

Cisco Identity Services Engine (ISE)

Traditional corporate network boundaries and siloed services are a thing of the past. Today's networks must accommodate an ever-growing array of consumer IT devices while providing user-centric policy and enabling global collaboration. The Cisco TrustSec[®] architecture addresses this shift by using identity-based access policies to allow users and devices onto the network, so that IT can enable appropriate services without sacrificing control. Customers can use a range of next-generation physical or virtual appliances and associated licenses to deploy the Cisco[®] Identity Services Engine (ISE). This guide provides the SKU-level information needed to order the appliances and licenses for an ISE deployment.

Cisco Identity Services Engine (ISE) Ordering Steps

1. Estimate the number of concurrent endpoints in the network.
2. Estimate the number of appliances (physical or virtual) needed to support the number of concurrent endpoints in the network.
 - Please consult a network professional that has been Cisco ISE-trained and certified to design and estimate the number of ISE appliances needed.
3. Select the appropriate type of appliance suitable for your deployment. (Reference the appliance selection.)
4. Select the appropriate level of support needed for the appliances in your deployment. (Reference the appliance support selection.)
5. Select the appropriate type of license suitable for your deployment. (Reference the license selection.)
6. Select the appropriate level of services available from Cisco Advanced Services or a Certified Partner for design, deployment, and sustaining services of the ISE deployment.

Step 1: Estimate the Number of Concurrent Endpoints in the Network

Estimating the total number of concurrent endpoints is dependent on a number of variables. An approach to consider would be to take into account:

- Number of employees in the organization
- Average number of devices per employee (desktop, laptop, smartphone, desk IP phone, etc.)
- Number of switch ports currently in the organization
- Number of access points deployed in the organization
- Average number of devices per access point
- Dynamic IP address range being used
- Average number of guests expected to join the network
- Inventory of non-user devices such as IP cameras, printers, IP-enabled projectors, etc.

A combination of factors that includes but is not limited to the above factors could be used to determine the total number of concurrent endpoints in the network.

Step 2: Estimate the Number of Appliances or Servers* Needed for the Deployment

The total number of appliances or servers needed in a deployment is determined by a range of factors, including but not limited to the total number of concurrent endpoints in the network, use cases, high-availability requirements, and locations. For appliance or server sizing questions, please speak to your local security sales specialist or send an email to cise-questions@external.cisco.com.

Step 3: Select the Type of Appliance or Server*

An ISE deployment can consist of one or more appliances or servers. These appliances or servers can be centrally located, distributed, or both. Table 1 provides the appliance or server options available.

Table 1. Cisco ISE Appliances and Servers* Options

Cisco Identity Services Engine Appliances		
Option 1: Cisco Identity Services Engine Appliances and Servers*	Product Number	Endpoints Supported
Cisco Secure Network Server 3415*	SNS-3415-K9	5,000
Cisco Secure Network Server 3495*	SNS-3495-K9	20,000
Cisco Identity Services Engine 3315 Appliance	ISE-3315-K9	3,000
Cisco Identity Services Engine 3355 Appliance	ISE-3355-K9	5,000
Cisco Identity Services Engine 3395 Appliance	ISE-3395-K9	10,000
Option 2: Cisco Identity Services Engine Virtual Appliance on VMware ESX or ESXi 4.X & 5.X hypervisor		
	Paper Entitlement Delivery	eDelivery Entitlement
Cisco Identity Services Engine Virtual Appliance	ISE-VM-K9=	L-ISE-VM-K9=
Bundle of 5 Cisco Identity Services Engine Virtual Appliances	ISE-5VM-K9=	L-ISE-5VM-K9=
Bundle of 10 Cisco Identity Services Engine Virtual Appliances	ISE-10VM-K9=	L-ISE-10VM-K9=

Note: The Cisco Secure Network Server* is a multipurpose server and can support Cisco ISE, ACS, and NAC applications. One application can be selected as a Software Option to be installed on the server. To order ISE and the Cisco Secure Network Server*, order the appropriate product number (SNS-3415-K9* or SNS-3495-K9*) and then select ISE as the Software Option.

Note: To achieve the same level of performance and scalability as ISE hardware appliances, ISE virtual appliances must be installed on servers with the same configurations as the ISE hardware appliances. Consult the Cisco Identity Services Engine Installation Guide.

Note: Please consult a certified ISE design engineer on the specific models needed for your deployment prior to ordering any of the Cisco Secure Network Servers or Cisco Identity Services Engine 3300 Series Appliances.

