



Intelligent Service Architecture Features Roadmap

This roadmap lists the features documented in the *Cisco IOS Intelligent Service Architecture Configuration Guide* and maps them to the modules in which they appear.

Roadmap History

This roadmap was first published on April 28, 2005, and last updated on April 28, 2005.

Feature and Release Support

[Table 1](#) lists Intelligent Service Architecture (ISA) feature support for the following Cisco IOS software release trains:

- [Cisco IOS Release 12.2SB](#)

Only features that were introduced or modified in Cisco IOS Release 12.2(27)SBA or a later release appear in the table. *Not all features may be supported in your Cisco IOS software release.*

Cisco IOS software images are specific to a Cisco IOS software release, a feature set, and a platform. Use Cisco Feature Navigator to find information about platform support and Cisco IOS software image support. Access Cisco Feature Navigator at <http://www.cisco.com/go/fn>. You must have an account on Cisco.com. If you do not have an account or have forgotten your username or password, click **Cancel** at the login dialog box and follow the instructions that appear.



Note

[Table 1](#) lists only the Cisco IOS software release that introduced support for a given feature in a given Cisco IOS software release train. Unless noted otherwise, subsequent releases of that Cisco IOS software release train also support that feature.

Table 1 Supported ISA Features

Release	Feature Name	Feature Description	Where Documented
Cisco IOS Release 12.2SB			
12.2(27)SBA	ISA: Accounting: Per Session, Service, and Flow	ISA accounting provides means to bill for account or service usage. ISA accounting uses the RADIUS protocol to facilitate interaction between ISG and an external RADIUS-based AAA or mediation server.	Configuring ISA Accounting



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Release	Feature Name	Feature Description	Where Documented
	ISA: Accounting: Postpaid	ISA accounting provides means to bill for account or service usage. ISA sends accounting start and stop records for sessions and services to an accounting server for postpaid billing. The accounting server interprets the records to generate bills.	Configuring ISA Accounting
	ISA:Accounting: Prepaid	ISA prepaid billing support allows an ISG to check a subscriber's available credit to determine whether to allow the subscriber access to a service and how long the access can last. ISA supports time- and volume-based prepaid billing.	Configuring ISA Support for Prepaid Billing
	ISA: Accounting: Tariff Switching	ISA accounting provides means to bill for account or service usage. Where billing rates change at fixed times and sessions are active across the boundary at which the rates change, the ISG will provide accounting data to the billing server indicating the boundary. Tariff switching can also be used between accounting methods, such as switching from prepaid billing to post paid billing.	Configuring ISA Accounting Configuring ISA Support for Prepaid Billing
	ISA: Flow Control: Flow Redirect	The ISA Layer 4 Redirect feature enables service providers to better control the user experience by allowing subscriber TCP or UDP packets to be redirected to specified servers for appropriate handling. ISA Layer 4 redirection can be applied to individual subscriber sessions or flows.	Redirecting Subscriber Traffic Using ISA Layer 4 Redirect
	ISA: Flow Control: QoS Control: Dynamic Rate Limiting	ISA can change the allowed bandwidth of a session or flow by dynamically applying rate-limiting policies.	Configuring ISA Policies for Regulating Network Access
	ISA: Instrumentation: Advanced Conditional Debugging	ISA provides the ability to define various conditions for filtering debug output. Conditional debugging generates very specific and relevant information that can be used for session, flow, subscriber, and service diagnostics.	Troubleshooting ISA with Session Monitoring and Distributed Conditional Debugging
	ISA: Instrumentation: Session and Flow Monitoring	ISA provides a mechanism for continuously monitoring interface and CPU statistics. This feature introduces the show interface monitor and show processes cpu monitor commands, which display statistics that are updated at specified intervals.	Troubleshooting ISA with Session Monitoring and Distributed Conditional Debugging
	ISA: Network Interface: IP Routed, VRF-Aware MPLS	ISA supports multiple types of forwarding to connect subscriber sessions to networks. These connections can be to Internet, corporate Intranets, ISPs, or walled gardens for content delivery. ISA supports both routed and MPLS-enabled interfaces for network access.	Configuring ISA Network Forwarding Policies
	ISA: Network Interface: Tunneled (L2TP)	ISA supports multiple types of forwarding to connect subscriber sessions to networks. These connections can be to Internet, corporate Intranets, ISPs or walled gardens for content delivery. ISA supports tunnelled interfaces to networks.	Configuring ISA Network Forwarding Policies

