



INDEX

Numerics

802.1X

- configuration process [6-9](#)
- configuring [6-8 to 6-22](#)
- configuring AAA accounting methods [6-21](#)
- description [6-1 to 6-7](#)
- disabling authentication on the device [6-18](#)
- disabling on the device [6-19](#)
- displaying statistics [6-22](#)
- enabling MAC address authentication bypass [6-17](#)
- enabling multiply hosts on an interface [6-17](#)
- enabling on interfaces [6-12](#)
- enabling RADIUS accounting [6-20](#)
- enabling single hosts on an interface [6-17](#)
- field descriptions [6-23](#)
- guidelines [6-8](#)
- licensing requirements [6-7](#)
- limitations [6-8](#)
- MIBs [6-26](#)
- multiple host support [6-6](#)
- port security on same port [6-6](#)
- prerequisites [6-8](#)
- single host support [6-6](#)
- supported topologies [6-7](#)
- virtualization support [6-7](#)

802.1X authentication

- authorization states for ports [6-4](#)
- controlling on interfaces [6-12](#)
- disabling on the device [6-18](#)
- initiation [6-3](#)

802.1X feature

- disabling on the device [6-19](#)

- enabling [6-10](#)

802.1X reauthentication

- enabling global periodic [6-13](#)
- enabling periodic on interfaces [6-14](#)
- setting retry counts on interfaces [6-22](#)

802.1X retry counts

- setting globally [6-19](#)
- setting on interfaces [6-20](#)

802.1X timers

- changes interface timers [6-15](#)
- changing global timers [6-14](#)

A

AAA

- accounting [2-2](#)
- authentication [2-2](#)
- authorization [2-2](#)
- benefits [2-2](#)
- configuring [2-7 to 2-15](#)
- description [2-1 to 2-5](#)
- field descriptions [2-15](#)
- guidelines [2-6](#)
- licensing requirements [2-6](#)
- limitations [2-6](#)
- MIBs [2-17](#)
- monitoring TACACS+ servers [4-3](#)
- prerequisites [2-6](#)
- standards [2-16](#)
- TACACS+ server groups [3-11, 3-13, 4-12, 4-14](#)
- user login process [2-4](#)
- virtualization support [2-5](#)

AAA accounting

Send document comments to nexus7k-docfeedback@cisco.com.

- adding rule methods [2-11](#)
 - changing rule methods [2-10](#)
 - configuring methods for 802.1X [6-21](#)
 - deleting rule methods [2-13](#)
 - rearranging rule methods [2-12](#)
 - AAA authentication rules
 - adding methods [2-8](#)
 - changing methods [2-8](#)
 - deleting methods [2-10](#)
 - rearranging methods [2-9](#)
 - AAA protocols
 - RADIUS [2-1](#)
 - TACACS+ [2-1](#)
 - AAA server groups
 - description [2-3](#)
 - AAA servers
 - FreeRADIUS VSA format [3-4](#)
 - specifying SNMPv3 parameters [2-13, 2-14](#)
 - specifying user roles [2-14](#)
 - specifying user roles in VSAs [2-13](#)
 - AAA services
 - configuration options [2-3](#)
 - remote [2-2](#)
 - security [2-1](#)
 - access control lists
 - description [7-1 to 7-8](#)
 - order of application [7-2](#)
 - types of [7-2](#)
 - See also ARP ACLs
 - See also IP ACLs
 - See also MAC ACLs
 - See also policy-based ACLs
 - See also port ACLs
 - See also router ACLs
 - See also VLAN ACLs
 - accounting
 - description [2-2](#)
 - VDC support [2-5](#)
 - ARP ACLs
 - applying to VLANs [12-9](#)
 - changing [12-17](#)
 - creating [12-16](#)
 - description [12-16](#)
 - priority of ARP ACLs and DHCP snooping entries [12-4](#)
 - removing [12-18](#)
 - ARP inspection
 - See dynamic ARP inspection
 - authentication
 - 802.1X [6-3](#)
 - description [2-2](#)
 - local [2-2](#)
 - methods [2-3](#)
 - remote [2-2](#)
 - user logins [2-4](#)
 - authentication, authorization, and accounting. See AAA
 - authorization
 - description [2-2](#)
 - user logins [2-4](#)
-
- ## B
- broadcast storms. See traffic storm control
-
- ## C
- Cisco
 - vendor ID [2-14, 3-3, 4-4](#)
 - cisco-av-pair
 - specifying AAA user parameters [2-13, 2-14](#)
-
- ## D
- DHCP binding database
 - See DHCP snooping binding database
 - DHCP option 82
 - description [11-3](#)
 - DHCP snooping

Send document comments to nexus7k-docfeedback@cisco.com.

binding database
 See DHCP snooping binding database

description [11-1](#)

displaying DHCP bindings [11-16](#)

enabling feature [11-8](#)

enabling globally [11-9](#)

enabling on a VLAN [11-10](#)

interface trust state [11-12](#)