Step 4: Select the Type of Support

Four types of Cisco SMARTnet® support services are available for Cisco ISE customers using physical appliances:

- **8x5xNBD:** Next business day
- **8x5x4:** Standard 4-hour service
- **24x7x4:** Premium 4-hour service

- **24x7x2:** Premium 2-hour service

Cisco SMARTnet support services include global access to the Cisco Technical Assistance Center (TAC), advance hardware replacement, and ISE software updates and all minor and major upgrades. Access to the extensive Cisco.com knowledge base and tools is also included. For more information about Cisco SMARTnet service offerings, please visit

http://www.cisco.com/en/US/products/svcs/ps3034/ps2827/ps2978/serv_group_home.html.

For Cisco ISE customers using virtual appliances, Cisco offers Software Application Support plus Upgrades (SASU). Cisco SASU services include global access to Cisco TAC and ISE software updates and all minor and major upgrades. Access to the extensive Cisco.com knowledge base and tools is also included. For more information about Cisco SASU offerings, please visit

http://www.cisco.com/en/US/products/svcs/ps3034/ps2827/ps2993/serv_group_home.html.

Table 2 lists the SKUs of the four service options available for Cisco ISE physical appliances. Table 3 lists the service options for the Cisco Secured Network Servers*. Table 4 lists the SKUs for service options available for Cisco ISE virtual appliances. All support licenses will be in effect for one year from the purchase date.

Table 2. Cisco ISE Physical Appliance Support SKUs

Product Number	Cisco SMARTnet Service Option SKUs			
	8x5xNBD	8x5x4	24x7x4	24x7x2
ISE-3315-K9	CON-SNT-ISE3315	CON-SNTE- ISE3315	CON-SNTP- ISE3315	CON-S2P- ISE3315
ISE-3355-K9	CON-SNT- ISE3355	CON-SNTE- ISE3355	CON-SNTP- ISE3355	CON-S2P- ISE3355
ISE-3395-K9	CON-SNT- ISE3395	CON-SNTE- ISE3395	CON-SNTP- ISE3395	CON-S2P- ISE3395

Table 3. Cisco Secure Network Server Support SKUs*

Product Number	SMARTnet Part Number	Description
SNS-3415-K9*	CON-SNT-SNS-3415	Cisco SMARTnet support for SNS-3415-K9 - 8x5 Next Business Day
SNS-3495-K9*	CON-SNT-SNS-3495	Cisco SMARTnet support for SNS-3495-K9 - 8x5 Next Business Day

Table 4. Cisco ISE Virtual Appliance Support SKUs

Product Number	Cisco SASU SKU
ISE-VM-K9= or L-ISE-VM-K9=	CON-SAU- ISEVM
ISE-5VM-K9= or L-ISE-5VM-K9=	CON-SAU- ISE5VM
ISE-10VM-K9= or L-ISE-10VM-K9=	CON-SAU- ISE10VM

Step 5: Select the Type of License

Cisco ISE license options allow customers to choose between functionality-based licensing or deployment-based licensing.

Functionality-based licensing:

- The Base license is intended for organizations that want to authenticate and authorize users and devices on their network (wired, wireless, and VPN). Base licenses include support for AAA services, guest lifecycle management, compliance reporting, and end-to-end monitoring and troubleshooting. The Base license is a perpetual license.

- The Advanced license expands upon the Base license and enables organizations to make more advanced policy decisions based on user and device compliance. Advanced license features include device onboarding and provisioning, device profiling, posture services, mdm integration capabilities* and Security Group Access enforcement capabilities across the entire network (wired, wireless, and VPN). The Advanced license is a subscription-term-based license, with a choice of 3- or 5-year term subscriptions.

Note: Do not order and install ISE Base and Advanced licenses on ISE deployments using ISE Wireless and Wireless Upgrade Licenses.

Deployment-based licensing:

- The Wireless license is intended for organizations that want to start their ISE deployment for policy decision for wireless endpoints only. Wireless license features include both Base and Advanced license features. The Wireless license is a subscription-term-based license with a choice of 3- or 5-year term subscriptions. The Wireless Upgrade license is intended for customers who deployed the Cisco Identity Services Engine for wireless endpoints only and want to expand their deployment to wired and VPN endpoints. The Wireless Upgrade license installs on top of the Wireless license and is a term license whose term coincides with the pre-existing Wireless license.
- **Note:** The ISE Wireless Upgrade licenses do not increase the number of endpoints supported in a deployment. The number of endpoints supported is determined by the license quantity specified by the ISE Wireless license.
- **Note:** When ordering the ISE Wireless license, order the same license quantity as the ISE Wireless License in operation. Do not purchase ISE Wireless Upgrade licenses based only on anticipated or wired and VPN devices. ISE does not pool licenses based on access method (wired, wireless, or VPN).

