



IceWall SSO

Version 10.0 Enterprise Edition

Read Me First

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1 Introduction

Thank you for purchasing the IceWall SSO, developed by Hewlett-Packard Japan.
This manual describes the package contents, licenses, and various manuals for the IceWall SSO.

Please read this manual before using IceWall SSO.

2 Package Contents

This chapter describes the installation packages and manuals included in the product “IceWall SSO 10.0 Enterprise Edition Software Media and Manual.”

This product also includes IceWall SSO optional products and other products in the IceWall family. Use of these licensed products is available only with the purchase of a license.

2.1 IceWall SSO installation packages

The CD-ROM contains the IceWall SSO installation packages below.

2.1.1 HP-UX version

- IceWall-SSO-ia64.sw
This is the IceWall SSO HP-UX Itanium version package. It includes the IceWall SSO modules.
- IceWall-RCM-ia64.sw
This is the HP-UX Itanium version of the Agent module package for Remote Configuration Manager.

2.1.2 Linux version

- IceWall-SSO-dfw-10.0.0-1.x86_64.rpm
This is the Forwarder package.
- IceWall-SSO-certd_oracle1110-10.0.0-1.x86_64.rpm
This is the Authentication Module package for Oracle 11g Database.
- IceWall-SSO-certd_ldap-10.0.0-1.x86_64.rpm
This is the Authentication Module package for Sun Java System Directory Server and HP-UX Directory Server.
- IceWall-SSO-certd_openldap-10.0.0-1.x86_64.rpm
This is the Authentication Module package for OpenLDAP 2.4.
- IceWall-SSO-certd_msad-10.0.0-1.x86_64.rpm
This is the Authentication Module package for Microsoft Active Directory.
- IceWall-SSO-certd_ned-10.0.0-1.x86_64.rpm
This is the Authentication Module package for Novell eDirectory.
- IceWall-SSO-certd_csv-10.0.0-1.x86_64.rpm
This is the Authentication Module package for CSV-format text.

- IceWall-SSO-certd_odbc-10.0.0-1.x86_64.rpm
This is the Authentication Module package for MySQL Server 5.1.
- IceWall-SSO-dmp-10.0.0-1.x86_64.rpm
This is the Dynamic Menu Portal package.
- IceWall-RCM-rcfgagt-4.0.0-1.x86_64.rpm
This is the Agent module package for Remote Configuration Manager.
- IceWall-SSO-dgfw-10.0.0-1.x86_64.rpm
This is the Domain Gateway Option for UNIX package. Purchase a licensed product separately to use this package.

2.1.3 Windows version

- rcmsetup_x64limited.exe
This is the Remote Configuration Manager package with limited functionality and no support.

2.2 Other packages

The IceWall SSO option products and IceWall family product packages below are not included in the CD-ROM. To use these products, separately purchase the media and manual products, along with the required licensed products.

- IceWall SSO Agent Option
- IceWall SAML2 Option
- IceWall SSO JAVA Agent Library
- IceWall MCRP
- IceWall Identity Manager
- IceWall QFS (Quick File Store)
- IceWall File Manager

2.3 Manuals

The manuals for IceWall SSO are as follows.

1. Electronic files
 - IceWall SSO Version 10.0 Enterprise Edition Release Notes
 - IceWall SSO Version 10.0 Enterprise Edition Read Me First
 - IceWall SSO Version 10.0 Installation Guide for HP-UX
 - IceWall SSO Version 10.0 Installation Guide for Linux
 - IceWall SSO Version 10.0 User's Manual
 - IceWall SSO Version 10.0 Reference Manual
 - IceWall SSO Version 10.0 Troubleshooting Guide
 - IceWall SSO Version 10.0 Installation Guide for Dynamic Menu Portal
 - IceWall SSO Version 10.0 Installation Guide for Client Certificates Option

- IceWall SSO Version 10.0 Installation Guide of Domain Gateway Option for UNIX
- IceWall SSO Version 10.0 Sample Setup Guide
- IceWall SSO Version 10.0 Registration Tool Manual
- IceWall SSO Version 10.0 Configuration Manual for Automatic Form Authentication
- IceWall SSO Version 10.0 Web Application Developer's Manual
- IceWall SSO Version 10.0 UserExit Routine Developer's Manual
- IceWall SSO Version 10.0 Password Encryption Library Developer's Manual
- IceWall SSO Version 10.0 IceWall Cert Protocol 2.0 Developer's Manual
- IceWall SSO Version 10.0 Standard HTML Customization Guide
- IceWall SSO Version 10.0 Standard HTML Customization Guide of Domain Gateway Option for UNIX
- IceWall SSO Version 10.0 Performance Monitor Tool Manual
- IceWall SSO Version 10.0 Session ID Generation Routine Developer's Manual
- IceWall SSO Version 10.0 Authentication DB Encryption Library Developer's Manual

The main content of each manual is described below.

