



## **Firepower System Database Access Guide**

Version 6.2  
February 15, 2021

THE SPECIFICATIONS AND INFORMATION REGARDING THE PRODUCTS IN THIS MANUAL ARE SUBJECT TO CHANGE WITHOUT NOTICE. ALL STATEMENTS, INFORMATION, AND RECOMMENDATIONS IN THIS MANUAL ARE BELIEVED TO BE ACCURATE BUT ARE PRESENTED WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. USERS MUST TAKE FULL RESPONSIBILITY FOR THEIR APPLICATION OF ANY PRODUCTS.

### **Cisco Systems, Inc.**

[www.cisco.com](http://www.cisco.com)

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco website at [www.cisco.com/go/offices](http://www.cisco.com/go/offices).

THE SOFTWARE LICENSE AND LIMITED WARRANTY FOR THE ACCOMPANYING PRODUCT ARE SET FORTH IN THE INFORMATION PACKET THAT SHIPPED WITH THE PRODUCT AND ARE INCORPORATED HEREIN BY THIS REFERENCE. IF YOU ARE UNABLE TO LOCATE THE SOFTWARE LICENSE OR LIMITED WARRANTY, CONTACT YOUR CISCO REPRESENTATIVE FOR A COPY.

The Cisco implementation of TCP header compression is an adaptation of a program developed by the University of California, Berkeley (UCB) as part of UCB's public domain version of the UNIX operating system. All rights reserved. Copyright © 1981, Regents of the University of California.

NOTWITHSTANDING ANY OTHER WARRANTY HEREIN, ALL DOCUMENT FILES AND SOFTWARE OF THESE SUPPLIERS ARE PROVIDED "AS IS" WITH ALL FAULTS. CISCO AND THE ABOVE-NAMED SUPPLIERS DISCLAIM ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT OR ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE.

IN NO EVENT SHALL CISCO OR ITS SUPPLIERS BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR LOSS OR DAMAGE TO DATA ARISING OUT OF THE USE OR INABILITY TO USE THIS MANUAL, EVEN IF CISCO OR ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: [www.cisco.com/go/trademarks](http://www.cisco.com/go/trademarks). Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1721R)

Any Internet Protocol (IP) addresses and phone numbers used in this document are not intended to be actual addresses and phone numbers. Any examples, command display output, network topology diagrams, and other figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses or phone numbers in illustrative content is unintentional and coincidental.

© 2016 Cisco Systems, Inc. All rights reserved.



---

**CHAPTER 1****Introduction 1-11**

- Major Changes for Database Access in Version 6.2 1-11
  - New and Modified Tables for Version 6.2 1-11
- Prerequisites 1-12
  - Licensing 1-12
  - Firepower System Features and Terminology 1-12
  - Communication Ports 1-12
  - Client System 1-12
  - Query Application 1-13
  - Database Queries 1-13
- Where Do I Begin? 1-13

---

**CHAPTER 2****Setting Up Database Access 2-1**

- Creating a Database User Account 2-1
- Enabling Database Access on the Firepower Management Center 2-2
- Downloading the JDBC Driver 2-3
- Installing the Client SSL Certificate 2-3
- Connecting to the Database Using a Third-Party Application 2-5
- Connecting to the Database Using a Custom Program 2-6
  - Sample Code for Custom Java Programs 2-7
  - Running the Application 2-8
- Querying the Database 2-9
  - Supported SHOW Statement Syntax 2-9
  - Supported DESCRIBE or DESC Statement Syntax 2-9
  - Supported SELECT Statement Syntax 2-10
  - Join Constraints 2-12
  - Querying Data Stored in Unfamiliar Formats 2-12
  - Limiting Queries for Performance Reasons 2-14
  - Query Tips 2-14
- Troubleshooting Queries 2-14
- Sample Queries 2-15

**CHAPTER 3**

**Schema: System-Level Tables 3-1**

- audit\_log 3-1
  - audit\_log Fields 3-1
  - audit\_log Joins 3-2
  - audit\_log Sample Query 3-2
- fireamp\_event 3-2
  - fireamp\_event Fields 3-3
  - fireamp\_event Joins 3-8
  - fireamp\_event Sample Query 3-8
- health\_event 3-8
  - health\_event Fields 3-9
  - health\_event Joins 3-9
  - health\_event Sample Query 3-10

**CHAPTER 4**

**Schema: Intrusion Tables 4-1**

- intrusion\_event 4-1
  - intrusion\_event Fields 4-2
  - intrusion\_event Joins 4-6
  - intrusion\_event Sample Query 4-7
- intrusion\_event\_packet 4-7
  - intrusion\_event\_packet Fields 4-7
  - intrusion\_event\_packet Joins 4-8
  - intrusion\_event\_packet Sample Query 4-8
- rule\_message 4-8
  - rule\_message Fields 4-8
  - rule\_message Joins 4-9
  - rule\_message Sample Query 4-9
- rule\_documentation 4-9
  - rule\_documentation Fields 4-9
  - rule\_documentation Joins 4-10
  - rule\_documentation Sample Query 4-10

**CHAPTER 5**

**Schema: Statistics Tracking Tables 5-1**

- Understanding Statistics Tracking Tables 5-2
  - Storage Characteristics for Statistics Tracking Tables 5-2
  - Specifying Time Intervals When Querying Statistics Tables 5-3
- app\_ids\_stats\_current\_timeframe 5-4
  - app\_ids\_stats\_current\_timeframe Fields 5-4

app_ids_stats_current_timeframe Joins	5-5
app_ids_stats_current_timeframe Sample Query	5-6
app_stats_current_timeframe	5-6
app_stats_current_timeframe Fields	5-6
app_stats_current_timeframe Joins	5-7
app_stats_current_timeframe Sample Query	5-8
compliance_events_stats_current_timeframe	5-8
compliance_events_stats_current_timeframe Fields	5-8
compliance_event_stats_current_timeframe Joins	5-9
compliance_event_stats_current_timeframe Sample Query	5-9
dns_query_stats_current_timeframe	5-9
dns_query_stats_current_timeframe Fields	5-10
dns_query_stats_current_timeframe Joins	5-10
dns_query_stats_current_timeframe Sample Query	5-10
geolocation_stats_current_timeframe	5-11
geolocation_stats_current_timeframe Fields	5-11
geolocation_stats_current_timeframe Joins	5-12
geolocation_stats_current_timeframe Sample Query	5-12
ids_impact_stats_current_timeframe	5-13
ids_impact_stats_current_timeframe Fields	5-13
ids_impact_stats_current_timeframe Joins	5-14
ids_impact_stats_current_timeframe Sample Query	5-14
interface_stats_current_timeframe	5-14
interface_stats_current_timeframe Fields	5-14
interface_stats_current_timeframe Joins	5-15
interface_stats_current_timeframe Sample Query	5-15
ip_reputation_stats_current_timeframe	5-15
ip_reputation_stats_current_timeframe Fields	5-15
ip_reputation_stats_current_timeframe Joins	5-16
ip_reputation_stats_current_timeframe Sample Query	5-16
qos_rule_stats_current_timeframe	5-17
qos_rule_stats_current_timeframe Fields	5-17
qos_rule_stats_current_timeframe Joins	5-17
qos_rule_stats_current_timeframe Sample Query	5-18
session_stats_current_timeframe	5-18
session_stats_current_timeframe Fields	5-18
session_stats_current_timeframe Joins	5-19
session_stats_current_timeframe Sample Query	5-19

- ssl\_stats\_current\_timeframe 5-19
  - ssl\_stats\_current\_timeframe Fields 5-19
  - ssl\_stats\_current\_timeframe Joins 5-21
  - ssl\_stats\_current\_timeframe Sample Query 5-21
- storage\_stats\_by\_disposition\_current\_timeframe 5-22
  - storage\_stats\_by\_disposition\_current\_timeframe Fields 5-22
  - storage\_stats\_by\_disposition\_current\_timeframe Joins 5-23
  - storage\_stats\_by\_disposition\_current\_timeframe Sample Query 5-23
- storage\_stats\_by\_file\_type\_current\_timeframe 5-23
  - storage\_stats\_by\_file\_type\_current\_timeframe Fields 5-23
  - storage\_stats\_by\_file\_type\_current\_timeframe Joins 5-24
  - storage\_stats\_by\_file\_type\_current\_timeframe Sample Query 5-24
- transmission\_stats\_by\_file\_type\_current\_timeframe 5-24
  - transmission\_stats\_by\_file\_type\_current\_timeframe Fields 5-25
  - transmission\_stats\_by\_file\_type\_current\_timeframe Joins 5-25
  - transmission\_stats\_by\_file\_type\_current\_timeframe Sample Query 5-25
- url\_category\_stats\_current\_timeframe 5-26
  - url\_category\_stats\_current\_timeframe Fields 5-26
  - url\_category\_stats\_current\_timeframe Joins 5-26
  - url\_category\_stats\_current\_timeframe Sample Query 5-27
- url\_reputation\_stats\_current\_timeframe 5-27
  - url\_reputation\_stats\_current\_timeframe Fields 5-27
  - url\_reputation\_stats\_current\_timeframe Joins 5-28
  - url\_reputation\_stats\_current\_timeframe Sample Query 5-28
- user\_ids\_stats\_current\_timeframe 5-28
  - user\_ids\_stats\_current\_timeframe Fields 5-29
  - user\_ids\_stats\_current\_timeframe Joins 5-30
  - user\_ids\_stats\_current\_timeframe Sample Query 5-30
- user\_stats\_current\_timeframe 5-30
  - user\_stats\_current\_timeframe Fields 5-30
  - user\_stats\_current\_timeframe Joins 5-31
  - user\_stats\_current\_timeframe Sample Query 5-31

**CHAPTER 6**

**Schema: Discovery Event and Network Map Tables 6-1**

- application\_host\_map 6-5
  - application\_host\_map Fields 6-5
  - application\_host\_map Joins 6-6
  - application\_host\_map Sample Query 6-7
- application\_info 6-8

application_info Fields	6-8
application_info Joins	6-9
application_info Sample Query	6-9
application_tag_map	6-9
application_tag_map Fields	6-10
application_tag_map Joins	6-10
application_tag_map Sample Query	6-11
domain_control_information	6-11
domain_control_information Fields	6-11
domain_control_information Joins	6-11
domain_control_information Sample Query	6-11
network_discovery_event	6-12
network_discovery_event Fields	6-12
network_discovery_event Joins	6-13
network_discovery_event Sample Query	6-13
rna_host	6-13
rna_host Fields	6-14
rna_host Joins	6-14
rna_host Sample Query	6-15
rna_host_attribute	6-15
rna_host_attribute Fields	6-16
rna_host_attribute Joins	6-16
rna_host_attribute Sample Query	6-16
rna_host_client_app	6-17
rna_host_client_app Fields	6-17
rna_host_client_app Joins	6-17
rna_host_client_app Sample Query	6-19
rna_host_client_app_payload	6-19
rna_host_client_app_payload Fields	6-20
rna_host_client_app_payload Joins	6-21
rna_host_client_app_payload Sample Query	6-22
rna_host_ioc_state	6-22
rna_host_ioc_state Fields	6-23
rna_host_ioc_state Joins	6-25
rna_host_ioc_state Sample Query	6-25
rna_host_ip_map	6-26
rna_host_ip_map Fields	6-26
rna_host_ip_map Joins	6-26
rna_host_ip_map Sample Query	6-27

- rna\_host\_mac\_map **6-28**
  - rna\_host\_mac\_map Fields **6-28**
  - rna\_host\_mac\_map Joins **6-28**
  - rna\_host\_mac\_map Sample Query **6-29**
- rna\_host\_os **6-29**
  - rna\_host\_os Fields **6-29**
  - rna\_host\_os Joins **6-30**
  - rna\_host\_os Sample Query **6-30**
- rna\_host\_os\_vulns **6-30**
  - rna\_host\_os\_vulns Fields **6-31**
  - rna\_host\_os\_vulns Joins **6-31**
  - rna\_host\_os\_vulns Sample Query **6-31**
- rna\_host\_protocol **6-32**
  - rna\_host\_protocol Fields **6-32**
  - rna\_host\_protocol Joins **6-32**
  - rna\_host\_protocol Sample Query **6-33**
- rna\_host\_sensor **6-33**
  - rna\_host\_sensor Fields **6-33**
  - rna\_host\_sensor Joins **6-34**
  - rna\_host\_sensor Sample Query **6-34**
- rna\_host\_service **6-35**
  - rna\_host\_service Fields **6-35**
  - rna\_host\_service Joins **6-35**
  - rna\_host\_service Sample Query **6-36**
- rna\_host\_service\_banner **6-37**
  - rna\_host\_service\_banner Fields **6-37**
  - rna\_host\_service\_banner Joins **6-37**
  - rna\_host\_service\_banner Sample Query **6-38**
- rna\_host\_service\_info **6-38**
  - rna\_host\_service\_info Fields **6-39**
  - rna\_host\_service\_info Joins **6-40**
  - rna\_host\_service\_info Sample Query **6-42**
- rna\_host\_service\_payload **6-43**
  - rna\_host\_service\_payload Fields **6-43**
  - rna\_host\_service\_payload Joins **6-43**
  - rna\_host\_service\_payload Sample Query **6-45**
- rna\_host\_service\_subtype **6-46**
  - rna\_host\_service\_subtype Fields **6-46**
  - rna\_host\_service\_subtype Joins **6-46**



rna_host_service_subtype	Sample Query	6-47
rna_host_service_vulns		6-47
rna_host_service_vulns	Fields	6-47
rna_host_service_vulns	Joins	6-48
rna_host_service_vulns	Sample Query	6-48
rna_host_third_party_vuln		6-48
rna_host_third_party_vuln	Fields	6-49
rna_host_third_party_vuln	Joins	6-49
rna_host_third_party_vuln	Sample Query	6-50
rna_host_third_party_vuln_bugtraq_id		6-50
rna_host_third_party_vuln_bugtraq_id	Fields	6-50
rna_host_third_party_vuln_bugtraq_id	Joins	6-51
rna_host_third_party_vuln_bugtraq_id	Sample Query	6-51
rna_host_third_party_vuln_cve_id		6-51
rna_host_third_party_vuln_cve_id	Fields	6-52
rna_host_third_party_vuln_cve_id	Joins	6-52
rna_host_third_party_vuln_cve_id	Sample Query	6-53
rna_host_third_party_vuln_rna_id		6-53
rna_host_third_party_vuln_rna_id	Fields	6-54
rna_host_third_party_vuln_rna_id	Joins	6-54
rna_host_third_party_vuln_rna_id	Sample Query	6-55
rna_vuln		6-55
rna_vuln	Fields	6-55
rna_vuln	Joins	6-57
rna_vuln	Sample Query	6-57
tag_info		6-58
tag_info	Fields	6-58
tag_info	Joins	6-58
tag_info	Sample Query	6-58
url_categories		6-59
url_categories	Fields	6-59
url_categories	Joins	6-59
url_categories	Sample Query	6-59
url_reputations		6-59
url_reputations	Fields	6-60
url_reputations	Joins	6-60
url_reputations	Sample Query	6-60
user_ipaddr_history		6-60
user_ipaddr_history	Fields	6-60

user\_ipaddr\_history Joins 6-61  
 user\_ipaddr\_history Sample Query 6-62

**CHAPTER 7**

**Schema: Connection Log Tables 7-1**

connection\_log 7-1  
     connection\_log Fields 7-1  
     connection\_log Joins 7-15  
     connection\_log Sample Query 7-15  
 connection\_summary 7-15  
     connection\_summary Fields 7-16  
     connection\_summary Joins 7-18  
     connection\_summary Sample Query 7-18  
 si\_connection\_log 7-19  
     si\_connection\_log Fields 7-19  
     si\_connection\_log Joins 7-31  
     si\_connection\_log Sample Query 7-31

**CHAPTER 8**

**Schema: User Activity Tables 8-1**

discovered\_users 8-1  
     discovered\_users Fields 8-1  
     discovered\_users Joins 8-2  
     discovered\_users Sample Query 8-2  
 user\_discovery\_event 8-2  
     user\_discovery\_event Fields 8-3  
     user\_discovery\_event Joins 8-4  
     user\_discovery\_event Sample Query 8-4  
 user\_ioc\_state 8-4  
     user\_ioc\_state Fields 8-5  
     user\_ioc\_state Joins 8-7  
     user\_ioc\_state Sample Query 8-7

**CHAPTER 9**

**Schema: Correlation Tables 9-1**

compliance\_event 9-1  
     compliance\_event Fields 9-2  
     compliance\_event Joins 9-5  
     compliance\_event Sample Query 9-5  
 remediation\_status 9-6  
     remediation\_status Fields 9-6

remediation_status Joins	9-7
remediation_status Sample Query	9-7
white_list_event	9-7
white_list_event Fields	9-7
white_list_event Joins	9-9
white_list_event Sample Query	9-9
white_list_violation	9-9
white_list_violation Fields	9-9
white_list_violation Joins	9-10
white_list_violation Sample Query	9-10

---

**CHAPTER 10****Schema: File Event Tables** 10-1

file_event	10-1
file_event Fields	10-2
file_event Joins	10-5
file_event Sample Query	10-6

---

**APPENDIX A****Deprecated Tables** A-1

---

**INDEX**





# Introduction

---

The Firepower System® database access feature allows you to query intrusion, discovery, user activity, correlation, connection, vulnerability, and application and URL statistics database tables on a Cisco Firepower Management Center, using a third-party client that supports JDBC SSL connections.

You can use an industry-standard reporting tool such as Crystal Reports, Actuate BIRT, or JasperSoft iReport to design and submit queries. Or, you can configure your own custom application to query Cisco data under program control. For example, you can build a servlet to report intrusion and discovery event data periodically or refresh an alert dashboard.

Note that you can connect to multiple Firepower Management Centers with a single client, but you must configure access to each one individually.

When deciding which appliance or appliances to connect to, keep in mind that querying the database on a Cisco appliance reduces available appliance resources. You should carefully design your queries and submit them at times consistent with your organization's priorities.

For more information, see the following sections:

- [Major Changes for Database Access in Version 6.2, page 1-11](#)
- [Prerequisites, page 1-12](#)
- [Where Do I Begin?, page 1-13](#)

## Major Changes for Database Access in Version 6.2

If you are upgrading your Firepower System deployment from Version 6.1 to Version 6.2, please note the following changes, some of which may require you to update your queries.

### New and Modified Tables for Version 6.2

The table below lists changes to database access tables in Version 6.2.

**Table 1-1**      **Summary of Changes to Tables in Version 6.2**

Table	Description of Changes
<a href="#">user_ioc_state, page 8-4</a>	Stores compromise state for hosts.

# Prerequisites

You must fulfill the prerequisites listed in the following sections before you can use the database access feature:

- [Licensing, page 1-12](#)
- [Firepower System Features and Terminology, page 1-12](#)
- [Communication Ports, page 1-12](#)
- [Client System, page 1-12](#)
- [Query Application, page 1-13](#)
- [Database Queries, page 1-13](#)

## Licensing

You can query the external database with any Cisco license installed. However, certain tables are associated with licensed features. These tables are only populated with data if you have configured licensing to allow use of that feature and your deployment is properly configured to generate the data. You may not be able to query tables associated with unlicensed features. For more information about licensing, see Understanding Licensing in the *Firepower Management Center Configuration Guide*.

## Firepower System Features and Terminology

To understand the information in this guide, you should be familiar with the features and nomenclature of the Firepower System, and the function of its components. You should be familiar with the different types of event data these components generate. Note that you can frequently obtain definitions of unfamiliar or product-specific terms in the *Firepower Management Center Configuration Guide*. The configuration guide also contains additional information about the data in the fields documented in this guide.

## Communication Ports

The Firepower System requires the use of specific ports to communicate internally and externally, between appliances, and to enable certain functionality within the network deployment.

After you enable database access on the Firepower Management Center, the system uses ports 1500 and 2000 for the connection that carries JDBC traffic between the client and the appliance.

## Client System

On the computer that you want to use to connect to the Firepower System database, you must install Java software, also known as the Java Runtime Environment (JRE) or the Java Virtual Machine (JVM). You can download the latest version of Java from <http://java.com/>.

You must download and unzip a package from the Firepower Management Center that contains the JDBC driver files you will use to connect to the database. The package also contains executable files used to install an SSL certificate for encrypted communication with the Firepower Management Center, and other source files for these utilities.

You should also understand how to change applicable system settings on your computer, such as environment variables.

## Query Application

To query the Firepower System database, you can use commercially available reporting tools such as Actuate BIRT, JasperSoft iReport, or Crystal Reports, or any other application (including custom applications) that supports JDBC SSL connections. This guide provides the information you need to connect to the database, including the JDBC URL, driver JAR files, driver class, and so on. However, you should refer to your reporting tool documentation for detailed instructions on how to configure a JDBC SSL connection.

Cisco also provides a sample command-line Java application named RunQuery, which you can use to test your database connection, view the schema, and run basic ad hoc queries manually. The RunQuery source code is also a reference for setting up the database connection in a custom Java application. The RunQuery source code is included in the ZIP package that you download from the Firepower Management Center.

RunQuery is a sample client only, **not** a fully featured reporting tool. Cisco **strongly** recommends against using it as your primary method of querying the database. For information on using RunQuery, refer to the README file included in the ZIP package.

Note that the database access feature uses only the following JDBC functionalities:

- database metadata, which includes information such as schema, version, and supported features
- SQL query execution

Database access does not use any other JDBC functionality, including stored procedures, transactions, batch commands, multiple result sets, or insert/update/delete functions.

## Database Queries

To query the database, you should know how to construct and execute `SELECT` statements on single tables and on multiple tables using join conditions.

To assist you, this guide contains information on supported MySQL query syntax, the Firepower System database schema, allowed joins, and other important query-related requirements and limitations.

## Where Do I Begin?

After you have met the prerequisites described in [Prerequisites, page 1-12](#), you can begin configuring your client system to connect to a Firepower Management Center.

[Setting Up Database Access, page 2-1](#) explains how to configure the appliance to allow access, how to configure your client system to connect to the appliance, and how to configure your reporting application to connect to the appliance. It also contains some basic query instructions and information on supported MySQL syntax.

The rest of the guide contains schema and join information for the database and sample queries, and is split into the following chapters:

- [Schema: System-Level Tables, page 3-1](#) contains schema and join information for system-level tables such as the audit log and health events.

- [Schema: Intrusion Tables, page 4-1](#) contains schema and join information for intrusion-related tables.
- [Schema: Statistics Tracking Tables, page 5-1](#) contains schema and join information for application, URL, and user statistics tables.
- [Schema: Discovery Event and Network Map Tables, page 6-1](#) contains schema and join information for tables that contain discovery event and network map information, that is, information on your network assets.
- [Schema: Connection Log Tables, page 7-1](#) contains schema and join information for tables that contain connection event and connection summary event information.
- [Schema: User Activity Tables, page 8-1](#) contains schema and join information for tables that contain user discovery and identity data.
- [Schema: Correlation Tables, page 9-1](#) contains schema and join information for correlation-related tables, including allow list events and violations and remediation status data.
- [Schema: File Event Tables, page 10-1](#) contains schema and join information for the table that contains file events.





## Setting Up Database Access

To obtain read-only access to the database, you must first configure the appliance to allow access. Then, you must configure your client system to connect to the appliance by downloading the JDBC driver and accepting the SSL certificate from the appliance you want to access. Finally, you must configure your reporting application to connect to the appliance.



### Note

Before you set up database access, you should make sure you have fulfilled the prerequisites described in [Prerequisites, page 1-12](#).

For more information, see the following sections:

- [Creating a Database User Account, page 2-1](#)
- [Enabling Database Access on the Firepower Management Center, page 2-2](#)
- [Downloading the JDBC Driver, page 2-3](#)
- [Installing the Client SSL Certificate, page 2-3](#)
- [Connecting to the Database Using a Third-Party Application, page 2-5](#)
- [Connecting to the Database Using a Custom Program, page 2-6](#)
- [Querying the Database, page 2-9](#)
- [Troubleshooting Queries, page 2-14](#)
- [Sample Queries, page 2-15](#)

## Creating a Database User Account

**License:** Any

To configure access to the Firepower System database, you must first create a user account and assign it permission to access the Firepower System database. You can grant this permission by assigning the account either the system-provided user role of External Database User or a custom user role created by your organization that includes the External Database User permission. See the *Firepower Management Center Configuration Guide* for information on creating the user account and viewing the permissions in a given user role.