The type of license needed is determined by the functionality, the deployment required to meet specific use cases, the total number of concurrent endpoints on the network, and, in the case of the Advanced or Wireless licenses, the term duration. Cisco ISE licenses are specific to a deployment and not to individual appliances in the deployment. Cisco ISE licenses can be ordered at the same time as, or separately from, an appliance order. Please note that the Advanced licenses can only be added on top of Base licenses, and that the number of Advanced licenses can never exceed the number of Base licenses. Similarly, the Wireless Upgrade license can only be installed on top of a Wireless license. To install the Wireless Upgrade license, the Wireless Upgrade license count has to match the Wireless license count. Table 5 lists the various Cisco ISE licenses available.

Table 5. Cisco ISE License Options

License Type	Features Supported	Deployment Type Supported	License Prerequisite	License Term(s)
Base License	AAA Guest Provisioning Link Encryption Policies	Wired Wireless VPN	-	Perpetual
Advanced License	Device Onboarding/Provisioning Device Profiling and Feed Service* Host Posture Security Group Access Integrated Vendor MDM Support*	Wired Wireless VPN	Base License	3- and 5-Year Terms

License Type	Features Supported	Deployment Type Supported	License Prerequisite	License Term(s)
Wireless License	Device Onboarding/Provisioning AAA Guest Provisioning Link Encryption Policies Device Profiling and Feed Service* Host Posture Security Group Access Integrated Vendor MDM Support*	Wireless	-	3- and 5-Year Terms
Wireless Upgrade License	Device Onboarding/Provisioning Authentication/Authorization Guest Provisioning Link Encryption Policies Device Profiling Host Posture Security Group Access	Wired Wireless VPN	Wireless License	3- and 5-Year Terms

Table 6 lists the SKUs associated with the ISE license options.

Table 6. Cisco ISE Functionality-Based License Options

License Tiers (T)	Number of Endpoints Supported	Base License	Advanced 3-Year License	Advanced 5-Year License	Wireless 3-Year License	Wireless 5-Year License	Wireless Upgrade 3-Year License	Wireless Upgrade 5-Year License
100	100 Endpoints	L-ISE-BSE-100=	L-ISE-ADV3Y-100=	L-ISE-ADV5Y-100=	L-ISE-AD3Y-W-100=	L-ISE-AD5Y-W-100=	L-ISE-W-3UPG-100=	L-ISE-W-UPG-100=
250	250 Endpoints	L-ISE-BSE-250=	L-ISE-ADV3Y-250=	L-ISE-ADV5Y-250=	L-ISE-AD3Y-W-250=	L-ISE-AD5Y-W-250=	L-ISE-W-3UPG-250=	L-ISE-W-UPG-250=
500	500 Endpoints	L-ISE-BSE-500=	L-ISE-ADV3Y-500=	L-ISE-ADV5Y-500=	L-ISE-AD3Y-W-500=	L-ISE-AD5Y-W-500=	L-ISE-W-3UPG-500=	L-ISE-W-UPG-500=
1000	1000 Endpoints	L-ISE-BSE-1K=	L-ISE-ADV3Y-1K=	L-ISE-ADV5Y-1K=	L-ISE-AD3Y-W-1K=	L-ISE-AD5Y-W-1K=	L-ISE-W-3UPG-1K=	L-ISE-W-UPG-1K=
1500	1500 Endpoints	L-ISE-BSE-1500=	L-ISE-ADV3Y-1500=	L-ISE-ADV5Y-1500=	L-ISE-AD3Y-W-1500=	L-ISE-AD5Y-W-1500=	L-ISE-W-3UPG-1500=	L-ISE-W-UPG-1500=
2500	2500 Endpoints	L-ISE-BSE-2500=	L-ISE-ADV3Y-2500=	L-ISE-ADV5Y-2500=	L-ISE-AD3Y-W-2500=	L-ISE-AD5Y-W-2500=	L-ISE-W-3UPG-2500=	L-ISE-W-UPG-2500=
3500	3500 Endpoints	L-ISE-BSE-3500=	L-ISE-ADV3Y-3500=	L-ISE-ADV5Y-3500=	L-ISE-AD3Y-W-3500=	L-ISE-AD5Y-W-3500=	L-ISE-W-3UPG-3500=	L-ISE-W-UPG-3500=
5000	5000 Endpoints	L-ISE-BSE-5K=	L-ISE-ADV3Y-5K=	L-ISE-ADV5Y-5K=	L-ISE-AD3Y-W-5K=	L-ISE-AD5Y-W-5K=	L-ISE-W-3UPG-5K=	L-ISE-W-UPG-5K=
10,000	10K Endpoints	L-ISE-BSE-10K=	L-ISE-ADV3Y-10K=	L-ISE-ADV5Y-10K=	L-ISE-AD3Y-W-10K=	L-ISE-AD5Y-W-10K=	L-ISE-W-3UPG-10K=	L-ISE-W-UPG-10K=
25,000	25K Endpoints	L-ISE-BSE-25K=	L-ISE-ADV3Y-25K=	L-ISE-ADV5Y-25K=	L-ISE-AD3Y-W-25K=	L-ISE-AD5Y-W-25K=	L-ISE-W-3UPG-25K=	L-ISE-W-UPG-25K=
50,000	50K Endpoints	L-ISE-BSE-50K=	L-ISE-ADV3Y-50K=	L-ISE-ADV5Y-50K=	L-ISE-AD3Y-W-50K=	L-ISE-AD5Y-W-50K=	L-ISE-W-3UPG-50K=	L-ISE-W-UPG-50K=
100,000	100K Endpoints	L-ISE-BSE-100K=	L-ISE-ADV3Y-100K=	L-ISE-ADV5Y-100K=	L-ISE-AD3Y-W-100K=	L-ISE-AD5Y-W-100K=	L-ISE-W-3UPG-100K=	L-ISE-W-UPG-100K=