2.3.1 Electronic files

The PDF manuals below are provided in the CD-ROM.

1. IceWall SSO Version 10.0 Enterprise Edition Release Notes

This manual contains the information below.

- Newly added functions from IceWall SSO Version 10.0.
- Information about improved existing functions
- Information about bug fixes
- Known issues

2. IceWall SSO Version 10.0 Enterprise Edition Read Me First
README_EE_E.PDF

(This manual)

3. IceWall SSO Version 10.0 Installation Guide

For HP-UX : ICEWALL_01h_INST.PDF

For Linux : ICEWALL_01l_INST.PDF

There are manuals available for the HP-UX and Linux versions. These manuals provide the following information.

- System requirements
- Installation and uninstallation procedures
- Installation results verification procedures

4. IceWall SSO Version 10.0 User's Manual

ICEWALL_02_USER.PDF

This manual contains the information below.

- Description of IceWall SSO functions
- Advanced settings
- Security
- Performance tuning
- Restrictions for various Authentication DB
- Log files

5. IceWall SSO Version 10.0 Reference Manual

ICEWALL_03_REFR.PDF

This manual describes the parameters and the setting procedures for the configuration files of Forwarder, and Authentication Module.

6. IceWall SSO Version 10.0 Troubleshooting Guide

ICEWALL_04_FAQ.PDF

This manual contains the information below.

- How to investigate problems
- Inquiry
- Error message descriptions
- FAQ
- Known problems

7. IceWall SSO Version 10.0 Installation Guide for Dynamic Menu Portal

ICEWALL_05_DMP.PDF

This manual contains information about installation of Dynamic Menu Portal and settings.

8. IceWall SSO Version 10.0 Installation Guide for Client Certificates Option

ICEWALL_06_CERT.PDF

This manual contains information about installation of the Client Certificates Option and settings.

* A separate option license is required to use the client certificates.

9. IceWall SSO Version 10.0 Installation Guide of Domain Gateway Option for UNIX

ICEWALL_07_DOMAIN.PDF

This manual contains information about installation of the Domain Gateway Option for UNIX and settings.

* A separate Forwarder license is required to use this function.

10. IceWall SSO Version 10.0 Sample Setup Guide

ICEWALL_08_SMPL.PDF

This manual uses samples to describe the setup procedures for the IceWall SSO authentication and authorization functions. See this information as a reference when installing IceWall SSO.

11. IceWall SSO Version 10.0 Registration Tool Manual

ICEWALL_09_TOOL_R3.PDF

This manual describes how to use the tool for registering user data in the certification DB.

12. IceWall SSO Version 10.0 Configuration Manual for Automatic Form Authentication

ICEWALL_10_FORM.PDF

This manual describes the setting procedures for enabling Forwarder to automatically send form data to the Backend Web Server for the form authentication.

13. IceWall SSO Version 10.0 Web Application Developer's Manual

ICEWALL_11_APPM.PDF

This manual contains information necessary for developing applications on the Backend Web Server.

14. IceWall SSO Version 10.0 UserExit Routine Developer's Manual

ICEWALL_12_EXIT.PDF

This manual contains information necessary when developing routines (UserExit Routine) for adding unique processes to the Forwarder and Authentication Module.

15. IceWall SSO Version 10.0 Password Encryption Library Developer's Manual

ICEWALL_13_PWD.PDF

This manual contains information necessary for developing routines that encrypt passwords saved to the certification DB.

16. IceWall SSO Version 10.0 IceWall Cert Protocol 2.0 Developer's Manual

ICEWALL_14_ICP20.PDF

This manual contains the message specifications and formats for communication between the modules that make up IceWall SSO, and the information necessary for developing the libraries that encrypt and decrypt these messages.

17. IceWall SSO Version 10.0 Standard HTML Customization Guide

ICEWALL_15_HTML.PDF

This manual describes the contents of the standard HTML files that are provided with the product and how to customize them.

