Managing Feature Licenses

A license specifies the options that are enabled on a given ASA. This document describes how to obtain a license activation key and how to activate it. It also describes the available licenses for each model.

Note This chapter describes licensing for Version 9.1; for other versions, see the licensing documentation that applies to your version:

http://www.cisco.com/en/US/products/ps6120/products_licensing_information_listing.html

This chapter includes the following sections:

Supported Feature Licenses Per Model

This section describes the licenses available for each model as well as important notes about licenses. This section includes the following topics:

Licenses Per Model

This section lists the feature licenses available for each model:

Items that are in *italics* are separate, optional licenses that can replace the Base or Security Plus license version. You can mix and match licenses, for example, the 24 Unified Communications license plus the Strong Encryption license; or the 500 AnyConnect Premium license plus the GTP/GPRS license; or all four licenses together.

Note Some features are incompatible with each other. See the individual feature chapters for compatibility information.

If you have a No Payload Encryption model, then some of the features below are not supported. See the "No Payload Encryption Models" section on page 5-33 for a list of unsupported features.

For detailed information about licenses, see the "License Notes" section on page 5-18.

ASA 5505

Table 5-1 ASA 5505 License Features

Licenses	Description (Base License in Plain Text)	Description (Security Plus Lic. in Plain Text)
Firewall Licenses		
Botnet Traffic Filter	Disabled / *Opt. Time-based lic: Available*	Disabled / *Opt. Time-based lic: Available*
Firewall Conns, Concurrent	10,000	25,000
GTP/GPRS	No support	No support
Intercompany Media Eng.	Disabled / *Optional license: Available*	Disabled / *Optional license: Available*
UC Phone Proxy Sessions, Total UC Proxy Sessions	2 / *Optional license: 24*	2 / *Optional license: 24*
VPN Licenses		
Adv. Endpoint Assessment	Disabled / *Optional license: Available*	Disabled / *Optional license: Available*
AnyConnect for Cisco VPN Phone	Disabled / *Optional license: Available*	Disabled / *Optional license: Available*
AnyConnect Essentials	Disabled / *Optional license: Available (25 sessions)*	Disabled / *Optional license: Available (25 sessions)*
AnyConnect for Mobile	Disabled / *Optional license: Available*	Disabled / *Optional license: Available*
AnyConnect Premium (sessions)	2 / *Optional Permanent or Time-based licenses:* *10* *25*	2 / *Optional Permanent or Time-based licenses:* *10* *25*
Other VPN (sessions)	10	25
Total VPN (sessions), combined all types	up to 25[1]	up to 25
VPN Load Balancing	No support	No support
General Licenses		
Encryption	Base (DES) / *Opt. lic.: Strong (3DES/AES)*	Base (DES) / *Opt. lic.: Strong (3DES/AES)*
Failover	No support	Active/Standby (no stateful failover)
Security Contexts	No support	No support
Clustering	No support	No support
Inside Hosts, concurrent[2]	10[3] / *Opt. licenses:* *50* *Unlimited*	10[3] / *Opt. licenses:* *50* *Unlimited*
VLANs, maximum	Routed mode: 3 (2 regular and 1 restricted) Transparent mode: 2	Routed mode: 20 Transparent mode: 3 (2 regular and 1 failover)
VLAN Trunks, maximum	No support	8 trunks

1. The total number of VPN sessions depends on your licenses. If you enable AnyConnect Essentials, then the total is the model maximum of 25. If you enable AnyConnect Premium, then the total is the AnyConnect Premium value plus the Other VPN value, not to exceed 25 sessions.
2. In routed mode, hosts on the inside (Business and Home VLANs) count toward the limit when they communicate with the outside (Internet VLAN), including when the inside initiates a connection to the outside as well as when the outside initiates a connection to the inside. Note that even when the outside initiates a connection to the inside, outside hosts are *not* counted toward the limit; only the inside hosts count. Hosts that initiate traffic between Business and Home are also not counted toward the limit. The interface associated with the default route is considered to be the outside Internet interface. If there is no default route, hosts on all interfaces are counted toward the limit. In transparent mode, the interface with the lowest number of hosts is counted toward the host limit. Use the **show local-host** command to view host limits.
3. For a 10-user license, the max. DHCP clients is 32. For 50 users, the max. is 128. For unlimited users, the max. is 250, which is the max. for other models.

ASA 5510

Table 5-2 ASA 5510 License Features

Licenses	Description (Base License in Plain Text)	Description (Security Plus Lic. in Plain Text)
Firewall Licenses		
Botnet Traffic Filter	Disabled *Optional Time-based license: Available*	Disabled *Optional Time-based license: Available*
Firewall Conns, Concurrent	50,000	130,000
GTP/GPRS	No support	No support
Intercompany Media Eng.	Disabled *Optional license: Available*	Disabled *Optional license: Available*
UC Phone Proxy Sessions, Total UC Proxy Sessions	2 *Optional licenses:* *24* *50* *100*	2 *Optional licenses:* *24* *50* *100*
VPN Licenses		
Adv. Endpoint Assessment	Disabled *Optional license: Available*	Disabled *Optional license: Available*
AnyConnect for Cisco VPN Phone	Disabled *Optional license: Available*	Disabled *Optional license: Available*
AnyConnect Essentials	Disabled *Optional license: Available (250 sessions)*	Disabled *Optional license: Available (250 sessions)*
AnyConnect for Mobile	Disabled *Optional license: Available*	Disabled *Optional license: Available*
AnyConnect Premium (sessions)	2 *Optional Perm. or Time-based lic,:* *10* *25* *50* *100* *250* *Optional Shared licenses: Participant or Server. For the Server:* *500-50,000 in increments of 500* *50,000-545,000 in increments of 1000*	2 *Optional Perm. or Time-based lic:* *10* *25* *50* *100* *250* *Optional Shared licenses: Participant or Server. For the Server:* *500-50,000 in increments of 500* *50,000-545,000 in increments of 1000*
Total VPN (sessions), combined all types	250	250
Other VPN (sessions)	250	250
VPN Load Balancing	No support	Supported
General Licenses		
Encryption	Base (DES) *Opt. lic.: Strong (3DES/AES)*	Base (DES) *Opt. lic.: Strong (3DES/AES)*
Failover	No support	Active/Standby or Active/Active
Interfaces of all types, Max.	364	564
Interface Speed	All: Fast Ethernet	Ethernet 0/0 and 0/1: Gigabit Ethernet[1] Ethernet 0/2, 0/3, 0/4 (and others): Fast Eth.
Security Contexts	No support	2 *Optional licenses:* *5*
Clustering	No support	No support
VLANs, Maximum	50	100

1. Although the Ethernet 0/0 and 0/1 ports are Gigabit Ethernet, they are still identified as “Ethernet” in the software.

ASA 5520

Table 5-3 ASA 5520 License Features

Licenses	Description (Base License in Plain Text)								
Firewall Licenses									
Botnet Traffic Filter	Disabled	*Optional Time-based license: Available*							
Firewall Conns, Concurrent	280,000								
GTP/GPRS	Disabled	*Optional license: Available*							
Intercompany Media Eng.	Disabled	*Optional license: Available*							
UC Phone Proxy Sessions, Total UC Proxy Sessions	2	*Optional licenses:*	*24*	*50*	*100*	*250*	*500*	*750*	*1000*
VPN Licenses									
Adv. Endpoint Assessment	Disabled	*Optional license: Available*							
AnyConnect for Cisco VPN Phone	Disabled	*Optional license: Available*							
AnyConnect Essentials	Disabled	*Optional license: Available (750 sessions)*							
AnyConnect for Mobile	Disabled	*Optional license: Available*							
AnyConnect Premium (sessions)	2	*Optional Permanent or Time-based licenses:*							
		10	*25*	*50*	*100*	*250*	*500*	*750*	
	Optional Shared licenses: Participant or Server. For the Server:								
	500-50,000 in increments of 500					*50,000-545,000 in increments of 1000*			
Total VPN (sessions), combined all types	750								
Other VPN (sessions)	750								
VPN Load Balancing	Supported								
General Licenses									
Encryption	Base (DES)	*Optional license: Strong (3DES/AES)*							
Failover	Active/Standby or Active/Active								
Interfaces of all types, Max.	764								
Security Contexts	2	*Optional licenses:*	*5*	*10*	*20*				
Clustering	No support								
VLANs, Maximum	150								

ASA 5540

Table 5-4 ASA 5540 License Features

Licenses	Description (Base License in Plain Text)									
Firewall Licenses										
Botnet Traffic Filter	Disabled	*Optional Time-based license: Available*								
Firewall Conns, Concurrent	400,000									
GTP/GPRS	Disabled	*Optional license: Available*								
Intercompany Media Eng.	Disabled	*Optional license: Available*								
UC Phone Proxy Sessions, Total UC Proxy Sessions	2	*Optional licenses:*	*24*	*50*	*100*	*250*	*500*	*750*	*1000*	*2000*
VPN Licenses										
Adv. Endpoint Assessment	Disabled	*Optional license: Available*								
AnyConnect for Cisco VPN Phone	Disabled	*Optional license: Available*								
AnyConnect Essentials	Disabled	*Optional license: Available (2500 sessions)*								
AnyConnect for Mobile	Disabled	*Optional license: Available*								
AnyConnect Premium (sessions)	2	*Optional Permanent or Time-based licenses:*								
		10	*25*	*50*	*100*	*250*	*500*	*750*	*1000*	*2500*
	Optional Shared licenses: Participant or Server. For the Server:									
	500-50,000 in increments of 500					*50,000-545,000 in increments of 1000*				
Total VPN (sessions), combined all types	5000									
Other VPN (sessions)	5000									
VPN Load Balancing	Supported									
General Licenses										
Encryption	Base (DES)	*Optional license: Strong (3DES/AES)*								
Failover	Active/Standby or Active/Active									
Interfaces of all types, Max.	964									
Security Contexts	2	*Optional licenses:*	*5*	*10*	*20*	*50*				
Clustering	No support									
VLANs, Maximum	200									

ASA 5550

Table 5-5 ASA 5550 License Features

Licenses	Description (Base License in Plain Text)									
Firewall Licenses										
Botnet Traffic Filter	Disabled	*Optional Time-based license: Available*								
Firewall Conns, Concurrent	650,000									
GTP/GPRS	Disabled	*Optional license: Available*								
Intercompany Media Eng.	Disabled	*Optional license: Available*								
UC Phone Proxy Sessions, Total UC Proxy Sessions	2	*Optional licenses:*								
		24	*50*	*100*	*250*	*500*	*750*	*1000*	*2000*	*3000*
VPN Licenses										
Adv. Endpoint Assessment	Disabled	*Optional license: Available*								
AnyConnect for Cisco VPN Phone	Disabled	*Optional license: Available*								
AnyConnect Essentials	Disabled	*Optional license: Available (5000 sessions)*								
AnyConnect for Mobile	Disabled	*Optional license: Available*								
AnyConnect Premium (sessions)	2	*Optional Permanent or Time-based licenses:*								
		10	*25*	*50*	*100*	*250*	*500*	*750*	*1000*	*2500*	*5000*
	Optional Shared licenses: Participant or Server. For the Server:									
	500-50,000 in increments of 500					*50,000-545,000 in increments of 1000*				
Total VPN (sessions), combined all types	5000									
Other VPN (sessions)	5000									
VPN Load Balancing	Supported									
General Licenses										
Encryption	Base (DES)	*Optional license: Strong (3DES/AES)*								
Failover	Active/Standby or Active/Active									
Interfaces of all types, Max.	1764									
Security Contexts	2	*Optional licenses:*		*5*	*10*	*20*	*50*	*100*		
Clustering	No support									
VLANs, Maximum	400									

