



About the Documentation

This documentation describes how to use the Device Manager to configure the Cisco ACE 4700 Series Application Control Engine Appliance.

This section provides the following topics about the documentation:

- [Audience, page xv](#)
- [Organization, page xv](#)
- [Related Documentation, page xvii](#)
- [Conventions, page xix](#)
- [Obtaining Documentation, Obtaining Support, and Security Guidelines, page xix](#)
- [Open-Source Software Included in Cisco ACE Application Control Engine, page xx](#)
- [Open Source License Acknowledgements, page xx](#)

Audience

This documentation is intended for experienced system and network administrators. Depending on the configuration required, readers should have specific knowledge in the following areas:

- Networking and data communications
- Network security
- Router configuration

Organization

This documentation contains the following sections:

- [Chapter 1, “Overview”](#) contains an summary of ACE features and the ACE Appliance Device Manager interface, terms, and getting started configuration information.
- [Chapter 2, “Using Homepage”](#) describes how to use the DM Homepage, a launching point for quick access to selected areas within the DM.
- [Chapter 3, “Using DM Guided Setup”](#) describes how to use the guided setup pages to simplify configuration of the DM.

- [Chapter 4, “Configuring Virtual Contexts”](#) describes how to configure virtual contexts on the ACE appliance so that you can effectively and efficiently manage and allocate resources, users, and services.
- [Chapter 5, “Configuring Virtual Servers”](#) contains procedures for configuring virtual servers for load balancing on the ACE.
- [Chapter 6, “Configuring Real Servers and Server Farms”](#) provides an overview of server load balancing and procedures for configuring real servers and server farms for load balancing on the ACE.
- [Chapter 7, “Configuring Stickiness”](#) provides information about sticky behavior and procedures for configuring stickiness with the DM.
- [Chapter 8, “Configuring Parameter Maps”](#) describes how to configure parameter maps so that the ACE can perform actions on incoming traffic based on certain criteria, such as protocol or connection attributes.
- [Chapter 9, “Configuring SSL”](#) describes the SSL configuration process and details the procedures for configuring SSL on the ACE appliance.
- [Chapter 10, “Configuring Network Access”](#) includes information about configuring virtual context VLAN interfaces, port channel interfaces, and gigabit Ethernet interfaces.
- [Chapter 11, “Configuring High Availability”](#) contains an overview of the redundancy feature and explains how to configure high available.
- [Chapter 12, “Configuring Traffic Policies”](#) describes how to configure class maps and policy maps to provide a global level of classification for filtering traffic received by or passing through the ACE appliance.
- [Chapter 13, “Configuring Application Acceleration and Optimization”](#) describes how to configure application acceleration and optimization options on the ACE appliance.
- [Chapter 14, “Monitoring Your Network”](#) allows you to monitor key areas of system usage.
- [Chapter 15, “Managing the ACE Appliance”](#) describes the administrative tools that manage the ACE appliance.
- [Chapter 16, “Using ACE Device Manager Troubleshooting Tools”](#) describes the administrator-only diagnostic tools to help troubleshoot ACE appliance management problems.

Related Documentation

In addition to this documentation, the ACE appliance documentation set includes the following:

Document Title	Description
<i>Administration Guide, Cisco ACE Application Control Engine</i>	Describes how to perform the following administration tasks on the ACE: <ul style="list-style-type: none"> • Setting up the ACE • Establishing remote access • Managing software licenses • Configuring class maps and policy maps • Managing the ACE software • Configuring SNMP • Configuring redundancy • Configuring the XML interface • Upgrading the ACE software
<i>Application Acceleration and Optimization Guide, Cisco ACE 4700 Series Application Control Engine Appliance</i>	Describes how to configure the web optimization features of the ACE appliance. This guide also provides an overview and description of those features.
Cisco Application Control Engine (ACE) Configuration Examples Wiki	Provides examples of common configurations for load balancing, security, SSL, routing and bridging, virtualization, and so on.
Cisco Application Control Engine (ACE) Troubleshooting Wiki	Describes the procedures and methodology in wiki format to troubleshoot the most common problems that you may encounter during the operation of your ACE.
<i>Command Reference, Cisco ACE Application Control Engine</i>	Provides an alphabetical list and descriptions of all CLI commands by mode, including syntax, options, and related commands.
<i>CSS-to-ACE Conversion Tool Guide, Cisco ACE Application Control Engine</i>	Describes how to use the CSS-to-ACE conversion tool to migrate Cisco Content Services Switches (CSS) running-configuration or startup-configuration files to the ACE.
<i>Hardware Installation Guide, Cisco ACE 4710 Application Control Engine Appliance</i>	Provides information for installing the ACE appliance.
<i>Getting Started Guide, Cisco ACE 4700 Series Application Control Engine Appliance</i>	Describes how to use the ACE appliance Device Manager GUI and CLI to perform the initial setup and VIP load-balancing configuration tasks.
<i>Regulatory Compliance and Safety Information, Cisco ACE 4710 Application Control Engine Appliance</i>	Regulatory compliance and safety information for the ACE appliance.