18. IceWall SSO Version 10.0 Standard HTML Customization Guide of Domain Gateway Option for UNIX
ICEWALL_16_HTMLD.PDF
This manual describes the contents of the standard HTML files of the Domain Gateway Option for UNIX that are provided with the product and how to customize them.
19. IceWall SSO Version 10.0 Performance Monitor Tool Manual
ICEWALL_17_IWPM.PDF
This manual describes how to use the tools for output of performance reports.
20. IceWall SSO Version 10.0 Session ID Generation Routine Developer's Manual
ICEWALL_18_SID.PDF
This document describes information necessary for developing session ID generation routines that are implemented in the Authentication Module.
21. IceWall SSO Version 10.0 Authentication DB Encryption Library Developer's Manual
ICEWALL_19_DBENC.PDF
This manual provides information required to develop an Authentication DB encryption library that can be integrated into the Authentication Module.

2.4 License agreement

You can find a PDF version of the IceWall software license agreement on the CD-ROM.

1. END USER LICENSE AGREEMENT
EULA_5187-2088.PDF
2. ADDITIONAL LICENSE RESTRICTIONS
EK-LS4-IW.PDF

Adobe Systems Acrobat Reader is required to view the manuals and documents provided as electronic files in PDF format.

Note: Adobe Reader can be downloaded from the Adobe Systems website free of charge. For details on how to install and use Adobe Reader, see the Adobe Reader manual.

3 IceWall SSO Overview

3.1 IceWall SSO

IceWall SSO is a middleware to provide a single sign-on solution. It consists of Forwarder (dfw), Authentication Module (certd), and other modules.

3.2 Modules and functions

1. Forwarder (dfw)

Forwarder is a CGI process that receives service requests from users and forwards them to web application servers. Forwarder performs the URL and keyword conversions against response contents from the web application servers.

Forwarder replaces a URL in the contents with a URL that is accessible through Forwarder and sends it to the user. “IceWall server” means the server on which Forwarder runs. “Backend Web Server” means the web application server that communicates the service requests and response contents with Forwarder.

2. Authentication Module (certd)

The Authentication Module is a daemon program that receives requests from Forwarder, and obtains user information from the Authentication DB (a directory service or database), and responds authentication authorization information. The Authentication Module runs on the “Authentication Server.”

3. Dynamic Menu Portal (dmp)

Dynamic Menu Portal is a product that is an expanded version of the Dynamic Menu which provides simple portal functions.

4. Domain Gateway Option for UNIX (optional product)

Domain Gateway Option for UNIX is a product that links IceWall SSO authentication up with Microsoft Windows domain authentication to enable a client authenticated by the domain to use Backend Web Server applications without having to re-enter his or her ID and password.

5. Agent Option (optional product)

Agent Option is an optional product that incorporates an agent module in the web application server for enabling single sign-on from the client without passing through Forwarder. The availability of this option depends on the web application server OS and web server (http server) software type and version. So please confirm it before use.

6. IceWall Identity Manager (separate product)

IceWall Identity Manager is an application for managing users registered in the IceWall SSO Authentication DB from a web browser. Since administrators can be created based on role, users can be managed hierarchically.

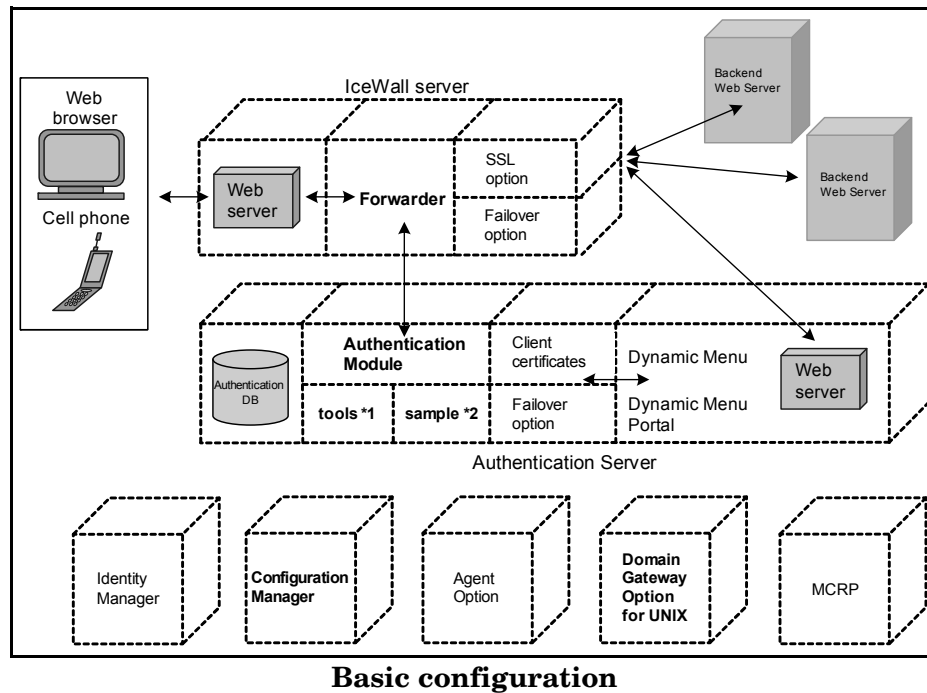
7. IceWall MCRP (separate product)