Release	Feature Name	Feature Description	Where Documented
	ISA: Policy Control: Cisco Policy Language	ISA control policies are a structured replacement for feature-specific configuration commands and allow configurable functionality to be expressed in terms of an event, a condition, and an action. Control policies provide an intuitive and extensible framework, with a consistent set of CLI commands, for specifying system behavior. The ISA policy language is aligned with the Cisco Common Classification Policy Language (C3PL).	Configuring ISA Control Policies
	ISA: Policy Control: DHCP Proxy	This feature enables ISA to dynamically interact with DHCP and apply policies that influence the IP addresses that DHCP assigns subscribers.	Managing ISA Subscriber IP Addresses
	ISA: Policy Control: Multidimensional Identity per Session	ISA control policies provide a flexible way to collect pieces of subscriber identity during session establishment. Control policies also allow session policy to be applied iteratively as more elements of identity become available to the system.	Configuring ISA Control Policies
	ISA: Policy Control: Policy: Domain Based (Auto-domain, Proxy)	ISA control policies manage the primary services and rules used to enforce particular contracts. Policies can be configured to interpret the domain as a request to activate the service associated with that domain name, allowing users to automatically receive services in accordance with the domain to which they are attempting to connect.	Configuring ISA Control Policies
	ISA: Policy Control: Policy: Triggers (Time, Volume, Duration)	ISA control policies can be configured with time-based, volume-based, and duration-based policy triggers. Time-based triggers use an internal clock, allowing policies to be applied at specific times. Volume-based triggers are based on packet count; when the packet count reaches a specified value, the specified policy is applied. Duration-based triggers are based on an internal timer. Upon expiration of the timer, the specified policy is applied.	Configuring ISA Control Policies
	ISA: Policy Control: Policy Server: CoA	This feature provides ISA support for the RADIUS Change of Authorization (CoA) extension, which facilitates dynamic authorization.	Enabling ISA to Interact with External Policy Servers
	ISA: Policy Control: Service Profiles	ISA defines a service as a collection of policies that can be applied to any subscriber session. Services can be configured on the router or on an external AAA server.	Configuring ISA Subscriber Services
	ISA: Policy Control: User Profiles	ISA user profiles specify services and functionality that should be applied to ISA sessions for the specified subscriber. User profiles are defined on an external AAA server.	RADIUS Attributes and Profiles for ISA

Release	Feature Name	Feature Description	Where Documented
	ISA: Session: Auth: PBHK	The ISA Port-Bundle Host Key feature serves as an in-band signaling mechanism for session identification at external portals. TCP packets from subscribers are mapped to a local IP address for the ISA gateway and a range of ports. This mapping allows the portal to identify the ISA gateway from which the session originated.	Configuring ISA Layer 3 Access
	ISA: Session: Auth: Single Sign-On	Single sign-on eliminates the need to authenticate a session more than once when a subscriber has access to services provided by other devices in the administrative domain of the access or service provider.	Overview of ISA
	ISA: Session: Authorization (MAC, IP)	ISA transparent autologon enables an IP address or MAC address to be used in place of the username in authorization requests. Enabling the AAA server to authorize subscribers on the basis of their source IP address or MAC address allows subscriber profiles to be downloaded from the AAA server as soon as packets are received from subscribers.	Configuring ISA Layer 3 Access
	ISA: Session: Creation: Interface IP Session: L2	ISA IP interface sessions include all IP traffic received on a specific physical or virtual interface. IP interface sessions are provisioned through the CLI; that is, a session is created when the IP interface session commands are entered.	Configuring ISA Layer 3 Access
	ISA: Session: Creation: Interface IP Session: L3	ISA IP interface sessions include all IP traffic received on a specific physical or virtual interface. IP interface sessions are provisioned through the CLI; that is, a session is created when the IP interface session commands are entered.	Configuring ISA Layer 3 Access
	ISA: Session: Creation: IP Session: Protocol Event (DHCP)	Most ISA sessions are created upon detection of a data flow that cannot be affiliated with an already active session. An ISG can be configured to create an IP session upon receipt of the first DHCP DISCOVER packet received from a subscriber.	Configuring ISA Layer 3 Access
	ISA: Session: Creation: IP Session: Subnet and Source IP: L2	The ISA session is the primary component used for associating services and policies across specific data flows. An IP subnet session is an ISA session that includes any IP traffic from a single IP subnet . A source-IP-based session includes traffic from a single source IP address.	Configuring ISA Layer 3 Access
	ISA: Session: Creation: IP Session: Subnet and Source IP: L3	The ISA session is the primary component used for associating services and policies across specific data flows. An IP subnet session is an ISA session that includes any IP traffic from a single IP subnet . A source-IP-based session includes traffic from a single source IP address.	Configuring ISA Layer 3 Access

Release	Feature Name	Feature Description	Where Documented
	ISA: Session: Creation: P2P Session (PPPoE, PPPoXoX)	The ISA session is the primary context to which services and policies are associated across specific data flows. Point-to-point (P2P) sessions are established through a signalling protocol. ISA handles many variants of P2P encapsulation such as PPP, PPPoE and PPPoA.	Configuring ISA Layer 2 Access
	ISA: Session: Lifecycle: Idle Timeout	The ISA idle timeout controls how long a connection can be idle before it is terminated.	Configuring Policies for Session Maintenance
	ISA: Session: Lifecycle: Packet of Disconnect (POD)	An ISG can be configured to interact with external policy server. The policy server can use RADIUS Packet of Disconnect (POD) to manage the lifecycle of any ISA session. The primary role of the POD message is to terminate an ISA session.	Enabling ISA to Interact with External Policy Servers
	ISA: Session: VRF Transfer	The ISA Session is the primary component used for associating services and policies with specific data flows. ISA sessions are associated with virtual routing and forwarding instances when routing is required for the network service. ISA VRF transfer provides means to dynamically switch an active session between virtual routing domains.	Configuring ISA VRF Transfer

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