ASA 5580

Table 5-6 ASA 5580 License Features

Licenses	Description (Base License in Plain Text)										
Firewall Licenses											
Botnet Traffic Filter	Disabled	*Optional Time-based license: Available*									
Firewall Conns, Concurrent	5580-20: 2,000,000					5580-40: 4,000,000					
GTP/GPRS	Disabled	*Optional license: Available*									
Intercompany Media Eng.	Disabled	*Optional license: Available*									
UC Phone Proxy Sessions, Total UC Proxy Sessions	2	*Optional licenses:*									
		24	*50*	*100*	*250*	*500*	*750*	*1000*	*2000*	*3000*	*5000*	*10,000*[1]
VPN Licenses											
Adv. Endpoint Assessment	Disabled	*Optional license: Available*									
AnyConnect for Cisco VPN Phone	Disabled	*Optional license: Available*									
AnyConnect Essentials	Disabled	*Optional license: Available (10000 sessions)*									
AnyConnect for Mobile	Disabled	*Optional license: Available*									
AnyConnect Premium (sessions)	2	*Optional Permanent or Time-based licenses:*									
		10	*25*	*50*	*100*	*250*	*500*	*750*	*1000*	*2500*	*5000*	*10,000*
	Optional Shared licenses: Participant or Server. For the Server:										
	500-50,000 in increments of 500					*50,000-545,000 in increments of 1000*					
Total VPN (sessions), combined all types	10,000										
Other VPN (sessions)	10,000										
VPN Load Balancing	Supported										
General Licenses											
Encryption	Base (DES)	*Optional license: Strong (3DES/AES)*									
Failover	Active/Standby or Active/Active										
Interfaces of all types, Max.	4612										
Security Contexts	2	*Optional licenses:*			*5*	*10*	*20*	*50*	*100*	*250*	
Clustering	Disabled	*Optional license: Available for 8 units*									
VLANs, Maximum	1024										

1. With the 10,000-session UC license, the total combined sessions can be 10,000, but the maximum number of Phone Proxy sessions is 5000.

ASA 5512-X

Table 5-7 ASA 5512-X License Features

Licenses	Description (Base License in Plain Text)	Description (Security Plus Lic. in Plain Text)
Firewall Licenses		
Botnet Traffic Filter	Disabled	*Optional Time-based license: Available*	Disabled	*Optional Time-based license: Available*
Firewall Conns, Concurrent	100,000	250,000
GTP/GPRS	No support	Disabled	*Optional license: Available*
Intercompany Media Eng.	Disabled	*Optional license: Available*	Disabled	*Optional license: Available*
UC Phone Proxy Sessions, Total UC Proxy Sessions	2	*Optional licenses:*	2	*Optional licenses:*
	24	*50*	*100*	*250*	*500*	*24*	*50*	*100*	*250*	*500*
VPN Licenses		
Adv. Endpoint Assessment	Disabled	*Optional license: Available*	Disabled	*Optional license: Available*
AnyConnect for Cisco VPN Phone	Disabled	*Optional license: Available*	Disabled	*Optional license: Available*
AnyConnect Essentials	Disabled	*Optional license: Available (250 sessions)*	Disabled	*Optional license: Available (250 sessions)*
AnyConnect for Mobile	Disabled	*Optional license: Available*	Disabled	*Optional license: Available*
AnyConnect Premium (sessions)	2	*Optional Perm. or Time-based lic,:*	2	*Optional Perm. or Time-based lic:*
	10	*25*	*50*	*100*	*250*	*10*	*25*	*50*	*100*	*250*
	Optional Shared licenses: Participant or Server. For the Server:	*Optional Shared licenses: Participant or Server. For the Server:*
	500-50,000 in increments of 500	*50,000-545,000 in increments of 1000*	*500-50,000 in increments of 500*	*50,000-545,000 in increments of 1000*
Total VPN (sessions), combined all types	250	250
Other VPN (sessions)	250	250
VPN Load Balancing	No support	Supported
General Licenses		
Encryption	Base (DES)	*Opt. lic.: Strong (3DES/AES)*	Base (DES)	*Opt. lic.: Strong (3DES/AES)*
Failover	No support	Active/Standby or Active/Active
Interfaces of all types, Max.	716	916
Security Contexts	No support	2	*Optional licenses:*	*5*
Clustering	No Support	Supported for 2 units
IPS Module	Disabled	*Optional license: Available*	Disabled	*Optional license: Available*
VLANs, Maximum	50	100

ASA 5515-X

Table 5-8 ASA 5515-X License Features

Licenses	Description (Base License in Plain Text)						
Firewall Licenses							
Botnet Traffic Filter	Disabled	*Optional Time-based license: Available*					
Firewall Conns, Concurrent	250,000						
GTP/GPRS	Disabled	*Optional license: Available*					
Intercompany Media Eng.	Disabled	*Optional license: Available*					
UC Phone Proxy Sessions, Total UC Proxy Sessions	2	*Optional licenses:*	*24*	*50*	*100*	*250*	*500*
VPN Licenses							
Adv. Endpoint Assessment	Disabled	*Optional license: Available*					
AnyConnect for Cisco VPN Phone	Disabled	*Optional license: Available*					
AnyConnect Essentials	Disabled	*Optional license: Available (250 sessions)*					
AnyConnect for Mobile	Disabled	*Optional license: Available*					
AnyConnect Premium (sessions)	2	*Optional Permanent or Time-based licenses:*					
		10	*25*	*50*	*100*	*250*	
	Optional Shared licenses: Participant or Server. For the Server:						
	500-50,000 in increments of 500				*50,000-545,000 in increments of 1000*		
Total VPN (sessions), combined all types	250						
Other VPN (sessions)	250						
VPN Load Balancing	Supported						
General Licenses							
Encryption	Base (DES)	*Optional license: Strong (3DES/AES)*					
Failover	Active/Standby or Active/Active						
Interfaces of all types, Max.	916						
Security Contexts	2	*Optional licenses:*	*5*				
Clustering	Supported for 2 units						
IPS Module	Disabled	*Optional license: Available*					
VLANs, Maximum	100						

ASA 5525-X

Table 5-9 ASA 5525-X License Features

Licenses	Description (Base License in Plain Text)								
Firewall Licenses									
Botnet Traffic Filter	Disabled	*Optional Time-based license: Available*							
Firewall Conns, Concurrent	500,000								
GTP/GPRS	Disabled	*Optional license: Available*							
Intercompany Media Eng.	Disabled	*Optional license: Available*							
UC Phone Proxy Sessions, Total UC Proxy Sessions	2	*Optional licenses:*	*24*	*50*	*100*	*250*	*500*	*750*	*1000*
VPN Licenses									
Adv. Endpoint Assessment	Disabled	*Optional license: Available*							
AnyConnect for Cisco VPN Phone	Disabled	*Optional license: Available*							
AnyConnect Essentials	Disabled	*Optional license: Available (750 sessions)*							
AnyConnect for Mobile	Disabled	*Optional license: Available*							
AnyConnect Premium (sessions)	2	*Optional Permanent or Time-based licenses:*							
		10	*25*	*50*	*100*	*250*	*500*	*750*	
	Optional Shared licenses: Participant or Server. For the Server:								
	500-50,000 in increments of 500					*50,000-545,000 in increments of 1000*			
Total VPN (sessions), combined all types	750								
Other VPN (sessions)	750								
VPN Load Balancing	Supported								
General Licenses									
Encryption	Base (DES)	*Optional license: Strong (3DES/AES)*							
Failover	Active/Standby or Active/Active								
Interfaces of all types, Max.	1316								
Security Contexts	2	*Optional licenses:*	*5*	*10*	*20*				
Clustering	Supported for 2 units								
IPS Module	Disabled	*Optional license: Available*							
VLANs, Maximum	200								

ASA 5545-X

Table 5-10 ASA 5545-X License Features

Licenses	Description (Base License in Plain Text)									
Firewall Licenses										
Botnet Traffic Filter	Disabled	*Optional Time-based license: Available*								
Firewall Conns, Concurrent	750,000									
GTP/GPRS	Disabled	*Optional license: Available*								
Intercompany Media Eng.	Disabled	*Optional license: Available*								
UC Phone Proxy Sessions, Total UC Proxy Sessions	2	*Optional licenses:*	*24*	*50*	*100*	*250*	*500*	*750*	*1000*	*2000*
VPN Licenses										
Adv. Endpoint Assessment	Disabled	*Optional license: Available*								
AnyConnect for Cisco VPN Phone	Disabled	*Optional license: Available*								
AnyConnect Essentials	Disabled	*Optional license: Available (2500 sessions)*								
AnyConnect for Mobile	Disabled	*Optional license: Available*								
AnyConnect Premium (sessions)	2	*Optional Permanent or Time-based licenses:*								
		10	*25*	*50*	*100*	*250*	*500*	*750*	*1000*	*2500*
	Optional Shared licenses: Participant or Server. For the Server:									
	500-50,000 in increments of 500					*50,000-545,000 in increments of 1000*				
Total VPN (sessions), combined all types	2500									
Other VPN (sessions)	2500									
VPN Load Balancing	Supported									
General Licenses										
Encryption	Base (DES)	*Optional license: Strong (3DES/AES)*								
Failover	Active/Standby or Active/Active									
Interfaces of all types, Max.	1716									
Security Contexts	2	*Optional licenses:*	*5*	*10*	*20*	*50*				
Clustering	Supported for 2 units									
IPS Module	Disabled	*Optional license: Available*								
VLANs, Maximum	300									

ASA 5555-X

Table 5-11 ASA 5555-X License Features

Licenses	Description (Base License in Plain Text)									
Firewall Licenses										
Botnet Traffic Filter	Disabled	*Optional Time-based license: Available*								
Firewall Conns, Concurrent	1,000,000									
GTP/GPRS	Disabled	*Optional license: Available*								
Intercompany Media Eng.	Disabled	*Optional license: Available*								
UC Phone Proxy Sessions, Total UC Proxy Sessions	2	*Optional licenses:*								
		24	*50*	*100*	*250*	*500*	*750*	*1000*	*2000*	*3000*
VPN Licenses										
Adv. Endpoint Assessment	Disabled	*Optional license: Available*								
AnyConnect for Cisco VPN Phone	Disabled	*Optional license: Available*								
AnyConnect Essentials	Disabled	*Optional license: Available (5000 sessions)*								
AnyConnect for Mobile	Disabled	*Optional license: Available*								
AnyConnect Premium (sessions)	2	*Optional Permanent or Time-based licenses:*								
		10	*25*	*50*	*100*	*250*	*500*	*750*	*1000*	*2500*	*5000*
	Optional Shared licenses: Participant or Server. For the Server:									
	500-50,000 in increments of 500					*50,000-545,000 in increments of 1000*				
Total VPN (sessions), combined all types	5000									
Other VPN (sessions)	5000									
VPN Load Balancing	Supported									
General Licenses										
Encryption	Base (DES)	*Optional license: Strong (3DES/AES)*								
Failover	Active/Standby or Active/Active									
Interfaces of all types, Max.	2516									
Security Contexts	2	*Optional licenses:*		*5*	*10*	*20*	*50*	*100*		
Clustering	Supported for 2 units									
IPS Module	Disabled	*Optional license: Available*								
VLANs, Maximum	500									

ASA 5585-X with SSP-10

You can use two SSPs of the same level in the same chassis. Mixed-level SSPs are not supported (for example, an SSP-10 with an SSP-20 is not supported). Each SSP acts as an independent device, with separate configurations and management. You can use the two SSPs as a failover pair if desired.