IceWall MCRP is a product that provides reverse proxy functions that are nearly identical to the IceWall SSO Forwarder. It works as a module integrated into Apache HTTP Server and provides high-speed reverse proxy functions. Because IceWall MCRP does not include any functions for authentication/authorization of connected users, to perform access control, it must be used together with IceWall SSO and IceWall SSO Agent Option (optional product for IceWall SSO).

8. IceWall Remote Configuration Manager (separate product)

IceWall Remote Configuration Manager enables users to check the IceWall SSO settings and operating status from Windows Server. It also allows users to execute any HP-UX or Linux commands and display the command results.

3.3 Basic configuration



Basic configuration

Modules provided with this product are indicated by **bold letters**.

You can also set up an environment in which the IceWall server and the Authentication Server are on the same machine.

***1 tools**

These tools register user data into Authentication DB.

***2 developkit**

This is the development kit for the IceWall SSO UserExit library, the password encryption library and the authentication database encryption library.

4 Licenses

This chapter describes the licenses required for use of IceWall SSO Version 10.0 Enterprise Edition.

4.1 Product components

IceWall SSO Enterprise Edition product components are as follows:

1. Media and manuals

- **Media and manual product**
(IceWall SSO Version 10.0 Enterprise Edition Software Media and Manual)

2. Forwarder (IceWall server) licenses

- **Forwarder license**
(IceWall SSO Version 10.0 Enterprise Edition Forwarder License for HP-UX)
(IceWall SSO Version 10.0 Enterprise Edition Forwarder License for Linux)
- **Forwarder base license**
(IceWall SSO Version 10.0 Enterprise Edition Forwarder Base License)
- **SSL option**
(IceWall SSO Version 10.0 Enterprise Edition SSL Option License)
- **Failover option**
(IceWall SSO Version 10.0 Enterprise Edition FailOver Option License)
- **Integrated Windows Authentication option**
(IceWall SSO Version 10.0 Domain Gateway Option for UNIX)
- **Client Certificate option**
(IceWall SSO Version 10.0 Client Certificates License)

3. Authentication Server licenses (user licenses)

- **Authentication Server license**
(IceWall SSO Version 10.0 Enterprise Edition User Certification Server License for HP-UX)
(IceWall SSO Version 10.0 Enterprise Edition User Certification Server License for Linux)
- **Authentication Server base user license**
(IceWall SSO Version 10.0 Enterprise Edition Base 100 User License)
(IceWall SSO Version 10.0 Enterprise Edition Base 500 User License)
(IceWall SSO Version 10.0 Enterprise Edition Base 1,000 User License)
(IceWall SSO Version 10.0 Enterprise Edition Base 10,000 User License)
(IceWall SSO Version 10.0 Enterprise Edition Base 100,000 User License)
(IceWall SSO Version 10.0 Enterprise Edition Base 1,000,000 User License)
(IceWall SSO Version 10.0 Enterprise Edition Base 5,000,000 User License)
(IceWall SSO Version 10.0 Enterprise Edition Base 10,000,000 User License)
(IceWall SSO Version 10.0 Enterprise Edition Base Unlimited User License)
- **Authentication Server additional license**
(IceWall SSO Version 10.0 Enterprise Edition Additional User License for HP-UX)
(IceWall SSO Version 10.0 Enterprise Edition Additional User License for Linux)
- **Authentication Server additional user license**
(IceWall SSO Version 10.0 Enterprise Edition Additional 100 User License)
(IceWall SSO Version 10.0 Enterprise Edition Additional 500 User License)

(IceWall SSO Version 10.0 Enterprise Edition Additional 1,000 User License)
(IceWall SSO Version 10.0 Enterprise Edition Additional 10,000 User License)
(IceWall SSO Version 10.0 Enterprise Edition Additional 100,000 User License)
(IceWall SSO Version 10.0 Enterprise Edition Additional 1,000,000 User License)

- Authentication Server load balance option license
(IceWall SSO Version 10.0 Certd Load Balance Option License)
- Authentication Server load balance option development license
(IceWall SSO Version 10.0 Certd Load Balance Option Development License)

4. Agent Option

This manual does not provide information on the Agent Option license. For information about the license, refer to the Agent Option product documents or contact your sales representative.

