



Cisco WAAS on Service Modules for Cisco Integrated Services Routers Generation 2

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The Cisco Wide Area Application Services (WAAS) on service modules (SM family of devices) work together with other wide area application engines (WAEs) in your network to optimize TCP traffic over your network.

When client and server applications attempt to communicate with each other, the network intercepts and redirects this traffic to the WAEs so that they can act on behalf of the client application and the destination server. The WAEs examine the traffic and use built-in application policies to determine whether to optimize the traffic or allow it to pass through your network unoptimized.

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Prerequisites for WAAS on SMs

The prerequisites for WAAS on SMs are as follows:

Router

- Plan software upgrades or downgrades for times when you can take all applications that run on the host router out of service or offline.
- Ensure that you have the appropriate Cisco access router to serve as the host router. The Cisco WAAS on SMs is supported on the following Cisco Integrated Services Routers Generation 2 (Cisco ISRs G2):
 - Cisco 2900 Series ISR G2
 - Cisco 3900 Series ISR G2
- Use the **show version** command to ensure that the router is running Cisco IOS Release 15.0(1)M2 or a later software release. Cisco IOS Release 15.0(1)M2 is the lowest version of Cisco IOS that you can use. It is recommended that you use Cisco IOS Release 15.1(4)M or a later software release.



Note When minimum release requirements are met, you can change images on either the router or the SMs without affecting performance.

- When installing the module, make sure the slot supports SMs. For information on SM slots on the router, check the slot information on the faceplate of the Cisco ISR G2.

Service Module

- The Cisco WAAS software version 4.2.1 and later versions are supported on the following Cisco Services Ready Engine (Cisco SRE) service modules: SM-SRE-700-K9 and SM-SRE-900-K9.
- The Cisco WAAS software version 4.4.3 and later versions are supported on the following Cisco Services Ready Engine (Cisco SRE) service modules: SM-SRE-710-K9 and SM-SRE-910-K9.
- To install the service module use the *Cisco SRE Service Module Configuration and Installation Guide*:

<http://www.cisco.com/en/US/docs/routers/access/interfaces/software/feature/guide/ism-sm-sre.html>

File Server

- Verify that your download FTP or TFTP file server is accessible. This server is used for installations, backups, and restores.

Restrictions for WAAS on SMs

The restrictions for WAAS on SMs are as follows:

Upgrade or Downgrade

- You can do a software upgrade or downgrade only on an inactive system. You must plan upgrades or downgrades for times when you can take all applications that run on the host router out of service or offline.

Configuration

- You can configure service module software only by using a console that connects to a router console port.
- The Cisco IOS software installer script must be on the same server and in the same directory as the application package files.
- You can access the WAAS software that runs on the service module by first accessing one of the following:
 - Router's Cisco IOS command-line interface (CLI) to open a console session to the service module
 - WAAS GUI
 - Cisco Configuration Professional
- The Cisco IOS software installer script must be on the same server and in the same directory as the application package files.

About WAAS on SMs

Cisco WAAS is a Linux system-based application that resides on a service module that plugs into a host Cisco access router that runs Cisco IOS software.

WAAS on a service module is a standalone WAE with its own startup and run-time configurations that are independent of the Cisco IOS configuration on the router. The module does not have an external console port. Instead, you launch and configure the module through the router by means of a configuration session on the module. After the session, you return to the router CLI and clear the session.

The host router and the service module (the module is also referred to as an *appliance* or *blade* or, with installed software, a *service module*)—provide a router-integrated application platform for accelerating data-intensive applications. Typically, such applications involve the following services:

- Application-oriented networking
- Contact centers and interactive voice-response applications
- Content caching and delivery
- Data and video storage
- Network analysis
- Voice mail and auto-attendant applications
- WAN optimization

Preparing to Install WAAS on SMs

The WAAS installation ZIP file for SM-SRE has the following naming convention:

SM-WAAS-*release_version*-K9.zip

where *release_version* is the current release version number. For example, for WAAS version 4.2.1.11, the SM-SRE installation ZIP file is SM-WAAS-4.2.1.11-K9.zip. This ZIP file contains the following files:

- WAAS-4.2.1-K9.bin

- WAAS-4.2.1-K9.bin.install.sre
- WAAS-4.2.1-K9.bin.install.sre.header
- WAAS-4.2.1-K9.bin.installer
- WAAS-4.2.1-K9.bin.key
- WAAS-4.2.1-K9.bin.srebootloader

These are the six files needed for the entire installation of the WAAS application on SM-SRE. To install WAAS software on the SM, follow these steps:

Step 1 Download the SM-SRE installation ZIP file onto an FTP or HTTP server.

Step 2 Unzip the installation file on UNIX-like system using the following command:

```
unzip -d target_dir SM-WAAS-release_version-K9.zip
```

Without the `-d` option, the **unzip** command extracts the ZIP content to the current working directory. Make sure all the files are unzipped to the same directory.



Note

If you are installing WAAS on an SM that already has Cisco Unified Computing System Express (UCS Express) installed, make sure you install WAAS using the “`sata-mode=ide`” argument. See section “Installing Other Cisco Applications on the Cisco SRE Service Module” in the *Installation and Configuration Guide for Cisco Services Ready Engine Virtualization 1.5*.

Follow the instructions in *Cisco SRE Service Module Configuration and Installation Guide* to install the WAAS application on the SM-SRE at:

<http://www.cisco.com/en/US/docs/routers/access/interfaces/software/feature/guide/ism-sm-sre.html>

Obtaining Documentation, Obtaining Support, and Security Guidelines

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

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

Related Documentation

For additional information on WAAS software, Cisco IOS software, and the service module hardware, see the following documentation:

Related Topic	Document Title
Cisco Wide Area Application Services	<p><i>Cisco Wide Area Application Services Configuration Guide</i></p> <p><i>Cisco Wide Area Application Services Quick Configuration Guide</i></p> <p><i>Cisco Wide Area Application Services Command Reference</i></p> <p>All available on the WAAS documentation page at:</p> <p>http://www.cisco.com/en/US/products/ps6870/tsd_products_support_series_home.html</p>
Cisco IOS software	<p><i>Cisco IOS Software Release 15.1(4)M</i></p> <p>http://www.cisco.com/en/US/products/ps10592/tsd_products_support_series_home.html</p> <p><i>Cisco IOS Interface and Hardware Component Command Reference</i></p> <p>http://www.cisco.com/en/US/docs/ios-xml/ios/interface/command/ir-cr-book.html</p>
Service Modules	<p><i>Cisco SRE Service Module Configuration and Installation Guide</i></p> <p>http://www.cisco.com/en/US/docs/routers/access/interfaces/software/feature/guide/ism-sm-sre.html</p>
Cisco Configuration Professional	<p>All documentation available at:</p> <p>http://www.cisco.com/en/US/products/ps9422/tsd_products_support_series_home.html</p>

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