PEERLESS

PeerlessNet™ NetPrint SDK

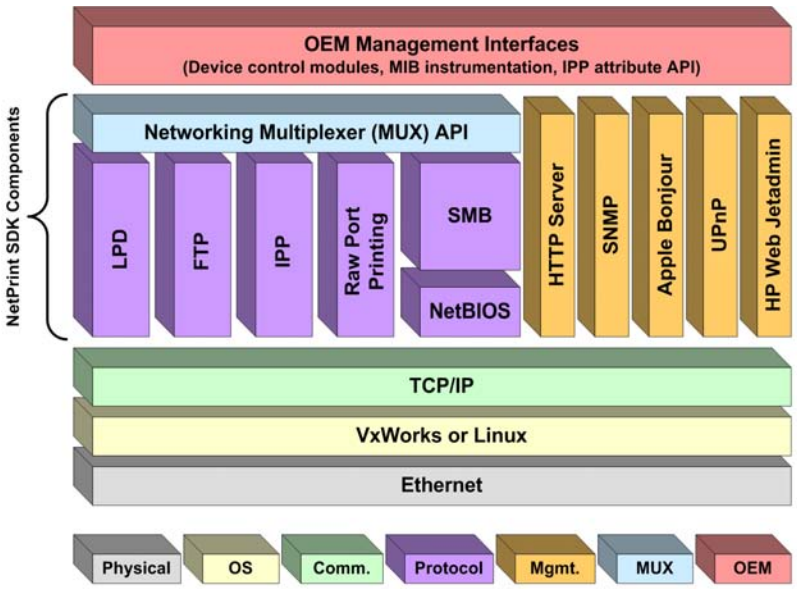
Comprehensive TCP/IP-based network printing and network management solution for embedded devices

Product Overview

The NetPrint SDK is part of the PeerlessNet family of software development kit (SDK) products that collectively provide a set of comprehensive, modular, and portable solutions that original equipment manufacturers (OEMs) can easily enable on their network-connected devices.

The PeerlessNet NetPrint SDK provides a suite of applications and services that provide network printing support for TCP/IP networks. The SDK components meet the latest industry standards and fulfill the key market requirements for TCP/IP-based network printing and network management. The SDK is designed to allow the maximum flexibility in terms of its use and integration: it can be integrated standalone or in combination with other PeerlessNet technology.

The NetPrint SDK enables the basic network printer server functionality by utilizing the core networking features, such as simultaneous IPv4 and IPv6 communication, multicast domain name system (DNS), and multiple wired and wireless network interface. The SDK also implements several printing protocol interface modules and provides a set of network management components.



Services and Protocols

- Line Printer Daemon (LPD)
- File Transfer Protocol (FTP)
- Internet Printing Protocol (IPP) version 1.1
- Raw TCP/IP port printing
- Microsoft Server Message Block (SMB) using NetBIOS

Device Management and Discovery Components

- Embedded HTTP 1.1 server
- Simple Network Management Protocol version 3 (SNMPv3) including pre-compiled:
  - Printer MIB (RFC 1759)
  - MIB II (RFC 1213)
  - Host Resources MIB (RFC 1514)
  - SNMP MIB and other SNMPv3-related MIBs
- Apple Bonjour device discovery
- UPnP™ device discovery 1.0
- Support for Hewlett Packard's Web Jetadmin 8.0 and Service Location Protocol (SLP)
- Attribute API for setting and getting printer properties and tracking print jobs

Value-Added Features

- HTTP basic authentication for securing Web server content (RFC 2617)
- Secure SNMPv3 support using DES and AES for encrypting SNMP data over the network
- Support for simultaneous IPv4 and/or IPv6 connections

Value to OEMs

- Standards-based, cross-platform interoperability
- High integration flexibility and operating environment diversity
- Flexible architecture to support new features and OEM extensions
- Increased productivity and ROI
- Fast time to market
- Detailed component documentation, including the SDK *Porting Guide* with an API reference

Platform Support

- Linux
- VxWorks
- Any POSIX-compliant operating system

Components

Protocol interface modules. Core application-level networking components that allow networked clients to connect to the print controller and perform printing operations. All protocol modules communicate with the OEM-implemented device control modules through a networking multiplexer (MUX). The provided protocol modules include LPD service, FTP printing service, IPP service, raw TCP/IP port-printing service, SMB print service.

Networking MUX. A critical functional module whose API binds the SDK printing applications to the OEM printer controller and manages the delivery of print job data streams to the controller. In addition to managing print jobs, the MUX can also handle scan and fax jobs within a multifunctional peripheral (MFP) application.

Network management components. Functional components that collectively provide network management functionality, device discovery and configuration, for example, SNMPv3, embedded Web server, Bonjour and UPnP device discovery, support for HP Web Jetadmin.

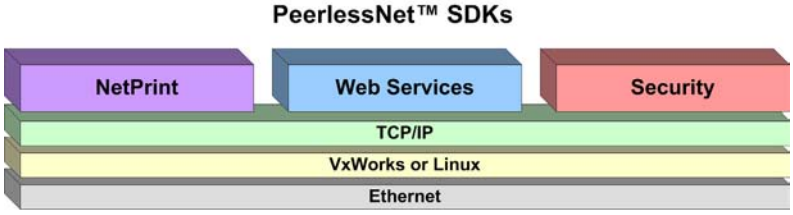
Features and Benefits

Industry standards foundation. The PeerlessNet NetPrint SDK and its components are built to conform to a wide range of industry standards for TCP/IP-based network printing, device discovery, and network management. For example, simultaneous IPv4 and IPv6 communication, SNMPv3, Printer MIB, IPP 1.1, event notifications and subscriptions, UPnP device discovery 1.0, and others.

Optimized code size. The NetPrint SDK code is designed to be as compact as possible. The modular PeerlessNet build system ensures that only the code required for a specific OEM implementation is included.

High performance and low cost. The NetPrint SDK leverages the power of the devices's built-in processor, ROM, RAM, and other hardware components to offer a compact, high-performance, and low-cost solution.

Flexibility and ease of use. The NetPrint SDK can be easily integrated into a standalone network device using the OEM's existing software or in combination with other technology from Peerless. During the build procedure the OEM can specify the desired components, some of which can be used without the SDK for OEM custom applications. The SDK and its components are provided with detailed user and API documentation, a set of unit tests, and implementation code samples.



Peerless Systems Corporation (HQ)
2381 Rosecrans Ave., Suite 400
El Segundo, CA 90245
Ph: 310.536.0908
Fax: 310.536.0058
E-mail: info@peerless.com

Peerless Systems Co., Ltd.
AIOS Gotanda 405
1-10-7 Higashi-Gotanda
Shinagawa-ku, Tokyo 141-0022, Japan
Ph: 81-3-3446-0392 Fax: 81-3-6408-0414
E-mail: salesdesk-japan@peerless.com

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