### Warning

**External Database Access is a Global privilege. A user with External Database Access will be able to query information for all domains.**

**Tip**

Users assigned the system-provided Administrator role have the External Database User permission by default.

In a multidomain deployment, you can create user accounts in any domain in which you have been assigned Admin access. However, the External Database User role is only available at the Global domain level. External Database Users can access all events regardless of domain.

## Enabling Database Access on the Firepower Management Center


**License:** Any

After you create an External Database user, you must configure the Firepower Management Center to allow access to the database on the appliance. You must also configure a database access list on the appliance and add all host IP addresses that will query the external database.

**To enable database access:**

**Access:** Admin

- 
- Step 1** On the Firepower Management Center, select **System > Configuration**.
- Step 2** Click **External Database Access** on the left.  
The Database Settings menu appears.
- Step 3** Select the **Allow External Database Access** check box.  
The **Access List** field appears.
- Step 4** Type the fully qualified domain name (FQDN), or IPv4 address, of the Firepower Management Center in the **Server Hostname** field, depending on your third-party application requirements. You cannot use an IPv6 address as you cannot use an IPv6 address to install a certificate.  
  
If you type an FQDN, you must make sure that the client can resolve the FQDN of the Firepower Management Center. If you type an IP address, you must make sure that the client can connect to the Firepower Management Center using the IP address.
- Step 5** To add database access for one or more IP addresses, click **Add Hosts**.  
An **IP Address** field appears in the **Access List** field.
- Step 6** In the **IP Address** field, you have the following options, depending on the IP addresses you want to add:
- an exact IPv4 address (for example, 192.168.1.101)
  - an exact IPv6 address (for example, 2001:DB8::4)
  - an IP address range.
    - For information on using IP address ranges in the Firepower System, see IP Address Conventions in the *Firepower Management Center Configuration Guide*.
  - **any**, to designate any IP address
- Step 7** Click **Add**.  
The IP address is added to the database access list.

- Step 8** Optionally, to remove an entry in the database access list, click the delete icon (  ).
- Step 9** Click **Save**.  
The database access settings are saved.
- Step 10** Continue with the procedure in the next section, [Downloading the JDBC Driver](#).
- 

## Downloading the JDBC Driver

**License:** Any

After you create an External Database user and configure the Firepower Management Center to allow database access, download the JDBC driver to the client system. You must use this JDBC driver to connect to the database.

**To download the JDBC driver:**

**Access:** Admin

---

- Step 1** On the Firepower Management Center, select **System > Configuration**.
- Step 2** Click **External Database Access** on the left.  
The Database Settings menu appears.
- Step 3** Next to **Client JDBC Driver**, click **Download** and follow your browser's prompts to download the `client.zip` package.
- Step 4** Unpack the ZIP package. Note the location.  
Make sure you preserve the file structure of the package.  
The driver, along with other files, is packaged in a ZIP file (`client.zip`). The package contains the following directories:
- `bin`, which contains a sample client called `RunQuery`, as well as the executable files you use to install the certificate for encrypted communication between your client and the Firepower Management Center
  - `lib`, which contains JDBC driver JAR files
  - `src`, which contains source code for the executable files in the `bin` directory
- Step 5** Continue with the procedure in the next section, [Installing the Client SSL Certificate](#).
- 

## Installing the Client SSL Certificate

Once you have downloaded the JDBC driver, use the system-provided program named `InstallCert` to accept and install the SSL certificate from the Firepower Management Center. Your client system and the Firepower Management Center communicate securely with SSL certificate authentication. When you accept the certificate, your computer adds it to the keystore (`jssecacerts`) in the `security` directory of the currently running JRE:

```
$JAVA_HOME/jre[version]/lib/security
```

The following represent common locations of the keystore for computers running Microsoft Windows and UNIX, respectively:

- C:\Program Files\Java\jre[version]\lib\security\jssecacerts
- /var/jre[version]/lib/security/jssecacerts



**Note** If the Java query application you plan to use to access the database access function uses a different JRE, you must copy the keystore to the **security** directory of the other JRE.

#### To install the SSL certificate using InstallCert:

- Step 1** On your computer, open a command line interface.
- Step 2** At the command prompt, change to the **bin** directory created when you unpacked the ZIP package.
- Step 3** To install the Firepower Management Center's SSL certificate, type the following and press Enter:

```
java InstallCert defense_center:1500
```

where *defense\_center* is either the FQDN or the IP address of the Firepower Management Center. InstallCert does not support IPv6 addresses. If you are on an IPv6 network, you must use a resolvable hostname.

You must specify port 1500. If you do not specify port 1500, the system will try to use port 2000 and the procedure will fail.

Output similar to the following example from a computer running Microsoft Windows appears:

```
Loading KeyStore C:\Program Files\Java\jre6\lib\security...
Opening connection to defensecenter.example.com:2000...
Starting SSL handshake...
Subject GENERATION=server, T=vjdbc, O="Cisco, Inc.",
...
...
```

You are prompted to view the certificate.

- Step 4** Optionally, view the certificate.  
You are prompted to accept the certificate.
- Step 5** Accept the certificate.

The certificate is accepted, and output similar to the following example from a computer running Microsoft Windows appears:

```
Added certificate to keystore 'C:\Program Files\Java\jre6\lib\security\jssecacerts'
using alias 'defensecenter.example.com-1'
```

If you plan to use Crystal Reports, note the location of the keystore (*jssecacerts*). You will need this information later.

- Step 6** You have the following options:
- If you have a third-party application, continue with the procedure in the next section, [Connecting to the Database Using a Third-Party Application, page 2-5](#).
  - If you have a custom application, continue with the procedure in [Connecting to the Database Using a Custom Program, page 2-6](#).

# Connecting to the Database Using a Third-Party Application

After you install the certificate, you can query the database on a Firepower Management Center using any third-party client that supports JDBC SSL connections. The following table lists information you may need to configure a connection between your client and the Firepower Management Center.

**Table 2-1 Connection Information for Database Access Clients**

Information	Description
JDBC URL	The following JDBC URL identifies the Firepower System database so the JDBC driver on your client can establish a connection with it:  <code>jdbc:vjdbc:rmi://defense_center:2000/VJdbc,eqe</code>  where <i>defense_center</i> is either the FQDN or the IP address for the Firepower Management Center.
JDBC driver JAR files	You must use the following JAR files when you configure a connection to the Firepower System database: <ul style="list-style-type: none"> <li>• <code>vjdbc.jar</code></li> <li>• <code>commons-logging-1.1.jar</code></li> </ul> These files are located in the <code>lib</code> subdirectory where you unpacked the <code>client.zip</code> file you downloaded and unpacked, as described in <a href="#">Downloading the JDBC Driver, page 2-3</a> .
JDBC driver class	You must use the following driver class when you configure a connection to the Firepower System database:  <code>com.sourcefire.vjdbc.VirtualDriver</code>
user name and password	To connect to the database on an appliance, use a user account that has the External Database User permission. For more information, see <a href="#">Creating a Database User Account, page 2-1</a> .

The following sections contain tips for connecting to the Firepower System database using three popular industry-standard reporting tools. Whether you use one of these tools or another Java-based application, you should refer to the documentation for your reporting tool for detailed instructions on how to create a JDBC SSL connection.

## Crystal Reports

The following is valid for installing Crystal Reports 2011 on a 32-bit Windows environment. If you run a 64-bit Windows environment, the filepaths may be different.

To allow Crystal Reports 2011 to connect to the Firepower System database, you must:

- Add the JDBC driver JAR files that you downloaded from the Firepower Management Center to the Crystal Reports classpath. Assuming a default installation of Crystal Reports, you can edit the classpath section in the following file:

```
C:\Program Files\SAP BusinessObjects\SAP Business Objects
Enterprise XI 4.0\Java\CRConfig.xml
```

- Copy the keystore that was created when you installed the client SSL certificate to the appropriate Crystal Reports security directory. Assuming a default installation of Crystal Reports, that directory is:  

```
C:\Program Files\SAP BusinessObjects\SAP Business Objects
Enterprise XI 4.0\win32_x86\jdk\jre\lib\security
```
- Create a new JDBC (JNDI) connection with the Database Expert, using `Cisco` as the database name.

### JasperSoft iReport

To allow iReport to connect to the Firepower System database, you must:

- Add the JDBC driver JAR files that you downloaded from the Firepower Management Center to the iReport classpath.
- Add a new JDBC driver using the JDBC driver JAR files that you downloaded from the Firepower Management Center. After you add the driver files, iReport should find the correct driver class.
- Create a new database connection using the driver you just created.

### Actuate BIRT

To allow BIRT to connect to the Firepower System database, you must:

- Add a driver definition using the **Generic JDBC Driver** template.
- Create a new database connection using the **Generic JDBC** profile type.
- Create a data source for reports using the **JDBC Data Source** data source type.



#### Tip

If you cannot select the Cisco driver class when creating a new JDBC data source profile, add the driver using the JDBC driver JAR files you downloaded from the Firepower Management Center.

## Connecting to the Database Using a Custom Program

Once you install the certificate, you can enable custom Java report tools to query the Firepower System database. Cisco provides a sample Java command line application named `RunQuery` that establishes the required SSL connection using the JDBC driver provided with your Firepower Management Center. `RunQuery` retrieves both table records and table metadata. The source code is included in the `src` directory of the ZIP package you downloaded from the Firepower Management Center. See [Downloading the JDBC Driver, page 2-3](#).



#### Note

`RunQuery` is a sample client only, **not** a fully featured reporting tool. Cisco **strongly** recommends against using it as your primary method of querying the database. For information on using `RunQuery`, refer to the README file included in the ZIP package.

See the following for more information on connecting to the database using a custom program:

- [Sample Code for Custom Java Programs, page 2-7](#) describes the Java classes and methods that the `RunQuery` application uses to set up the database connection and submit queries.
- [Running the Application, page 2-8](#) discusses environment requirements necessary for your Java application to execute.

## Sample Code for Custom Java Programs

The RunQuery source code uses the functions discussed below. These code samples illustrate one of several possible implementation approaches.

### Dynamically setting the SSL provider connection

After you install the SSL security certificate on your client (see [Installing the Client SSL Certificate, page 2-3](#)), you can dynamically register your JSSE provider with the following line in your program:

```
Security.addProvider(new com.sun.net.ssl.internal.ssl.Provider());
```

### Initializing the JDBC driver for your program

You can load the JDBC driver class in your Java application using the `Class.forName()` method, as follows:

```
Class.forName("com.sourcefire.vjdbc.VirtualDriver").newInstance();
```

If your program launches from the command line, the user supplies the JDBC class as follows:

```
java -Djdbc.drivers="com.sourcefire.vjdbc.VirtualDriver" program_name ...
```

where *program\_name* is the name of your program.

### Connecting the program to the database

Your program must obtain a JDBC connection object before it can submit queries. Use the `DriverManager.getConnection` method as follows to establish the connection and get the connection object:

```
Connection conn = DriverManager.getConnection("jdbc:vjdbc:rmi://my_dc:2000/VJdbc,eqe",
    "user", "password");
```

where *my\_dc* is either the FQDN or the IP address for the Firepower Management Center, *user* is the database access user account name, and *password* is the account password.

### Querying the data in the Cisco tables

Create an SQL query object to submit the query and assign the retrieved records to a result set, as follows:

```
Statement stmt = conn.createStatement();
ResultSet rs = stmt.executeQuery("sql");
```

where *sql* is the SQL query. See [Querying the Database, page 2-9](#) for supported SQL functions.

### Producing the results of a table query

With the result set (*rs*) generated by the above query, you can output the fields as follows:

```
while(rs.next())
{
    for(int i=1; i<= md.getColumnCount(); i++)
    {
        System.out.print(rs.getString(i) + " ");
    }
    System.out.print("\n");
}
```

### Getting schema information

Your program can list the tables in the database, as follows:

```

DatabaseMetaData metaData = conn.getMetaData();
    ResultSet tables = meta.getTables(null, null, null, null);
    while (tables.next())
    {
        System.out.println(tables.getString("TABLE_NAME"));
    }

```

Your program can list a table's columns, as follows:

```

ResultSet columns = metaData.getColumns(null, null, "table_name", null);

```

where *table\_name* is the name of the database table.

## Running the Application

Before you run your application, you must set the `CLASSPATH` on the client computer to include the current directory and the locations of your application's JAR files.

If you downloaded and unpacked the ZIP package for Database Access as noted in [Downloading the JDBC Driver, page 2-3](#), update the `CLASSPATH` as follows:

### To run the application in a Unix environment:

---

**Step 1** Use the following command:

```

export CLASSPATH=$CLASSPATH:./path/lib/vjdbc.jar:path/lib/commons-logging-1.1.jar

```

where *path* is the directory path where you unpacked the ZIP package downloaded from the Firepower Management Center.

### To run the application in a Windows 7 environment:

---

**Step 1** Right-click the Computer icon and select **Properties**.

The **System** window appears.

**Step 2** Click **Advanced System Settings**.

The **System Properties** window appears.

**Step 3** Select the **Advanced** tab.

**Step 4** Click **Environment Variables...**

The **Environment Variables** window appears.

**Step 5** Select the **CLASSPATH** system variable and click **Edit...**

The **Edit System Variable** window appears.

**Step 6** Add the following to the **Variable value:** field:

```

.;path\bin;.;path\lib\vjdbc.jar;.;path\lib\commons-logging-1.1.jar;.;path\lib

```

where *path* is the directory path where you unpacked the ZIP package downloaded from the Firepower Management Center.

**Step 7** Click **OK** to save the value.

The Environment Variables window appears.

**Step 8** Click **OK** to save the value. You can now run the application.

---



# Querying the Database

External Database Access is a Global privilege. Unless constrained in the query, results will be for all domains in the database.

The following sections contain information on supported query syntax and other important query-related requirements and limitations:

- [Supported SHOW Statement Syntax, page 2-9](#) describes the supported MySQL **SHOW** statement syntax for querying the Firepower System database.
- [Supported DESCRIBE or DESC Statement Syntax, page 2-9](#) describes the supported MySQL **DESCRIBE** statement syntax for querying the Firepower System database.
- [Supported SELECT Statement Syntax, page 2-10](#) describes the supported MySQL **SELECT** statement syntax for querying the Firepower System database.
- [Join Constraints, page 2-12](#) describes the joins supported for querying the Firepower System database and explains how to get information on the specific allowed joins for any table.
- [Querying Data Stored in Unfamiliar Formats, page 2-12](#) describes how to perform queries on data stored in formats that may be unfamiliar (including UNIX timestamps and IP addresses) so your queries are successful and your results appear as expected.
- [Limiting Queries for Performance Reasons, page 2-14](#) contains recommendations on constraining your queries so as not to degrade the performance of the Firepower System.
- [Query Tips, page 2-14](#) contains tips for querying intrusion events across several appliances.

For schema information and allowed joins, see the following chapters:

- [Schema: System-Level Tables, page 3-1](#)
- [Schema: Intrusion Tables, page 4-1](#)
- [Schema: Statistics Tracking Tables, page 5-1](#)
- [Schema: Discovery Event and Network Map Tables, page 6-1](#)
- [Schema: Connection Log Tables, page 7-1](#)
- [Schema: User Activity Tables, page 8-1](#)
- [Schema: Correlation Tables, page 9-1](#)

## Supported SHOW Statement Syntax

The **SHOW** statement lists all tables in the Firepower System database. The following represents the supported MySQL **SHOW** statement syntax you can use when querying the Firepower System database:

```
SHOW TABLES;
```

Any **SHOW** statement syntax not listed above is not supported.

## Supported DESCRIBE or DESC Statement Syntax

The Firepower System database offers limited use of the **DESCRIBE** statement. In the Firepower System database, the output of the **DESCRIBE** statement only lists the names of the columns and the type of data in each column. The following represents the supported MySQL **DESCRIBE** statement syntax you can use when querying the Firepower System database:

```
DESCRIBE table_name;
```

The Firepower System database also supports the identical command `DESC`:

```
DESC table_name;
```

**Table 2-2 Supported DESCRIBE Statement Syntax**

Where...	Is...
<code>table_name</code>	the name of a table you are querying

Any **DESCRIBE** statement syntax not listed above is not supported. In particular, the Firepower System database access feature does not support:

- the `INDEX FOR` clause
- the `TABLE` clause
- the `PROCEDURE` clause

## Supported SELECT Statement Syntax

The following represents the supported MySQL `SELECT` statement syntax you can use when querying the Firepower System database:

```
SELECT
[ALL | DISTINCT]
[COUNT ( field ) | COUNT (*) ]

select_expr [,select_expr ...]

FROM table_references

[WHERE where_condition]

[GROUP BY { column_name | position } [ ASC | DESC ], ...]

[HAVING where_condition]

[ORDER BY { column_name | position } [ ASC | DESC ], ...]

[LIMIT { [offset,] row_count | row_count OFFSET offset}]
```

The following table details the required syntax for the clauses and arguments in the above `SELECT` statement.

**Table 2-3 Supported SELECT Statement Syntax**

Where...	Is...
<code>select_expr</code>	{ <code>column_name</code> [[AS] <code>alias</code> ]   <code>function(...)</code> [[AS] <code>alias</code> ]   <code>aggregate_function(...)</code> [[AS] <code>alias</code> ]}
<code>column_name</code>	the name of a field you are querying

**Table 2-3** Supported *SELECT* Statement Syntax (continued)

Where...	Is...
function	{ABS   CAST   CEILING   CHAR_LENGTH   COALESCE   CONV   CHARACTER_LENGTH   CONCAT   CONVERT   COUNT   CURRENT_DATE   CURRENT_TIME   CURRENT_TIMESTAMP   EXTRACT   FLOOR   HEX   INET_ATON   INET_NTOA   INET6_ATON   INET6_NTOA   LEFT   LOWER   LPAD   MID   MOD   NULLIF   OCTET_LENGTH   POSITION   RIGHT   ROUND   SUBSTRING   SYSDATE   TIME   TIMESTAMP   TRIM   UPPER}
aggregate_function	{AVG   COUNT   COUNT(DISTINCT)   MAX   MIN   SUM}
field	the name of the field on which you are performing a function
table_references	one of: <ul style="list-style-type: none"> <li><i>table_reference</i> INNER JOIN <i>table_reference</i> <i>join_condition</i></li> <li><i>table_reference</i> LEFT [OUTER] JOIN <i>table_reference</i> <i>join_condition</i></li> </ul>
table_reference	<i>table_name</i> [[AS] <i>alias</i> ]
table_name	the name of a table you are querying
join_condition	ON <i>conditional_expr</i>
conditional_expr	an equality comparison between fields that are join-compatible; see <a href="#">Join Constraints, page 2-12</a> for more information
where_condition	one of: <ul style="list-style-type: none"> <li>IS NULL OR IS NOT NULL</li> <li>NOT, !</li> <li>BETWEEN ... AND ...</li> <li>LIKE</li> <li>=, !=, &lt;&gt;, &gt;, &gt;=, &lt;, &lt;=</li> </ul>

If you are not familiar with how supported MySQL syntax is expressed, see the following table for tips.

**Table 2-4** MySQL Syntax Format

These symbols...	That is...	Represent...
brackets	[]	an optional clause or argument
curly brackets	{}	a required clause or argument
pipe		a choice between clauses or arguments

Any *SELECT* statement syntax not listed above is not supported. In particular, the Firepower System database access feature does not support:

- *SELECT* \*, that is, you must explicitly specify fields
- unions
- subqueries
- the *WITH ROLLUP* modifier to the *GROUP BY* clause
- the *INTO* clause
- the *FOR UPDATE* clause



For example, the following statement queries the `rna_host_mac_map` table, which contains information on hosts with MAC addresses that are not identified with an IP address, limiting the query to the first five hosts:

```
SELECT HEX(host_id), HEX(mac_address)
FROM rna_host_mac_map
LIMIT 5;
```

## Packet Data

The Firepower System database stores packet data for intrusion events in binary format. For results in hex notation, use the `HEX()` function.

For example, the following statement queries the `intrusion_event_packet` table to obtain packet data for a particular event:

```
SELECT HEX(packet_data)
FROM intrusion_event_packet
WHERE event_id = 1234;
```

## UNIX Timestamps

The Firepower System database stores most timestamps as UNIX timestamps, which represent the number of seconds elapsed since 00:00:00 January 1st, 1970 (UTC). For results in your local time, use the `FROM_UNIXTIME()` function.

For example, the following statement queries the `audit_log` table, which keeps a record of all user actions on the web interface of an appliance, and returns up to 25 results:

```
SELECT FROM_UNIXTIME(action_time_sec), user, message
FROM audit_log
LIMIT 0, 25;
```

Keep in mind that all times in the database are in UTC. Although the `CONVERT_TZ()` function is allowed, it only provides results in UTC.

Note that some events have microsecond resolution associated with them. Use the `CONCAT()` and `LPAD()` functions to concatenate the UNIX timestamp and the microsecond increment. For example, the following statement queries the `intrusion_event` table:

```
SELECT CONCAT(FROM_UNIXTIME(event_time_sec), '.', LPAD(event_time_usec, 6, '0')),
HEX(host_id),
rule_message
FROM intrusion_event
LIMIT 0, 25;
```

To query the database for events with a particular UNIX timestamp, use the `UNIX_TIMESTAMP()` function.

## Limiting Queries for Performance Reasons

Although the system limits the joins you can perform on Firepower System database tables, it does still allow some expensive queries - queries that may negatively impact the performance of your Firepower Management Center.

Therefore, you should try to limit the result set for large tables. Strategies include:

- constraining queries to a specific leaf domain
- constraining queries to a specific time range
- constraining queries by IP address
- using the `LIMIT` clause

Depending on your deployment, querying many tables may require a limited result set. In particular, the following tables can contain up to 100 million events on a DC3000:

- `fireamp_event`
- `intrusion_event`
- `intrusion_event_packet`
- `connection_log` (pre-Version 5.0 name: `rna_flow`)
- `connection_summary` (pre-Version 5.0 name: `rna_flow_summary`)

Queries on network map tables may also be expensive, depending on the number of hosts the system has detected on your monitored network.

## Query Tips

The following sections provide tips on ensuring unique results when you build queries that include detection engines or intrusion events.

### Device Names

Device names are not necessarily unique across multiple Firepower Management Centers. To ensure uniqueness, include a specific device UUID in your query.

### Intrusion Events

To uniquely match an intrusion event across multiple managed devices, include the following fields in your query of the `intrusion_event` table:

- `intrusion_event.event_id`
- `intrusion_event.event_time_sec`
- `intrusion_event.sensor_uuid`

## Troubleshooting Queries

You can configure multiple Firepower Management Centers to allow access to a single client, but each system must be configured individually. The available information from each system depend on multiple factors. If there is no data to query, your queries will not return expected results.

The following list outlines some of the specific reasons why a query may not return results:

- Your query is too specific. For example, you may need to adjust the time range or IP address range of a query.
- Not all of the fields for an event may be populated, depending on the network traffic that caused an event to be generated. For example, not all connection events contain payload information.
- You have not configured logging for the event type you are querying.
- You have disabled event storage.
- you are attempting to query on a domain to which you do not have access.

For more information on how events are generated and logged, see the *Firepower Management Center Configuration Guide*.

## Sample Queries

The following sections contain sample queries that illustrate how you can use the database access feature:

- [Audit Records for a User, page 2-15](#)
- [Intrusion Events by Priority and Classification, page 2-15](#)
- [Intrusion Events and Their Associated Policies, page 2-16](#)
- [Lists of Detected Hosts, page 2-16](#)
- [List of Detected Servers, page 2-16](#)
- [Server Vulnerabilities on Your Network, page 2-17](#)
- [Operating System Summary, page 2-17](#)
- [Operating System Vulnerabilities for a Host, page 2-17](#)
- [Host Violation Count, page 2-17](#)



### Caution

Performing some of these sample queries may be expensive, depending on your deployment. See [Limiting Queries for Performance Reasons, page 2-14](#) for more information.