Document Title	Description
<i>Release Note, Cisco ACE 4700 Series Application Control Engine Appliance</i>	Provides information about operating considerations, caveats, and command-line interface (CLI) commands for the ACE appliance.
<i>Routing and Bridging Guide, Cisco ACE Application Control Engine</i>	Describes how to perform the following routing and bridging tasks on the ACE: <ul style="list-style-type: none"> • (ACE appliance only) Configuring Ethernet ports • Configuring VLAN interfaces • Configuring routing • Configuring bridging • Configuring Dynamic Host Configuration Protocol (DHCP)
<i>Security Guide, Cisco ACE Application Control Engine</i>	Describes how to perform the following ACE security configuration tasks: <ul style="list-style-type: none"> • Security access control lists (ACLs) • User authentication and accounting using a Terminal Access Controller Access Control System Plus (TACACS+), Remote Authentication Dial-In User Service (RADIUS), or Lightweight Directory Access Protocol (LDAP) server • Application protocol and HTTP deep packet inspection • TCP/IP normalization and termination parameters • Network Address Translation (NAT)
<i>Server Load-Balancing Guide, Cisco ACE Application Control Engine</i>	Describes how to configure the following server load-balancing features on the ACE: <ul style="list-style-type: none"> • Real servers and server farms • Class maps and policy maps to load balance traffic to real servers in server farms • Server health monitoring (probes) • Stickiness • Dynamic workload scaling (DWS) • Firewall load balancing • TCL scripts
<i>SSL Guide, Cisco ACE Application Control Engine</i>	Describes how to configure the following Secure Sockets Layer (SSL) features on the ACE: <ul style="list-style-type: none"> • SSL certificates and keys • SSL initiation • SSL termination • End-to-end SSL
<i>System Message Guide, Cisco ACE Application Control Engine</i>	Describes how to configure system message logging on the ACE. This guide also lists and describes the system log (syslog) messages generated by the ACE.

Document Title	Description
<i>User Guide, Cisco Application Networking Manager</i>	Describes how to use Cisco Application Networking Manager (ANM), a networking management application for monitoring and configuring network devices, including the ACE.
<i>Virtualization Guide, Cisco ACE Application Control Engine</i>	Describes how to operate your ACE in a single context or in multiple contexts.

Conventions

This documentation uses the following conventions:

Item	Convention
Commands and keywords	boldface font
Variables for which you supply values	<i>italic</i> font
Displayed session and system information	screen font
Information you enter	boldface screen font
Variables you enter	<i>italic screen</i> font
Menu items and button names	boldface font
Selecting a menu item in paragraphs	Option > Network Preferences
Selecting a menu item in tables	Option > Network Preferences



Note

Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the publication.



Caution

Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New* in Cisco Product Documentation, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

Open-Source Software Included in Cisco ACE Application Control Engine

- Cisco ACE Application Control Engine includes the following open-source software, which is covered by the Apache 2.0 license (<http://www.apache.org/>): Ant, Apache Axis, Avalon Logkit, Commons, Ehcache, Globus Toolkit, Jetty, Log4J, Oro, Tomcat.
- Cisco ACE Application Control Engine includes the following open-source software, which is covered by The Legion of the Bouncy Castle (<http://www.bouncycastle.org/licence.html>) license: BouncyCastle.
- Cisco ACE Application Control Engine includes the following open-source software, which is covered by the GNU Lesser General Public License Version 2.1 (<http://www.gnu.org/licenses/lgpl.html>): c3p0-0.9.0.2.jar, Enterprise DT, Jasperreports 1.2, Jcommon 1.2, Jfreechart 1.0.1
- Cisco ACE Application Control Engine includes the following open-source software, which is covered by the Mozilla Public License Version 1.1 (<http://www.mozilla.org/MPL/MPL-1.1.html>): Itext 1.4.

Open Source License Acknowledgements

The following acknowledgements pertain to this software license.

OpenSSL/Open SSL Project

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>).

This product includes cryptographic software written by Eric Young (eay@cryptsoft.com).

This product includes software written by Tim Hudson (tjh@cryptsoft.com).

License Issues

The OpenSSL toolkit stays under a dual license, i.e. both the conditions of the OpenSSL License and the original SSLeay license apply to the toolkit. See below for the actual license texts. Actually both licenses are BSD-style Open Source licenses. In case of any license issues related to OpenSSL please contact openssl-core@openssl.org.

OpenSSL License:

© 1998-1999 The OpenSSL Project. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions, and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. All advertising materials mentioning features or use of this software must display the following acknowledgment: “This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (<http://www.openssl.org/>)”
4. The names “OpenSSL Toolkit” and “OpenSSL Project” must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact openssl-core@openssl.org.
5. Products derived from this software may not be called “OpenSSL” nor may “OpenSSL” appear in their names without prior written permission of the OpenSSL Project.
6. Redistributions of any form whatsoever must retain the following acknowledgment:
 “This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>)”

THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT “AS IS” AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This product includes cryptographic software written by Eric Young (ey@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

Original SSLeay License:

© 1995-1998 Eric Young (ey@cryptsoft.com). All rights reserved.

This package is an SSL implementation written by Eric Young (ey@cryptsoft.com).

The implementation was written so as to conform with Netscapes SSL.

This library is free for commercial and non-commercial use as long as the following conditions are adhered to. The following conditions apply to all code found in this distribution, be it the RC4, RSA, lhash, DES, etc., code; not just the SSL code. The SSL documentation included with this distribution is covered by the same copyright terms except that the holder is Tim Hudson (tjh@cryptsoft.com).

Copyright remains Eric Young’s, and as such any Copyright notices in the code are not to be removed. If this package is used in a product, Eric Young should be given attribution as the author of the parts of the library used. This can be in the form of a textual message at program startup or in documentation (online or textual) provided with the package.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. All advertising materials mentioning features or use of this software must display the following acknowledgement:
 “This product includes cryptographic software written by Eric Young (ey@cryptsoft.com)”.

The word 'cryptographic' can be left out if the routines from the library being used are not cryptography-related.

4. If you include any Windows specific code (or a derivative thereof) from the apps directory (application code) you must include an acknowledgement: "This product includes software written by Tim Hudson (tjh@cryptsoft.com)".

THIS SOFTWARE IS PROVIDED BY ERIC YOUNG "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The license and distribution terms for any publicly available version or derivative of this code cannot be changed. i.e. this code cannot simply be copied and put under another distribution license [including the GNU Public License].