Table 5-12 ASA 5585-X with SSP-10 License Features

Licenses	Description (Base and Security Plus License in Plain Text)									
Firewall Licenses										
Botnet Traffic Filter	Disabled	*Optional Time-based license: Available*								
Firewall Conns, Concurrent	1,000,000									
GTP/GPRS	Disabled	*Optional license: Available*								
Intercompany Media Eng.	Disabled	*Optional license: Available*								
UC Phone Proxy Sessions, Total UC Proxy Sessions	2	*Optional licenses:*								
		24	*50*	*100*	*250*	*500*	*750*	*1000*	*2000*	*3000*
VPN Licenses										
Adv. Endpoint Assessment	Disabled	*Optional license: Available*								
AnyConnect for Cisco VPN Phone	Disabled	*Optional license: Available*								
AnyConnect Essentials	Disabled	*Optional license: Available (5000 sessions)*								
AnyConnect for Mobile	Disabled	*Optional license: Available*								
AnyConnect Premium (sessions)	2	*Optional Permanent or Time-based licenses:*								
		10	*25*	*50*	*100*	*250*	*500*	*750*	*1000*	*2500*	*5000*
	Optional Shared licenses: Participant or Server. For the Server:									
	500-50,000 in increments of 500					*50,000-545,000 in increments of 1000*				
Total VPN (sessions), combined all types	5000									
Other VPN (sessions)	5000									
VPN Load Balancing	Supported									
General Licenses										
10 GE I/O	**Base License**: Disabled; fiber ifcs run at 1 GE					**Security Plus License**: Enabled; fiber ifcs run at 10 GE				
Encryption	Base (DES)	*Optional license: Strong (3DES/AES)*								
Failover	Active/Standby or Active/Active									
Interfaces of all types, Max.	4612									
Security Contexts	2	*Optional licenses:*		*5*	*10*	*20*	*50*	*100*		
Clustering	Disabled	*Optional license: Available for 8 units*								
VLANs, Maximum	1024									

ASA 5585-X with SSP-20

You can use two SSPs of the same level in the same chassis. Mixed-level SSPs are not supported (for example, an SSP-20 with an SSP-40 is not supported). Each SSP acts as an independent device, with separate configurations and management. You can use the two SSPs as a failover pair if desired.

Table 5-13 ASA 5585-X with SSP-20 License Features

Licenses	Description (Base and Security Plus License in Plain Text)										
Firewall Licenses											
Botnet Traffic Filter	Disabled	*Optional Time-based license: Available*									
Firewall Conns, Concurrent	2,000,000										
GTP/GPRS	Disabled	*Optional license: Available*									
Intercompany Media Eng.	Disabled	*Optional license: Available*									
UC Phone Proxy Sessions, Total UC Proxy Sessions	2	*Optional licenses:*									
		24	*50*	*100*	*250*	*500*	*750*	*1000*	*2000*	*3000*	*5000*	*10,000*[1]
VPN Licenses											
Adv. Endpoint Assessment	Disabled	*Optional license: Available*									
AnyConnect for Cisco VPN Phone	Disabled	*Optional license: Available*									
AnyConnect Essentials	Disabled	*Optional license: Available (10,000 sessions)*									
AnyConnect for Mobile	Disabled	*Optional license: Available*									
AnyConnect Premium (sessions)	2	*Optional Permanent or Time-based licenses:*									
		10	*25*	*50*	*100*	*250*	*500*	*750*	*1000*	*2500*	*5000*	*10,000*
	Optional Shared licenses: Participant or Server. For the Server:										
	500-50,000 in increments of 500					*50,000-545,000 in increments of 1000*					
Total VPN (sessions), combined all types	10,000										
Other VPN (sessions)	10,000										
VPN Load Balancing	Supported										
General Licenses											
10 GE I/O	**Base License**: Disabled; fiber ifcs run at 1 GE					**Security Plus License**: Enabled; fiber ifcs run at 10 GE					
Encryption	Base (DES)	*Optional license: Strong (3DES/AES)*									
Failover	Active/Standby or Active/Active										
Interfaces of all types, Max.	4612										
Security Contexts	2	*Optional licenses:*		*5*	*10*	*20*	*50*	*100*	*250*		
Clustering	Disabled	*Optional license: Available for 8 units*									
VLANs, Maximum	1024										

1. With the 10,000-session UC license, the total combined sessions can be 10,000, but the maximum number of Phone Proxy sessions is 5000.

ASA 5585-X with SSP-40 and -60

You can use two SSPs of the same level in the same chassis. Mixed-level SSPs are not supported (for example, an SSP-40 with an SSP-60 is not supported). Each SSP acts as an independent device, with separate configurations and management. You can use the two SSPs as a failover pair if desired.

Table 5-14 ASA 5585-X with SSP-40 and -60 License Features

Licenses	Description (Base License in Plain Text)										
Firewall Licenses											
Botnet Traffic Filter	Disabled	*Optional Time-based license: Available*									
Firewall Conns, Concurrent	**5585-X with SSP-40**: 4,000,000					**5585-X with SSP-60**: 10,000,000					
GTP/GPRS	Disabled	*Optional license: Available*									
Intercompany Media Eng.	Disabled	*Optional license: Available*									
UC Phone Proxy Sessions, Total UC Proxy Sessions	2	*Optional licenses:*									
		24	*50*	*100*	*250*	*500*	*750*	*1000*	*2000*	*3000*	*5000*	*10,000*[1]
VPN Licenses											
Adv. Endpoint Assessment	Disabled	*Optional license: Available*									
AnyConnect for Cisco VPN Phone	Disabled	*Optional license: Available*									
AnyConnect Essentials	Disabled	*Optional license: Available (10,000 sessions)*									
AnyConnect for Mobile	Disabled	*Optional license: Available*									
AnyConnect Premium (sessions)	2	*Optional Permanent or Time-based licenses:*									
		10	*25*	*50*	*100*	*250*	*500*	*750*	*1000*	*2500*	*5000*	*10,000*
	Optional Shared licenses: Participant or Server. For the Server:										
	500-50,000 in increments of 500					*50,000-545,000 in increments of 1000*					
Total VPN (sessions), combined all types	10,000										
Other VPN (sessions)	10,000										
VPN Load Balancing	Supported										
General Licenses											
10 GE I/O	Enabled; fiber ifcs run at 10 GE										
Encryption	Base (DES)	*Optional license: Strong (3DES/AES)*									
Failover	Active/Standby or Active/Active										
Interfaces of all types, Max.	4612										
Security Contexts	2	*Optional licenses:*		*5*	*10*	*20*	*50*	*100*	*250*		
Clustering	Disabled	*Optional license: Available for 8 units*									
VLANs, Maximum	1024										

1. With the 10,000-session UC license, the total combined sessions can be 10,000, but the maximum number of Phone Proxy sessions is 5000.

ASA Services Module

Table 5-15 ASASM License Features

Licenses	Description (Base License in Plain Text)										
Firewall Licenses											
Botnet Traffic Filter	Disabled	*Optional Time-based license: Available*									
Firewall Conns, Concurrent	10,000,000										
GTP/GPRS	Disabled	*Optional license: Available*									
Intercompany Media Eng.	Disabled	*Optional license: Available*									
UC Phone Proxy Sessions, Total UC Proxy Sessions	2	*Optional licenses:*									
		24	*50*	*100*	*250*	*500*	*750*	*1000*	*2000*	*3000*	*5000*	*10,000*[1]
VPN Licenses											
Adv. Endpoint Assessment	Disabled	*Optional license: Available*									
AnyConnect for Cisco VPN Phone	Disabled	*Optional license: Available*									
AnyConnect Essentials	Disabled	*Optional license: Available (10,000 sessions)*									
AnyConnect for Mobile	Disabled	*Optional license: Available*									
AnyConnect Premium (sessions)	2	*Optional Permanent or Time-based licenses:*									
		10	*25*	*50*	*100*	*250*	*500*	*750*	*1000*	*2500*	*5000*	*10,000*
	Optional Shared licenses: Participant or Server. For the Server:										
	500-50,000 in increments of 500					*50,000-545,000 in increments of 1000*					
Total VPN (sessions), combined all types	10,000										
Other VPN (sessions)	10,000										
VPN Load Balancing	Supported										
General Licenses											
Encryption	Base (DES)	*Optional license: Strong (3DES/AES)*									
Failover	Active/Standby or Active/Active										
Security Contexts	2	*Optional licenses:*									
		5	*10*	*20*	*50*	*100*	*250*				
Clustering	No support										
VLANs, Maximum	1000										

1. With the 10,000-session UC license, the total combined sessions can be 10,000, but the maximum number of Phone Proxy sessions is 5000.

License Notes

Table 5-16 includes common footnotes shared by multiple tables in the "Licenses Per Model" section on page 5-1.

Table 5-16 License Notes

License	Notes
AnyConnect Essentials	AnyConnect Essentials sessions include the following VPN types: • SSL VPN • IPsec remote access VPN using IKEv2 This license does not support browser-based (clientless) SSL VPN access or Cisco Secure Desktop. For these features, activate an AnyConnect Premium license instead of the AnyConnect Essentials license. **Note** With the AnyConnect Essentials license, VPN users can use a web browser to log in, and download and start (WebLaunch) the AnyConnect client. The AnyConnect client software offers the same set of client features, whether it is enabled by this license or an AnyConnect Premium license. The AnyConnect Essentials license cannot be active at the same time as the following licenses on a given ASA: AnyConnect Premium license (all types) or the Advanced Endpoint Assessment license. You can, however, run AnyConnect Essentials and AnyConnect Premium licenses on different ASAs in the same network. By default, the ASA uses the AnyConnect Essentials license, but you can disable it to use other licenses by using the **no anyconnect-essentials** command or in ASDM, using the **Configuration > Remote Access VPN > Network (Client) Access > Advanced > AnyConnect Essentials** pane. See also the "VPN License and Feature Compatibility" section on page 5-23.
AnyConnect for Cisco VPN Phone	In conjunction with an AnyConnect Premium license, this license enables access from hardware IP phones that have built in AnyConnect compatibility.