## Audit Records for a User

The following query returns all records in the audit log for a particular user, displaying all timestamps in UTC:

```
SELECT FROM_UNIXTIME(action_time_sec), user, message
FROM audit_log
WHERE user = 'eventanalyst';
```

## Intrusion Events by Priority and Classification

The following query duplicates the Drilldown of Event, Priority, and Classification view in the Events By Priority and Classification workflow. If you have not changed the default Intrusion Events workflow in your user preferences, this is the first page you see when you select **Analysis > Intrusion Events** on the Firepower Management Center web interface:

```

SELECT rule_message, priority, rule_classification, count(*) as Count
FROM intrusion_event
WHERE reviewed="0" GROUP BY rule_message, priority, rule_classification
ORDER BY Count
DESCLIMIT 0, 25;

```

## Intrusion Events and Their Associated Policies

The following query lists intrusion events from the specified week. For each event it shows the associated intrusion policy violation and rule classification.

```

SELECT FROM_UNIXTIME(event_time_sec) AS event_time, event_id AS intrusion_event,
intrusion_event_policy_name AS policy, rule_classification AS classification
FROM intrusion_event
WHERE event_time_sec BETWEEN UNIX_TIMESTAMP('2011-10-01 00:00:00') AND
UNIX_TIMESTAMP('2011-10-07 23:59:59')
ORDER BY policy ASC;

```

## Lists of Detected Hosts

The following query returns the basic information in the hosts network map for all MAC hosts (hosts without an IP address) detected on your network, along with the hardware vendor for each NIC:

```

SELECT HEX(mac_address), mac_vendor, host_type, FROM_UNIXTIME(last_seen_sec)
FROM rna_mac_host;

```

The following query maps IP addresses to MAC addresses:

```

SELECT HEX(ipaddr), HEX(mac_address), HEX(host_id)
FROM rna_host_ip_map LEFT JOIN rna_host_mac_map on
rna_host_ip_map.host_id=rna_host_mac_map.host_id;

```

## List of Detected Servers

The following query joins two related tables to give you a list of the servers detected on your network along with many of their attributes, similar to what you can see in a table view of servers on the Firepower Management Center's web interface:

```

SELECT FROM_UNIXTIME(s.last_used_sec), HEX(s.host_id), s.port, s.protocol, s.hits,
i.service_name, i.vendor, i.version, i.source_type, s.confidence
FROM AS s
LEFT JOIN rna_ip_host_service_info AS i ON (s.host_id = i.host_id AND s.port = i.port AND
s.protocol =
i.protocol);

```

Note that this query left joins the tables on the set of `host_id`, `port`, and `protocol`, as required by Database Access. See [rna\\_host\\_service Joins, page 6-35](#) and [rna\\_host\\_service\\_info Joins, page 6-40](#).



## Server Vulnerabilities on Your Network

The following query joins two vulnerability-related tables to give you a list of valid server-related vulnerabilities detected for a particular host, along with whether each vulnerability is exploitable across a network:

```
SELECT h.rna_vuln_id, v.title, v.remote
FROM rna_host_service_vulns AS h
LEFT JOIN rna_vuln AS v ON (h.rna_vuln_id = v.rna_vuln_id)
WHERE h.ip_address = INET_ATON('10.10.10.4')
AND h.invalid = 0;
```

Note that this query left joins the tables on `rna_vuln_id`, as required by [rna\\_host\\_service\\_vulns](#), [page 6-47](#) and [rna\\_vuln Joins](#), [page 6-57](#).

## Operating System Summary

The following query duplicates the Summary of OS Names page in the Operating System Summary workflow. If you have not changed the default workflow in your user preferences, this is the first page you see when you select **Analysis > Hosts** on the Firepower Management Center web interface, then select **Hosts**:

```
SELECT vendor, product, count(*) AS total
FROM rna_host_os
GROUP BY vendor, product
ORDER BY total DESC;
```

## Operating System Vulnerabilities for a Host

The following query joins two vulnerability-related tables to give you a list of valid operating system-related vulnerabilities detected for a particular host, along with whether each vulnerability is exploitable across a network:

```
SELECT h.rna_vuln_id, v.title, v.remote
FROM rna_host_os_vulns AS h
LEFT JOIN rna_vuln AS v ON (h.rna_vuln_id = v.rna_vuln_id)
WHERE h.host_id = UNHEX('9610B6E6F1784DA4B39BEA7A210AAD68')
AND h.invalid = 0;
```

Note that this query left joins the tables on `rna_vuln_id`, as required by Database Access. See [rna\\_host\\_os\\_vulns](#), [page 6-30](#) and [rna\\_vuln Joins](#), [page 6-57](#).

## Host Violation Count

The following query duplicates the Host Violation Count page in the Host Violation Count workflow. If you have not changed the default Compliance Allow List Violations workflow in your user preferences, this is the first page you see when you select **Analysis > Correlation > White List Violations** on the Firepower Management Center's web interface.

```
SELECT host_id, HEX(host_id), white_list_name, count(*) AS total
FROM white_list_violation
GROUP BY host_id, white_list_name
ORDER BY total DESC;
```



# Schema: System-Level Tables

This chapter contains information on the schema and supported joins for system-level functions, including auditing, appliance health monitoring, malware detection, and logging of security updates.

For more information, see the sections listed in the following table.

**Table 3-1** Schema for System-Level Tables

See...	For the table that stores information on...	Version
<a href="#">audit_log, page 3-1</a>	User interactions with the appliance’s web interface.	4.10.x+
<a href="#">fireamp_event, page 3-2</a>	AMP for Endpoints malware detection and quarantine events.	5.1+
<a href="#">health_event, page 3-8</a>	Health status events for monitored appliances.	4.10.x+

## audit\_log

The `audit_log` table contains information on Firepower System users’ interactions with the web interface. Keep in mind that the audit log stores records for the local appliance only, not for managed appliances.

For more information, see the following sections:

- [audit\\_log Fields, page 3-1](#)
- [audit\\_log Joins, page 3-2](#)
- [audit\\_log Sample Query, page 3-2](#)

## audit\_log Fields

The following table describes the database fields you can access in the `audit_log` table.

**Table 3-2** `audit_log` Fields

Field	Description
<code>action_time_sec</code>	The UNIX timestamp of the date and time the appliance generated the audit record.
<code>domain_name</code>	Name of the domain in which the user logged in.
<code>domain_uuid</code>	UUID of the domain in which the user logged in. This is expressed in binary.
<code>message</code>	The action the user performed.

Table 3-2 *audit\_log Fields (continued)*

Field	Description
source	The IP address of the web interface user's host, in dotted-decimal notation.
subsystem	The menu path the user followed to generate the audit record.
user	The user name of the user who triggered the audit event.

## audit\_log Joins

You cannot perform joins on the `audit_log` table.

## audit\_log Sample Query

The following query returns up to the 25 most recent audit log entries, sorted by time and limited to the Global \ Company B \ Edge domain.

```
SELECT from_unixtime(action_time_sec)
AS Time, user, subsystem, message, source, count(*)
AS Total
FROM audit_log
GROUP BY source, subsystem, user, message
WHERE domain_name= "Global \ Company B \ Edge"
ORDER BY source DESC;
```

## fireamp\_event

The `fireamp_event` table contains information on malware events detected by AMP for Endpoints as well as network-based events detected by AMP for Firepower. These events contain information on malware detected or quarantined within a cloud, the detection method, and hosts and users affected by the malware. Other information for an individual malware event can vary depending on how and why it was generated.

Because AMP for Firepower detect malware files in network traffic, network-based malware events contain port, application protocol, and originating IP address information about the connection used to transmit the file.

Malware events and IOCs imported from your AMP for Endpoints deployment do not contain contextual connection information, but they do include information obtained at download or execution time, such as file path, invoking client application, and similar information.

For more information, see the following sections:

- [fireamp\\_event Fields, page 3-3](#)
- [fireamp\\_event Joins, page 3-8](#)
- [fireamp\\_event Sample Query, page 3-8](#)

## fireamp\_event Fields

The following table describes the database fields you can access in the `fireamp_event` table.

**Table 3-3** *fireamp\_event Fields*

Field	Description
<code>application_id</code>	ID number that maps to the application performing the file transfer.
<code>application_name</code>	Name of the application performing the transfer.
<code>cert_valid_end_date</code>	The Unix timestamp on which the SSL certificate used in the connection ceases to be valid.
<code>cert_valid_start_date</code>	The Unix timestamp when the SSL certificate used in the connection was issued.
<code>client_application_id</code>	The internal identification number for the client application, if applicable.
<code>client_application_name</code>	The name of the client application, if applicable.
<code>cloud_name</code>	The name of the cloud service from which the malware event originated. Each <code>cloud_name</code> value has an associated <code>cloud_uuid</code> value.
<code>cloud_uuid</code>	The internal unique ID of the cloud service from which the malware event originated. Each <code>cloud_uuid</code> value has an associated <code>cloud_name</code> value.
<code>connection_sec</code>	UNIX timestamp (seconds since 00:00:00 01/01/1970) of the connection event associated with the malware event.
<code>counter</code>	Specific counter for the event, used to distinguish among multiple events that happened during the same second.
<code>detection_name</code>	The name of the detected or quarantined malware.
<code>detector_type</code>	The detector that detected the malware. Each <code>detector_type</code> value has an associated <code>detector_type_id</code> . The possible display values and the associated IDs are: <ul style="list-style-type: none"> <li>• ClamAV — 128</li> <li>• ETHOS — 8</li> <li>• SPERO — 32</li> <li>• SHA — 4</li> <li>• Tetra — 64</li> </ul>
<code>detector_type_id</code>	The internal ID of the detection technology that detected the malware. Each <code>detector_type_id</code> value has an associated <code>detector_type</code> value. The possible display values and the associated types are: <ul style="list-style-type: none"> <li>• 4 — SHA</li> <li>• 8 — ETHOS</li> <li>• 32 — SPERO</li> <li>• 64 — Tetra</li> <li>• 128 — ClamAV</li> </ul>

Table 3-3 fireamp\_event Fields (continued)

Field	Description
direction	Value that indicates whether the file was uploaded or downloaded. Can have the following values: <ul style="list-style-type: none"> <li>Download</li> <li>Upload</li> </ul> Currently the value depends on the protocol (for example, if the connection is HTTP it is a download).
disposition	The malware status of the file. Possible values include: <ul style="list-style-type: none"> <li>CLEAN — The file is clean and does not contain malware.</li> <li>UNKNOWN — It is unknown whether the file contains malware.</li> <li>MALWARE — The file contains malware.</li> <li>UNAVAILABLE — The software was unable to send a request to the Cisco cloud for a disposition, or the Cisco cloud services did not respond to the request.</li> <li>CUSTOM SIGNATURE — The file matches a user-defined hash, and is treated in a fashion designated by the user.</li> </ul>
domain_name	Name of the domain in which the event was detected.
domain_uuid	UUID of the domain in which the event was detected. This is expressed in binary.
dst_continent_name	The name of the continent of the destination host. <ul style="list-style-type: none"> <li>** — Unknown</li> <li>na — North America</li> <li>as — Asia</li> <li>af — Africa</li> <li>eu — Europe</li> <li>sa — South America</li> <li>au — Australia</li> <li>an — Antarctica</li> </ul>
dst_country_id	Code for the country of the destination host.
dst_country_name	Name of the country of the destination host.
dst_ip_address_v6	This field has been deprecated and will now return null.
dst_ipaddr	A binary representation of the IPv4 or IPv6 address for the destination of the connection.
dst_port	Port number for the destination of the connection.
endpoint_user	The user determined by the Cisco AMP for Endpoints agent if the event was detected by the Cisco cloud. This user is not associated with LDAP and does not appear in the discovered_users table.
event_description	The additional event information associated with the event type.
event_id	The internal unique ID of the malware event.

Table 3-3 fireamp\_event Fields (continued)

Field	Description
event_subtype	<p>The action that led to malware detection. Each event_subtype value has an associated event_subtype_id value. The possible display values and the associated IDs are:</p> <ul style="list-style-type: none"> <li>• Create — 1</li> <li>• Execute — 2</li> <li>• Move — 22</li> <li>• Scan — 4</li> </ul>
event_subtype_id	<p>The internal ID of the action that led to malware detection. Each event_subtype_id value has an associated event_subtype value. The possible display values and the associated subtypes are:</p> <ul style="list-style-type: none"> <li>• 1 — Create</li> <li>• 2 — Execute</li> <li>• 4 — Scan</li> <li>• 22 — Move</li> </ul>
event_type	<p>The type of malware event. Each event_type value has an associated event_type_id value. The possible display values and the associated IDs are:</p> <ul style="list-style-type: none"> <li>• Blocked Execution — 553648168</li> <li>• Cloud Recall Quarantine — 553648155</li> <li>• Cloud Recall Quarantine Attempt Failed — 2164260893</li> <li>• Cloud Recall Quarantine Started — 553648147</li> <li>• Cloud Recall Restore from Quarantine — 553648154</li> <li>• Cloud Recall Restore from Quarantine Failed — 2164260892</li> <li>• Cloud Recall Restore from Quarantine Started — 553648146</li> <li>• FireAMP IOC — 1107296256</li> <li>• Quarantine Failure — 2164260880</li> <li>• Quarantined Item Restored — 553648149</li> <li>• Quarantine Restore Failed — 2164260884</li> <li>• Quarantine Restore Started — 553648150</li> <li>• Scan Completed, No Detections — 554696715</li> <li>• Scan Completed With Detections — 1091567628</li> <li>• Scan Failed — 2165309453</li> <li>• Scan Started — 554696714</li> <li>• Threat Detected — 1090519054</li> <li>• Threat Detected in Exclusion — 553648145</li> <li>• Threat Detected in Network File Transfer — 1</li> <li>• Threat Detected in Network File Transfer (Retrospective) — 2</li> <li>• Threat Quarantined — 553648143</li> </ul>

Table 3-3 fireamp\_event Fields (continued)

Field	Description
event_type_id	<p>The internal ID of the malware event type. Each event_type_id value has an associated event_type value. The possible display values and the associated types are:</p> <ul style="list-style-type: none"> <li>• 553648143 — Threat Quarantined</li> <li>• 553648145 — Threat Detected in Exclusion</li> <li>• 553648146 — Cloud Recall Restore from Quarantine Started</li> <li>• 553648147 — Cloud Recall Quarantine Started</li> <li>• 553648149 — Quarantined Item Restored</li> <li>• 553648150 — Quarantine Restore Started</li> <li>• 553648154 — Cloud Recall Restore from Quarantine</li> <li>• 553648155 — Cloud Recall Quarantine</li> <li>• 553648168 — Blocked Execution</li> <li>• 554696714 — Scan Started</li> <li>• 554696715 — Scan Completed, No Detections</li> <li>• 1090519054 — Threat Detected</li> <li>• 1091567628 — Scan Completed With Detections</li> <li>• 1107296256 — FireAMP IOC</li> <li>• 2164260880 — Quarantine Failure</li> <li>• 2164260893 — Cloud Recall Quarantine Attempt Failed</li> <li>• 2164260884 — Quarantine Restore Failed</li> <li>• 2164260892 — Cloud Recall Restore from Quarantine Failed</li> <li>• 2165309453 — Scan Failed</li> </ul>
file_name	The name of the detected or quarantined file. This name can contain UTF-8 characters.
file_path	The file path, not including the file name, of the detected or quarantined file. This path can contain UTF-8 characters.
file_sha	The SHA-256 hash value of the detected or quarantined file.
file_size	The size in bytes of the detected or quarantined file.
file_timestamp	The creation timestamp of the detected or quarantined file.
file_type	The file type of the detected or quarantined file.
file_type_id	The internal ID of the file type of the detected or quarantined file.
http_response_code	The response code given to the HTTP request in the event.
instance_id	Numerical ID of the Snort instance on the managed device that generated the event.
ioc_count	Number of indications of compromise found in the event.
parent_file_name	The name of the file accessing the detected or quarantined file when detection occurred.
parent_file_sha	The SHA-256 hash value of the parent file accessing the detected or quarantined file when detection occurred.
policy_uuid	Identification number that acts as a unique identifier for the access control policy that triggered the event.



Table 3-3 fireamp\_event Fields (continued)

Field	Description
retroactive_disposition	Disposition of the file if the disposition is updated. If the disposition is not updated, this field contains the same value as the <code>disposition</code> field. The possible values are the same as the <code>disposition</code> field.
score	A numeric value from 0 to 100 based on the potentially malicious behaviors observed during dynamic analysis.
security_context	Description of the security context (virtual firewall) that the traffic passed through. Note that the system only populates this field for ASA FirePOWER devices in multi-context mode.
sensor_address	IP address of the device that generated the event.
sensor_id	ID of the device that generated the event.
sensor_name	The text name of the managed device that generated the event record. This field is <code>null</code> when the event refers to the reporting device itself, rather than to a connected device.
sensor_uuid	A unique identifier for the managed device, or 0 if <code>fireamp_event.sensor_name</code> is <code>null</code> .
src_continent_name	The name of the continent of the source host. ** — Unknown na — North America as — Asia af — Africa eu — Europe sa — South America au — Australia an — Antarctica
src_country_id	Code for the country of the source host.
src_country_name	Name of the country of the source host.
src_ip_address_v6	Field deprecated in Version 5.2. Returns <code>null</code> for all queries.
src_ipaddr	A binary representation of the IPv4 or IPv6 address for the source of the connection.
src_port	Port number for the source of the connection.
ssl_issuer_common_name	Issuer Common Name from the SSL certificate. This is typically the host and domain name of the certificate issuer, but may contain other information.
ssl_issuer_country	The country of the SSL certificate issuer.
ssl_issuer_organization	The organization of the SSL certificate issuer.
ssl_issuer_organization_unit	The organizational unit of the SSL certificate issuer.
ssl_serial_number	The serial number of the SSL certificate, assigned by the issuing CA.
ssl_subject_common_name	Subject Common name from the SSL certificate This is typically the host and domain name of the certificate subject, but may contain other information.
ssl_subject_country	The country of the SSL certificate subject.
ssl_subject_organization	The organization of the SSL certificate subject.
ssl_subject_organization_unit	The organizational unit of the SSL certificate subject.

**Table 3-3** *fireamp\_event Fields (continued)*

Field	Description
threat_name	Name of the threat.
timestamp	The malware event generation timestamp.
url	The URL of the source of the connection.
user_id	An internal identification number for the user who last logged into the host that sent or received the file. This user is in the <b>discovered_users</b> table.
username	The name of the user who last logged into the host that sent or received the file.
web_application_id	The internal identification number for the web application, if applicable.
web_application_name	Name of the web application, if applicable.

## fireamp\_event Joins

The following table describes the joins you can perform on the **fireamp\_event** table.

**Table 3-4** *fireamp\_event Joins*

You can join this table on...	And...
dst_ipaddr or src_ipaddr	<a href="#">rna_host_ip_map.ipaddr</a> <a href="#">user_ipaddr_history.ipaddr</a>

## fireamp\_event Sample Query

The following query returns 25 malware events associated with the specified user, sorted by `timestamp` in ascending order.

```
SELECT event_id, timestamp, src_ipaddr, dst_ipaddr, username, cloud_name, event_type,
event_subtype, event_description, detection_name, detector_type, file_name,
parent_file_name
FROM fireamp_event
WHERE username="username" ORDER BY timestamp ASC
LIMIT 25;
```

## health\_event

The **health\_event** table contains information on health events generated by the Firepower System.

For more information, see the following sections:

- [health\\_event Fields, page 3-9](#)
- [health\\_event Joins, page 3-9](#)
- [health\\_event Sample Query, page 3-10](#)

## health\_event Fields

The following table describes the database fields you can access in the `health_event` table.

**Table 3-5** *health\_event Fields*

Field	Description
<code>description</code>	The description of the condition that caused the associated health module to generate the health event. For example, health events generated when a process was unable to execute are labeled <code>Unable to Execute</code> .
<code>domain_name</code>	Name of the domain in which the event was detected.
<code>domain_uuid</code>	UUID of the domain in which the event was detected. This is presented in binary.
<code>event_time_sec</code>	The UNIX timestamp of the date and time the Firepower Management Center generated the health event.
<code>id</code>	The internal identification number for the event.
<code>module_name</code>	The name of the health module that generated the event.
<code>sensor_name</code>	The text name of the managed device that generated the event record. This field is <code>null</code> when the health event refers to the reporting device itself, rather than to a connected one.
<code>sensor_uuid</code>	A unique identifier for the managed device, or zero if <code>sensor_name</code> is <code>null</code> .
<code>status</code>	The health monitor status that has been reported for the appliance identified in <code>sensor_uuid</code> . Values are: <ul style="list-style-type: none"> <li><code>red</code> — Critical status. Limits have been exceeded for at least one health module on the appliance and the problem has not been corrected.</li> <li><code>yellow</code> — Warning status. Limits have been exceeded for at least one health module on the appliance and the problem has not been corrected.</li> <li><code>green</code> — Normal status. All health modules on the appliance are running within the limits configured in the health policy applied to the appliance.</li> <li><code>recovered</code> — All health modules on the appliance are running within the limits configured in the health policy applied to the appliance, including modules that were in a Critical or Warning state.</li> <li><code>disabled</code> — Either the appliance is disabled or blocked, or is currently unreachable, or has no health policy applied to it.</li> <li><code>error</code> — At least one health monitoring module has failed on the appliance and has not been successfully re-run since the failure occurred</li> </ul>
<code>units</code>	The unit of measure for results obtained by the health test. For example, <code>% (of Disk Usage)</code> .
<code>value</code>	The number of units of the result obtained by the health test. For example, the <code>value</code> of <code>80%</code> is <code>80</code> .

## health\_event Joins

You cannot perform joins on the `health_event` table.

## health\_event Sample Query

The following query returns up to the 25 most recent health events logged within the defined time frame and limited to the Global \ Company B \ Edgedomain.

```
SELECT module_name, FROM_UNIXTIME(event_time_sec)
AS event_time, description, value, units, status, sensor_name
FROM health_event
WHERE event_time_sec AND domain_name= "Global \ Company B \ Edge"
BETWEEN UNIX_TIMESTAMP("2011-10-01 00:00:00")
AND UNIX_TIMESTAMP("2011-10-07 23:59:59")
ORDER BY event_time DESC
LIMIT 0, 25;
```



## Schema: Intrusion Tables

This chapter contains information on the schema and supported joins for intrusion events, the packets that triggered the events, and the associated rule messages.

For more information, see the sections listed in the following table.

**Table 4-1**      **Schema for Intrusion Tables**

See...	For the table that stores information on...	Version
<a href="#">intrusion_event</a> , page 4-1	Intrusion events, which include the date, time, type of exploit, and contextual information about the source and target of an attack.	4.10.x+
<a href="#">intrusion_event_packet</a> , page 4-7	The content of the packet or packets that triggered an intrusion event.	4.10.x+
<a href="#">rule_message</a> , page 4-8	Rule messages for intrusion events, including the associated generator ID (GID), signature ID (SID), and version data.	4.10.x+
<a href="#">rule_documentation</a> , page 4-9	Information on rules, including the attack scenarios, affected systems, and information on when the rule was created and by whom.	5.2+

### intrusion\_event

The `intrusion_event` table contains information on possible intrusions identified by the Firepower System. For each possible intrusion, the system generates an event and an associated record in the database, which contains the date, time, type of exploit, access control policy and rule, intrusion policy and rule, and other contextual information about the source and target of the attack.



**Tip**

For packet-based events, a copy of the packet or packets that triggered the event may also be available; see [intrusion\\_event\\_packet Sample Query](#), page 4-8.

For more information, see the following sections:

- [intrusion\\_event Fields](#), page 4-2
- [intrusion\\_event Joins](#), page 4-6
- [intrusion\\_event Sample Query](#), page 4-7

## intrusion\_event Fields

The following table describes the database fields you can access in the `intrusion_event` table.