When installing IceWall SSO Version 10.0 Enterprise Edition for the first time, you need to purchase the Forwarder license. An Authentication Server license is also required to use the authentication function.

To use the optional functions, the corresponding optional licenses are required.

4.2 Media and manual

One media and manual are required at the time of initial purchase. The media includes packages for all supported OS.

4.3 Forwarder licenses

1. Understanding Forwarder licenses

The Forwarder licenses are provided in a server-based license structure. You need a Forwarder license, based on the type of OS, and a Forwarder base license, based on the number of Forwarders.

2. Forwarder license

One Forwarder license is required for the type of OS on which Forwarder is running.

3. Forwarder Base license

One Forwarder base license is required for each Forwarder server. The license is not dependent on the number of CPUs. In this context, a server is defined as any server that is independently bootable. For example, a virtual server running on a virtual partition on a physical server is considered to be a single server. Licenses are not required for every instance in use when multiple Forwarder instances are running on a single server. If multiple Forwarders are running on multiple servers in a clustering or loadbalancing configuration, licenses are required for each of these servers. Licenses are also required for each server that is used as a stand-by system in the configuration.

4. SSL option

The SSL option is required for using SSL in communication between Forwarder and backend web applications. It is not necessary if SSL is used only in communication between the browser and Forwarder.

5. Failover option

This option is required when using the failover function for communication between Forwarder and backend web applications and between Forwarder and the Authentication Module. This option is not necessary in load balancing of Forwarders using a load balancer.

6. Forwarder licenses for development systems

IceWall SSO does not have any development license. Forwarder licenses are required for the number of servers, even for development systems.

7. Integrated Windows Authentication option

This option is required when integrating Windows domain authentication and IceWall SSO authentication. One license is required for each Forwarders.

4.4 Authentication Server licenses

1. Understanding the Authentication Server licenses

The Authentication Server licenses are provided in a user-based license structure. The number of users in IceWall SSO is not the number of simultaneous connections, but is the number of users registered to a single table of the Authentication DB. As a result, user licenses are required for the number of registered users. If multiple IceWall SSO Authentication Servers are running in a redundant system configuration, licenses are not required for each server. The Authentication Server user licenses must be enough to cover the number of required users by combining the base user licenses and additional user licenses. The number of purchased additional user licenses cannot exceed the number of users of the base user license. Also, if there are multiple Authentication Servers, each of which uses a different Authentication DB table or Authentication DB, a base user license is required for each Authentication Server.

2. Licenses required for new systems

When installing a new system, you need one type of Authentication Server license for the type of OS you are using, and a combination of one type of Authentication Server base user license and an Authentication Server additional user license to cover the number of users required in your environment. The number of users of the Authentication Server additional user license must not exceed the number of users of the Authentication Server base user license. For example, you can only add the Additional 1000, 500, or 100 User Licenses for a base 1,000 user licenses.

3. Additional licenses for existing systems

When adding users to an existing system, you need one type of Authentication Server additional server license for the type of OS you are using, and an Authentication Server additional user license to cover the number of users required in your environment. In this case, the number of additional users must not exceed the number of users of the Authentication Server base user license at the time of initial purchase.

In addition, the unit of the Authentication Server additional user license that is purchased must not exceed the number of users of the Authentication Server base user license at the time of initial purchase.

For example, if you purchase one Base 1,000 User License and five Additional 1,000 User Licenses for a total of 6,000 users, you can only choose from 1,000, 500, or 100 Additional User licenses for future addition. If you purchase a 10,000 Base User License at the time of initial purchase, you can select from 10,000, 1,000, 500, or 100 additional user licenses.

When ordering an Authentication Server additional user license, the user quantity and license number information is required. Refer to the license sheet issued at the time of initial purchase for this information.

4. User licenses for development system

No development licenses are provided in IceWall SSO. For development servers, users must purchase a 100-user license regardless of the number of users. When purchasing a license for a development system, you also need to purchase a full license for the Authentication Server that runs in the production environment.