Table 5-16 License Notes (continued)

License	Notes
AnyConnect for Mobile	This license provides access to the AnyConnect Client for touch-screen mobile devices running Windows Mobile 5.0, 6.0, and 6.1. We recommend using this license if you want to support mobile access to AnyConnect 2.3 and later versions. This license requires activation of one of the following licenses to specify the total number of SSL VPN sessions permitted: AnyConnect Essentials or AnyConnect Premium. **Mobile Posture Support** Enforcing remote access controls and gathering posture data from mobile devices requires an AnyConnect Mobile license and either an AnyConnect Essentials or AnyConnect Premium license to be installed on the ASA. Here is the functionality you receive based on the license you install. • AnyConnect Premium License Functionality – Enforce DAP policies on supported mobile devices based on DAP attributes and any other existing endpoint attributes. This includes allowing or denying remote access from a mobile device. • AnyConnect Essentials License Functionality – Enable or disable mobile device access on a per group basis and to configure that feature using ASDM. – Display information about connected mobile devices via CLI or ASDM without having the ability to enforce DAP policies or deny or allow remote access to those mobile devices.
AnyConnect Premium	AnyConnect Premium sessions include the following VPN types: • SSL VPN • Clientless SSL VPN • IPsec remote access VPN using IKEv2
AnyConnect Premium Shared	A shared license lets the ASA act as a shared license server for multiple client ASAs. The shared license pool is large, but the maximum number of sessions used by each individual ASA cannot exceed the maximum number listed for permanent licenses.
Botnet Traffic Filter	Requires a Strong Encryption (3DES/AES) License to download the dynamic database.
Encryption	The DES license cannot be disabled. If you have the 3DES license installed, DES is still available. To prevent the use of DES when you want to only use strong encryption, be sure to configure any relevant commands to use only strong encryption.
Failover, Active/Active	You cannot use Active/Active failover and VPN; if you want to use VPN, use Active/Standby failover.

Table 5-16 License Notes (continued)

License	Notes
Intercompany Media Engine	When you enable the Intercompany Media Engine (IME) license, you can use TLS proxy sessions up to the configured TLS proxy limit. If you also have a Unified Communications (UC) license installed that is higher than the default TLS proxy limit, then the ASA sets the limit to be the UC license limit plus an additional number of sessions depending on your model. You can manually configure the TLS proxy limit using the **tls-proxy maximum-sessions** command or in ASDM, using the **Configuration > Firewall > Unified Communications > TLS Proxy** pane. To view the limits of your model, enter the **tls-proxy maximum-sessions ?** command. If you also install the UC license, then the TLS proxy sessions available for UC are also available for IME sessions. For example, if the configured limit is 1000 TLS proxy sessions, and you purchase a 750-session UC license, then the first 250 IME sessions do not affect the sessions available for UC. If you need more than 250 sessions for IME, then the remaining 750 sessions of the platform limit are used on a first-come, first-served basis by UC and IME. • For a license part number ending in "K8", TLS proxy sessions are limited to 1000. • For a license part number ending in "K9", the TLS proxy limit depends on your configuration and the platform model. **Note** K8 and K9 refer to whether the license is restricted for export: K8 is unrestricted, and K9 is restricted. You might also use SRTP encryption sessions for your connections: • For a K8 license, SRTP sessions are limited to 250. • For a K9 license, there is no limit. **Note** Only calls that require encryption/decryption for media are counted toward the SRTP limit; if passthrough is set for the call, even if both legs are SRTP, they do not count toward the limit.
Interfaces of all types, Max.	The maximum number of combined interfaces; for example, VLANs, physical, redundant, bridge group, and EtherChannel interfaces. Every **interface** defined in the configuration counts against this limit.
IPS module	The IPS module license lets you run the IPS software module on the ASA. You also need the IPS signature subscription on the IPS side. See the following guidelines: • To buy the IPS signature subscription you need to have the ASA with IPS pre-installed (the part number must include "IPS", for example ASA5515-IPS-K9); you cannot buy the IPS signature subscription for a non-IPS part number ASA. • For failover, you need the IPS signature subscription on both units; this subscription is not shared in failover, because it is not an ASA license. • For failover, the IPS signature subscription requires a unique IPS module license per unit. Like other ASA licenses, the IPS module license is technically shared in the failover cluster license. However, because of the IPS signature subscription requirements, you must buy a separate IPS module license for each unit in failover.

Table 5-16 License Notes (continued)

License	Notes
Other VPN	Other VPN sessions include the following VPN types: • IPsec remote access VPN using IKEv1 • IPsec site-to-site VPN using IKEv1 • IPsec site-to-site VPN using IKEv2 This license is included in the Base license.
Total VPN (sessions), combined all types	• Although the maximum VPN sessions add up to more than the maximum VPN AnyConnect and Other VPN sessions, the combined sessions should not exceed the VPN session limit. If you exceed the maximum VPN sessions, you can overload the ASA, so be sure to size your network appropriately. • If you start a clientless SSL VPN session and then start an AnyConnect client session from the portal, 1 session is used in total. However, if you start the AnyConnect client first (from a standalone client, for example) and then log into the clientless SSL VPN portal, then 2 sessions are used.

Table 5-16 License Notes (continued)

License	Notes
UC Phone Proxy sessions, Total UC Proxy Sessions	The following applications use TLS proxy sessions for their connections. Each TLS proxy session used by these applications (and only these applications) is counted against the UC license limit: • Phone Proxy • Presence Federation Proxy • Encrypted Voice Inspection Other applications that use TLS proxy sessions do not count toward the UC limit, for example, Mobility Advantage Proxy (which does not require a license) and IME (which requires a separate IME license). Some UC applications might use multiple sessions for a connection. For example, if you configure a phone with a primary and backup Cisco Unified Communications Manager, there are 2 TLS proxy connections, so 2 UC Proxy sessions are used. You independently set the TLS proxy limit using the **tls-proxy maximum-sessions** command or in ASDM, using the **Configuration > Firewall > Unified Communications > TLS Proxy** pane. To view the limits of your model, enter the **tls-proxy maximum-sessions ?** command. When you apply a UC license that is higher than the default TLS proxy limit, the ASA automatically sets the TLS proxy limit to match the UC limit. The TLS proxy limit takes precedence over the UC license limit; if you set the TLS proxy limit to be less than the UC license, then you cannot use all of the sessions in your UC license. **Note** For license part numbers ending in "K8" (for example, licenses under 250 users), TLS proxy sessions are limited to 1000. For license part numbers ending in "K9" (for example, licenses 250 users or larger), the TLS proxy limit depends on the configuration, up to the model limit. K8 and K9 refer to whether the license is restricted for export: K8 is unrestricted, and K9 is restricted. If you clear the configuration (using the **clear configure all** command, for example), then the TLS proxy limit is set to the default for your model; if this default is lower than the UC license limit, then you see an error message to use the **tls-proxy maximum-sessions** command to raise the limit again (in ASDM, use the **TLS Proxy** pane). If you use failover and enter the **write standby** command or in ASDM, use **File > Save Running Configuration to Standby Unit** on the primary unit to force a configuration synchronization, the **clear configure all** command is generated on the secondary unit automatically, so you may see the warning message on the secondary unit. Because the configuration synchronization restores the TLS proxy limit set on the primary unit, you can ignore the warning. You might also use SRTP encryption sessions for your connections: • For K8 licenses, SRTP sessions are limited to 250. • For K9 licenses, there is not limit. **Note** Only calls that require encryption/decryption for media are counted toward the SRTP limit; if passthrough is set for the call, even if both legs are SRTP, they do not count toward the limit.
VLANs, Maximum	For an interface to count against the VLAN limit, you must assign a VLAN to it.
VPN Load Balancing	VPN load balancing requires a Strong Encryption (3DES/AES) License.

VPN License and Feature Compatibility

Table 5-17 shows how the VPN licenses and features can combine.

For a detailed list of the features supported by the AnyConnect Essentials license and AnyConnect Premium license, see *AnyConnect Secure Mobility Client Features, Licenses, and OSs*:

- Version 3.1: http://www.cisco.com/en/US/docs/security/vpn_client/anyconnect/anyconnect31/feature/guide/anyconnect31features.html
- Version 3.0: http://www.cisco.com/en/US/docs/security/vpn_client/anyconnect/anyconnect30/feature/guide/anyconnect30features.html
- Version 2.5: http://www.cisco.com/en/US/docs/security/vpn_client/anyconnect/anyconnect25/feature/guide/anyconnect25features.html

Table 5-17 VPN License and Feature Compatibility

	Enable one of the following licenses:[1]	
Supported with:	**AnyConnect Essentials**	**AnyConnect Premium**
AnyConnect for Cisco VPN Phone	**No**	**Yes**
AnyConnect for Mobile[2]	**Yes**	**Yes**
Advanced Endpoint Assessment	**No**	**Yes**
AnyConnect Premium Shared	**No**	**Yes**
Client-based SSL VPN	**Yes**	**Yes**
Browser-based (clientless) SSL VPN	**No**	**Yes**
IPsec VPN	**Yes**	**Yes**
VPN Load Balancing	**Yes**	**Yes**
Cisco Secure Desktop	**No**	**Yes**

1. You can only have one license type active, either the AnyConnect Essentials license or the AnyConnect Premium license. By default, the ASA includes an AnyConnect Premium license for 2 sessions. If you install the AnyConnect Essentials license, then it is used by default. See the Configuration > Remote Access VPN > Network (Client) Access > Advanced > AnyConnect Essentials pane to enable the Premium license instead.
2. Mobile Posture support is different for the AnyConnect Essentials vs. the AnyConnect Premium license. See Table 5-16 on page 5-18 for details.

Information About Feature Licenses

A license specifies the options that are enabled on a given ASA. It is represented by an activation key that is a 160-bit (5 32-bit words or 20 bytes) value. This value encodes the serial number (an 11 character string) and the enabled features.

This section includes the following topics:

Preinstalled License

By default, your ASA ships with a license already installed. This license might be the Base License, to which you want to add more licenses, or it might already have all of your licenses installed, depending on what you ordered and what your vendor installed for you. See the "Monitoring Licenses" section on page 5-39 section to determine which licenses you have installed.

Permanent License

You can have one permanent activation key installed. The permanent activation key includes all licensed features in a single key. If you also install time-based licenses, the ASA combines the permanent and time-based licenses into a running license. See the "How Permanent and Time-Based Licenses Combine" section on page 5-25 for more information about how the ASA combines the licenses.

Time-Based Licenses

In addition to permanent licenses, you can purchase time-based licenses or receive an evaluation license that has a time-limit. For example, you might buy a time-based AnyConnect Premium license to handle short-term surges in the number of concurrent SSL VPN users, or you might order a Botnet Traffic Filter time-based license that is valid for 1 year.

This section includes the following topics:

Time-Based License Activation Guidelines

- You can install multiple time-based licenses, including multiple licenses for the same feature. However, only one time-based license per feature can be *active* at a time. The inactive license remains installed, and ready for use. For example, if you install a 1000-session AnyConnect Premium license, and a 2500-session AnyConnect Premium license, then only one of these licenses can be active.
- If you activate an evaluation license that has multiple features in the key, then you cannot also activate another time-based license for one of the included features. For example, if an evaluation license includes the Botnet Traffic Filter and a 1000-session AnyConnect Premium license, you cannot also activate a standalone time-based 2500-session AnyConnect Premium license.

How the Time-Based License Timer Works

- The timer for the time-based license starts counting down when you activate it on the ASA.
- If you stop using the time-based license before it times out, then the timer halts. The timer only starts again when you reactivate the time-based license.
- If the time-based license is active, and you shut down the ASA, then the timer continues to count down. If you intend to leave the ASA in a shut down state for an extended period of time, then you should deactivate the time-based license before you shut down.