**Table 4-2** *intrusion\_event Fields*

Field	Description
<code>access_control_policy_name</code>	The access control policy associated with the intrusion policy that generated the intrusion event. Note that the access control policy name and access control rule name combination is unique for a Firepower Management Center.
<code>access_control_policy_UUID</code>	The UUID of the access control policy associated with the intrusion policy that generated the intrusion event.
<code>access_control_rule_id</code>	The internal identification number of the access control rule associated with the intrusion policy that generated the intrusion event.
<code>access_control_rule_name</code>	The name of the access control rule associated with the intrusion policy that generated the intrusion event. Note that the access control rule name is unique within a policy but not across different policies.
<code>application_protocol_id</code>	The internal identification number of the application protocol.
<code>application_protocol_name</code>	One of: <ul style="list-style-type: none"> <li>the name of the application, if a positive identification can be made</li> <li><code>pending</code> if the system requires more data</li> <li>blank if there is no application information in the connection</li> </ul>
<code>blocked</code>	The value indicating what happened to the packet that triggered the intrusion event: <ul style="list-style-type: none"> <li>0 — Packet not dropped</li> <li>1 — Packet dropped (inline, switched, or routed deployment)</li> <li>2 — Packet that triggered the event would have been dropped, if the intrusion policy had been applied to a device configured in inline, switched, or routed deployment</li> </ul>
<code>client_application_id</code>	The internal identification number of the client application that was used in the intrusion event.
<code>client_application_name</code>	The client application, if available, that was used in the intrusion event. One of: <ul style="list-style-type: none"> <li>the name of the application, if a positive identification can be made</li> <li>a generic client name if the system detects a client application but cannot identify a specific one.</li> <li><code>null</code> if there is no application information in the connection</li> </ul>
<code>connection_sec</code>	UNIX timestamp (seconds since 00:00:00 01/01/1970) of the connection event associated with the intrusion event.
<code>counter</code>	Number that is incremented for each connection event in a given second, and is used to differentiate among multiple connection events that happen during the same second.
<code>detection_engine_name</code>	Field deprecated in Version 5.0. Returns <code>null</code> for all queries.
<code>detection_engine_uuid</code>	Field deprecated in Version 5.0. Returns <code>null</code> for all queries.

Table 4-2 intrusion\_event Fields (continued)

Field	Description
domain_name	Name of the domain specified for the event.
domain_uuid	UUID of the domain specified for the event. This is presented in binary.
dst_continent_name	The name of the continent of the destination host. ** — Unknown na — North America as — Asia af — Africa eu — Europe sa — South America au — Australia an — Antarctica
dst_country_id	Code for the country of the destination host.
dst_country_name	Name of the country of the destination host.
dst_ip_address	Field deprecated in Version 5.2. Due to backwards compatibility the value in this field is not set to null, but it is not reliable.
dst_ip_address_v6	Field deprecated in Version 5.2. Due to backwards compatibility the value in this field is not set to null, but it is not reliable.
dst_ipaddr	A binary representation of the IPv4 or IPv6 address for the destination host involved in the triggering event.
dst_port	Either: <ul style="list-style-type: none"> <li>the destination port number, if the event protocol type is TCP or UDP</li> <li>the ICMP code, if the event protocol type is ICMP</li> </ul>
dst_user_dept	The department of the destination user.
dst_user_email	The email address of the destination user.
dst_user_first_name	The first name of the destination user.
dst_user_id	The internal identification number for the destination user; that is, the user who last logged into the destination host before the intrusion event occurred.
dst_user_last_name	The last name of the destination user.
dst_user_last_seen_sec	The UNIX timestamp of the date and time when the system last reported a login for the destination user.
dst_user_last_updated_sec	The UNIX timestamp of the date and time when the system last updated the destination user's record.
dst_user_name	The user name for the destination user.
dst_user_phone	The telephone number for the destination user.
event_id	The internal identification number for the event. Uniquely identifies an event on the Firepower Management Center.
event_time_sec	The UNIX timestamp of the date and time when the event packet was captured.

Table 4-2 intrusion\_event Fields (continued)

Field	Description
event_time_usec	The microsecond increment of the event timestamp. If microsecond resolution is not available, this value is 0.
http_response_code	The response code given to the HTTP request in the event.
icmp_code	ICMP code if the event is ICMP traffic, or null if the event was not generated from ICMP traffic.
icmp_type	ICMP type if the event is ICMP traffic, or null if the event was not generated from ICMP traffic.
impact	The impact flag value of the event. Integer values are: <ul style="list-style-type: none"> <li>• 1 — Red (vulnerable)</li> <li>• 2 — Orange (potentially vulnerable)</li> <li>• 3 — Yellow (currently not vulnerable)</li> <li>• 4 — Blue (unknown target)</li> <li>• 5 — Gray (unknown impact)</li> </ul>
instance_id	Numerical ID of the Snort instance on the managed device that generated the event.
interface_egress_name	The name of the interface for the outbound traffic.
interface_ingress_name	The name of the interface for the inbound traffic.
intrusion_event_policy_uuid	A unique identifier for the intrusion policy that triggered the intrusion event.
intrusion_event_policy_name	The intrusion policy that generated the intrusion event.
ioc_count	Number of indications of compromise found in the event.
network_analysis_policy_name	The network analysis policy associated with the intrusion policy that generated the intrusion event.
network_analysis_policy_UUID	The UUID of the network analysis policy associated with the intrusion policy that generated the intrusion event.
priority	The priority for the rule classification associated with the event. Rule priority is set in the user interface.
protocol_name	The text name of the traffic protocol associated with the intrusion event.
protocol_num	The IANA number of the protocol as listed in <a href="http://www.iana.org/assignments/protocol-numbers">http://www.iana.org/assignments/protocol-numbers</a> .
reviewed	Whether the intrusion event has been marked as reviewed: <ul style="list-style-type: none"> <li>• 1 — Reviewed</li> <li>• 0 — Not reviewed</li> </ul>
rule_classification	The description of the rule classification associated with the intrusion event, which usually describes the attack detected by the rule that triggered the event. For example: A Network Trojan was Detected.
rule_classification_id	The identification number for the rule classification associated with the intrusion event.
rule_generator	The component that generated the intrusion event. The generator can be either a rules engine, decoder, or preprocessor.



Table 4-2 intrusion\_event Fields (continued)

Field	Description
rule_generator_id	The generator ID (GID) of the component named in <code>rule_generator</code> that generated the intrusion event.
rule_message	Explanatory text for the event. For rule-based intrusion events, the message is generated from the rule. For decoder- and preprocessor-based events, the message is hard coded.
rule_revision	The revision number of the rule associated with the intrusion event.
rule_signature_id	The signature ID (SID) for the intrusion event. Identifies the specific rule, decoder message, or preprocessor message that caused the event to be generated.
security_context	Description of the security context (virtual firewall) that the traffic passed through. Note that the system only populates this field for ASA FirePOWER devices in multi-context mode.
security_zone_egress_name	The egress security zone in the intrusion event that triggered the policy violation.
security_zone_ingress_name	The ingress security zone in the intrusion event that triggered the policy violation.
sensor_address	The IP address of the managed device that generated the event. Format is <i>ipv4_address, ipv6_address</i> .
sensor_name	The name of the managed device that generated the intrusion event.
sensor_uuid	A unique identifier for the managed device, or 0 if <code>sensor_name</code> is null.
src_continent_name	The name of the continent of the destination host. ** — Unknown na — North America as — Asia af — Africa eu — Europe sa — South America au — Australia an — Antarctica
src_country_id	Code for the country of the destination host.
src_country_name	Name of the country of the destination host.
src_ip_address	Field deprecated in Version 5.2. Due to backwards compatibility the value in this field is not set to null, but it is not reliable.
src_ip_address_v6	Field deprecated in Version 5.2. Due to backwards compatibility the value in this field is not set to null, but it is not reliable.
src_ipaddr	A binary representation of the IPv4 or IPv6 address for the source host involved in the triggering event.
src_port	Either: <ul style="list-style-type: none"> <li>the source port number, if the event protocol type is TCP or UDP</li> <li>the ICMP type, if the event protocol type is ICMP</li> </ul>
src_user_dept	The department of the source user.

Table 4-2 intrusion\_event Fields (continued)

Field	Description
src_user_email	The email address for the source user.
src_user_first_name	The first name of the source user.
src_user_id	The internal identification number for the source user; that is, the user who last logged into the source host before the intrusion event occurred.
src_user_last_name	The last name of the source user.
src_user_last_seen_sec	The UNIX timestamp of the date and time the system last reported a login for the source user.
src_user_last_updated_sec	The UNIX timestamp of the date and time the source user's record was last updated.
src_user_name	The user name for the source user.
src_user_phone	The source user's phone number.
vlan_id	The identification number of the innermost VLAN associated with the packet that triggered the intrusion event.
web_application_id	The internal identification number of the web application that was used in the intrusion event, if applicable.
web_application_name	The web application that was used in the intrusion event, if applicable. One of: <ul style="list-style-type: none"> <li>the name of the application, if a positive identification can be made</li> <li>web browsing if the system detects an application protocol of HTTP but cannot identify a specific web application</li> <li>blank if the connection has no HTTP traffic</li> </ul>

## intrusion\_event Joins

The following table describes the joins you can perform on the `intrusion_event` table.

Table 4-3 intrusion\_event Joins

You can join this table on...	And...
application_protocol_id or client_application_id or web_application_id	<pre>application_info.application_id application_host_map.application_id application_tag_map.application_id rna_host_service_info.application_protocol_id rna_host_client_app_payload.web_application_id rna_host_client_app_payload.client_application_id rna_host_client_app.client_application_id rna_host_client_app.application_protocol_id rna_host_service_payload.web_application_id</pre>
dst_ipaddr or src_ipaddr	<pre>rna_host_ip_map.ipaddr user_ipaddr_history.ipaddr</pre>

## intrusion\_event Sample Query

The following query returns the 25 most common unreviewed intrusion event results, sorted in descending order based on Count.

```
SELECT rule_message, priority, rule_classification, count(*) as Count
FROM intrusion_event
WHERE reviewed="0"
GROUP BY rule_message, priority, rule_classification
ORDER BY Count DESC LIMIT 0, 25;
```

## intrusion\_event\_packet

The `intrusion_event_packet` table contains information on content of the packet or packets that triggered an intrusion event. Keep in mind if you prohibited packet transfer from your managed devices to the Firepower Management Center, the `intrusion_event_packet` table contains no data.

For more information, see the following sections:

- [intrusion\\_event\\_packet Fields, page 4-7](#)
- [intrusion\\_event\\_packet Joins, page 4-8](#)
- [intrusion\\_event\\_packet Sample Query, page 4-8](#)

## intrusion\_event\_packet Fields

The following table describes the database fields you can access in the `intrusion_event_packet` table.

**Table 4-4** *intrusion\_event\_packet Fields*

Field	Description
<code>detection_engine_name</code>	Field deprecated in Version 5.0. Returns <code>null</code> for all queries.
<code>detection_engine_uuid</code>	Field deprecated in Version 5.0. Returns <code>null</code> for all queries.
<code>domain_name</code>	Name of the domain specified for the event.
<code>domain_uuid</code>	UUID of the domain specified for the event. This is presented in binary.
<code>event_id</code>	The identification number for the event. The ID is unique on a given managed device.
<code>linktype</code>	An internal key that indicates the format of the packet's outer layer; used by the managed device to correctly decode the packet. Only link type 1 is supported.
<code>netmap_num</code>	Netmap ID for the domain on which the event was detected.
<code>packet_data</code>	The contents of the packet that triggered the event.
<code>packet_time_sec</code>	The UNIX timestamp of the date and time the event packet was captured.
<code>packet_time_usec</code>	The microsecond increment of the event timestamp. If microsecond resolution is not available, this value is 0.
<code>sensor_address</code>	The IP address of the managed device that generated the event. Format is <code>ipv4_address</code> , <code>ipv6_address</code> .

**Table 4-4** intrusion\_event\_packet Fields (continued)

Field	Description
sensor_name	The name of the managed device that generated the intrusion event.
sensor_uuid	A unique identifier for the managed device, or 0 if sensor_name is null.

## intrusion\_event\_packet Joins

You cannot perform joins on the `intrusion_event_packet` table.

## intrusion\_event\_packet Sample Query

The following query returns the packet information for all packets matching the selected event ID.

```
SELECT event_id, packet_time_sec, sensor_address, packet_data
FROM intrusion_event_packet
WHERE event_id="1";
```

## rule\_message

The `rule_message` table is a list of the rule messages for intrusion rules. Each rule message is accompanied by its identifying information.

For more information, see the following sections:

- [rule\\_message Fields, page 4-8](#)
- [rule\\_message Joins, page 4-9](#)
- [rule\\_message Sample Query, page 4-9](#)

## rule\_message Fields

The following table describes the database fields you can access in the `rule_message` table.

**Table 4-5** rule\_message Fields

Field	Description
generator_id	The GUID of the component that triggers the rule.
message	The message associated with the rule that is triggered.
rev_uuid	A unique identifier for the rule revision.
revision	The revision number for the rule.
signature_id	The rule identification number as it is rendered in the appliance user interface.
uuid	A unique identifier for the rule.

## rule\_message Joins

You cannot perform joins on the `rule_message` table.

## rule\_message Sample Query

The following query returns the intrusion rule message for the intrusion rule that has a GID of 1 and a SID of 1200.

```
SELECT generator_id, signature_id, revision, message
FROM rule_message
WHERE generator_id="1"
AND signature_id="1200";
```

## rule\_documentation

The `rule_documentation` table contains information about rules used to generate alerts.

For more information, see the following sections:

- [rule\\_documentation Fields, page 4-9](#)
- [rule\\_documentation Joins, page 4-10](#)
- [rule\\_documentation Sample Query, page 4-10](#)

## rule\_documentation Fields

The following table describes the database fields you can access in the `rule_documentation` table.

**Table 4-6** *rule\_documentation Fields*

Field	Description
<code>additional_references</code>	Additional information and references.
<code>affected_systems</code>	Systems affected by the vulnerability.
<code>attack_scenarios</code>	Examples of possible attacks.
<code>contributors</code>	Contact information for the author of the rule and other relevant documentation.
<code>corrective_action</code>	Information regarding patches, upgrades, or other means to remove or mitigate the vulnerability.
<code>detailed_information</code>	Information regarding the underlying vulnerability, what the rule actually looks for, and what systems are affected.
<code>ease_of_attack</code>	Whether the attack is considered simple, medium, hard, or difficult, and whether or not it can be performed using a script.
<code>false_negatives</code>	Examples that may result in a false negative. The default value is None Known.
<code>false_positives</code>	Examples that may result in a false positive. The default value is None Known.
<code>impact</code>	How a compromise that uses this vulnerability may impact various systems.

**Table 4-6** *rule\_documentation Fields (continued)*

Field	Description
rule_revision	Rule revision number.
rule_signature_id	Rule identification number that corresponds with the event.
summary	Explanation of the threat or vulnerability.
updated	The UNIX timestamp of the date and time the rule was last updated.

## rule\_documentation Joins

You cannot perform joins on the `rule_documentation` table.

## rule\_documentation Sample Query

The following query returns the attack scenarios, corrective action, impact, and summary for the intrusion rule that has an ID of 1.

```
SELECT attack_scenarios, corrective_action, impact, summary
FROM rule_documentation
WHERE rule_signature_id="1";
```



## Schema: Statistics Tracking Tables

This chapter contains information on the schema and supported joins for application and URL statistics tracking tables. These tables collect statistical information on:

- access control and intrusion events by application and by user
- bandwidth usage and connection decisions by application and by user
- bandwidth usage and connection decisions by URL reputation (risk) and by URL business relevance

For links to details on each table, see the following table.

**Table 5-1**      **Application and URL Statistics Tables**

See	For the table that stores statistics on...	Version
<a href="#">app_ids_stats_current_timeframe, page 5-4</a>	Access control and intrusion protection activity, by application and a range of application attributes.	5.0+
<a href="#">app_stats_current_timeframe, page 5-6</a>	Traffic volume and system access control activity (connections allowed or denied), by application and a range of application attributes.	5.0+
<a href="#">compliance_events_stats_current_timeframe, page 5-8</a>	Compliance and allow list events	6.0+
<a href="#">dns_query_stats_current_timeframe, page 5-9</a>	DNS Queries	6.0+
<a href="#">geolocation_stats_current_timeframe, page 5-11</a>	Access control activity by location.	5.2+
<a href="#">ids_impact_stats_current_timeframe, page 5-13</a>	Statistics for intrusion events (connections blocked and would have dropped) by impact levels.	5.1.1+
<a href="#">interface_stats_current_timeframe, page 5-14</a>	Statistics for iinterfaces.	6.1+
<a href="#">ip_reputation_stats_current_timeframe, page 5-15</a>	Contain statistics on the bandwidth usage and connections associated with requests to IP addresses, URLs, and DNS domains in specified Security Intelligence categories.	6.0+
<a href="#">qos_rule_stats_current_timeframe, page 5-17</a>	Contain statistics on quality of service rules, where they are triggered, and how they are applied.	6.1+
<a href="#">session_stats_current_timeframe, page 5-18</a>	Contain statistics for all connections. Statistics can be extracted based on bytes, connection, sensor, and time.	5.2+
<a href="#">ssl_stats_current_timeframe, page 5-19</a>	Contain statistics for SSL connections. Statistics can be extracted based on bytes, connection, sensor, and time.	5.4+

Table 5-1 Application and URL Statistics Tables (continued)

See	For the table that stores statistics on...	Version
<a href="#">storage_stats_by_disposition_current_timeframe</a> , page 5-22	Contain statistics for files based on disposition. Statistics can be extracted based on bytes, disposition, sensor, and time.	5.3+
<a href="#">storage_stats_by_file_type_current_timeframe</a> , page 5-23	Contain statistics for files based on file type. Statistics can be extracted based on bytes, file type, sensor, and time.	5.3+
<a href="#">transmission_stats_by_file_type_current_timeframe</a> , page 5-24	Contain statistics for connections based on file type. Statistics can be extracted based on bytes, connection, file type, sensor, and time.	5.3+
<a href="#">tunnel_session_stats_current_timeframe</a>	Lookups on this table are not currently supported.	6.1+
<a href="#">url_category_stats_current_timeframe</a> , page 5-26	Traffic volume and system access control activity (connections allowed or denied), by the category of the requested website.	5.0+
<a href="#">url_reputation_stats_current_timeframe</a> , page 5-27	Traffic volume and system access control activity (connections allowed or denied), by the reputation of the requested website.	5.0+
<a href="#">user_ids_stats_current_timeframe</a> , page 5-28	Access control and intrusion protection activity, by user.	5.0+
<a href="#">user_stats_current_timeframe</a> , page 5-30	Traffic volume and system access control activity (connections allowed or denied), by user.	5.0+

## Understanding Statistics Tracking Tables

A table's name ends with `current_day`, `current_month`, or `current_year` to indicate the timeframe of its data. For example, the `app_ids_stats_current_timeframe` describes `app_stats_current_day`, `app_stats_current_month`, and `app_stats_current_year`. The `app_stats_current_year` table stores statistics for 360 days; the `current_month` table stores statistics for 30 days.

Each time the Firepower Management Center receives raw counts from managed devices in your network, it updates all three table types, but does so at successively coarser resolution. The `current_day` table has the finest resolution (15 seconds or 5 minutes, depending on the particular table); the `current_year` table has the coarsest resolution (24 hours). See [Storage Characteristics for Statistics Tracking Tables](#), page 5-2 for specific information.

## Storage Characteristics for Statistics Tracking Tables

See the following table for important details.



**Table 5-2 Storage Characteristics of Statistics Tables**

Table Type	Interval (Resolution)	Storage Lifespan
current_day	15 seconds for <code>app_ids_stats_current_timeframe</code> and <code>user_ids_stats_current_timeframe</code>	current interval plus all intervals in the preceding 24 hours
	5 minutes for <code>app_stats_current_timeframe</code> , <code>user_stats_current_timeframe</code> , <code>url_category_stats_current_timeframe</code> , and <code>url_reputation_stats_current_timeframe</code>	current interval plus all intervals in the preceding 24 hours
current_month	one hour	current hour plus the hours stretching back 30 days
current_year	24 hours	current day plus the preceding 360 days

A storage interval is defined by its start time. For example, the `current_month` table contains counts for the hour 10:00:00 - 10:59:59 as one record with a timestamp of 10:00:00. Note that a day begins at 00:00:00 and ends at 23:59:59. Interval start times are stored as UNIX timestamps (GMT).

## Specifying Time Intervals When Querying Statistics Tables

The effective time interval for a query is defined by both the table and the `time_start_sec` field in the query.

For example, if your SQL statement specifies `time_start_sec = 6:00:00`, the interval varies for each table type:

- for `current_day` tables: either 6:00:00 to 6:00:14 (for 15 second tables) or 6:00:00 to 6:04:59 (for 5 minute tables).
- for `current_month` tables: 6:00:00 to 6:59:59.
- for `current_year` tables: 0:00:00 to 23:59:59 on the following day.

The simplest way to retrieve data is to state the interval start time. For example, to retrieve from the `app_ids_stats_current_day` table, specify one of the following:

```
00:00:00
00:00:15
00:00:30
23:59:45
```

If your query contains a timestamp that is other than an interval start time, the system modifies the request as follows:

- rounds up the start time to the nearest interval time
- rounds down the end time to the nearest interval time

For example, the following query rounds up the start time:

```
SELECT application_id
FROM app_ids_stats_current_month
WHERE start_time_sec = UNIX_TIMESTAMP("2011-12-01 12:30:00");
```

and is the same as:

```
SELECT application_id
FROM app_ids_stats_current_month
WHERE start_time_sec = UNIX_TIMESTAMP("2011-12-01 01:00:00");
```

When querying a range of intervals, the starting time interval is rounded up, and the ending time interval is rounded down. For example:

```
SELECT application_id
FROM app_ids_stats_current_month
WHERE start_time_sec BETWEEN UNIX_TIMESTAMP("2011-12-10 12:59:00") and
UNIX_TIMESTAMP("2011-12-10 16:28:00");
```

is changed to:

```
SELECT application_id
FROM app_ids_stats_current_month
WHERE start_time_sec BETWEEN UNIX_TIMESTAMP("2011-12-10 13:00:00") and
UNIX_TIMESTAMP("2011-12-12 16:00:00");
```

If your query interval extends beyond a table's time frame, you can usually obtain the additional data from another table, although the data in the other table will have a coarser resolution. For example, to retrieve bandwidth usage for the past two days, you can get results for yesterday from the `current_day` table (at 5 minute resolution), but you can get statistics for the previous day only from `current_month` (in hour chunks) or `current_year` (in day chunks).

## app\_ids\_stats\_current\_timeframe

The `app_ids_stats_current_timeframe` tables contain statistics about application activity and intrusion events on your monitored network. Statistics can be extracted per detected application, per application type (application protocol, client application, or web application), and also per risk and business relevance of the application. The tables also track blocked connections due to intrusion policy violations and the estimated potential impact of an intrusion.

For an understanding of the `current_day`, `current_month`, and `current_year` statistics tables, see [Storage Characteristics for Statistics Tracking Tables, page 5-2](#).

For more information on the `app_ids_stats_current_timeframe` tables, see the following sections:

- [app\\_ids\\_stats\\_current\\_timeframe Fields, page 5-4](#)
- [app\\_ids\\_stats\\_current\\_timeframe Joins, page 5-5](#)
- [app\\_ids\\_stats\\_current\\_timeframe Sample Query, page 5-6](#)

## app\_ids\_stats\_current\_timeframe Fields

The following table describes the fields you can access in the `app_ids_stats_current_timeframe` tables. All tables of this type contain the same fields.

**Table 5-3** *app\_ids\_stats\_current\_timeframe Fields*

Field	Description
application_id	The internal identification number for the application.
application_name	The application name that appears in the user interface.
blocked	Number of connections blocked due to violation of an intrusion policy.

**Table 5-3** *app\_ids\_stats\_current\_timeframe Fields (continued)*

Field	Description
business_relevance	An index (from 1 to 5) of the application's relevance to business productivity where 1 is very low and 5 is very high.
business_relevance_description	A description of business relevance (very low, low, medium, high, very high).
domain_name	Name of the domain specified for the statistics.
domain_uuid	UUID of the domain specified for the statistics. This is presented in binary.
impact_level_1	The number of impact level 1 (vulnerable) intrusion events recorded for the application.
impact_level_2	The number of impact level 2 (potentially vulnerable) intrusion events.
impact_level_3	The number of impact level 3 (host currently not vulnerable) intrusion events.
impact_level_4	The number of impact level 4 (unknown target) intrusion events.
impact_level_5	The number of impact level 5 (unknown vulnerability) intrusion events.
is_client_application	A true-false flag that indicates if the detected application is a client application.
is_server_application	A true-false flag that indicates if the detected application is an application protocol.
is_web_application	A true-false flag that indicates if the detected application is a web application.
netmap_num	Netmap ID for the domain on which the statistics were collected.
risk	An index (from 1 to 5) of the application's estimated risk where 1 is very low risk and 5 is critical risk.
risk_description	A description of the estimated risk (very low, low, medium, high, critical).
sensor_address	The IP address of the managed device that generated the event. Format is <i>ipv4_address</i> , <i>ipv6_address</i> .
sensor_id	ID of the device that provided the event.
sensor_name	The name of the managed device that generated the intrusion event.
sensor_uuid	A unique identifier for the managed device, or 0 if <i>sensor_name</i> is null.
start_time_sec	The UNIX timestamp of the date and time the measurement interval starts. For detailed information, see <a href="#">Specifying Time Intervals When Querying Statistics Tables, page 5-3</a> .
would_have_dropped	Number of packets that would have been dropped if the intrusion policy had been configured to drop packets in an inline deployment.