MAC address verification [11-10](#)

message exchange process [11-4](#)

minimum configuration [11-7](#)

option 82 [11-3](#)

overview [11-1](#)

relay agent [11-12](#)

DHCP snooping binding database

 described [11-2](#)

 entries [11-2](#)

documentation

 additional publications [iii-xviii](#)

dynamic ARP inspection

 additional validation [12-11](#)

 applying ARP ACLs [12-9](#)

 ARP cache poisoning [12-2](#)

 ARP requests [12-2](#)

 ARP spoofing attack [12-2](#)

 configuring log buffer size [12-11](#)

 configuring trust state [12-8](#)

 description [12-1](#)

 DHCP snooping binding database [12-3](#)

 enabling on VLANs [12-8](#)

 error-disabled recovery [12-10](#)

 function of [12-3](#)

 interface trust states [12-3](#)

 logging of dropped packets [12-5](#)

 man-in-the middle attack [12-2](#)

 network security issues and interface trust states [12-3](#)

 priority of ARP ACLs and DHCP snooping entries [12-4](#)

Dynamic Host Configuration Protocol snooping

 See DHCP snooping

F

field descriptions

 802.1X [6-23](#)

 AAA [2-15](#)

 TACACS+ [4-19](#)

FreeRADIUS

 VSA format for role attributes [2-14, 3-4](#)

I

IDs

 Cisco vendor ID [2-14, 3-3, 4-4](#)

interfaces

 controlling 802.1X authentication [6-12](#)

 enabling 802.1X [6-12](#)

 enabling periodic 802.1X reauthentication [6-14](#)

 setting 802.1X reauthentication retry counts [6-22](#)

 setting 802.1X retransmission retry counts [6-20](#)

IP ACLs

 applying to a physical port [7-11](#)

 applying to a port channel [7-12](#)

 changing an IP ACL [7-10](#)

 configuring [7-9 to 7-13](#)

 creating an IP ACL [7-10](#)

 field descriptions for IPv4 ACLs [7-13](#)

 guidelines [7-8](#)

 licensing [7-8](#)

 limitations [7-8](#)

 prerequisites [7-8](#)

 removing an IP ACL [7-11](#)

 virtualization support [7-8](#)

IP Source Guard

 description [13-1](#)

 enabling [13-3](#)

 static IP source entries [13-4](#)

Send document comments to nexus7k-docfeedback@cisco.com.

K

key chain

- end-time [14-2](#)
- lifetime [14-2](#)
- start-time [14-2](#)

keychain management

- configuring a key [14-5](#)
- configuring lifetimes [14-6](#)
- configuring text for a key [14-5](#)
- creating a keychain [14-4](#)
- description [14-1](#)

L

licensing

- 802.1X [6-7](#)
- AAA [2-6](#)
- IP ACLs [7-8](#)
- RADIUS [3-4](#)
- TACACS+ [4-5](#)
- traffic storm control [15-3](#)

M

MAC ACLs

- applying to a physical port [8-4](#)
- changing a MAC ACL [8-3](#)
- creating a MAC ACL [8-3](#)
- removing a MAC ACL [8-4](#)
- virtualization support [7-8](#)

MAC addresses

- enabling authentication bypass for 802.1X [6-17](#)

MIBs

- 802.1X [6-26](#)
- AAA [2-17](#)

multicast storms. See traffic storm control

multiple hosts

- enabling for 802.1X [6-17](#)

N

network-admin user role

- description [5-3](#)

network-operator user role

- description [5-3](#)

P

passwords

- strong characteristics [5-2](#)

port ACLs

- definition [7-2](#)

port-based authentication

- encapsulation [6-2](#)

ports

- authorization states for 802.1X [6-4](#)

port security

- 802.1X on same port [6-6](#)
- description [10-1](#)
- enabling globally [10-8](#)
- enabling on an interface [10-9](#)
- MAC move [10-4](#)
- static MAC address [10-10](#)
- violations [10-4](#)

preshared keys

- TACACS+ [4-3](#)

R

RADIUS

- configuring global preshared keys [3-9](#)
- configuring servers [3-5 to 3-16](#)
- configuring timeout intervals [3-14](#)
- configuring transmission retry counts [3-14](#)
- description [3-1 to 3-5](#)
- licensing [3-4](#)
- network environments [3-1](#)
- operation [3-2](#)

Send document comments to nexus7k-docfeedback@cisco.com.