Note We suggest you do not change the system clock after you install the time-based license. If you set the clock to be a later date, then if you reload, the ASA checks the system clock against the original installation time, and assumes that more time has passed than has actually been used. If you set the clock back, and the actual running time is greater than the time between the original installation time and the system clock, then the license immediately expires after a reload.

How Permanent and Time-Based Licenses Combine

When you activate a time-based license, then features from both permanent and time-based licenses combine to form the running license. How the permanent and time-based licenses combine depends on the type of license. Table 5-18 lists the combination rules for each feature license.

Note Even when the permanent license is used, if the time-based license is active, it continues to count down.

Table 5-18 Time-Based License Combination Rules

Time-Based Feature	Combined License Rule
AnyConnect Premium Sessions	The higher value is used, either time-based or permanent. For example, if the permanent license is 1000 sessions, and the time-based license is 2500 sessions, then 2500 sessions are enabled. Typically, you will not install a time-based license that has less capability than the permanent license, but if you do so, then the permanent license is used.
Unified Communications Proxy Sessions	The time-based license sessions are added to the permanent sessions, up to the platform limit. For example, if the permanent license is 2500 sessions, and the time-based license is 1000 sessions, then 3500 sessions are enabled for as long as the time-based license is active.
Security Contexts	The time-based license contexts are added to the permanent contexts, up to the platform limit. For example, if the permanent license is 10 contexts, and the time-based license is 20 contexts, then 30 contexts are enabled for as long as the time-based license is active.
Botnet Traffic Filter	There is no permanent Botnet Traffic Filter license available; the time-based license is used.
All Others	The higher value is used, either time-based or permanent. For licenses that have a status of enabled or disabled, then the license with the enabled status is used. For licenses with numerical tiers, the higher value is used. Typically, you will not install a time-based license that has less capability than the permanent license, but if you do so, then the permanent license is used.

To view the combined license, see the "Monitoring Licenses" section on page 5-39.

Stacking Time-Based Licenses

In many cases, you might need to renew your time-based license and have a seamless transition from the old license to the new one. For features that are only available with a time-based license, it is especially important that the license not expire before you can apply the new license. The ASA allows you to *stack* time-based licenses so you do not have to worry about the license expiring or about losing time on your licenses because you installed the new one early.

When you install an identical time-based license as one already installed, then the licenses are combined, and the duration equals the combined duration.

For example:

1. You install a 52-week Botnet Traffic Filter license, and use the license for 25 weeks (27 weeks remain).
2. You then purchase another 52-week Botnet Traffic Filter license. When you install the second license, the licenses combine to have a duration of 79 weeks (52 weeks plus 27 weeks).

Similarly:

1. You install an 8-week 1000-session AnyConnect Premium license, and use it for 2 weeks (6 weeks remain).
2. You then install another 8-week 1000-session license, and the licenses combine to be 1000-sessions for 14 weeks (8 weeks plus 6 weeks).

If the licenses are not identical (for example, a 1000-session AnyConnect Premium license vs. a 2500-session license), then the licenses are *not* combined. Because only one time-based license per feature can be active, only one of the licenses can be active. See the "Activating or Deactivating Keys" section on page 5-37 for more information about activating licenses.

Although non-identical licenses do not combine, when the current license expires, the ASA automatically activates an installed license of the same feature if available. See the "Time-Based License Expiration" section on page 5-26 for more information.

Time-Based License Expiration

When the current license for a feature expires, the ASA automatically activates an installed license of the same feature if available. If there are no other time-based licenses available for the feature, then the permanent license is used.

If you have more than one additional time-based license installed for a feature, then the ASA uses the first license it finds; which license is used is not user-configurable and depends on internal operations. If you prefer to use a different time-based license than the one the ASA activated, then you must manually activate the license you prefer. See the "Activating or Deactivating Keys" section on page 5-37.

For example, you have a time-based 2500-session AnyConnect Premium license (active), a time-based 1000-session AnyConnect Premium license (inactive), and a permanent 500-session AnyConnect Premium license. While the 2500-session license expires, the ASA activates the 1000-session license. After the 1000-session license expires, the ASA uses the 500-session permanent license.

Shared AnyConnect Premium Licenses

A shared license lets you purchase a large number of AnyConnect Premium sessions and share the sessions as needed among a group of ASAs by configuring one of the ASAs as a shared licensing server, and the rest as shared licensing participants. This section describes how a shared license works and includes the following topics:

Information About the Shared Licensing Server and Participants

The following steps describe how shared licenses operate:

1. Decide which ASA should be the shared licensing server, and purchase the shared licensing server license using that device serial number.
2. Decide which ASAs should be shared licensing participants, including the shared licensing backup server, and obtain a shared licensing participant license for each device, using each device serial number.
3. (Optional) Designate a second ASA as a shared licensing backup server. You can only specify one backup server.

   Note The shared licensing backup server only needs a participant license.

4. Configure a shared secret on the shared licensing server; any participants with the shared secret can use the shared license.
5. When you configure the ASA as a participant, it registers with the shared licensing server by sending information about itself, including the local license and model information.

   Note The participant needs to be able to communicate with the server over the IP network; it does not have to be on the same subnet.

6. The shared licensing server responds with information about how often the participant should poll the server.
7. When a participant uses up the sessions of the local license, it sends a request to the shared licensing server for additional sessions in 50-session increments.
8. The shared licensing server responds with a shared license. The total sessions used by a participant cannot exceed the maximum sessions for the platform model.

   Note The shared licensing server can also participate in the shared license pool. It does not need a participant license as well as the server license to participate.

a. If there are not enough sessions left in the shared license pool for the participant, then the server responds with as many sessions as available.

b. The participant continues to send refresh messages requesting more sessions until the server can adequately fulfill the request.

9. When the load is reduced on a participant, it sends a message to the server to release the shared sessions.

Note The ASA uses SSL between the server and participant to encrypt all communications.

Communication Issues Between Participant and Server

See the following guidelines for communication issues between the participant and server:

- If a participant fails to send a refresh after 3 times the refresh interval, then the server releases the sessions back into the shared license pool.
- If the participant cannot reach the license server to send the refresh, then the participant can continue to use the shared license it received from the server for up to 24 hours.
- If the participant is still not able to communicate with a license server after 24 hours, then the participant releases the shared license, even if it still needs the sessions. The participant leaves existing connections established, but cannot accept new connections beyond the license limit.
- If a participant reconnects with the server before 24 hours expires, but after the server expired the participant sessions, then the participant needs to send a new request for the sessions; the server responds with as many sessions as can be reassigned to that participant.

Information About the Shared Licensing Backup Server

The shared licensing backup server must register successfully with the main shared licensing server before it can take on the backup role. When it registers, the main shared licensing server syncs server settings as well as the shared license information with the backup, including a list of registered participants and the current license usage. The main server and backup server sync the data at 10 second intervals. After the initial sync, the backup server can successfully perform backup duties, even after a reload.

When the main server goes down, the backup server takes over server operation. The backup server can operate for up to 30 continuous days, after which the backup server stops issuing sessions to participants, and existing sessions time out. Be sure to reinstate the main server within that 30-day period. Critical-level syslog messages are sent at 15 days, and again at 30 days.

When the main server comes back up, it syncs with the backup server, and then takes over server operation.

When the backup server is not active, it acts as a regular participant of the main shared licensing server.

Note When you first launch the main shared licensing server, the backup server can only operate independently for 5 days. The operational limit increases day-by-day, until 30 days is reached. Also, if the main server later goes down for any length of time, the backup server operational limit decrements day-by-day. When the main server comes back up, the backup server starts to increment again day-by-day. For example, if the main server is down for 20 days, with the backup server active during

that time, then the backup server will only have a 10-day limit left over. The backup server "recharges" up to the maximum 30 days after 20 more days as an inactive backup. This recharging function is implemented to discourage misuse of the shared license.

Failover and Shared Licenses

This section describes how shared licenses interact with failover and includes the following topics:

- "Failover and Shared License Servers" section on page 5-29
- "Failover and Shared License Participants" section on page 5-30

Failover and Shared License Servers

This section describes how the main server and backup server interact with failover. Because the shared licensing server is also performing normal duties as the ASA, including performing functions such as being a VPN gateway and firewall, then you might need to configure failover for the main and backup shared licensing servers for increased reliability.

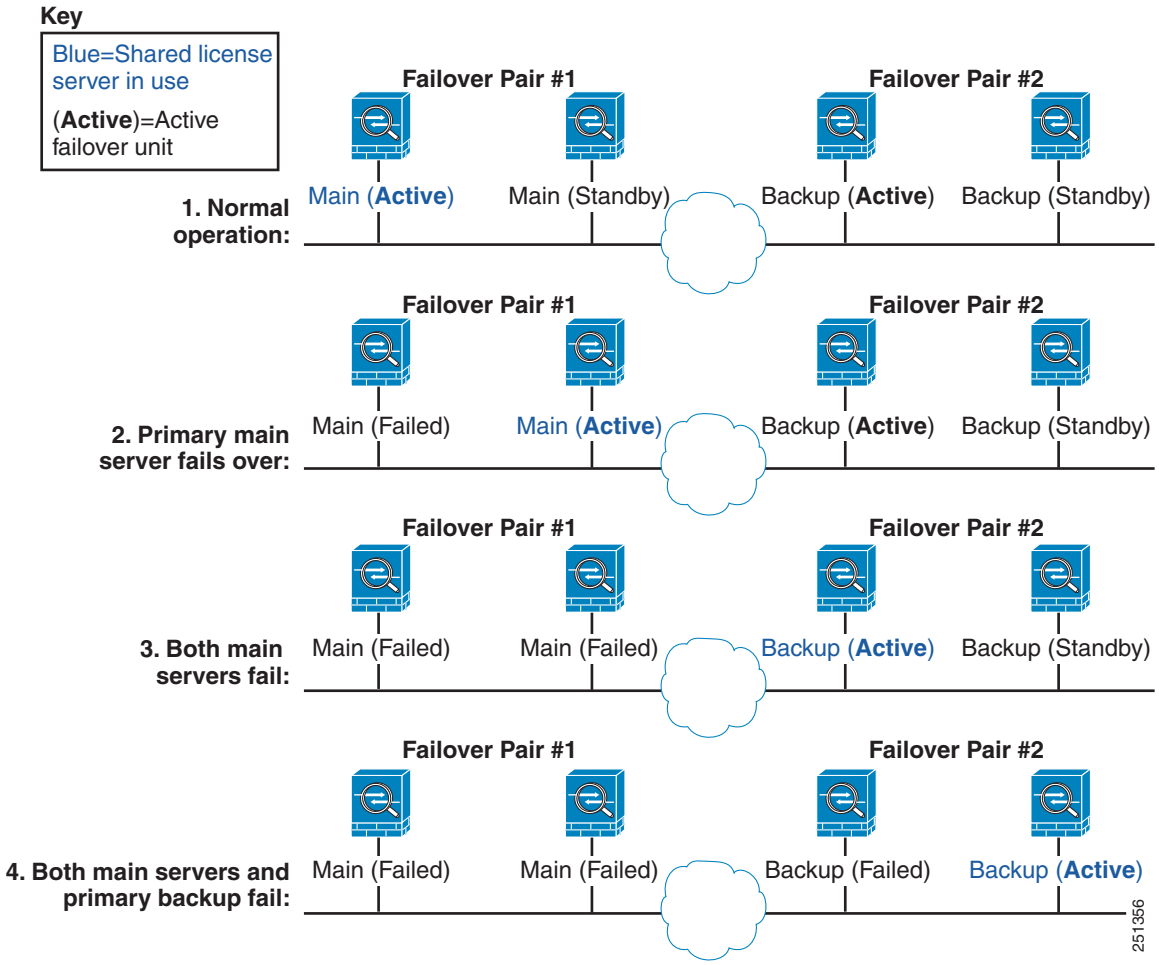
Note The backup server mechanism is separate from, but compatible with, failover.