## app\_ids\_stats\_current\_timeframe Joins

The following table describes the joins you can perform on the `app_ids_stats_current_timeframe` tables.

Table 5-4 app\_ids\_stats\_current\_timeframe Joins

You can join this table on...	And...
application_id	application_info.application_id application_host_map.application_id application_tag_map.application_id rna_host_service_info.application_protocol_id rna_host_client_app_payload.web_application_id rna_host_client_app_payload.client_application_id rna_host_client_app.client_application_id rna_host_client_app.application_protocol_id rna_host_service_payload.web_application_id

## app\_ids\_stats\_current\_timeframe Sample Query

The following query returns up to 25 application records from the `app_ids_stats_current_month` table. Each record contains the number of blocked connections and intrusion events for the application over the time interval.

```
SELECT from_unixtime(start_time_sec), sum(blocked)
FROM app_ids_stats_current_day
WHERE start_time_sec = unix_timestamp("2013-12-15");
```

## app\_stats\_current\_timeframe

The `app_stats_current_timeframe` tables contain statistics on bandwidth usage and access control actions (connection allowed or denied), by application and by device that monitored the traffic. You can filter these statistics by the business relevance, estimated risk, and type of the application.

For an understanding of the `current_day`, `current_month`, and `current_year` statistics tables, see [Storage Characteristics for Statistics Tracking Tables, page 5-2](#).

For more information on the `app_stats_current_timeframe` tables, see the following sections:

- [app\\_stats\\_current\\_timeframe Fields, page 5-6](#)
- [app\\_stats\\_current\\_timeframe Joins, page 5-7](#)
- [app\\_stats\\_current\\_timeframe Sample Query, page 5-8](#)

## app\_stats\_current\_timeframe Fields

The following table describes the fields you can access in the `app_stats_current_timeframe` tables.

Table 5-5 app\_stats\_current\_timeframe Fields

Field	Description
application_id	The internal identification number for the application.
application_name	The application name that appears in the user interface.

**Table 5-5** *app\_stats\_current\_timeframe Fields (continued)*

Field	Description
business_relevance	An index (from 1 to 5) of the application's relevance to business productivity where 1 is very low and 5 is very high.
business_relevance_description	A description of business relevance (very low, low, medium, high, very high).
bypass	Number of packets which are allowed to bypass due to delay.
bytes_in	The bytes of inbound traffic for the application during the specified interval.
bytes_out	The bytes of outbound traffic for the application during the specified interval.
connections_allowed	The number of connections allowed.
connections_denied	The number of connections denied due to violation of an access control policy.
domain_name	Name of the domain specified for the statistics.
domain_uuid	UUID of the domain specified for the statistics. This is presented in binary.
is_client_application	A true-false flag that indicates if the detected application is a client application.
is_server_application	A true-false flag that indicates if the detected application is an application protocol.
is_web_application	A true-false flag that indicates if the detected application is a web application.
netmap_num	Netmap ID for the domain on which the statistics were collected.
qos_dropped_bytes_in	Number of incoming bytes dropped due to QoS.
qos_dropped_bytes_out	Number of outgoing bytes dropped due to QoS.
risk	An index (from 1 to 5) of the application's estimated risk where 1 is very low risk and 5 is critical risk.
risk_description	A description of the estimated risk (very low, low, medium, high, critical).
sensor_address	The IP address of the managed device that monitored the traffic. Format is <i>ipv4_address, ipv6_address</i> .
sensor_id	The internal identification number of the managed device that detected the traffic.
sensor_name	The name of the managed device that detected the traffic.
sensor_uuid	A unique identifier for the managed device, or 0 if <i>sensor_name</i> is null.
start_time_sec	The UNIX timestamp of the start of the measurement interval. For information on specifying the start time, see <a href="#">Specifying Time Intervals When Querying Statistics Tables, page 5-3</a> .
would_bypass	Number of packets which were eligible for bypass but were inspected.

## app\_stats\_current\_timeframe Joins

The following table describes the joins you can perform on the `app_stats_current_timeframe` tables.

Table 5-6 *app\_stats\_current\_timeframe Joins*

You can join this table on...	And...
application_id	<pre> application_info.application_id application_host_map.application_id application_tag_map.application_id rna_host_service.application_protocol_id rna_host_client_app_payload.web_application_id rna_host_client_app_payload.client_application_id rna_host_client_app.client_application_id rna_host_client_app.application_protocol_id rna_host_service_payload.web_application_id </pre>

## app\_stats\_current\_timeframe Sample Query

The following query returns the inbound and outbound traffic load associated with applications that have low business relevance and high risk in the period of a day, for all managed devices connected to the Firepower Management Center.

```

SELECT start_time_sec, sum(bytes_in), sum(bytes_out)
FROM app_stats_current_day
WHERE business_relevance <= 2
AND risk >= 4 AND start_time_sec = unix_timestamp("2013-12-15");

```

## compliance\_events\_stats\_current\_timeframe

The `compliance_stats_events_current_timeframe` tables contain statistics on the number of compliance and allow list events during a timeframe.

For an understanding of the `current_day`, `current_month`, and `current_year` statistics tables, see [Storage Characteristics for Statistics Tracking Tables, page 5-2](#).

For more information on the `compliance_events_stats_current_timeframe` tables, see the following sections:

- [compliance\\_events\\_stats\\_current\\_timeframe Fields, page 5-8](#)
- [compliance\\_event\\_stats\\_current\\_timeframe Joins, page 5-9](#)
- [compliance\\_event\\_stats\\_current\\_timeframe Sample Query, page 5-9](#)

## compliance\_events\_stats\_current\_timeframe Fields

The following table describes the fields you can access in the `compliance_events_stats_current_timeframe` tables.

**Table 5-7** *compliance\_event\_stats\_current\_timeframe Fields*

Field	Description
domain_name	Name of the domain specified for the statistics.
domain_uuid	UUID of the domain specified for the statistics. This is presented in binary.
netmap_num	Netmap ID for the domain on which the statistics were collected.
priority_0_events	Number of priority 0 events detected during the timeframe.
priority_1_events	Number of priority 1 events detected during the timeframe.
priority_2_events	Number of priority 2 events detected during the timeframe.
priority_3_events	Number of priority 3 events detected during the timeframe.
priority_4_events	Number of priority 4 events detected during the timeframe.
priority_5_events	Number of priority 5 events detected during the timeframe.
rule	Allow List rule which triggered the events. If this rule is empty, the events are compliance events.
start_time_sec	The UNIX timestamp of the start of the measurement interval. For information on specifying the start time, see <a href="#">Specifying Time Intervals When Querying Statistics Tables, page 5-3</a> .

## compliance\_event\_stats\_current\_timeframe Joins

You cannot perform joins on the `compliance_event_stats_current_timeframe` table.

## compliance\_event\_stats\_current\_timeframe Sample Query

The following query returns the priority 0, 1, and 2 events, and the relevant allow list rule, ordered by domain, in the period of a day.

```
SELECT domain_name, priority_0_events, priority_1_events, priority_2_events, rule
FROM compliance_event_stats_current_day
ORDER BY domain_name DESC;
```

## dns\_query\_stats\_current\_timeframe

The `dns_query_stats_current_timeframe` tables contain statistics on DNS queries.

For an understanding of the `current_day`, `current_month`, and `current_year` statistics tables, see [Storage Characteristics for Statistics Tracking Tables, page 5-2](#).

For more information on the `dns_query_stats_current_timeframe` tables, see the following sections:

- [dns\\_query\\_stats\\_current\\_timeframe Fields, page 5-10](#)
- [dns\\_query\\_stats\\_current\\_timeframe Joins, page 5-10](#)
- [dns\\_query\\_stats\\_current\\_timeframe Sample Query, page 5-10](#)

## dns\_query\_stats\_current\_timeframe Fields

The following table describes the fields you can access in the `dns_query_stats_current_timeframe` tables.

**Table 5-8** *dns\_query\_stats\_current\_timeframe Fields*

Field	Description
<code>bytes_in</code>	The bytes of inbound traffic during the specified interval.
<code>bytes_out</code>	The bytes of outbound traffic during the specified interval.
<code>connections_allowed</code>	The number of connections allowed for the specified DNS query.
<code>connections_denied</code>	The number of connections denied for the specified DNS query due to violation of an access control policy.
<code>dns_record_type</code>	The type of DNS lookup used in the DNS query.
<code>domain_name</code>	Name of the domain specified for the statistics.
<code>domain_uuid</code>	UUID of the domain specified for the statistics. This is presented in binary.
<code>sensor_address</code>	The IP address of the managed device that monitored the traffic. Format is <i>ipv4_address, ipv6_address</i> .
<code>sensor_id</code>	The internal identification number of the managed device that detected the traffic.
<code>sensor_name</code>	The name of the managed device that detected the traffic.
<code>sensor_uuid</code>	A unique identifier for the managed device, or 0 if <code>sensor_name</code> is null.
<code>start_time_sec</code>	The UNIX timestamp of the start of the measurement interval. For information on specifying the start time, see <a href="#">Specifying Time Intervals When Querying Statistics Tables</a> , page 5-3.

## dns\_query\_stats\_current\_timeframe Joins

You cannot perform joins on the `dns_query_stats_current_timeframe` table.

## dns\_query\_stats\_current\_timeframe Sample Query

The following query returns the number of connections associated with dns record types for each sensor in the period of a day, sorted by sensor name and limited to the Global \ Company B \ Edge domain.

```
SELECT sensor_name, dns_record_type, sum(connections_allowed), sum(connections_denied)
FROM dns_query_stats_current_day
ORDER BY sensor_name DESC
WHERE domain_name= "Global \ Company B \ Edge";
```



## geolocation\_stats\_current\_timeframe

The `geolocation_stats_timeframe` tables contain statistics regarding intrusion events based on location levels. Statistics can be extracted based on impact level, device, and how the packets are handled.

For an understanding of the `current_day`, `current_month`, and `current_year` statistics tables, see [Storage Characteristics for Statistics Tracking Tables, page 5-2](#).

For more information on the `geolocation_stats_current_timeframe` tables, see the following sections:

- [geolocation\\_stats\\_current\\_timeframe Fields, page 5-11](#)
- [geolocation\\_stats\\_current\\_timeframe Joins, page 5-12](#)
- [geolocation\\_stats\\_current\\_timeframe Sample Query, page 5-12](#)

## geolocation\_stats\_current\_timeframe Fields

The following table describes the fields you can access in the `geolocation_stats_current_timeframe` tables. All tables of this type contain the same fields.

**Table 5-9** *geolocation\_stats\_current\_timeframe Fields*

Field	Description
<code>bytes_from</code>	The total number of bytes transmitted by the session responder.
<code>bytes_to</code>	Total number of bytes transmitted by the session initiator.
<code>destination_continent</code>	The name of the continent of the destination host. ** — Unknown na — North America as — Asia af — Africa eu — Europe sa — South America au — Australia an — Antarctica
<code>destination_country</code>	Code for the country of the destination host.
<code>domain_name</code>	Name of the domain specified for the statistics.
<code>domain_uuid</code>	UUID of the domain specified for the statistics. This is presented in binary.
<code>flows_allowed</code>	The number of flows allowed.
<code>flows_denied</code>	The number of flows denied due to violation of an access control policy.
<code>netmap_num</code>	Netmap ID for the domain on which the statistics were collected.
<code>sensor_address</code>	The IP address of the managed device that generated the event. Format is <i>ipv4_address, ipv6_address</i> .
<code>sensor_id</code>	ID of the device that provided the event.
<code>sensor_name</code>	The name of the managed device that generated the intrusion event.
<code>sensor_uuid</code>	A unique identifier for the managed device, or 0 if <code>sensor_name</code> is null.

Table 5-9 geolocation\_stats\_current\_timeframe Fields (continued)

Field	Description
source_continent	The name of the continent of the source host. ** — Unknown na — North America as — Asia af — Africa eu — Europe sa — South America au — Australia an — Antarctica
source_country	Code for the country of the source host.
start_time_sec	The UNIX timestamp of the date and time the measurement interval starts. For detailed information, see <a href="#">Specifying Time Intervals When Querying Statistics Tables, page 5-3</a> .
xff_continent	The name of the continent of the original source host when there is a proxy in the connection. ** — Unknown na — North America as — Asia af — Africa eu — Europe sa — South America au — Australia an — Antarctica
xff_country	Code for the country of the original source host when there is a proxy in the connection.

## geolocation\_stats\_current\_timeframe Joins

You cannot perform joins on the `geolocation_stats_current_timeframe` tables.

## geolocation\_stats\_current\_timeframe Sample Query

The following query returns source country and sensor name for the first 25 connection events from Asia during the current day, limited to the Global \ Company B \ Edge domain.

```
SELECT sensor_name, source_continent
FROM geolocation_stats_current_year
WHERE destination_continent='as' and domain_name= "Global \ Company B \ Edge"
LIMIT 20;
```

## ids\_impact\_stats\_current\_timeframe

The `ids_impact_stats_timeframe` tables contain statistics regarding intrusion events based on impact levels. Statistics can be extracted based on impact level, device, and how the packets are handled.

For an understanding of the `current_day`, `current_month`, and `current_year` statistics tables, see [Storage Characteristics for Statistics Tracking Tables, page 5-2](#).

For more information on the `ids_impact_stats_current_timeframe` tables, see the following sections:

- [ids\\_impact\\_stats\\_current\\_timeframe Fields, page 5-13](#)
- [ids\\_impact\\_stats\\_current\\_timeframe Joins, page 5-14](#)
- [ids\\_impact\\_stats\\_current\\_timeframe Sample Query, page 5-14](#)

## ids\_impact\_stats\_current\_timeframe Fields

The following table describes the fields you can access in the `ids_impact_stats_current_timeframe` tables. All tables of this type contain the same fields.

**Table 5-10** *ids\_impact\_stats\_current\_timeframe Fields*

Field	Description
<code>blocked</code>	Number of connections blocked due to violation of an intrusion policy.
<code>domain_name</code>	Name of the domain specified for the statistics.
<code>domain_uuid</code>	UUID of the domain specified for the statistics. This is presented in binary.
<code>impact_level_1</code>	The number of impact level 1 (vulnerable) intrusion events recorded for the application.
<code>impact_level_2</code>	The number of impact level 2 (potentially vulnerable) intrusion events.
<code>impact_level_3</code>	The number of impact level 3 (host currently not vulnerable) intrusion events.
<code>impact_level_4</code>	The number of impact level 4 (unknown target) intrusion events.
<code>impact_level_5</code>	The number of impact level 5 (unknown vulnerability) intrusion events.
<code>netmap_num</code>	Netmap ID for the domain on which the statistics were collected.
<code>sensor_address</code>	The IP address of the managed device that generated the event. Format is <i>ipv4_address</i> , <i>ipv6_address</i> .
<code>sensor_id</code>	ID of the device that provided the event.
<code>sensor_name</code>	The name of the managed device that generated the intrusion event.
<code>sensor_uuid</code>	A unique identifier for the managed device, or 0 if <code>sensor_name</code> is null.
<code>start_time_sec</code>	The UNIX timestamp of the date and time the measurement interval starts. For detailed information, see <a href="#">Specifying Time Intervals When Querying Statistics Tables, page 5-3</a> .
<code>would_have_dropped</code>	Number of packets that would have been dropped if the intrusion policy had been set to drop packets in an inline deployment.

## ids\_impact\_stats\_current\_timeframe Joins

You cannot perform joins on the `ids_impact_stats_current_timeframe` tables.

## ids\_impact\_stats\_current\_timeframe Sample Query

The following query returns the first 25 `blocked` and `would_have_dropped` events during the current day, limited to the `domain_name= "Global \ Company B \ Edge"` domain.

```
SELECT blocked, would_have_dropped
FROM ids_impact_stats_current_year
WHERE domain_name= "Global \ Company B \ Edge"
LIMIT 25;
```

## interface\_stats\_current\_timeframe

The `interface_stats_current_timeframe` tables contain statistics regarding specific interfaces.

For an understanding of the `current_day`, `current_month`, and `current_year` statistics tables, see [Storage Characteristics for Statistics Tracking Tables, page 5-2](#).

For more information on the `interface_stats_current_timeframe` tables, see the following sections:

- [interface\\_stats\\_current\\_timeframe Fields, page 5-14](#)
- [interface\\_stats\\_current\\_timeframe Joins, page 5-15](#)
- [interface\\_stats\\_current\\_timeframe Sample Query, page 5-15](#)

## interface\_stats\_current\_timeframe Fields

The following table describes the fields you can access in the `interface_stats_current_timeframe` tables. All tables of this type contain the same fields.

**Table 5-11** *interface\_stats\_current\_timeframe Fields*

Field	Description
<code>connections_allowed</code>	Number of connections allowed.
<code>connections_denied</code>	Number of connections blocked due to violation of an intrusion policy.
<code>domain_name</code>	Name of the domain specified for the statistics.
<code>domain_uuid</code>	UUID of the domain specified for the statistics. This is presented in binary.
<code>egress_bytes</code>	Number of egress bytes.
<code>ingress_bytes</code>	Number of ingress bytes.
<code>interface_name</code>	Name of the interface.
<code>interface_uuid</code>	UUID of the interface.
<code>netmap_num</code>	Netmap ID for the domain on which the statistics were collected.
<code>qos_dropped_egress_bytes</code>	Number of egress bytes dropped due to QoS.
<code>qos_dropped_ingress_bytes</code>	Number of ingress bytes dropped due to QoS.

**Table 5-11** *interface\_stats\_current\_timeframe Fields (continued)*

Field	Description
sensor_address	The IP address of the managed device that generated the event. Format is <i>ipv4_address</i> , <i>ipv6_address</i> .
sensor_id	ID of the device that provided the event.
sensor_name	The name of the managed device that generated the intrusion event.
sensor_uuid	A unique identifier for the managed device, or 0 if <i>sensor_name</i> is null.
start_time_sec	The UNIX timestamp of the date and time the measurement interval starts. For detailed information, see <a href="#">Specifying Time Intervals When Querying Statistics Tables</a> , page 5-3.

## interface\_stats\_current\_timeframe Joins

You cannot perform joins on the `interface_stats_current_timeframe` tables.

## interface\_stats\_current\_timeframe Sample Query

The following query returns the first 25 `blocked` and `would_have_dropped` events during the current day, limited to the `domain_name= "Global \ Company B \ Edge"` domain.

```
SELECT blocked, would_have_dropped
FROM ids_impact_stats_current_year
WHERE domain_name= "Global \ Company B \ Edge"
LIMIT 25;
```

## ip\_reputation\_stats\_current\_timeframe

The `ip_category_stats_current_timeframe` tables contain statistics on the bandwidth usage and connections associated with requests to IP addresses, URLs, and DNS domains in specified Security Intelligence categories. You can also constrain queries on the managed device that monitored the traffic.

For an understanding of the `current_day`, `current_month`, and `current_year` statistics tables, see [Storage Characteristics for Statistics Tracking Tables](#), page 5-2.

For more information on the `ids_impact_stats_current_timeframe` tables, see the following sections:

- [ip\\_reputation\\_stats\\_current\\_timeframe Fields](#), page 5-15
- [ip\\_reputation\\_stats\\_current\\_timeframe Joins](#), page 5-16
- [ip\\_reputation\\_stats\\_current\\_timeframe Sample Query](#), page 5-16

## ip\_reputation\_stats\_current\_timeframe Fields

The following table describes the fields you can access in the `ip_reputation_stats_current_timeframe` tables. All tables of this type contain the same fields.

**Table 5-12** *ip\_reputation\_stats\_current\_timeframe Fields*

Field	Description
bytes_in	The bytes of inbound traffic during the specified interval.
bytes_out	The bytes of outbound traffic during the specified interval.
connections_allowed	The number of connections allowed for the specified IP.
connections_denied	The number of connections denied for the specified IP due to violation of an access control policy.
domain_name	Name of the domain specified for the statistics.
domain_uuid	UUID of the domain specified for the statistics. This is presented in binary.
name	the Security Intelligence name, for example, "URL Malware"
sensor_address	The IP address of the managed device that generated the event. Format is <i>ipv4_address, ipv6_address</i> .
sensor_id	ID of the device that provided the event.
sensor_name	The name of the managed device that generated the intrusion event.
sensor_uuid	A unique identifier for the managed device, or 0 if <i>sensor_name</i> is null.
start_time_sec	The UNIX timestamp of the date and time the measurement interval starts. For detailed information, see <a href="#">Specifying Time Intervals When Querying Statistics Tables, page 5-3</a> .
type	Type of information in the entry. Possible values include: 0 - network security intelligence statistics. 1 - DNS security intelligence statistics. 2 - URL security intelligence statistics.

## ip\_reputation\_stats\_current\_timeframe Joins

You cannot perform joins on the `ip_reputation_stats_current_timeframe` tables.

## ip\_reputation\_stats\_current\_timeframe Sample Query

The following query returns the first 25 connections showing the number of bytes in and out, number of connections, type of connection, and sensor, in order by domain during the current day, limited to the Global \ Company B \ Edge domain.

```
SELECT uuid_btoa(domain_uuid), domain_name, type, name, bytes_in, bytes_out,
connections_allowed, connections_denied, sensor_name
FROM ip_reputation_stats_current_day
ORDER BY domain_name DESC
WHERE domain_name= "Global \ Company B \ Edge";
LIMIT 25;
```

## qos\_rule\_stats\_current\_timeframe

The `qos_rule_stats_current_timeframe` tables contain statistics on quality of service rules, where they are triggered, and how they are applied.

For an understanding of the `current_day`, `current_month`, and `current_year` statistics tables, see [Storage Characteristics for Statistics Tracking Tables, page 5-2](#).

For more information on the `qos_rules_stats_current_timeframe` tables, see the following sections:

- [qos\\_rule\\_stats\\_current\\_timeframe Fields, page 5-17](#)
- [qos\\_rule\\_stats\\_current\\_timeframe Joins, page 5-17](#)
- [qos\\_rule\\_stats\\_current\\_timeframe Sample Query, page 5-18](#)

## qos\_rule\_stats\_current\_timeframe Fields

The following table describes the fields you can access in the `qos_rule_stats_current_timeframe` tables. All tables of this type contain the same fields.

**Table 5-13** `qos_rule_stats_current_timeframe` Fields

Field	Description
<code>deploy_revision</code>	Revision UUID of the QoS policy.
<code>domain_name</code>	Name of the domain specified for the statistics.
<code>domain_uuid</code>	UUID of the domain specified for the statistics. This is presented in binary.
<code>netmap_num</code>	Netmap ID for the domain on which the statistics were collected.
<code>qos_dropped_bytes_in</code>	Number of incoming bytes dropped due to QoS.
<code>qos_dropped_bytes_out</code>	Number of outgoing bytes dropped due to QoS.
<code>qos_policy_id</code>	UUID of the QoS policy.
<code>qos_policy_name</code>	Name of the QoS policy.
<code>qos_rule_id</code>	Integer ID of the QoS rule.
<code>qos_rule_name</code>	Name of the QoS rule.
<code>sensor_address</code>	The IP address of the managed device that generated the event. Format is <i>ipv4_address</i> , <i>ipv6_address</i> .
<code>sensor_id</code>	ID of the device that provided the event.
<code>sensor_name</code>	The name of the managed device that generated the event.
<code>sensor_uuid</code>	A unique identifier for the managed device, or 0 if <code>sensor_name</code> is null.
<code>start_time_sec</code>	The UNIX timestamp of the date and time the measurement interval starts. For detailed information, see <a href="#">Specifying Time Intervals When Querying Statistics Tables, page 5-3</a> .

## qos\_rule\_stats\_current\_timeframe Joins

You cannot perform joins on the `qos_rule_stats_current_timeframe` tables.

