating system on which the software is running, for example, possible intrusion detection and IPSEC security policy violations. Audit trails can be stored remotely or locally, and can be digitally signed.

**Data integrity and confidentiality.** With its robust PKI solution, the SDK provides the public-key cryptography necessary for digital signatures to ensure the integrity of messages transmitted over the network, as well as their non-repudiation and confidentiality. The SDK can automatically instantiate the IPSEC security policies for both VxWorks and Linux with certificates acquired from a certificates authority.

## Core Features

- ▶ Full-featured PKI module
- ▶ RFC1510-compliant Kerberos module
- ▶ Legacy username/password support
- ▶ Audit trails for authentication and authorization events

## Value-Added Features

- ▶ LDAP and local authorization
- ▶ Attribute certificates
- ▶ Automatic IPSEC configuration
- ▶ PKINIT support
- ▶ Performance optimization for certificate validation
- ▶ Support for Microsoft Kerberos extensions
- ▶ 802.1x security for wired and wireless LANs

## Platform Support

- ▶ FreeBSD
- ▶ Linux
- ▶ VxWorks
- ▶ Any POSIX compliant operating system

## Regulatory Requirements Compliance

- ▶ Sarbanes-Oxley
- ▶ Gramm-Leach-Bliley
- ▶ ISO15408/Common Criteria
- ▶ BS7799
- ▶ HIPAA

## Value to OEMs

- ▶ Standards-based, cross-platform interoperability
- ▶ High integration flexibility and operating environment diversity
- ▶ Easy, comprehensive security solution with no expert knowledge required
- ▶ Robust architecture to support new features and extensions
- ▶ Unique value-added features
- ▶ Increased productivity and ROI
- ▶ Fast time to market

## Security for Various Embedded Devices

- ▶ Network printers
- ▶ Network scanners
- ▶ Network fax servers
- ▶ Set-top boxes
- ▶ Multi-service residential and SIP gateways
- ▶ Enterprise office equipment
- ▶ DRM applications
- ▶ Biometric security devices

## Solution Details and Value-Added Features

### Public-Key Infrastructure (PKI) solution

- ✓ Compatible with most major certificate authorities: Verisign, Valicert, RSA, Microsoft, and others
- ✓ Advanced certificate validation: CRLs, OCSP, SCVP
- ✓ Multiple PKI enrollment methods: Manual, Automatic (SCEP), E-mail
- ✓ Support for key escrow environments: Banking, US Federal PKI, DoD
- ✓ Simultaneous maintenance of Trust and Enrollment relationships with multiple PKI security domains
- ✓ Automatic configuration of certificate-related IPSEC security associations

### Kerberos solution

- ✓ Kerberos version 5 support (RFC 1510)
- ✓ Complete integration with Microsoft Windows Server 2000 and Server 2003 domains, including Active Directory authentication and authorization
- ✓ Automatic Kerberos realm configuration (if available on the network)
- ✓ Automatic Kerberos KDC Configuration (if available on the network)
- ✓ PKINIT support
- ✓ Single sign-on support
- ✓ Kerberos ticket utilization for authentication to remote "Kerberized" services
- ✓ "Kerberization" of embedded service applications, which allows remote client authentication using client-supplied Kerberos service tickets
- ✓ Compatible with Microsoft Windows Kerberos extensions (Win2000, XP)

### Legacy username/password support

- ✓ Simple username and password authentication
- ✓ Microsoft NTLM and NTLM version 2 support

### Security audit trails for authentication and authorization events

- ✓ Security logs can be kept locally on the device or stored on a remote file system
- ✓ Local security logs can be uploaded for analysis and digitally signed by the device prior to uploading

### 802.1x security for wired and wireless LANs

- ✓ 802.1x supplicant
- ✓ Support for multiple EAP methods: EAP-TLS, EAP-TTLS, EAP-PEAP

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