Shared licenses are supported only in single context mode, so Active/Active failover is not supported.

For Active/Standby failover, the primary unit acts as the main shared licensing server, and the standby unit acts as the main shared licensing server after failover. The standby unit does *not* act as the backup shared licensing server. Instead, you can have a second pair of units acting as the backup server, if desired.

For example, you have a network with 2 failover pairs. Pair #1 includes the main licensing server. Pair #2 includes the backup server. When the primary unit from Pair #1 goes down, the standby unit immediately becomes the new main licensing server. The backup server from Pair #2 never gets used. Only if both units in Pair #1 go down does the backup server in Pair #2 come into use as the shared licensing server. If Pair #1 remains down, and the primary unit in Pair #2 goes down, then the standby unit in Pair #2 comes into use as the shared licensing server (see Figure 5-1).

Figure 5-1 Failover and Shared License Servers



The standby backup server shares the same operating limits as the primary backup server; if the standby unit becomes active, it continues counting down where the primary unit left off. See the "Information About the Shared Licensing Backup Server" section on page 5-28 for more information.

Failover and Shared License Participants

For participant pairs, both units register with the shared licensing server using separate participant IDs. The active unit syncs its participant ID with the standby unit. The standby unit uses this ID to generate a transfer request when it switches to the active role. This transfer request is used to move the shared sessions from the previously active unit to the new active unit.

Maximum Number of Participants

The ASA does not limit the number of participants for the shared license; however, a very large shared network could potentially affect the performance on the licensing server. In this case, you can increase the delay between participant refreshes, or you can create two shared networks.

Failover or ASA Cluster Licenses

With some exceptions, failover and cluster units do not require the same license on each unit. For earlier versions, see the licensing document for your version.

This section includes the following topics:

Failover License Requirements and Exceptions

Failover units do not require the same license on each unit.

Older versions of ASA software required that the licenses match on each unit. Starting with Version 8.3(1), you no longer need to install identical licenses. Typically, you buy a license only for the primary unit; for Active/Standby failover, the secondary unit inherits the primary license when it becomes active. If you have licenses on both units, they combine into a single running failover cluster license.

The exceptions to this rule include:

- Security Plus license for the ASA 5505, 5510, and 5512-X—The Base license does not support failover, so you cannot enable failover on a standby unit that only has the Base license.
- Encryption license—Both units must have the same encryption license.
- IPS module license for the ASA 5512-X through ASA 5555-X—Both units require the IPS module license. You also need the IPS signature subscription on the IPS side for both units. See the following guidelines:
  - To buy the IPS signature subscription you need to have the ASA with IPS pre-installed (the part number must include “IPS”, for example ASA5515-IPS-K9); you cannot buy the IPS signature subscription for a non-IPS part number ASA.
  - You need the IPS signature subscription on both units; this subscription is not shared in failover, because it is not an ASA license.
  - The IPS signature subscription requires a unique IPS module license per unit. Like other ASA licenses, the IPS module license is technically shared in the failover cluster license. However, because of the IPS signature subscription requirements, you must buy a separate IPS module license for each unit in.

Note A valid permanent key is required; in rare instances, your authentication key can be removed. If your key consists of all 0’s, then you need to reinstall a valid authentication key before failover can be enabled.

ASA Cluster License Requirements and Exceptions

Cluster units do not require the same license on each unit. Typically, you buy a license only for the master unit; slave units inherit the master license. If you have licenses on multiple units, they combine into a single running ASA cluster license.

The exceptions to this rule include:

- Clustering license—Each unit must have a clustering license.
- Encryption license—Each unit must have the same encryption license.

How Failover or ASA Cluster Licenses Combine

For failover pairs or ASA clusters, the licenses on each unit are combined into a single running cluster license. If you buy separate licenses for each unit, then the combined license uses the following rules:

- For licenses that have numerical tiers, such as the number of sessions, the values from each unit's licenses are combined up to the platform limit. If all licenses in use are time-based, then the licenses count down simultaneously.

  For example, for failover:

  - You have two ASAs with 10 AnyConnect Premium sessions installed on each; the licenses will be combined for a total of 20 AnyConnect Premium sessions.
  - You have two ASA 5520 ASAs with 500 AnyConnect Premium sessions each; because the platform limit is 750, the combined license allows 750 AnyConnect Premium sessions.

  Note In the above example, if the AnyConnect Premium licenses are time-based, you might want to disable one of the licenses so you do not "waste" a 500 session license from which you can only use 250 sessions because of the platform limit.

  - You have two ASA 5540 ASAs, one with 20 contexts and the other with 10 contexts; the combined license allows 30 contexts. For Active/Active failover, the contexts are divided between the two units. One unit can use 18 contexts and the other unit can use 12 contexts, for example, for a total of 30.

  For example, for ASA clustering:

  - You have four ASA 5585-X ASAs with SSP-10, three units with 50 contexts each, and one unit with the default 2 contexts. Because the platform limit is 100, the combined license allows a maximum of 100 contexts. Therefore, you can configure up to 100 contexts on the master unit; each slave unit will also have 100 contexts through configuration replication.
  - You have four ASA 5585-X ASAs with SSP-60, three units with 50 contexts each, and one unit with the default 2 contexts. Because the platform limit is 250, the licenses will be combined for a total of 152 contexts. Therefore, you can configure up to 152 contexts on the master unit; each slave unit will also have 152 contexts through configuration replication.
- For licenses that have a status of enabled or disabled, then the license with the enabled status is used.
- For time-based licenses that are enabled or disabled (and do not have numerical tiers), the duration is the combined duration of all licenses. The primary/master unit counts down its license first, and when it expires, the secondary/slave unit(s) start counting down its license, and so on. This rule also applies to Active/Active failover and ASA clustering, even though all units are actively operating.

  For example, if you have 48 weeks left on the Botnet Traffic Filter license on two units, then the combined duration is 96 weeks.

To view the combined license, see the "Monitoring Licenses" section on page 5-39.

Loss of Communication Between Failover or ASA Cluster Units

If the units lose communication for more than 30 days, then each unit reverts to the license installed locally. During the 30-day grace period, the combined running license continues to be used by all units.

If you restore communication during the 30-day grace period, then for time-based licenses, the time elapsed is subtracted from the primary/master license; if the primary/master license becomes expired, only then does the secondary/slave license start to count down.

If you do not restore communication during the 30-day period, then for time-based licenses, time is subtracted from all unit licenses, if installed. They are treated as separate licenses and do not benefit from the combined license. The time elapsed includes the 30-day grace period.

For example:

1. You have a 52-week Botnet Traffic Filter license installed on two units. The combined running license allows a total duration of 104 weeks.
2. The units operate as a failover unit/ASA cluster for 10 weeks, leaving 94 weeks on the combined license (42 weeks on the primary/master, and 52 weeks on the secondary/slave).
3. If the units lose communication (for example the primary/master unit fails), the secondary/slave unit continues to use the combined license, and continues to count down from 94 weeks.
4. The time-based license behavior depends on when communication is restored:

- Within 30 days—The time elapsed is subtracted from the primary/master unit license. In this case, communication is restored after 4 weeks. Therefore, 4 weeks are subtracted from the primary/master license leaving 90 weeks combined (38 weeks on the primary, and 52 weeks on the secondary).
- After 30 days—The time elapsed is subtracted from both units. In this case, communication is restored after 6 weeks. Therefore, 6 weeks are subtracted from both the primary/master and secondary/slave licenses, leaving 84 weeks combined (36 weeks on the primary/master, and 46 weeks on the secondary/slave).

Upgrading Failover Pairs

Because failover pairs do not require the same license on both units, you can apply new licenses to each unit without any downtime. If you apply a permanent license that requires a reload (see Table 5-19 on page 5-37), then you can fail over to the other unit while you reload. If both units require reloading, then you can reload them separately so you have no downtime.

No Payload Encryption Models

You can purchase some models with No Payload Encryption. For export to some countries, payload encryption cannot be enabled on the Cisco ASA series. The ASA software senses a No Payload Encryption model, and disables the following features:

- Unified Communications
- VPN

You can still install the Strong Encryption (3DES/AES) license for use with management connections. For example, you can use ASDM HTTPS/SSL, SSHv2, Telnet and SNMPv3. You can also download the dynamic database for the Botnet Traffic Filter (which uses SSL).

When you view the license (see the "Monitoring Licenses" section on page 5-39), VPN and Unified Communications licenses will not be listed.

Licenses FAQ

Q. Can I activate multiple time-based licenses, for example, AnyConnect Premium and Botnet Traffic Filter?

A. Yes. You can use one time-based license per feature at a time.

Q. Can I "stack" time-based licenses so that when the time limit runs out, it will automatically use the next license?

A. Yes. For identical licenses, the time limit is combined when you install multiple time-based licenses. For non-identical licenses (for example, a 1000-session AnyConnect Premium license and a 2500-session license), the ASA automatically activates the next time-based license it finds for the feature.

Q. Can I install a new permanent license while maintaining an active time-based license?

A. Yes. Activating a permanent license does not affect time-based licenses.

Q. For failover, can I use a shared licensing server as the primary unit, and the shared licensing backup server as the secondary unit?

A. No. The secondary unit has the same running license as the primary unit; in the case of the shared licensing server, they require a server license. The backup server requires a participant license. The backup server can be in a separate failover pair of two backup servers.

Q. Do I need to buy the same licenses for the secondary unit in a failover pair?

A. No. Starting with Version 8.3(1), you do not have to have matching licenses on both units. Typically, you buy a license only for the primary unit; the secondary unit inherits the primary license when it becomes active. In the case where you also have a separate license on the secondary unit (for example, if you purchased matching licenses for pre-8.3 software), the licenses are combined into a running failover cluster license, up to the model limits.

Q. Can I use a time-based or permanent AnyConnect Premium license in addition to a shared AnyConnect Premium license?

A. Yes. The shared license is used only after the sessions from the locally installed license (time-based or permanent) are used up. **Note**: On the shared licensing server, the permanent AnyConnect Premium license is not used; you can however use a time-based license at the same time as the shared licensing server license. In this case, the time-based license sessions are available for local AnyConnect Premium sessions only; they cannot be added to the shared licensing pool for use by participants.

Guidelines and Limitations

See the following guidelines for activation keys.

Context Mode Guidelines

- In multiple context mode, apply the activation key in the system execution space.
- Shared licenses are not supported in multiple context mode.

Firewall Mode Guidelines

All license types are available in both routed and transparent mode.

Failover Guidelines

- Shared licenses are not supported in Active/Active mode. See the "Failover and Shared Licenses" section on page 5-29 for more information.
- See the "Failover or ASA Cluster Licenses" section on page 5-31.