## qos\_rule\_stats\_current\_timeframe Sample Query

The following query returns the number of dropped bytes in and out due to QOS rules, the QOS policy name, QOS rule name, and the sensor name, in descending order by sensor name during the current day, limited to the Global \ Company B \ Edge domain.

```
SELECT qos_dropped_bytes_in, qos_dropped_bytes_out, qos_policy_name, qos_rule_name,
       sensor_name
FROM qos_rule_stats_current_day
ORDER BY sensor_name DESC
WHERE domain_name= "Global \ Company B \ Edge";
```

## session\_stats\_current\_timeframe

The `session_stats_timeframe` tables contain statistics for all connections. Statistics can be extracted based on bytes, connection, sensor, and time.

For an understanding of the `current_day`, `current_month`, and `current_year` statistics tables, see [Storage Characteristics for Statistics Tracking Tables, page 5-2](#).

For more information on the `session_stats_current_timeframe` tables, see the following sections:

- [session\\_stats\\_current\\_timeframe Fields, page 5-18](#)
- [session\\_stats\\_current\\_timeframe Joins, page 5-19](#)
- [session\\_stats\\_current\\_timeframe Sample Query, page 5-19](#)

## session\_stats\_current\_timeframe Fields

The following table describes the fields you can access in the `session_stats_current_timeframe` tables. All tables of this type contain the same fields.

**Table 5-14** *session\_stats\_current\_timeframe Fields*

Field	Description
bytes_in	The bytes of inbound traffic during the specified interval.
bytes_out	The bytes of outbound traffic during the specified interval.
connections_allowed	The number of connections allowed for the specified URL category.
connections_denied	The number of connections denied for the specified URL category due to violation of an access control policy.
domain_name	Name of the domain specified for the statistics.
domain_uuid	UUID of the domain specified for the statistics. This is presented in binary.
id	This field is not used and will always return 0.
sensor_address	The IP address of the managed device that generated the event. Format is <i>ipv4_address, ipv6_address</i> .



Table 5-14 *session\_stats\_current\_timeframe* Fields (continued)

Field	Description
sensor_id	ID of the device that provided the event.
sensor_name	The name of the managed device that generated the intrusion event.
sensor_uuid	A unique identifier for the managed device, or 0 if sensor_name is null.
start_time_sec	The UNIX timestamp of the date and time the measurement interval starts. For detailed information, see <a href="#">Specifying Time Intervals When Querying Statistics Tables</a> , page 5-3.

## session\_stats\_current\_timeframe Joins

You cannot perform joins on the `session_stats_current_timeframe` tables.

## session\_stats\_current\_timeframe Sample Query

The following query returns the number of denied and allowed connections for each sensor, in descending order by `sensor_name` during the current day, limited to the Global \ Company B \ Edge domain.

```
SELECT sensor_name, sensor_id, connections_denied, connections_allowed
FROM session_stats_current_day
ORDER BY sensor_name DESC
WHERE domain_name= "Global \ Company B \ Edge";
```

## ssl\_stats\_current\_timeframe

The `ssl_stats_current_timeframe` tables contain statistics for SSL connections. Statistics can be extracted based on bytes, connection, sensor, and time.

For an understanding of the `current_day`, `current_month`, and `current_year` statistics tables, see [Storage Characteristics for Statistics Tracking Tables](#), page 5-2.

For more information on the `ssl_stats_current_timeframe` tables, see the following sections:

- [ssl\\_stats\\_current\\_timeframe Fields](#), page 5-19
- [ssl\\_stats\\_current\\_timeframe Joins](#), page 5-21
- [ssl\\_stats\\_current\\_timeframe Sample Query](#), page 5-21

## ssl\_stats\_current\_timeframe Fields

The following table describes the fields you can access in the `ssl_stats_current_timeframe` tables. All tables of this type contain the same fields.

**Table 5-15** *ssl\_stats\_current\_timeframe Fields*

Field	Description
block	Number of SSL sessions dropped with no reset.
block_with_reset	Number of SSL sessions dropped with reset.
cached_session	Number of SSL sessions found in the session cache.
cannot_determine_verdict	Number of handshake errors that occurred while evaluating SSL rules.
cert_expired	Number of SSL sessions in which the certificate was expired.
cert_invalid_issuer	Number of SSL sessions in which the certificate issuer was either not valid or not found in the Trusted CA list.
cert_invalid_signature	Number of SSL sessions in which the certificate had an invalid signature.
cert_not_checked	Number of SSL sessions in which the certificate was not checked.
cert_not_yet_valid	Number of SSL sessions in which the certificate was not yet valid.
cert_revoked	Number of SSL sessions in which the certificate had been revoked.
cert_self_signed	Number of SSL sessions in which the certificate was self-signed.
cert_unknown	Number of SSL sessions in which the certificate status was unknown.
cert_valid	Number of SSL sessions in which the certificate was valid.
cert_validation_cache_hit	Number of times a certificate was found in the validation cache.
cert_validation_cache_miss	Number of times a certificate was not found in the validation cache.
decrypt_resign_self_signed	Number of times an SSL session using a self-signed certificate was decrypted using the decrypt-resign method.
decrypt_resign_self_signed_replace_key_only	Number of times an SSL session using a self-signed certificate was decrypted using the decrypt-resign with replace key only method.
decrypt_resign_signed_cert	Number of times an SSL session using a signed certificate was decrypted using the decrypt-resign method.
decrypt_with_known_key	Number of times an SSL session was decrypted using the known-key method.
decryption_error	Number of SSL sessions which suffered an error during decryption.
domain_name	Name of the domain specified for the statistics.
domain_uuid	UUID of the domain specified for the statistics. This is presented in binary.
do_not_decrypt	Number of times an SSL session was found but not decrypted.
handshake_error	Number of handshake errors that occurred prior to evaluating SSL rules.
netmap_num	Netmap ID for the domain on which the statistics were collected.
orig_cert_cache_hit	Number of times an original certificate was found in the cache.
orig_cert_cache_miss	Number of times an original certificate was not found in the cache.
resigned_cert_cache_hit	Number of times a resigned certificate was found in the cache.
resigned_cert_cache_miss	Number of times a resigned certificate was not found in the cache.
sensor_address	The IP address of the managed device that generated the event. Format is <i>ipv4_address, ipv6_address</i> .
sensor_id	ID of the device that provided the event.

**Table 5-15** *ssl\_stats\_current\_timeframe Fields (continued)*

Field	Description
sensor_name	The name of the managed device that generated the event.
sensor_uuid	A unique identifier for the managed device, or 0 if sensor_name is null.
session_cache_hit	Number of times an SSL session ID or ticket was found in the cache.
session_cache_miss	Number of times an SSL session ID or ticket was not found in the cache.
session_incorrectly_identified_as_ssl	Number of sessions that were incorrectly identified as using SSL.
ssl_compression	Number of sessions that used SSL compression.
ssl_sessions_decrypted	Number of SSL sessions that were successfully decrypted.
ssl_sessions_not_decrypted	Number of SSL sessions that were not successfully decrypted.
ssl_sessions_reused_by_id	Number of times an SSL session reused an ID.
ssl_sessions_reused_by_ticket	Number of times an SSL session reused a ticket.
ssl_sessions_with_errors	Number of SSL sessions which have errors.
ssl_v20	Number of SSL sessions using SSL version 2.0
ssl_v30	Number of SSL sessions using SSL version 3.0
ssl_version_unknown	Number of SSL sessions using an unknown SSL version.
start_time_sec	The UNIX timestamp of the date and time the measurement interval starts. For detailed information, see <a href="#">Specifying Time Intervals When Querying Statistics Tables, page 5-3</a> .
tls_v10	Number of SSL sessions using TLS version 1.0
tls_v11	Number of SSL sessions using TLS version 1.1
tls_v12	Number of SSL sessions using TLS version 1.2
total_ssl_sessions	Total number of SSL sessions detected.
uncached_session	Number of times that a cache miss on an ID or ticket prevented decryption.
undecryptable_in_passive_mode	Number of SSL sessions that could not be decrypted because the device is in passive mode.
unknown_cipher_suite	Number of SSL sessions using an unknown cipher suite.
unsupported_cipher_suite	Number of SSL sessions using a cipher suite which is known but not supported.

## ssl\_stats\_current\_timeframe Joins

You cannot perform joins on the `ssl_stats_current_timeframe` tables.

## ssl\_stats\_current\_timeframe Sample Query

The following query returns the number of SSL sessions, sessions that were decrypted, sessions that were not decrypted, and sessions which cannot be decrypted in passive mode for each sensor, in descending order by `sensor_name` during the current day, limited to the `Global \ Company B \ Edge` domain.

```
SELECT sensor_name, total_ssl_sessions, ssl_sessions_decrypted,
```

## storage\_stats\_by\_disposition\_current\_timeframe

```
ssl_sessions_not_decrypted, undecryptable_in_passive_mode
FROM ssl_stats_current_day
WHERE domain_name= "Global \ Company B \ Edge"
ORDER BY sensor_name DESC;
```

## storage\_stats\_by\_disposition\_current\_timeframe

The `storage_stats_by_disposition_timeframe` tables contain statistics for stores files. Statistics can be extracted based on bytes, connection, sensor, and time.

For an understanding of the `current_day`, `current_month`, and `current_year` statistics tables, see [Storage Characteristics for Statistics Tracking Tables, page 5-2](#).

For more information on the `storage_stats_by_disposition_timeframe` tables, see the following sections:

- [storage\\_stats\\_by\\_disposition\\_current\\_timeframe Fields, page 5-22](#)
- [storage\\_stats\\_by\\_disposition\\_current\\_timeframe Joins, page 5-23](#)
- [storage\\_stats\\_by\\_disposition\\_current\\_timeframe Sample Query, page 5-23](#)

## storage\_stats\_by\_disposition\_current\_timeframe Fields

The following table describes the fields you can access in the `storage_stats_by_disposition_current_timeframe` tables. All tables of this type contain the same fields.

**Table 5-16** *storage\_stats\_by\_disposition\_current\_timeframe Fields*

Field	Description
bytes_written	The size of the file, in bytes.
disposition	The malware status of the file. Possible values include: <ul style="list-style-type: none"> <li>• CLEAN — The file is clean and does not contain malware.</li> <li>• UNKNOWN — It is unknown whether the file contains malware.</li> <li>• MALWARE — The file contains malware.</li> <li>• UNAVAILABLE — The software was unable to send a request to the Cisco cloud for a disposition, or the Cisco cloud services did not respond to the request.</li> <li>• CUSTOM SIGNATURE — The file matches a user-defined hash, and is treated in a fashion designated by the user.</li> </ul>
domain_name	Name of the domain specified for the statistics.
domain_uuid	UUID of the domain specified for the statistics. This is presented in binary.
netmap_num	Netmap ID for the domain on which the statistics were collected.
number_dropped	Number of files of this disposition dropped.
number_stored	Number of files of this disposition stored.
sensor	ID of the device that detected the file.

Table 5-16 storage\_stats\_by\_disposition\_current\_timeframe Fields (continued)

Field	Description
sensor_address	The IP address of the managed device that generated the event. Format is <i>ipv4_address, ipv6_address</i> .
sensor_name	The name of the managed device that generated the intrusion event.
sensor_uuid	A unique identifier for the managed device, or 0 if <i>sensor_name</i> is null.
start_time_sec	The UNIX timestamp of the date and time the measurement interval starts. For detailed information, see <a href="#">Specifying Time Intervals When Querying Statistics Tables</a> , page 5-3.

## storage\_stats\_by\_disposition\_current\_timeframe Joins

You cannot perform joins on the `session_stats_current_timeframe` tables.

## storage\_stats\_by\_disposition\_current\_timeframe Sample Query

The following query returns the number of dropped and stored files for each sensor, in descending order by *sensor\_name* during the current day, limited to the Global \ Company B \ Edge domain .

```
SELECT sensor_name, number_dropped, number_stored
FROM storage_stats_by_disposition_current_day
WHERE domain_name= "Global \ Company B \ Edge"
ORDER BY sensor_name DESC;
```

## storage\_stats\_by\_file\_type\_current\_timeframe

The `storage_stats_by_file_type_current_timeframe` tables contain statistics for stored files by file type. Statistics can be extracted based on bytes, connection, sensor, and time.

For an understanding of the `current_day`, `current_month`, and `current_year` statistics tables, see [Storage Characteristics for Statistics Tracking Tables](#), page 5-2.

For more information on the `storage_stats_by_file_type_current_timeframe` tables, see the following sections:

- [storage\\_stats\\_by\\_file\\_type\\_current\\_timeframe Fields](#), page 5-23
- [storage\\_stats\\_by\\_file\\_type\\_current\\_timeframe Joins](#), page 5-24
- [storage\\_stats\\_by\\_file\\_type\\_current\\_timeframe Sample Query](#), page 5-24

## storage\_stats\_by\_file\_type\_current\_timeframe Fields

The following table describes the fields you can access in the `storage_stats_by_file_type_current_timeframe` tables. All tables of this type contain the same fields.

Table 5-17 storage\_stats\_by\_file\_type\_current\_timeframe Fields

Field	Description
bytes_written	The size of the file, in bytes.
domain_name	Name of the domain specified for the statistics.
domain_uuid	UUID of the domain specified for the statistics. This is presented in binary.
file_type	The file type of the detected or quarantined file.
file_type_id	ID number that maps to the file type.
netmap_num	Netmap ID for the domain on which the statistics were collected.
number_dropped	Number of files of this type dropped.
number_stored	Number of files of this type stored.
sensor	ID of the device that detected the file.
sensor_address	The IP address of the managed device that generated the event. Format is <i>ipv4_address</i> , <i>ipv6_address</i> .
sensor_name	The name of the managed device that generated the intrusion event.
sensor_uuid	A unique identifier for the managed device, or 0 if <i>sensor_name</i> is null.
start_time_sec	The UNIX timestamp of the date and time the measurement interval starts. For detailed information, see <a href="#">Specifying Time Intervals When Querying Statistics Tables</a> , page 5-3.

## storage\_stats\_by\_file\_type\_current\_timeframe Joins

You cannot perform joins on the `session_stats_current_timeframe` tables.

## storage\_stats\_by\_file\_type\_current\_timeframe Sample Query

The following query returns the number of dropped and stored files for each sensor, in descending order by `file_type` during the current day, limited to the `Global \ Company B \ Edge` domain.

```
SELECT sensor_name, number_dropped, number_stored, file_type
FROM storage_stats_by_file_type_current_day
WHERE domain_name= "Global \ Company B \ Edge"
ORDER BY file_type DESC;
```

## transmission\_stats\_by\_file\_type\_current\_timeframe

The `transmission_stats_by_file_type_current_timeframe` tables contain statistics for stored files by file type. Statistics can be extracted based on bytes, connection, sensor, and time.

For an understanding of the `current_day`, `current_month`, and `current_year` statistics tables, see [Storage Characteristics for Statistics Tracking Tables](#), page 5-2.

For more information on the `transmission_stats_by_file_type_current_timeframe` tables, see the following sections:

- [transmission\\_stats\\_by\\_file\\_type\\_current\\_timeframe Fields](#), page 5-25
- [transmission\\_stats\\_by\\_file\\_type\\_current\\_timeframe Joins](#), page 5-25
- [transmission\\_stats\\_by\\_file\\_type\\_current\\_timeframe Sample Query](#), page 5-25

## transmission\_stats\_by\_file\_type\_current\_timeframe Fields

The following table describes the fields you can access in the `transmission_stats_by_file_type_current_timeframe` tables. All tables of this type contain the same fields.

**Table 5-18** *transmission\_stats\_by\_file\_type\_current\_timeframe Fields*

Field	Description
<code>bytes_sent</code>	The number of transmitted bytes.
<code>domain_name</code>	Name of the domain specified for the statistics.
<code>domain_uuid</code>	UUID of the domain specified for the statistics. This is presented in binary.
<code>file_type</code>	The file type of the detected or quarantined file.
<code>file_type_id</code>	ID number that maps to the file type.
<code>netmap_num</code>	Netmap ID for the domain on which the statistics were collected.
<code>number_dropped</code>	Number of files of this type dropped.
<code>number_sent</code>	Number of files of this type sent.
<code>sensor</code>	ID of the device that detected the file.
<code>sensor_address</code>	The IP address of the managed device that generated the event. Format is <i>ipv4_address, ipv6_address</i> .
<code>sensor_name</code>	The name of the managed device that generated the intrusion event.
<code>sensor_uuid</code>	A unique identifier for the managed device, or 0 if <code>sensor_name</code> is null.
<code>start_time_sec</code>	The UNIX timestamp of the date and time the measurement interval starts. For detailed information, see <a href="#">Specifying Time Intervals When Querying Statistics Tables</a> , page 5-3.

## transmission\_stats\_by\_file\_type\_current\_timeframe Joins

You cannot perform joins on the `transmission_stats_by_file_type_current_timeframe` tables.

## transmission\_stats\_by\_file\_type\_current\_timeframe Sample Query

The following query returns the number of dropped and sent connections for each sensor, in descending order by `file_type` during the current day, limited to the Global \ Company B \ Edge domain.

```
SELECT sensor_name, number_dropped, number_sent, file_type
FROM transmission_stats_by_file_type_current_day
WHERE domain_name= "Global \ Company B \ Edge"
ORDER BY file_type DESC;
```

## url\_category\_stats\_current\_timeframe

The `url_category_stats_current_timeframe` tables contain statistics on the bandwidth usage and connections associated with requests to URLs in specified URL categories. You can also constrain queries on the managed device that monitored the traffic.

For an understanding of the `current_day`, `current_month`, and `current_year` statistics tables, see [Storage Characteristics for Statistics Tracking Tables, page 5-2](#).

For more information on the `url_category_stats_current_timeframe` tables, see the following sections:

- [url\\_category\\_stats\\_current\\_timeframe Fields, page 5-26](#)
- [url\\_category\\_stats\\_current\\_timeframe Joins, page 5-26](#)
- [url\\_category\\_stats\\_current\\_timeframe Sample Query, page 5-27](#)

## url\_category\_stats\_current\_timeframe Fields

The following table describes the fields you can access in the `url_category_stats_current_timeframe` tables.

**Table 5-19** *url\_category\_stats\_current\_timeframe Fields*

Field	Description
<code>bytes_in</code>	The bytes of inbound traffic during the specified interval.
<code>bytes_out</code>	The bytes of outbound traffic during the specified interval.
<code>category</code>	The category of the URL.
<code>connections_allowed</code>	The number of connections allowed for the specified URL category.
<code>connections_denied</code>	The number of connections denied for the specified URL category due to violation of an access control policy.
<code>domain_name</code>	Name of the domain specified for the statistics.
<code>domain_uuid</code>	UUID of the domain specified for the statistics. This is presented in binary.
<code>netmap_num</code>	Netmap ID for the domain on which the statistics were collected.
<code>sensor_address</code>	The IP address of the managed device that monitored the traffic. Format is <i>ipv4_address, ipv6_address</i> .
<code>sensor_id</code>	The internal identification number of the managed device that detected the traffic.
<code>sensor_name</code>	The managed device that monitored the traffic.
<code>sensor_uuid</code>	A unique identifier for the managed device, or 0 if <code>sensor_name</code> is null.
<code>start_time_sec</code>	The UNIX timestamp of the start of the measurement interval. For information on specifying the start time, see <a href="#">Specifying Time Intervals When Querying Statistics Tables, page 5-3</a> .

## url\_category\_stats\_current\_timeframe Joins

You cannot perform joins on the `url_category_stats_current_timeframe` tables.



## url\_category\_stats\_current\_timeframe Sample Query

The following query returns up to 25 URL category records. Each record contains the bytes of associated inbound and outbound traffic, as well as allowed and denied connections, over the specified time interval. This query is limited to the Games category and the Global \ Company B \ Edge domain.

```
SELECT category, sensor_name, sensor_address, start_time_sec, bytes_in, bytes_out,
connections_allowed, connections_denied
FROM url_category_stats_current_year
WHERE category="Games" AND domain_name= "Global \ Company B \ Edge"
LIMIT 0, 25;
```

## url\_reputation\_stats\_current\_timeframe

The `url_reputation_stats_current_timeframe` tables contain statistics on the bandwidth usage and connections associated with requests to URLs with specified reputations. Query results can also be constrained on the managed device that monitored the traffic.

For an understanding of the `current_day`, `current_month`, and `current_year` statistics tables, see [Storage Characteristics for Statistics Tracking Tables, page 5-2](#).

For more information on the `url_reputation_stats_current_timeframe` tables, see the following sections:

- [url\\_reputation\\_stats\\_current\\_timeframe Fields, page 5-27](#)
- [url\\_reputation\\_stats\\_current\\_timeframe Joins, page 5-28](#)
- [url\\_reputation\\_stats\\_current\\_timeframe Sample Query, page 5-28](#)

## url\_reputation\_stats\_current\_timeframe Fields

The following table describes the fields you can access in the `url_reputation_stats_current_timeframe` tables.

**Table 5-20** *url\_reputation\_stats\_current\_timeframe Fields*

Field	Description
bytes_in	The bytes of inbound traffic during the specified interval.
bytes_out	The bytes of outbound traffic during the specified interval.
connections_allowed	The number of connections allowed.
connections_denied	The number of connections denied due to violation of an access control policy.
domain_name	Name of the domain specified for the statistics.
domain_uuid	UUID of the domain specified for the statistics. This is presented in binary.
netmap_num	Netmap ID for the domain on which the statistics were collected.

Table 5-20 url\_reputation\_stats\_current\_timeframe Fields (continued)

Field	Description
reputation	The risk associated with the requested URL. One of the following: <ul style="list-style-type: none"> <li>High risk</li> <li>Suspicious site</li> <li>Benign site with security risks</li> <li>Benign site</li> <li>Well known</li> <li>Risk unknown</li> </ul>
sensor_address	The IP address of the managed device that monitored the traffic. Format is <i>ipv4_address, ipv6_address</i> .
sensor_id	Internal identification number of the managed device that monitored the traffic.
sensor_name	The name of the managed device that monitored the traffic.
sensor_uuid	A unique identifier for the managed device, or 0 if <i>sensor_name</i> is null.
start_time_sec	The UNIX timestamp of the start of the measurement interval. For information on specifying the start time, see <a href="#">Specifying Time Intervals When Querying Statistics Tables</a> , page 5-3.

## url\_reputation\_stats\_current\_timeframe Joins

You cannot perform joins on the `url_reputation_stats_current_timeframe` tables.

## url\_reputation\_stats\_current\_timeframe Sample Query

The following query returns up to 25 URL reputation records from the `url_reputation_stats_current_month` table. Each record contains the bytes of inbound and outbound traffic, as well as allowed and denied connections over the measurement time interval. This particular query is limited to the High risk reputation and Global \ Company B \ Edge domain.

```
SELECT sensor_name, sensor_address, reputation, start_time_sec, bytes_in, bytes_out,
connections_allowed, connections_denied
FROM url_reputation_stats_current_year
WHERE reputation="High risk" AND domain_name= "Global \ Company B \ Edge"
LIMIT 0, 25;
```

## user\_ids\_stats\_current\_timeframe

The `user_ids_stats_current_timeframe` tables are round-robin tables that contain statistics on access filtering and impact statistics by user.

For an understanding of the `current_day`, `current_month`, and `current_year` tables in this type, see [Storage Characteristics for Statistics Tracking Tables](#), page 5-2.

For general information on using the round robin statistics tables, see [Understanding Statistics Tracking Tables, page 5-2](#).

For more information on the `user_ids_stats_current_timeframe` tables, see the following sections:

- [user\\_ids\\_stats\\_current\\_timeframe Fields, page 5-29](#)
- [user\\_ids\\_stats\\_current\\_timeframe Joins, page 5-30](#)
- [user\\_ids\\_stats\\_current\\_timeframe Sample Query, page 5-30](#)

## user\_ids\_stats\_current\_timeframe Fields

The following table describes the fields you can access in the `user_ids_stats_current_timeframe` tables.