Table 7. Cisco ISE Functionality-Based License Options

License Type	License SKU
Base License	L-ISE-BSE-[T]=
Advanced 3-Year License	L-ISE-ADV3Y-[T]=
Advanced 5-Year License	L-ISE-ADV5Y-[T]=
3-Year Wireless License	L-ISE-AD3Y-W-[T]=
5-Year Wireless License	L-ISE-AD5Y-W-[T]=
3-Year Wireless Upgrade License	L-ISE-W-3UPG-[T]=
5-Year Wireless Upgrade License	L-ISE-W-UPG-[T]=
Replace [T] with the appropriate license tier from Table 5 and 6.	

Note: Cisco ISE customers must have an active and valid SMARTnet or SASU contract for the appliances in the deployment to install any of the licenses described in this section.

Step 6: Select a Design and Deployment Service

Deploying the Cisco Identity Services Engine in an organization touches many geographic, functional, and political boundaries. For a successful deployment, customers must engage either a Cisco Certified Partner or Cisco Advanced Services (AS) for the design, deployment, and sustaining engineering of the Identity Services Engine.

Cisco AS has developed a number of services packages to meet program requirements and customer expectations. Table 8 lists two AS-Fixed Service options available:

Table 8. Cisco ISE Physical Appliance Support SKUs

AS-Fixed SKU	SKU Description
ASF-CORE-ISE-DSGN	ISE Design Service Package
ASF-CORE-ISE-POC	ISE Design and Proof-of-Concept Service Package

For more information about these AS-Fixed Service SKUs, you can visit:

http://www.cisco.com/web/about/doing_business/legal/service_descriptions/docs/ASF_Identity_Services_Engine_Design.pdf

http://www.cisco.com/web/about/doing_business/legal/service_descriptions/docs/ASF_Identity_Services_Engine_Design_and_Proof_of_Concept.pdf

Cisco partners can additionally purchase the ISE Design Guidance service package to help them validate their designs. You can refer to the following link for more information:

http://www.cisco.com/web/about/doing_business/legal/service_descriptions/docs/CPS_ISE_Planning_and_Design_Guidance_Service.pdf

For engaging Cisco AS or to learn more about the service packages, please contact Jazib Frahim (jfrahim@cisco.com) or refer to the following link:

<http://collaboratory.cisco.com/confluence/display/CAWIKI/ISE.FixedPriced> (Cisco employees)

For More Information

For more information about the Cisco Identity Services Engine, visit <http://www.cisco.com/go/ise> or contact your local account representative.

* Estimated availability in 3rd Quarter of CY2013.




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