Upgrade and Downgrade Guidelines

Your activation key remains compatible if you upgrade to the latest version from any previous version. However, you might have issues if you want to maintain downgrade capability:

- Downgrading to Version 8.1 or earlier—After you upgrade, if you activate additional feature licenses that were introduced *before 8.2*, then the activation key continues to be compatible with earlier versions if you downgrade. However if you activate feature licenses that were introduced in *8.2 or later*, then the activation key is not backwards compatible. If you have an incompatible license key, then see the following guidelines:
  - If you previously entered an activation key in an earlier version, then the ASA uses that key (without any of the new licenses you activated in Version 8.2 or later).
  - If you have a new system and do not have an earlier activation key, then you need to request a new activation key compatible with the earlier version.
- Downgrading to Version 8.2 or earlier—Version 8.3 introduced more robust time-based key usage as well as failover license changes:
  - If you have more than one time-based activation key active, when you downgrade, only the most recently activated time-based key can be active. Any other keys are made inactive. If the last time-based license is for a feature introduced in 8.3, then that license still remains the active license even though it cannot be used in earlier versions. Reenter the permanent key or a valid time-based key.
  - If you have mismatched licenses on a failover pair, then downgrading will disable failover. Even if the keys are matching, the license used will no longer be a combined license.
  - If you have one time-based license installed, but it is for a feature introduced in 8.3, then after you downgrade, that time-based license remains active. You need to reenter the permanent key to disable the time-based license.

Additional Guidelines and Limitations

- The activation key is not stored in your configuration file; it is stored as a hidden file in flash memory.
- The activation key is tied to the serial number of the device. Feature licenses cannot be transferred between devices (except in the case of a hardware failure). If you have to replace your device due to a hardware failure, and it is covered by Cisco TAC, contact the Cisco Licensing Team to have your existing license transferred to the new serial number. The Cisco Licensing Team will ask for the Product Authorization Key reference number and existing serial number.
- Once purchased, you cannot return a license for a refund or for an upgraded license.
- On a single unit, you cannot add two separate licenses for the same feature together; for example, if you purchase a 25-session SSL VPN license, and later purchase a 50-session license, you cannot use 75 sessions; you can use a maximum of 50 sessions. (You may be able to purchase a larger license at an upgrade price, for example from 25 sessions to 75 sessions; this kind of upgrade should be distinguished from adding two separate licenses together).

- Although you can activate all license types, some features are incompatible with each other. In the case of the AnyConnect Essentials license, the license is incompatible with the following licenses: AnyConnect Premium license, shared AnyConnect Premium license, and Advanced Endpoint Assessment license. By default, the AnyConnect Essentials license is used instead of the above licenses, but you can disable the AnyConnect Essentials license in the configuration to restore use of the other licenses using the Configuration > Remote Access VPN > Network (Client) Access > Advanced > AnyConnect Essentials pane.

Configuring Licenses

This section includes the following topics:

Obtaining an Activation Key

To obtain an activation key, you need a Product Authorization Key, which you can purchase from your Cisco account representative. You need to purchase a separate Product Authorization Key for each feature license. For example, if you have the Base License, you can purchase separate keys for Advanced Endpoint Assessment and for additional AnyConnect Premium sessions.

After obtaining the Product Authorization Keys, register them on Cisco.com by performing the following steps.

Detailed Steps

Step 1 Obtain the serial number for your ASA by choosing **Configuration > Device Management > Licensing > Activation Key** (in multiple context mode, view the serial number in the System execution space).

Step 2 If you are not already registered with Cisco.com, create an account.

Step 3 Go to the following licensing website:

http://www.cisco.com/go/license

Step 4 Enter the following information, when prompted:

- Product Authorization Key (if you have multiple keys, enter one of the keys first. You have to enter each key as a separate process.)
- The serial number of your ASA
- Your e-mail address

An activation key is automatically generated and sent to the e-mail address that you provide. This key includes all features you have registered so far for permanent licenses. For time-based licenses, each license has a separate activation key.

Step 5 If you have additional Product Authorization Keys, repeat Step 4 for each Product Authorization Key. After you enter all of the Product Authorization Keys, the final activation key provided includes all of the permanent features you registered.

Activating or Deactivating Keys

This section describes how to enter a new activation key, and how to activate and deactivate time-based keys.

Prerequisites

- If you are already in multiple context mode, enter the activation key in the system execution space.
- Some permanent licenses require you to reload the ASA after you activate them. Table 5-19 lists the licenses that require reloading.

Table 5-19 Permanent License Reloading Requirements

Model	License Action Requiring Reload
All models	Downgrading the Encryption license.

Limitations and Restrictions

Your activation key remains compatible if you upgrade to the latest version from any previous version. However, you might have issues if you want to maintain downgrade capability:

- Downgrading to Version 8.1 or earlier—After you upgrade, if you activate additional feature licenses that were introduced *before 8.2*, then the activation key continues to be compatible with earlier versions if you downgrade. However if you activate feature licenses that were introduced in *8.2 or later*, then the activation key is not backwards compatible. If you have an incompatible license key, then see the following guidelines:
  - If you previously entered an activation key in an earlier version, then the ASA uses that key (without any of the new licenses you activated in Version 8.2 or later).
  - If you have a new system and do not have an earlier activation key, then you need to request a new activation key compatible with the earlier version.
- Downgrading to Version 8.2 or earlier—Version 8.3 introduced more robust time-based key usage as well as failover license changes:
  - If you have more than one time-based activation key active, when you downgrade, only the most recently activated time-based key can be active. Any other keys are made inactive.
  - If you have mismatched licenses on a failover pair, then downgrading will disable failover. Even if the keys are matching, the license used will no longer be a combined license.

Detailed Steps

Step 1 Choose **Configuration > Device Management**, and then choose the **Licensing > Activation Key** or **Licensing Activation Key** pane, depending on your model.

Step 2 To enter a new activation key, either permanent or time-based, enter the new activation key in the New Activation Key field.

The key is a five-element hexadecimal string with one space between each element. The leading 0x specifier is optional; all values are assumed to be hexadecimal. For example:

```
0xd11b3d48 0xa80a4c0a 0x48e0fd1c 0xb0443480 0x843fc490
```

You can install one permanent key, and multiple time-based keys. If you enter a new permanent key, it overwrites the already installed one. If you enter a new time-based key, then it is active by default and displays in the Time-based License Keys Installed table. The last time-based key that you activate for a given feature is the active one.

Step 3 To activate or deactivate an installed time-based key, choose the key in the Time-based License Keys Installed table, and click either **Activate** or **Deactivate**.

You can only have one time-based key active for each feature. See the "Time-Based Licenses" section on page 5-24 for more information.

Step 4 Click **Update Activation Key**.

Some permanent licenses require you to reload the ASA after entering the new activation key. See Table 5-19 on page 5-37 for a list of licenses that need reloading. You will be prompted to reload if it is required.

Configuring a Shared License

This section describes how to configure the shared licensing server and participants. For more information about shared licenses, see the "Shared AnyConnect Premium Licenses" section on page 5-27.

This section includes the following topics:

Configuring the Shared Licensing Server

This section describes how to configure the ASA to be a shared licensing server.

Prerequisites

The server must have a shared licensing server key.

Detailed Steps

Step 1 Choose the **Configuration > Device Management > Licenses > Shared SSL VPN Licenses** pane.

Step 2 In the Shared Secret field, enter the shared secret as a string between 4 and 128 ASCII characters.

Any participant with this secret can use the license server.

Step 3 (Optional) In the TCP IP Port field, enter the port on which the server listens for SSL connections from participants, between 1 and 65535.

The default is TCP port 50554.

Step 4 (Optional) In the Refresh interval field, enter the refresh interval between 10 and 300 seconds.

This value is provided to participants to set how often they should communicate with the server. The default is 30 seconds.

Step 5 In the Interfaces that serve shared licenses area, check the **Shares Licenses** check box for any interfaces on which participants contact the server.

Step 6 (Optional) To identify a backup server, in the Optional backup shared SSL VPN license server area:

a. In the Backup server IP address field, enter the backup server IP address.

b. In the Primary backup server serial number field, enter the backup server serial number.

c. If the backup server is part of a failover pair, identify the standby unit serial number in the Secondary backup server serial number field.

You can only identify 1 backup server and its optional standby unit.

Step 7 Click **Apply**.

What to Do Next

See the "Configuring the Shared Licensing Participant and the Optional Backup Server" section on page 5-39.

Configuring the Shared Licensing Participant and the Optional Backup Server

This section configures a shared licensing participant to communicate with the shared licensing server; this section also describes how you can optionally configure the participant as the backup server.

Prerequisites

The participant must have a shared licensing participant key.

Detailed Steps

Step 1 Choose the **Configuration > Device Management > Licenses > Shared SSL VPN Licenses** pane.

Step 2 In the Shared Secret field, enter the shared secret as a string between 4 and 128 ASCII characters.

Step 3 (Optional) In the TCP IP Port field, enter the port on which to communicate with the server using SSL, between 1 and 65535.

The default is TCP port 50554.

Step 4 (Optional) To identify the participant as the backup server, in the Select backup role of participant area:

a. Click the **Backup Server** radio button.

b. Check the **Shares Licenses** check box for any interfaces on which participants contact the backup server.

Step 5 Click **Apply**.

Monitoring Licenses

This section includes the following topics:

Viewing Your Current License

This section describes how to view your current license, and for time-based activation keys, how much time the license has left.

Guidelines

If you have a No Payload Encryption model, then you view the license, VPN and Unified Communications licenses will not be listed. See the "No Payload Encryption Models" section on page 5-33 for more information.

Detailed Steps

Step 1 To view the running license, which is a combination of the permanent license and any active time-based licenses, choose the **Configuration > Device Management > Licensing > Activation Key** pane and view the Running Licenses area.

In multiple context mode, view the activation key in the System execution space by choosing the **Configuration > Device Management > Activation Key** pane.

For a failover pair, the running license shown is the combined license from the primary and secondary units. See the "How Failover or ASA Cluster Licenses Combine" section on page 5-32 for more information. For time-based licenses with numerical values (the duration is not combined), the License Duration column displays the shortest time-based license from either the primary or secondary unit; when that license expires, the license duration from the other unit displays.

Step 2 (Optional) To view time-based license details, such as the features included in the license and the duration, in the Time-Based License Keys Installed area, choose a license key, and then click **Show License Details**.

Step 3 (Optional) For a failover unit, to view the license installed on this unit (and not the combined license from both primary and secondary units), in the Running Licenses area, click **Show information of license specifically purchased for this device alone**.

Monitoring the Shared License

To monitor the shared license, choose **Monitoring > VPN > Clientless SSL VPN > Shared Licenses**.

Feature History for Licensing

Table 5-20 lists each feature change and the platform release in which it was implemented. ASDM is backwards-compatible with multiple platform releases, so the specific ASDM release in which support was added is not listed.