**Table 5-21** *user\_ids\_stats\_current\_timeframe Fields*

Field	Description
<code>blocked</code>	The number of connections blocked due to violation of an intrusion policy.
<code>domain_name</code>	Name of the domain specified for the statistics.
<code>domain_uuid</code>	UUID of the domain specified for the statistics. This is presented in binary.
<code>impact_level_1</code>	The number of impact level 1 (vulnerable) intrusion events recorded for the user.
<code>impact_level_2</code>	The number of impact level 2 (potentially vulnerable) intrusion events recorded for the user.
<code>impact_level_3</code>	The number of impact level 3 (host currently not vulnerable) intrusion events recorded for the user.
<code>impact_level_4</code>	The number of impact level 4 (unknown target) intrusion events recorded for the user.
<code>impact_level_5</code>	The number of impact level 5 (unknown vulnerability) intrusion events recorded for the user.
<code>netmap_num</code>	Netmap ID for the domain on which the statistics were collected.
<code>sensor_address</code>	The IP address of the managed device that monitored the traffic. Format is <i>ipv4_address, ipv6_address</i> .
<code>sensor_id</code>	The internal identification number of the managed device that detected the traffic.
<code>sensor_name</code>	The name of the managed device that detected the traffic.
<code>sensor_uuid</code>	A unique identifier for the managed device, or 0 if <code>sensor_name</code> is null.
<code>start_time_sec</code>	The UNIX timestamp of the start of the measurement interval. For information on specifying the start time, see <a href="#">Specifying Time Intervals When Querying Statistics Tables, page 5-3</a> .
<code>user_id</code>	An internal identification number for the user who last logged into the host.
<code>username</code>	The user name of the user who last logged into the host.
<code>would_have_dropped</code>	Number of packets that would have been dropped if the intrusion policy had been configured to drop packets in an inline deployment.

## user\_ids\_stats\_current\_timeframe Joins

You cannot perform joins on the `user_ids_stats_current_timeframe` tables.

## user\_ids\_stats\_current\_timeframe Sample Query

The following query returns up to 25 user records from the `user_ids_stats_current_month` table. Each record contains the number of blocked connections and intrusion events for the selected username with the Global \ Company B \ Edge domain.

```
SELECT username, start_time_sec, blocked, impact_level_1, impact_level_2,
impact_level_3, impact_level_4, impact_level_5 FROM user_ids_stats_current_year
WHERE username="username" AND domain_name= "Global \ Company B \ Edge"
LIMIT 0, 25;
```

## user\_stats\_current\_timeframe

The `user_stats_current_timeframe` tables contain statistics on bandwidth usage and access control actions (connection allowed or denied) by user. You can also constrain queries on the managed device that monitored the traffic.

For an understanding of the `current_day`, `current_month`, and `current_year` statistics tables, see [Storage Characteristics for Statistics Tracking Tables, page 5-2](#).

For more information, see the following sections:

- [user\\_stats\\_current\\_timeframe Fields, page 5-30](#)
- [user\\_stats\\_current\\_timeframe Joins, page 5-31](#)
- [user\\_stats\\_current\\_timeframe Sample Query, page 5-31](#)

## user\_stats\_current\_timeframe Fields

The following table describes the fields you can access in the `user_stats_current_timeframe` tables.

**Table 5-22** *user\_stats\_current\_timeframe Fields*

Field	Description
bytes_in	The number of bytes of inbound traffic for the user in the measured interval.
bytes_out	The number of bytes of outbound traffic for the user in the measured interval.
connections_allowed	The number of connections allowed for this user in the measured time frame.
connections_denied	The number of connections denied for this user due to violation of an access control policy.
domain_name	Name of the domain specified for the statistics.
domain_uuid	UUID of the domain specified for the statistics. This is presented in binary.
netmap_num	Netmap ID for the domain on which the statistics were collected.
qos_dropped_bytes_in	Number of incoming bytes dropped due to QoS.

**Table 5-22** *user\_stats\_current\_timeframe Fields (continued)*

Field	Description
qos_dropped_bytes_out	Number of outgoing bytes dropped due to QoS.
sensor_address	The IP address of the managed device that monitored the traffic. Format is <i>ipv4_address, ipv6_address</i> .
sensor_id	The internal identification number of the managed device that detected the traffic.
sensor_name	The name of the managed device that detected the traffic.
sensor_uuid	A unique identifier for the managed device, or 0 if <i>sensor_name</i> is null.
start_time_sec	The UNIX timestamp of the start of the measurement interval. For information on specifying the start time, see <a href="#">Specifying Time Intervals When Querying Statistics Tables, page 5-3</a> .
user_id	The internal identification number for the user who last logged into the host that generated the traffic.
username	User name for the user who last logged into the host that generated the traffic.

## user\_stats\_current\_timeframe Joins

You cannot perform joins on the `user_stats_current_timeframe` tables.

## user\_stats\_current\_timeframe Sample Query

The following query returns up to 25 user records. Each record contains the bytes of inbound and outbound traffic, as well as allowed and denied connections over the measurement time interval within the `domain_name= "Global \ Company B \ Edge domain`.

```
SELECT sensor_name, sensor_address, username, start_time_sec, bytes_in, bytes_out,
connections_allowed, connections_denied
FROM user_stats_current_year
WHERE username="username" AND domain_name= "Global \ Company B \ Edge"
LIMIT 0, 25;
```

■ user\_stats\_current\_timeframe



# CHAPTER 6

## Schema: Discovery Event and Network Map Tables

This chapter contains information on the schema and supported joins for tables related to discovery events and the Cisco network map.

Your Firepower System generates discovery events continuously as it monitors the traffic produced by your hosts and network devices.

The network map is a repository of information about the network assets reported in discovery events. For each detected host and network device, the network map contains information such as operating system, servers, client applications, host attributes, vulnerabilities, and so on.

Vulnerabilities are descriptions of specific compromises or exploits to which hosts may be susceptible. Cisco maintains its own vulnerability database (VDB), which cross-references the Bugtraq database and MITRE's CVE database. You can also import third-party vulnerability data using the host input feature.

Note that the information about a given host in the network map can vary according to the type of host and the information available in the monitored traffic.

For more information, see the sections listed in the following table. The Version column indicates the Firepower System versions that support each table. While support for deprecated tables continues in the current product release, Cisco **strongly** recommends avoiding the use of deprecated tables and fields, to ensure continued support in the future.

**Table 6-1** Schema for Discovery Event and Network Map Tables

See...	For the table that stores information on...	Version
<a href="#">application_host_map, page 6-5</a>	Applications detected on the hosts in your monitored network.	5.0+
<a href="#">application_ip_map, page A-1</a>	The category, tags, productivity, and risk associated with an application detected in your monitored network.	5.2+
<a href="#">application_ip_map, page A-1</a>	The category, tags, productivity, and risk associated with an application detected in your monitored network. deprecated in Version 5.2. Superseded by <a href="#">application_ip_map, page A-1</a> .	5.0-5.1.x
<a href="#">application_tag_map, page 6-9</a>	The tags associated with an application detected in your monitored network.	5.0+
<a href="#">domain_control_information, page 6-11</a>	Domain hierarchy information	6.0+
<a href="#">network_discovery_event, page 6-12</a>	Discovery and host input events.	5.0+

**Table 6-1** Schema for Discovery Event and Network Map Tables (continued)

See...	For the table that stores information on...	Version
<a href="#">rna_host</a> , page 6-13	Basic information on the hosts in your monitored network.	5.2+
<a href="#">rna_host_attribute</a> , page 6-15	The host attributes associated with each host in your monitored network.	5.2+
<a href="#">rna_host_client_app</a> , page 6-17	The client applications detected on the hosts in your monitored network.	5.2+
<a href="#">rna_host_client_app</a> , page 6-17	The payloads associated with HTTP (web browser) client applications detected on the hosts in your monitored network.	5.2+
<a href="#">rna_host_ioc_state</a> , page 6-22	Stores compromise state for hosts.	5.3+
<a href="#">rna_host_ip_map</a> , page 6-26	Correlates host IDs to MAC addresses for hosts in your monitored network.	5.2+
<a href="#">rna_host_os</a> , page 6-29	The operating systems detected on the hosts in your monitored network.	5.2+
<a href="#">rna_host_os_vulns</a> , page 6-30	The vulnerabilities associated with the hosts in your monitored network.	5.2+
<a href="#">rna_host_protocol</a> , page 6-32	The protocols detected on the hosts in your monitored network.	4.10.x+
<a href="#">rna_host_protocol</a> , page 6-32	The hosts in your monitored network with regard to the managed device that detected them.	5.2+
<a href="#">rna_host_service</a> , page 6-35	The services detected on the hosts in your monitored network.	5.2+
<a href="#">rna_host_service_banner</a> , page 6-37	Headers from network traffic that advertise service vendors and versions (“banners”) for the services detected on hosts in your monitored network.	5.2+
<a href="#">rna_host_service_info</a> , page 6-38	Details of the services detected on the hosts in your monitored network.	5.2+
<a href="#">rna_host_service_payload</a> , page 6-43	The payloads associated with services detected on the hosts in your monitored network.	5.2+
<a href="#">rna_host_service_subtype</a> , page 6-46	The sub-services for the services detected on the hosts in your monitored network.	5.2+
<a href="#">rna_host_service_vulns</a> , page 6-47	The vulnerabilities associated with the services detected on the hosts in your monitored network.	5.2+
<a href="#">rna_host_third_party_vuln</a> , page 6-48	The third-party vulnerabilities associated with the hosts in your monitored network.	5.2+
<a href="#">rna_host_third_party_vuln_bugtraq_id</a> , page 6-50	The third-party vulnerabilities associated with the hosts in your monitored network that are also associated with a vulnerability in the Bugtraq database ( <a href="http://www.securityfocus.com/bid/">http://www.securityfocus.com/bid/</a> ).	5.2+
<a href="#">rna_host_third_party_vuln_cve_id</a> , page 6-51	The third-party vulnerabilities associated with the hosts in your monitored network that are also associated with a vulnerability in MITRE’s CVE database. ( <a href="http://www.cve.mitre.org/">http://www.cve.mitre.org/</a> ).	5.2+



**Table 6-1** Schema for Discovery Event and Network Map Tables (continued)

See...	For the table that stores information on...	Version
<a href="#">rna_host_third_party_vuln_rna_id</a> , page 6-53	The third-party vulnerabilities associated with the hosts in your monitored network that are also associated with a vulnerability in the VDB.	5.2+
<a href="#">rna_ip_host</a> , page A-1	Basic information on the IP hosts in your monitored network. deprecated in Version 5.2. Superseded by <a href="#">rna_host</a> , page 6-13.	4.10.x-5.1.x
<a href="#">rna_ip_host_client_app</a> , page A-1	The client applications detected on the hosts in your monitored network. deprecated in Version 5.2. Superseded by <a href="#">rna_host_client_app</a> , page 6-17.	4.10.x-5.1.x
<a href="#">rna_ip_host_client_app_payload</a> , page A-1	The payloads associated with HTTP (web browser) client applications detected on the IP hosts in your monitored network. deprecated in Version 5.2. Superseded by <a href="#">rna_host_client_app</a> , page 6-17.	4.10.x-5.1.x
<a href="#">rna_ip_host_os</a> , page A-1	The operating systems detected on the IP hosts in your monitored network. deprecated in Version 5.2. Superseded by <a href="#">rna_host_os</a> , page 6-29.	4.10.x-5.1.x
<a href="#">rna_ip_host_os_vulns</a> , page A-1	The vulnerabilities associated with the IP hosts in your monitored network. deprecated in Version 5.2. Superseded by <a href="#">rna_host_os_vulns</a> , page 6-30.	4.10.x--5.1.x
<a href="#">rna_ip_host_sensor</a> , page A-1	The IP hosts in your monitored network with regard to the managed device that detected them. deprecated in Version 5.2. Superseded by <a href="#">rna_host_protocol</a> , page 6-32.	5.0-5.1.x
<a href="#">rna_ip_host_service</a> , page A-1	The services detected on the IP hosts in your monitored network. deprecated in Version 5.2. Superseded by <a href="#">rna_host_service</a> , page 6-35.	4.10.x-5.1.x
<a href="#">rna_ip_host_service_banner</a> , page A-1	Headers from network traffic that advertise service vendors and versions (“banners”) for the services detected on hosts in your monitored network. deprecated in Version 5.2. Superseded by <a href="#">rna_host_service_banner</a> , page 6-37.	4.10.x-5.1.x
<a href="#">rna_ip_host_service_info</a> , page A-1	Details of the services detected on the IP hosts in your monitored network. deprecated in Version 5.2. Superseded by <a href="#">rna_host_service_info</a> , page 6-38.	4.10.x-5.1.x

Table 6-1 Schema for Discovery Event and Network Map Tables (continued)

See...	For the table that stores information on...	Version
<a href="#">rna_ip_host_service_payload</a> , page A-1	The payloads associated with services detected on the IP hosts in your monitored network. deprecated in Version 5.2. Superseded by <a href="#">rna_host_service_payload</a> , page 6-43.	4.10.x-5.1.x
<a href="#">rna_ip_host_service_subtype</a> , page A-1	The sub-services for the services detected on the IP hosts in your monitored network. deprecated in Version 5.2. Superseded by <a href="#">rna_host_service_subtype</a> , page 6-46.	4.10.x-5.1.x
<a href="#">rna_ip_host_service_vulns</a> , page A-1	The vulnerabilities associated with the services detected on the IP hosts in your monitored network. deprecated in Version 5.2. Superseded by <a href="#">rna_host_service_vulns</a> , page 6-47.	4.10.x-5.1.x
<a href="#">rna_ip_host_third_party_vuln</a> , page A-1	The third-party vulnerabilities associated with the IP hosts in your monitored network. deprecated in Version 5.2. Superseded by <a href="#">rna_host_third_party_vuln</a> , page 6-48.	4.10.x-5.1.x
<a href="#">rna_ip_host_third_party_vuln_bugtraq_id</a> , page A-1	The third-party vulnerabilities associated with the IP hosts in your monitored network that are also associated with a vulnerability in the Bugtraq database ( <a href="http://www.securityfocus.com/bid/">http://www.securityfocus.com/bid/</a> ). deprecated in Version 5.2. Superseded by <a href="#">rna_host_third_party_vuln_bugtraq_id</a> , page 6-50.	4.10.x-5.1.x
<a href="#">rna_ip_host_third_party_vuln_cve_id</a> , page A-1	The third-party vulnerabilities associated with the IP hosts in your monitored network that are also associated with a vulnerability in MITRE's CVE database. ( <a href="http://www.cve.mitre.org/">http://www.cve.mitre.org/</a> ). deprecated in Version 5.2. Superseded by <a href="#">rna_host_third_party_vuln_cve_id</a> , page 6-51.	4.10.x-5.1.x
<a href="#">rna_ip_host_third_party_vuln_rna_id</a> , page A-1	The third-party vulnerabilities associated with the IP hosts in your monitored network that are also associated with a vulnerability in the VDB. deprecated in Version 5.2. Superseded by <a href="#">rna_host_third_party_vuln_rna_id</a> , page 6-53.	4.10.x-5.1.x
<a href="#">rna_ip_host_user_history</a> , page A-1	User activity for a particular IP host in your monitored network. deprecated in Version 5.2. Superseded by <a href="#">user_ipaddr_history</a> , page 6-60.	4.10.x-5.1.x
<a href="#">rna_mac_host</a> , page A-1	The MAC hosts (hosts without an IP address) in your monitored network.	4.10.x-5.1.x
<a href="#">rna_mac_host_sensor</a> , page A-1	The IP hosts in your monitored network with regard to the managed devices that detected them.	5.0-5.1.x

**Table 6-1** Schema for Discovery Event and Network Map Tables (continued)

See...	For the table that stores information on...	Version
<a href="#">rna_mac_ip_map</a> , page A-2	The MAC addresses of the IP hosts in your monitored network.  deprecated in Version 5.2. Superseded by <a href="#">rna_host_ip_map</a> , page 6-26 and <a href="#">rna_host_mac_map</a> , page 6-28.	4.10.x-5.1.x
<a href="#">rna_vuln</a> , page 6-55	The vulnerabilities in the Cisco VDB.	4.10.x+
<a href="#">tag_info</a> , page 6-58	The tags that characterize detected applications.	5.0+
<a href="#">url_categories</a> , page 6-59	The categories that characterize URLs accessed from hosts in your monitored network.	5.0+
<a href="#">url_reputations</a> , page 6-59	The reputations that characterize URLs accessed from hosts in your monitored network.	5.0+
<a href="#">user_ipaddr_history</a> , page 6-60	User activity for a particular host in your monitored network.	5.2+

## application\_host\_map

The `application_host_map` table contains information on the categories and tags associated with each application detected on your network.

For more information, see the following sections:

- [application\\_host\\_map Fields](#), page 6-5
- [application\\_host\\_map Joins](#), page 6-6
- [application\\_host\\_map Sample Query](#), page 6-7

## application\_host\_map Fields

The following table describes the fields you can access in the `application_host_map` table.

**Table 6-2** application\_host\_map Fields

Field	Description
application_id	The internal identification number for the application.
application_name	The application name that appears in the user interface.
application_tag_id	This field has been deprecated and will now return null.
business_relevance	The index (from 1 to 5) of the application's relevance to business productivity, where 1 is very low and 5 is very high.
business_relevance_description	The description of the business relevance (very low, low, medium, high, very high).
host_id	ID number of the host.
risk	An index (from 1 to 5) of the application's risk, where 1 is very low risk and 5 is critical risk.
risk_description	The description of the risk (very low, low, medium, high, critical).

## application\_host\_map Joins

The following table describes the joins you can perform on the `application_host_map` table.

**Table 6-3** application\_host\_map Joins

You can join this table on...	And...
application_id	app_ids_stats_current_timeframe.application_id application_info.application_id application_tag_map.application_id app_stats_current_timeframe.application_id connection_log.application_protocol_id connection_log.client_application_id connection_log.web_application_id connection_summary.application_protocol_id file_event.application_id intrusion_event.application_protocol_id intrusion_event.client_application_id intrusion_event.web_application_id rna_host_service_info.application_protocol_id rna_host_client_app_payload.web_application_id rna_host_client_app_payload.client_application_id rna_host_client_app.client_application_id rna_host_client_app.application_protocol_id rna_host_service_payload.web_application_id si_connection_log.application_protocol_name si_connection_log.client_application_id si_connection_log.web_application_id
host_id	rna_host.host_id rna_host_attribute.host_id rna_host_protocol.host_id rna_host_os_vulns.host_id rna_host_client_app.host_id rna_host_client_app_payload.host_id rna_host_ip_map.host_id rna_host_mac_map.host_id rna_host_os.host_id rna_host_sensor.host_id rna_host_service.host_id rna_host_service_banner.host_id rna_host_service_info.host_id rna_host_service_payload.host_id rna_host_service_vulns.host_id rna_host_third_party_vuln_bugtraq_id.host_id rna_host_third_party_vuln_cve_id.host_id rna_host_third_party_vuln_rna_id.host_id rna_host_third_party_vuln.host_id

## application\_host\_map Sample Query

The following query returns information about the applications detected on the host with a `host_id` of 8.

```
SELECT host_id, application_id, application_name, business_relevance, risk
FROM application_host_map
```

```
WHERE HEX(host_id) = "00000000000000000000000000000008";
```

## application\_info

The `application_info` table contains information about the applications that can be detected on the hosts in your monitored network.

You can retrieve the list of tags associated with an application from the `application_tag_map` table by joining on `application_id`. Similarly, you can retrieve an application's list of associated categories from the `application_host_map` by joining on `application_id`.

For more information, see the following sections:

- [application\\_info Fields, page 6-8](#)
- [application\\_info Joins, page 6-9](#)
- [application\\_info Sample Query, page 6-9](#)

## application\_info Fields

The following table describes the fields you can access in the `application_info` table.

**Table 6-4** *application\_info Fields*

Field	Description
<code>application_description</code>	A description of the application.
<code>application_id</code>	The internal identification number for the application.
<code>application_name</code>	The application name that appears in the user interface.
<code>business_relevance</code>	An index (from 1 to 5) of the application's relevance to business productivity, where 1 is very low and 5 is very high.
<code>business_relevance_description</code>	A description of business relevance (very low, low, medium, high, very high).
<code>domain_name</code>	Name of the domain on which the application was detected.
<code>domain_uuid</code>	UUID of the domain on which the application was detected. This is presented in binary.
<code>is_client_application</code>	A true-false flag that indicates if the detected application is a client.
<code>is_server_application</code>	A true-false flag that indicates if the detected application is a server application.
<code>is_web_application</code>	A true-false flag that indicates if the detected application is a web application.
<code>risk</code>	An index (from 1 to 5) of the application's estimated risk where 1 is very low risk and 5 is critical risk.
<code>risk_description</code>	A description of the risk (very low, low, medium, high, and critical).

## application\_info Joins

The following table describes the joins you can perform on the `application_info` table.

**Table 6-5** *application\_info Joins*

You can join this table on...	And...
application_id	application_host_map.application_id app_ids_stats_current_timeframe.application_id application_tag_map.application_id app_stats_current_timeframe.application_id connection_log.application_protocol_id connection_log.client_application_id connection_log.web_application_id si_connection_log.application_protocol_id si_connection_log.application_protocol_name si_connection_log.client_application_id si_connection_log.web_application_id connection_summary.application_protocol_id file_event.application_id intrusion_event.application_protocol_id intrusion_event.client_application_id intrusion_event.web_application_id rna_host_service_info.application_protocol_id rna_host_client_app_payload.web_application_id rna_host_client_app_payload.client_application_id rna_host_client_app.client_application_id rna_host_client_app.application_protocol_id rna_host_service_payload.web_application_id

## application\_info Sample Query

The following query returns the record for the application with a `host_id` of 8 found within the Global \ Company B \ Edge domain.

```
SELECT application_id, application_name, application_description, business_relevance,
risk
FROM application_info
WHERE application_id="8" AND domain_name= "Global \ Company B \ Edge";
```

## application\_tag\_map

The `application_tag_map` table contains information on the tags associated with each application detected on your network.

For more information, see the following sections:

- [application\\_tag\\_map Fields](#), page 6-10
- [application\\_tag\\_map Joins](#), page 6-10
- [application\\_tag\\_map Sample Query](#), page 6-11

## application\_tag\_map Fields

The following table describes the fields you can access in the `application_tag_map` table.

**Table 6-6** *application\_tag\_map Fields*

Field	Description
<code>application_id</code>	The internal identification number for the application.
<code>application_name</code>	The application that appears in the user interface.
<code>domain_name</code>	Name of the domain on which the application was detected.
<code>domain_uuid</code>	UUID of the domain on which the application was detected. This is presented in binary.
<code>tag_id</code>	The internal identification number for the tag.
<code>tag_name</code>	The text of the tag that appears in the user interface.
<code>tag_type</code>	One of the following: <code>category</code> or <code>type</code> .

## application\_tag\_map Joins

The following table describes the joins you can perform on the `application_tag_map` table.

**Table 6-7** *application\_tag\_map Joins*

You can join this table on...	And...
<code>application_id</code>	<code>app_ids_stats_current_timeframe.application_id</code> <code>application_info.application_id</code> <code>application_host_map.application_id</code> <code>app_stats_current_timeframe.application_id</code> <code>connection_log.application_protocol_id</code> <code>connection_log.client_application_id</code> <code>connection_log.web_application_id</code> <code>connection_summary.application_protocol_id</code> <code>file_event.application_id</code> <code>intrusion_event.application_protocol_id</code> <code>intrusion_event.client_application_id</code> <code>intrusion_event.web_application_id</code> <code>rna_host_service_info.application_protocol_id</code> <code>rna_host_client_app_payload.web_application_id</code> <code>rna_host_client_app_payload.client_application_id</code> <code>rna_host_client_app.client_application_id</code> <code>rna_host_client_app.application_protocol_id</code> <code>rna_host_service_payload.web_application_id</code> <code>si_connection_log.application_protocol_name</code> <code>si_connection_log.application_protocol_id</code> <code>si_connection_log.client_application_id</code> <code>si_connection_log.web_application_id</code>
<code>tag_id</code>	<code>tag_info.tag_id</code>



## application\_tag\_map Sample Query

The following query returns all tag records associated with the specified application.

```
SELECT application_id, application_name, tag_id, tag_name
FROM application_tag_map
WHERE application_name="Active Directory";
```

## domain\_control\_information

The `domain_control_information` table maps domains to their UUIDs and provides the name and UUID of each domain's parent domain.