- prerequisites [3-5](#)
- specifying server at login [3-13](#)
- virtualization support [3-4](#)
- VSAAs [3-3](#)

RADIUS accounting

- enabling for 802.1X [6-20](#)

RADIUS servers

- configuration process [3-6](#)
- configuring accounting attributes [3-15](#)
- configuring authentication attributes [3-15](#)
- configuring dead-time intervals [3-16](#)
- configuring hosts [3-8, 3-11, 4-13](#)
- configuring periodic monitoring [3-15](#)
- configuring preshared keys [3-10](#)
- configuring timeout interval [3-14](#)
- configuring transmission retry count [3-14](#)
- deleting hosts [3-17](#)
- displaying statistics [3-17](#)
- monitoring [3-2](#)

RBAC

- configuring [5-11 to 5-19](#)
- description [5-2](#)
- field descriptions [5-19](#)
- See also user roles

related documents [iii-xviii](#)

router ACLs

- definition [7-2](#)

rules. See user role rules

S

server groups. See AAA server groups

single hosts

- enabling for 802.1X [6-17](#)

SNMPv3

- specifying AAA parameters [2-13](#)
- specifying parameters for AAA servers [2-14](#)

statistics

- 802.1X [6-22](#)

RADIUS servers [3-17](#)

TACACS+ [4-19](#)

traffic storm control [15-5](#)

superuser role. See network-admin user role

T

TACACS+

- advantages over RADIUS [4-2](#)
- configuring [4-6 to 4-19](#)
- configuring global preshared keys [4-11](#)
- configuring global timeout interval [4-15](#)
- description [4-1 to 4-5](#)
- disabling [4-18](#)
- displaying statistics [4-19](#)
- enabling [4-9](#)
- field descriptions [4-19](#)
- global preshared keys [4-3](#)
- guidelines [4-6](#)
- licensing requirements [4-5](#)
- limitations [4-6](#)
- prerequisites [4-6](#)
- preshared key [4-3](#)
- specifying TACACS+ servers at login [4-14](#)
- user login operation [4-2](#)
- virtualization [4-5](#)
- VSAAs [4-4](#)

TACACS+ servers

- configuration process [4-7](#)
- configuring dead-time interval [4-18](#)
- configuring hosts [3-9, 3-12, 4-9, 4-10, 4-14](#)
- configuring periodic monitoring [4-17](#)
- configuring preshared keys [4-11](#)
- configuring server groups [3-11, 3-13, 4-12, 4-14](#)
- configuring TCP ports [4-16](#)
- configuring timeout interval [4-16](#)
- displaying statistics [4-19](#)
- field descriptions [4-19](#)
- monitoring [4-3](#)

Send document comments to nexus7k-docfeedback@cisco.com.

- privilege levels [4-5](#)
 - TCP ports
 - TACACS+ servers [4-16](#)
 - time ranges
 - absolute [7-6](#)
 - changing a time range [7-19](#)
 - configuring [7-18 to 7-20](#)
 - creating a time range [7-18](#)
 - description [7-6](#)
 - field descriptions [7-20](#)
 - periodic [7-7](#)
 - removing a time range [7-20](#)
 - traffic storm control
 - configuring [15-4](#)
 - description [15-1](#)
 - displaying statistics [15-5](#)
 - field descriptions [15-5](#)
 - guidelines [15-3](#)
 - licensing [15-3](#)
 - limitations [15-3](#)
 - virtualization support [15-3](#)
-
- ## U
- unicast storms. See traffic storm control
 - user accounts
 - adding roles [5-9](#)
 - changing expiry date [5-8](#)
 - changing passwords [5-8](#)
 - configuring [5-5 to 5-10](#)
 - creating [5-5](#)
 - deleting [5-10](#)
 - deleting roles [5-9](#)
 - description [5-1](#)
 - guidelines [5-4](#)
 - password characteristics [5-2](#)
 - virtualization support [5-3](#)
 - user accounts limitations [5-4](#)
 - user logins
 - authentication process [2-4](#)
 - authorization process [2-4](#)
 - user role rules
 - description [5-3](#)
 - user roles
 - adding rules [5-12](#)
 - change rules [5-13](#)
 - change VLAN policies [5-16](#)
 - changing interface policies [5-15](#)
 - changing VRF policies [5-18](#)
 - creating [5-12](#)
 - defaults [5-3](#)
 - deleting rules [5-15](#)
 - description [5-2](#)
 - guidelines [5-4](#)
 - limitations [5-4](#)
 - rearranging rules [5-14](#)
 - specifying on AAA servers [2-13, 2-14](#)
 - virtualization support [5-3](#)
-
- ## V
- vdc-admin user role
 - description [5-3](#)
 - vdc-operator user role
 - description [5-3](#)
 - vendor-specific attributes. See VSAs
 - virtualization
 - 802.1X [6-7](#)
 - AAA [2-5](#)
 - RADIUS [3-4](#)
 - TACACS+ [4-5](#)
 - traffic storm control [15-3](#)
 - user accounts [5-3](#)
 - user roles [5-3](#)
 - VLAN ACLs
 - applying a VACL [9-5](#)
 - creating and changing VACLs [9-3](#)
 - definition [7-2](#)

Send document comments to nexus7k-docfeedback@cisco.com.

description [9-1](#)

removing a VACL [9-4](#)

VSAs

format [2-14](#)

protocol options [2-14, 3-3, 4-4](#)

support description [2-13](#)

Send document comments to nexus7k-docfeedback@cisco.com.