5. Client Certificate option

The Client Certificate option is required for conducting individual user authentication using a Client Certificate.

The Client Certificate option is an option that enables additional functions to work with the Authentication Server and it is licensed with site based licensing. Only one license is required for a system built for the purpose of providing a certain service. The number of Authentication Servers and number of users do not matter. A systems built for the purpose of providing a certain service includes the following environments.

- Production environment
- Development and verification environment
- Backup environment

However, if there are Authentication Servers that are different from target services in the system, licenses are required for each service type.

6. Authentication Server load balance option

The Authentication Server load balance option is the optional license that is required when placing a load balancer between Forwarders and Authentication Servers to load balance the Authentication Servers.

This license is required if you have two Authentication Servers or two sets of Authentication Servers in redundant configuration (master and replica) to be load balanced. An additional license is required from the second Authentication Server or second set of Authentication Servers (in redundant configuration) added to your environment after you have one Authentication Server or one set of Authentication Servers. In other words, the number of license(s) required for the environment with “n” Authentication Servers or “n” sets of Authentication Servers (in redundant configuration) to be load balanced is “n - 1”.

The Authentication Server load balance option development license is a license for development purposes only. One license is required for one system in the development environment. The number of Authentication Servers that can be load balanced is unlimited.

5 Support

The support described in this chapter applies to systems installed in Japan. For information about support for systems abroad, please contact your sales representative.

5.1 Support period

The support period for IceWall SSO is listed below.

- Full support : 2 years after the end of sales
- Limited support : Until the end of March 2020 (Support for the OS platform running this version of IceWall SSO must not be expired.)

Please update to the latest version of this product before the support period ends.

5.2 Support coverage

The support coverage for IceWall SSO is listed below.

- Assistance in operating procedures and problem resolution by telephone
- License agreement for the latest software version
- Providing the latest software version, media, and manuals
- Providing a variety of online information
- Providing patches (full support period only)

Two types of support hours are available depending on the support agreements.

- Standard support hours
 - Monday to Friday (excluding HP Japan holidays)
 - Open 8:45 AM to 5:30 PM
- 24 × 7 support
 - Always open

Support coverage does not include the following items.

- Program development, coding, and isolation of the coding problems
- Installation assistance
- Backup and data recovery
- Application operation monitoring
- Creation of operating procedures and user training
- System performance tuning
- Onsite troubleshooting assistance

6 Information Source

The various product manuals and IceWall product website are useful for finding detailed information about the products. These manuals and website are listed below.

6.1 Manuals

You can choose manuals from any of the following categories depending on your purpose.

1. Before reading other manuals
 - Read Me First (this manual)
2. Installing IceWall SSO
 - Installation Guide
 - User's Manual
 - Sample Setup Guide
3. Advanced setup
 - User's Manual
 - Configuration Manual for Automatic Form Authentication
 - Installation Guide for Client Certificates Option
4. Using peripheral tools
 - Installation Guide for Dynamic Menu Portal
 - Installation Guide of Domain Gateway Option for UNIX
 - Registration Tool Manual
 - Performance Monitor Tool Manual
5. Detailed information on parameters
 - Reference Manual
6. Customizing IceWall
 - UserExit Routine Developer's Manual
 - Password Encryption Library Developer's Manual
 - Standard HTML Customization Guide
 - Standard HTML Customization Guide of Domain Gateway Option for UNIX
 - IceWall Cert Protocol 2.0 Developer's Manual
 - Session ID Generation Routine Developer's Manual
 - Authentication DB Password Encryption Library Developer's Manual
7. Developing and managing application software connected to IceWall
 - Web Application Developer's Manual
 - IceWall Cert Protocol 2.0 Developer's Manual

8. Troubleshooting

- Troubleshooting Guide

6.2 Website

Information about IceWall products is available at the URLs below.

- HP Japan IceWall SSO website
http://www.hp.com/jp/icewall_eng (English)
<http://www.hp.com/jp/icewall> (Japanese)

7 Contact Information

7.1 IceWall SSO related information

1. Product information

- Hewlett-Packard Japan, Ltd.
(http://www.hp.com/icewall_eng (English))
(<http://www.hp.com/jp/icewall> (Japanese))

2. Product inquiries

- Inquiries about the HP IceWall family
(http://www.hp.com/jp/iw_contact (Japanese))

7.2 Other information

- Adobe Systems Incorporated
(<http://www.adobe.com/>)