Table 5-20 Feature History for Licensing

Feature Name	Platform Releases	Feature Information
Increased Connections and VLANs	7.0(5)	Increased the following limits: • ASA5510 Base license connections from 32000 to 5000; VLANs from 0 to 10. • ASA5510 Security Plus license connections from 64000 to 130000; VLANs from 10 to 25. • ASA5520 connections from 130000 to 280000; VLANs from 25 to 100. • ASA5540 connections from 280000 to 400000; VLANs from 100 to 200.
SSL VPN Licenses	7.1(1)	SSL VPN licenses were introduced.
Increased SSL VPN Licenses	7.2(1)	A 5000-user SSL VPN license was introduced for the ASA 5550 and above.
Increased interfaces for the Base license on the ASA 5510	7.2(2)	For the Base license on the ASA 5510, the maximum number of interfaces was increased from 3 plus a management interface to unlimited interfaces.
Increased VLANs	7.2(2)	The maximum number of VLANs for the Security Plus license on the ASA 5505 was increased from 5 (3 fully functional; 1 failover; one restricted to a backup interface) to 20 fully functional interfaces. In addition, the number of trunk ports was increased from 1 to 8. Now there are 20 fully functional interfaces, you do not need to use the backup interface command to cripple a backup ISP interface; you can use a fully functional interface for it. The backup interface command is still useful for an Easy VPN configuration. VLAN limits were also increased for the ASA 5510 (from 10 to 50 for the Base license, and from 25 to 100 for the Security Plus license), the ASA 5520 (from 100 to 150), the ASA 5550 (from 200 to 250).

Table 5-20 Feature History for Licensing (continued)

Feature Name	Platform Releases	Feature Information
Gigabit Ethernet Support for the ASA 5510 Security Plus License	7.2(3)	The ASA 5510 now supports Gigabit Ethernet (1000 Mbps) for the Ethernet 0/0 and 0/1 ports with the Security Plus license. In the Base license, they continue to be used as Fast Ethernet (100 Mbps) ports. Ethernet 0/2, 0/3, and 0/4 remain as Fast Ethernet ports for both licenses. **Note** The interface names remain Ethernet 0/0 and Ethernet 0/1.
Advanced Endpoint Assessment License	8.0(2)	The Advanced Endpoint Assessment license was introduced. As a condition for the completion of a Cisco AnyConnect or clientless SSL VPN connections, the remote computer scans for a greatly expanded collection of antivirus and antispyware applications, firewalls, operating systems, and associated updates. It also scans for any registry entries, filenames, and process names that you specify. It sends the scan results to the ASA. The ASA uses both the user login credentials and the computer scan results to assign a Dynamic Access Policy (DAP). With an Advanced Endpoint Assessment License, you can enhance Host Scan by configuring an attempt to update noncompliant computers to meet version requirements. Cisco can provide timely updates to the list of applications and versions that Host Scan supports in a package that is separate from Cisco Secure Desktop.
VPN Load Balancing for the ASA 5510	8.0(2)	VPN load balancing is now supported on the ASA 5510 Security Plus license.
AnyConnect for Mobile License	8.0(3)	The AnyConnect for Mobile license was introduced. It lets Windows mobile devices connect to the ASA using the AnyConnect client.
Time-based Licenses	8.0(4)/8.1(2)	Support for time-based licenses was introduced.
Increased VLANs for the ASA 5580	8.1(2)	The number of VLANs supported on the ASA 5580 are increased from 100 to 250.
Unified Communications Proxy Sessions license	8.0(4)	The UC Proxy sessions license was introduced. Phone Proxy, Presence Federation Proxy, and Encrypted Voice Inspection applications use TLS proxy sessions for their connections. Each TLS proxy session is counted against the UC license limit. All of these applications are licensed under the UC Proxy umbrella, and can be mixed and matched. This feature is not available in Version 8.1.

Table 5-20 Feature History for Licensing (continued)

Feature Name	Platform Releases	Feature Information
Botnet Traffic Filter License	8.2(1)	The Botnet Traffic Filter license was introduced. The Botnet Traffic Filter protects against malware network activity by tracking connections to known bad domains and IP addresses.
AnyConnect Essentials License	8.2(1)	The AnyConnect Essentials License was introduced. This license enables AnyConnect VPN client access to the ASA. This license does not support browser-based SSL VPN access or Cisco Secure Desktop. For these features, activate an AnyConnect Premium license instead of the AnyConnect Essentials license. **Note** With the AnyConnect Essentials license, VPN users can use a Web browser to log in, and download and start (WebLaunch) the AnyConnect client. The AnyConnect client software offers the same set of client features, whether it is enabled by this license or an AnyConnect Premium license. The AnyConnect Essentials license cannot be active at the same time as the following licenses on a given ASA: AnyConnect Premium license (all types) or the Advanced Endpoint Assessment license. You can, however, run AnyConnect Essentials and AnyConnect Premium licenses on different ASAs in the same network. By default, the ASA uses the AnyConnect Essentials license, but you can disable it to use other licenses by using the Configuration > Remote Access VPN > Network (Client) Access > Advanced > AnyConnect Essentials pane.
SSL VPN license changed to AnyConnect Premium SSL VPN Edition license	8.2(1)	The SSL VPN license name was changed to the AnyConnect Premium SSL VPN Edition license.
Shared Licenses for SSL VPN	8.2(1)	Shared licenses for SSL VPN were introduced. Multiple ASAs can share a pool of SSL VPN sessions on an as-needed basis.
Mobility Proxy application no longer requires Unified Communications Proxy license	8.2(2)	The Mobility Proxy no longer requires the UC Proxy license.
10 GE I/O license for the ASA 5585-X with SSP-20	8.2(3)	We introduced the 10 GE I/O license for the ASA 5585-X with SSP-20 to enable 10-Gigabit Ethernet speeds for the fiber ports. The SSP-60 supports 10-Gigabit Ethernet speeds by default. **Note** The ASA 5585-X is not supported in 8.3(x).
10 GE I/O license for the ASA 5585-X with SSP-10	8.2(4)	We introduced the 10 GE I/O license for the ASA 5585-X with SSP-10 to enable 10-Gigabit Ethernet speeds for the fiber ports. The SSP-40 supports 10-Gigabit Ethernet speeds by default. **Note** The ASA 5585-X is not supported in 8.3(x).

Table 5-20 Feature History for Licensing (continued)

Feature Name	Platform Releases	Feature Information
Non-identical failover licenses	8.3(1)	Failover licenses no longer need to be identical on each unit. The license used for both units is the combined license from the primary and secondary units. We modified the following screen: Configuration > Device Management > Licensing > Activation Key.
Stackable time-based licenses	8.3(1)	Time-based licenses are now stackable. In many cases, you might need to renew your time-based license and have a seamless transition from the old license to the new one. For features that are only available with a time-based license, it is especially important that the license not expire before you can apply the new license. The ASA allows you to *stack* time-based licenses so you do not have to worry about the license expiring or about losing time on your licenses because you installed the new one early.
Intercompany Media Engine License	8.3(1)	The IME license was introduced.
Multiple time-based licenses active at the same time	8.3(1)	You can now install multiple time-based licenses, and have one license per feature active at a time. The following screen was modified: Configuration > Device Management > Licensing > Activation Key.
Discrete activation and deactivation of time-based licenses.	8.3(1)	You can now activate or deactivate time-based licenses using a command. The following screen was modified: Configuration > Device Management > Licensing > Activation Key.
AnyConnect Premium SSL VPN Edition license changed to AnyConnect Premium SSL VPN license	8.3(1)	The AnyConnect Premium SSL VPN Edition license name was changed to the AnyConnect Premium SSL VPN license.
No Payload Encryption image for export	8.3(2)	If you install the No Payload Encryption software on the ASA 5505 through 5550, then you disable Unified Communications, strong encryption VPN, and strong encryption management protocols. **Note** This special image is only supported in 8.3(x); for No Payload Encryption support in 8.4(1) and later, you need to purchase a special hardware version of the ASA.
Increased contexts for the ASA 5550, 5580, and 5585-X	8.4(1)	For the ASA 5550 and ASA 5585-X with SSP-10, the maximum contexts was increased from 50 to 100. For the ASA 5580 and 5585-X with SSP-20 and higher, the maximum was increased from 50 to 250.
Increased VLANs for the ASA 5580 and 5585-X	8.4(1)	For the ASA 5580 and 5585-X, the maximum VLANs was increased from 250 to 1024.

Table 5-20 Feature History for Licensing (continued)

Feature Name	Platform Releases	Feature Information
Increased connections for the ASA 5580 and 5585-X	8.4(1)	We increased the firewall connection limits: • ASA 5580-20—1,000,000 to 2,000,000. • ASA 5580-40—2,000,000 to 4,000,000. • ASA 5585-X with SSP-10: 750,000 to 1,000,000. • ASA 5585-X with SSP-20: 1,000,000 to 2,000,000. • ASA 5585-X with SSP-40: 2,000,000 to 4,000,000. • ASA 5585-X with SSP-60: 2,000,000 to 10,000,000.
AnyConnect Premium SSL VPN license changed to AnyConnect Premium license	8.4(1)	The AnyConnect Premium SSL VPN license name was changed to the AnyConnect Premium license. The license information display was changed from "SSL VPN Peers" to "AnyConnect Premium Peers."
Increased AnyConnect VPN sessions for the ASA 5580	8.4(1)	The AnyConnect VPN session limit was increased from 5,000 to 10,000.
Increased Other VPN sessions for the ASA 5580	8.4(1)	The other VPN session limit was increased from 5,000 to 10,000.
IPsec remote access VPN using IKEv2	8.4(1)	IPsec remote access VPN using IKEv2 was added to the AnyConnect Essentials and AnyConnect Premium licenses. IKEv2 site-to-site sessions were added to the Other VPN license (formerly IPsec VPN). The Other VPN license is included in the Base license.
No Payload Encryption hardware for export	8.4(1)	For models available with No Payload Encryption (for example, the ASA 5585-X), the ASA software disables Unified Communications and VPN features, making the ASA available for export to certain countries.
Dual SSPs for SSP-20 and SSP-40	8.4(2)	For SSP-40 and SSP-60, you can use two SSPs of the same level in the same chassis. Mixed-level SSPs are not supported (for example, an SSP-40 with an SSP-60 is not supported). Each SSP acts as an independent device, with separate configurations and management. You can use the two SSPs as a failover pair if desired. When using two SSPs in the chassis, VPN is not supported; note, however, that VPN has not been disabled.
IPS Module license for the ASA 5512-X through ASA 5555-X	8.6(1)	The IPS SSP software module on the ASA 5512-X, ASA 5515-X, ASA 5525-X, ASA 5545-X, and ASA 5555-X requires the IPS module license.
Clustering license for the ASA 5580 and ASA 5585-X.	9.0(1)	A clustering license was added for the ASA 5580 and ASA 5585-X.
Support for VPN on the ASASM	9.0(1)	The ASASM now supports all VPN features.
Unified communications support on the ASASM	9.0(1)	The ASASM now supports all Unified Communications features.

Table 5-20 Feature History for Licensing (continued)

Feature Name	Platform Releases	Feature Information
ASA 5585-X Dual SSP support for the SSP-10 and SSP-20 (in addition to the SSP-40 and SSP-60); VPN support for Dual SSPs	9.0(1)	The ASA 5585-X now supports dual SSPs using all SSP models (you can use two SSPs of the same level in the same chassis). VPN is now supported when using dual SSPs.
ASA 5500-X support for clustering	9.1(4)	The ASA 5512-X, ASA 5515-X, ASA 5525-X, ASA 5545-X, and ASA 5555-X now support 2-unit clusters. Clustering for 2 units is enabled by default in the base license; for the ASA 5512-X, you need the Security Plus license. We did not modify any ASDM screens.