For more information, see the following sections:

- [domain\\_control\\_information Fields, page 6-11](#)
- [domain\\_control\\_information Joins, page 6-11](#)
- [domain\\_control\\_information Sample Query, page 6-11](#)

## domain\_control\_information Fields

The following table describes the fields you can access in the `domain_control_information` table.

**Table 6-8** *domain\_control\_information Fields*

Field	Description
domain_name	Name of the domain
domain_uuid	UUID of the domain. This is presented in binary.
parent_domain_name	Name of the parent domain, if applicable.
parent_domain_uuid	UUID of the parent domain, if applicable. This is presented in binary.

## domain\_control\_information Joins

You cannot perform joins on the `domain_control_information` table.

## domain\_control\_information Sample Query

The following query returns all domain names, domain UUIDs in ASCII format, and their parent domains.

```
SELECT domain_name, uuid_btoa(domain_uuid), parent_domain_name
FROM domain_control_information;
```

## network\_discovery\_event

The `network_discovery_event` table contains information on discovery and host input events. The Firepower System generates discovery events when it detects a change on your monitored network, whether by discovering new network features or by detecting changes in previously identified network assets. The Firepower System generates host input events when a user manually modifies the network map by adding, modifying, or deleting network assets.

The `network_discovery_event` table supersedes the deprecated `rna_event` table starting with Version 5.0 of the Firepower System.

For more information, see the following sections:

- [network\\_discovery\\_event Fields, page 6-12](#)
- [network\\_discovery\\_event Joins, page 6-13](#)
- [network\\_discovery\\_event Sample Query, page 6-13](#)

## network\_discovery\_event Fields

The following table describes the fields you can access in the `network_discovery_event` table.

**Table 6-9** *network\_discovery\_event Fields*

Field	Description
<code>confidence</code>	The Firepower System-assigned confidence rating (from 0 to 100) for the identification of the service.
<code>description</code>	The description of the event.
<code>domain_name</code>	Name of the domain on which the event was detected.
<code>domain_uuid</code>	UUID of the domain on which the event was detected. This is presented in binary.
<code>event_id</code>	The internal identification number for the event.
<code>event_time_sec</code>	The UNIX timestamp of the date and time the event was generated.
<code>event_time_usec</code>	The microsecond increment of the event timestamp.
<code>event_type</code>	The event type. For example, <code>New Host Or Identity Conflict</code> .
<code>ip_address</code>	This field has been deprecated and will now return <code>null</code> .
<code>ipaddr</code>	A binary representation of the IPv4 or IPv6 address for the host involved in the event.
<code>mac_address</code>	The MAC address of the host involved in the event.
<code>mac_vendor</code>	The NIC hardware vendor of the host involved in the event.
<code>port</code>	The port used by the network traffic that triggered the event.
<code>sensor_address</code>	The IP address of the managed device that generated the discovery event. Format is <code>ipv4_address</code> , <code>ipv6_address</code> .
<code>sensor_name</code>	The managed device that generated the discovery event.
<code>sensor_uuid</code>	A unique identifier for the managed device, or 0 if <code>sensor_name</code> is <code>null</code> .
<code>user_dept</code>	The department of the user who last logged into the host.
<code>user_email</code>	The email address of the user who last logged into the host.
<code>user_first_name</code>	The first name of the user who last logged into the host.

**Table 6-9** *network\_discovery\_event Fields (continued)*

Field	Description
user_id	The internal identification number for the user who last logged into the host.
user_last_name	The last name of the user who last logged into the host.
user_last_seen_sec	The UNIX timestamp of the date and time the Firepower System last detected user activity for the user who last logged into the host.
user_last_updated_sec	The UNIX timestamp of the date and time the Firepower System last updated the user record for the user who last logged into the host.
user_name	The user name of the user who last logged into the host.
user_phone	The phone number of the user who last logged into the host.

## network\_discovery\_event Joins

The following table describes the joins you can perform using the `network_discovery_event` table.

**Table 6-10** *network\_discovery\_event Joins*

You can join this table on...	And...
ipaddr	<code>rna_host_ip_map.ipaddr</code> <code>user_ipaddr_history.ipaddr</code>

## network\_discovery\_event Sample Query

The following query returns discovery event records that include the user, detecting device name, timestamp, host IP address, and so on within the specified times.

```
SELECT sensor_name, event_time_sec, event_time_usec, event_type, ipaddr, user_id,
hex(mac_address), mac_vendor, port, confidence FROM network_discovery_event
WHERE event_time_sec
BETWEEN UNIX_TIMESTAMP("2013-01-01 00:00:00") AND UNIX_TIMESTAMP("2013-01-01 23:59:59")
ORDER BY event_time_sec DESC, event_time_usec DESC;
```

## rna\_host

The `rna_host` table contains basic information on the hosts in your monitored network.

This table supersedes `rna_ip_host` as of Version 5.2.

For more information, see the following sections:

- [rna\\_host Fields, page 6-14](#)
- [rna\\_host Joins, page 6-14](#)
- [rna\\_host Sample Query, page 6-15](#)

## rna\_host Fields

The following table describes the fields you can access in the `rna_host` table.

**Table 6-11** `rna_host` Fields

Field	Description
<code>criticality</code>	The host criticality level: None, Low, Medium, Or High.
<code>domain_name</code>	Name of the domain on which the host was detected.
<code>domain_uuid</code>	UUID of the domain on which the host was detected. This is presented in binary.
<code>hops</code>	The number of network hops from the host to the managed device that detected the host.
<code>host_id</code>	ID number of the host.
<code>host_name</code>	Name of the host.
<code>host_type</code>	The host type: Host, Router, Bridge, NAT Device, Or Load Balancer.
<code>jailbroken</code>	A true-false flag indicating whether a mobile device operating system is jailbroken.
<code>last_seen_sec</code>	The UNIX timestamp of the date and time the system last detected host activity.
<code>mobile</code>	A true-false flag indicating whether the detected host is a mobile device.
<code>netbios_name</code>	The host NetBIOS name string.
<code>notes</code>	The contents of the Notes host attribute for the host.
<code>vlan_id</code>	The VLAN identification number, if applicable.
<code>vlan_priority</code>	The priority value included in the VLAN tag.
<code>vlan_type</code>	The type of encapsulated packet that contains the VLAN tag: <ul style="list-style-type: none"> <li>• 0 — Ethernet</li> <li>• 1 — Token Ring</li> </ul>

## rna\_host Joins

The following table describes the joins you can perform on the `rna_host` table.

Table 6-12 *rna\_host Joins*

You can join this table on...	And...
host_id	<a href="#">application_host_map.host_id</a> <a href="#">rna_host_attribute.host_id</a> <a href="#">rna_host_protocol.host_id</a> <a href="#">rna_host_os_vulns.host_id</a> <a href="#">rna_host_client_app.host_id</a> <a href="#">rna_host_client_app_payload.host_id</a> <a href="#">rna_host_ip_map.host_id</a> <a href="#">rna_host_ioc_state.host_id</a> <a href="#">rna_host_mac_map.host_id</a> <a href="#">rna_host_os.host_id</a> <a href="#">rna_host_sensor.host_id</a> <a href="#">rna_host_service.host_id</a> <a href="#">rna_host_service_banner.host_id</a> <a href="#">rna_host_service_info.host_id</a> <a href="#">rna_host_service_payload.host_id</a> <a href="#">rna_host_service_vulns.host_id</a> <a href="#">rna_host_third_party_vuln_bugtraq_id.host_id</a> <a href="#">rna_host_third_party_vuln_cve_id.host_id</a> <a href="#">rna_host_third_party_vuln_rna_id.host_id</a> <a href="#">rna_host_third_party_vuln.host_id</a>

## rna\_host Sample Query

The following query returns 25 **rna\_host** records that include the host ID, VLAN ID, when the host was last seen, and the type of host, within the Global \ Company B \ Edge domain, ordered by the type of host.

```
SELECT host_id, vlan_id, last_seen_sec, host_type
FROM rna_host
WHERE domain_name= "Global \ Company B \ Edge"
ORDER BY host_type
LIMIT 0, 25;
```

## rna\_host\_attribute

The **rna\_host\_attribute** table contains information on the host attributes associated with each host in your monitored network. It supersedes the deprecated **rna\_ip\_host\_attribute** table.

For more information, see the following sections:

- [rna\\_host\\_attribute Fields, page 6-16](#)
- [rna\\_host\\_attribute Joins, page 6-16](#)
- [rna\\_host\\_attribute Sample Query, page 6-16](#)

## rna\_host\_attribute Fields

The following table describes the fields you can access in the `rna_host_attribute` table.

**Table 6-13** *rna\_host\_attribute Fields*

Field	Description
<code>attribute_name</code>	The host attribute. For example, Host Criticality Or Default Allow List.
<code>attribute_value</code>	The value of the host attribute.
<code>host_id</code>	ID number of the host.

## rna\_host\_attribute Joins

The following table describes the joins you can perform on the `rna_host_attribute` table.

**Table 6-14** *rna\_host\_attribute Joins*

You can join this table on...	And...
<code>host_id</code>	<code>application_host_map.host_id</code> <code>rna_host.host_id</code> <code>rna_host_protocol.host_id</code> <code>rna_host_os_vulns.host_id</code> <code>rna_host_client_app.host_id</code> <code>rna_host_client_app_payload.host_id</code> <code>rna_host_ioc_state.host_id</code> <code>rna_host_ip_map.host_id</code> <code>rna_host_mac_map.host_id</code> <code>rna_host_os.host_id</code> <code>rna_host_sensor.host_id</code> <code>rna_host_service.host_id</code> <code>rna_host_service_banner.host_id</code> <code>rna_host_service_info.host_id</code> <code>rna_host_service_payload.host_id</code> <code>rna_host_service_vulns.host_id</code> <code>rna_host_third_party_vuln_bugtraq_id.host_id</code> <code>rna_host_third_party_vuln_cve_id.host_id</code> <code>rna_host_third_party_vuln_rna_id.host_id</code> <code>rna_host_third_party_vuln.host_id</code>

## rna\_host\_attribute Sample Query

The following query returns all host attributes and values associated with the selected host ID.

```
SELECT attribute_name, attribute_value
FROM rna_host_attribute
WHERE HEX(host_id) = "00000000000000000000000000000008";
```

## rna\_host\_client\_app

The `rna_host_client_app` table contains information on the client applications detected on the hosts in your monitored network. It supersedes the deprecated `rna_ip_host_client_app` table.

For more information, see the following sections:

- [rna\\_host\\_client\\_app Fields, page 6-17](#)
- [rna\\_host\\_client\\_app Joins, page 6-17](#)
- [rna\\_host\\_client\\_app Sample Query, page 6-19](#)

## rna\_host\_client\_app Fields

The following table describes the fields you can access in the `rna_host_client_app` table.

**Table 6-15** *rna\_host\_client\_app Fields*

Field	Description
<code>application</code>	Field deprecated in Version 5.0. Returns <code>null</code> for all queries.
<code>application_protocol_id</code>	An internal identifier for the detected application protocol.
<code>application_protocol_name</code>	One of: <ul style="list-style-type: none"> <li>• the name of the application, if a positive identification can be made</li> <li>• <code>pending</code> if the system requires more data</li> <li>• blank if there is no application information in the connection</li> </ul>
<code>application_type</code>	Field deprecated in Version 5.0. Returns <code>null</code> for all queries.
<code>client_application_id</code>	The internal identification number for the application, if the application is identifiable.
<code>client_application_name</code>	One of: <ul style="list-style-type: none"> <li>• the name of the application, if a positive identification can be made.</li> <li>• a generic client name if the system detects a client application but cannot identify a specific one.</li> <li>• blank if there is no client application information in the connection.</li> </ul>
<code>hits</code>	The number of times the client application was detected.
<code>host_id</code>	ID number of the host.
<code>last_used_sec</code>	The UNIX timestamp of the date and time the system last detected application activity.
<code>version</code>	The version of the application detected on the host.

## rna\_host\_client\_app Joins

The following table describes the joins you can perform on the `rna_host_client_app` table.

**Table 6-16** *rna\_host\_client\_app Joins*

You can join this table on...	And...
host_id	rna_host.host_id rna_host_attribute.host_id rna_host_protocol.host_id rna_host_os_vulns.host_id application_host_map.host_id rna_host_client_app_payload.host_id rna_host_ioc_state.host_id rna_host_ip_map.host_id rna_host_mac_map.host_id rna_host_os.host_id rna_host_sensor.host_id rna_host_service.host_id rna_host_service_banner.host_id rna_host_service_info.host_id rna_host_service_payload.host_id rna_host_service_vulns.host_id rna_host_third_party_vuln_bugtraq_id.host_id rna_host_third_party_vuln_cve_id.host_id rna_host_third_party_vuln_rna_id.host_id rna_host_third_party_vuln.host_id



Table 6-16 rna\_host\_client\_app Joins (continued)

You can join this table on...	And...
host_id and application_protocol_id and client_application_id and version	the set of: rna_host_client_app_payload.host_id rna_host_client_app_payload.application_protocol_id rna_host_client_app_payload.client_application_id rna_host_client_app_payload.version
application_protocol_id or client_application_id	app_ids_stats_current_timeframe.application_id application_info.application_id application_host_map.application_id application_tag_map.application_id app_stats_current_timeframe.application_id connection_log.application_protocol_id connection_log.client_application_id connection_log.web_application_id connection_summary.application_protocol_id si_connection_log.application_protocol_name si_connection_log.client_application_id si_connection_log.web_application_id file_event.application_id intrusion_event.application_protocol_id intrusion_event.client_application_id intrusion_event.web_application_id rna_host_service_info.application_protocol_id rna_host_client_app_payload.web_application_id rna_host_client_app_payload.client_application_id rna_host_service_info.application_protocol_id rna_host_service_payload.web_application_id

## rna\_host\_client\_app Sample Query

The following query returns information about the client applications detected on the host with `host_id` of 8.

```
SELECT host_id, client_application_id, client_application_name, version, hits,
       application_protocol_id, application_protocol_name, last_used_sec
FROM rna_host_client_app
WHERE HEX(host_id) = "00000000000000000000000000000008";
```

## rna\_host\_client\_app\_payload

The `rna_host_client_app_payload` table contains information on the payloads in HTTP traffic associated with web applications on hosts detected in your monitored network.

For more information, see the following sections:

- [rna\\_host\\_client\\_app\\_payload Fields, page 6-20](#)
- [rna\\_host\\_client\\_app\\_payload Joins, page 6-21](#)
- [rna\\_host\\_client\\_app\\_payload Sample Query, page 6-22](#)

## rna\_host\_client\_app\_payload Fields

The following table describes the fields you can access in the `rna_host_client_app_payload` table.

**Table 6-17** *rna\_host\_client\_app\_payload Fields*

Field	Description
<code>application</code>	Field deprecated in Version 5.0. Returns <code>null</code> for all queries.
<code>application_protocol_id</code>	An internal identifier for the detected application protocol, if available. For traffic that has characteristics of both client applications and web applications, the <code>client_application_id</code> and <code>web_application_id</code> fields have the same value.
<code>application_protocol_name</code>	One of: <ul style="list-style-type: none"> <li>• the name of the application, if a positive identification can be made</li> <li>• <code>pending</code> if the system requires more data</li> <li>• blank if there is no application information in the connection</li> </ul>
<code>application_type</code>	Field deprecated in Version 5.0. Returns <code>null</code> for all queries.
<code>client_application_id</code>	The internal identification number for the client application.
<code>client_application_name</code>	One of: <ul style="list-style-type: none"> <li>• the name of the application, if a positive identification can be made.</li> <li>• a generic client name if the system detects a client application but cannot identify a specific one.</li> <li>• blank if there is no client application information in the connection.</li> </ul>
<code>host_id</code>	ID number of the host.
<code>payload_name</code>	Field deprecated in Version 5.0. Returns <code>null</code> for all queries.
<code>payload_type</code>	Field deprecated in Version 5.0. Returns <code>null</code> for all queries.
<code>version</code>	The version of the web application detected on the host.
<code>web_application_id</code>	The internal identification number for the web application, if available. For traffic that has characteristics of both client applications and web applications, the <code>client_application_id</code> and <code>web_application_id</code> fields have the same value.
<code>web_application_name</code>	One of: <ul style="list-style-type: none"> <li>• the name of the application, if a positive identification can be made.</li> <li>• <code>web browsing</code> if the system detects an application protocol of HTTP but cannot identify a specific web application.</li> <li>• blank if the connection has no HTTP traffic.</li> </ul>

## rna\_host\_client\_app\_payload Joins

The following table describes the joins you can perform on the `rna_host_client_app_payload` table.

**Table 6-18** *rna\_host\_client\_app\_payload Joins*

You can join this table on...	And...
host_id	rna_host.host_id rna_host_attribute.host_id rna_host_protocol.host_id rna_host_os_vulns.host_id application_host_map.host_id rna_host_client_app.host_id rna_host_ioc_state.host_id rna_host_ip_map.host_id rna_host_mac_map.host_id rna_host_os.host_id rna_host_sensor.host_id rna_host_service.host_id rna_host_service_banner.host_id rna_host_service_info.host_id rna_host_service_payload.host_id rna_host_service_vulns.host_id rna_host_third_party_vuln_bugtraq_id.host_id rna_host_third_party_vuln_cve_id.host_id rna_host_third_party_vuln_rna_id.host_id rna_host_third_party_vuln.host_id

**Table 6-18** *rna\_host\_client\_app\_payload Joins (continued)*

You can join this table on...	And...
the set of: host_id, application_protocol_id, client_application_id, version	the set of: rna_host_client_app.host_id rna_host_client_app.application_protocol_id rna_host_client_app.client_application_id rna_host_client_app.version
client_application_id or web_application_id	app_ids_stats_current_timeframe.application_id application_info.application_id application_host_map.application_id application_tag_map.application_id app_stats_current_timeframe.application_id connection_log.application_protocol_id connection_log.client_application_id connection_log.web_application_id connection_summary.application_protocol_id si_connection_log.application_protocol_name si_connection_log.client_application_id si_connection_log.web_application_id file_event.application_id intrusion_event.application_protocol_id intrusion_event.client_application_id intrusion_event.web_application_id rna_host_service_info.application_protocol_id rna_host_client_app.client_application_id rna_host_client_app.application_protocol_id rna_host_service_payload.web_application_id

## rna\_host\_client\_app\_payload Sample Query

The following query returns information about the web applications detected on the host with `host_id` of 8.

```
SELECT host_id, web_application_id, web_application_name, version,
client_application_id, client_application_name
FROM rna_host_client_app_payload
WHERE HEX(host_id) = "00000000000000000000000000000008";
```

## rna\_host\_ioc\_state

The `rna_host_ioc_state` table stores the IOC state for hosts in your monitored network.

For more information, see the following sections:

- [rna\\_host\\_ioc\\_state Fields, page 6-23](#)
- [rna\\_host\\_ioc\\_state Joins, page 6-25](#)
- [rna\\_host\\_ioc\\_state Sample Query, page 6-25](#)

## rna\_host\_ioc\_state Fields

The following table describes the fields you can access in the `rna_host_ioc_state` table.

**Table 6-19** *rna\_host\_ioc\_state Fields*

Field	Description
<code>first_seen</code>	Unix timestamp when the compromise was first detected.
<code>first_seen_sensor_address</code>	The IP address of the managed device that first detected the compromise. Format is <i>ipv4_address, ipv6_address</i> .
<code>first_seen_sensor_name</code>	The managed device that first detected the compromise.
<code>host_id</code>	ID number of the host.
<code>ioc_category</code>	The category for the compromise. Possible values include: <ul style="list-style-type: none"> <li>• CnC Connected</li> <li>• Exploit Kit</li> <li>• High Impact Attack</li> <li>• Low Impact Attack</li> <li>• Malware Detected</li> <li>• Malware Executed</li> <li>• Dropper Infection</li> <li>• Java Compromise</li> <li>• Word Compromise</li> <li>• Adobe Reader Compromise</li> <li>• Excel Compromise</li> <li>• PowerPoint Compromise</li> <li>• QuickTime Compromise</li> </ul>
<code>ioc_description</code>	Description of the compromise.

Table 6-19 rna\_host\_ioc\_state Fields (continued)

Field	Description
ioc_event_type	<p>The event type for the compromise. Possible values include:</p> <ul style="list-style-type: none"> <li>• Adobe Reader launched shell</li> <li>• Dropper Infection Detected by AMP for Endpoints</li> <li>• Excel Compromise Detected by AMP for Endpoints</li> <li>• Excel launched shell</li> <li>• Impact 1 Intrusion Event – attempted-admin</li> <li>• Impact 1 Intrusion Event – attempted-user</li> <li>• Impact 1 Intrusion Event – successful-admin</li> <li>• Impact 1 Intrusion Event – successful-user</li> <li>• Impact 1 Intrusion Event – web-application-attack</li> <li>• Impact 2 Intrusion Event – attempted-admin</li> <li>• Impact 2 Intrusion Event – attempted-user</li> <li>• Impact 2 Intrusion Event – successful-admin</li> <li>• Impact 2 Intrusion Event – successful-user</li> <li>• Impact 2 Intrusion Event – web-application-attack</li> <li>• Intrusion Event – exploit-kit</li> <li>• Intrusion Event – malware-backdoor</li> <li>• Intrusion Event – malware-CnC</li> <li>• Java Compromise Detected by AMP for Endpoints</li> <li>• Java launched shell</li> <li>• PDF Compromise Detected by AMP for Endpoints</li> <li>• PowerPoint Compromise Detected by AMP for Endpoints</li> <li>• PowerPoint launched shell</li> <li>• QuickTime Compromise Detected by AMP for Endpoints</li> <li>• QuickTime launched shell</li> <li>• Security Intelligence Event – CnC</li> <li>• Suspected Botnet Detected by AMP for Endpoints</li> <li>• Threat Detected by AMP for Endpoints – Subtype is 'executed'</li> <li>• Threat Detected by AMP for Endpoints – Subtype is not 'executed'</li> <li>• Threat Detected in File Transfer – Action is not 'block'</li> <li>• Word Compromise Detected by AMP for Endpoints</li> <li>• Word launched shell</li> </ul>
ioc_id	Unique ID number for the compromise.
is_disabled	Whether this compromise has been disabled.
last_seen	Unix timestamp when this compromise was last detected.

**Table 6-19** *rna\_host\_ioc\_state Fields (continued)*

Field	Description
last_seen_sensor_address	The IP address of the managed device that last detected the compromise. Format is <i>ipv4_address, ipv6_address</i> .
last_seen_sensor_name	The managed device that last detected the compromise.

## rna\_host\_ioc\_state Joins

The following table describes the joins you can perform on the `rna_host_ioc_state` table.

**Table 6-20** *rna\_host\_ioc\_state Joins*

You can join this table on...	And...
host_id	<code>rna_host.host_id</code> <code>rna_host_attribute.host_id</code> <code>rna_host_protocol.host_id</code> <code>rna_host_os_vulns.host_id</code> <code>application_host_map.host_id</code> <code>rna_host_client_app.host_id</code> <code>rna_host_client_app_payload.host_id</code> <code>rna_host_ip_map.host_id</code> <code>rna_host_mac_map.host_id</code> <code>rna_host_os.host_id</code> <code>rna_host_sensor.host_id</code> <code>rna_host_service.host_id</code> <code>rna_host_service_banner.host_id</code> <code>rna_host_service_info.host_id</code> <code>rna_host_service_payload.host_id</code> <code>rna_host_service_vulns.host_id</code> <code>rna_host_third_party_vuln_bugtraq_id.host_id</code> <code>rna_host_third_party_vuln_cve_id.host_id</code> <code>rna_host_third_party_vuln_rna_id.host_id</code> <code>rna_host_third_party_vuln.host_id</code>

## rna\_host\_ioc\_state Sample Query

The following query returns up to 25 hosts with their ioc within a specified timespan.

```
SELECT host_id, ioc_id
FROM rna_host_ioc_state
WHERE first_seen
BETWEEN UNIX_TIMESTAMP("2011-10-01 00:00:00")
AND UNIX_TIMESTAMP("2011-10-07 23:59:59")
ORDER BY ioc_id DESC
LIMIT 0, 25;
```

## rna\_host\_ip\_map

The `rna_host_ip_map` table correlates host IDs to IP addresses for hosts in your monitored network.

For more information, see the following sections:

- [rna\\_host\\_ip\\_map Fields, page 6-26](#)
- [rna\\_host\\_ip\\_map Joins, page 6-26](#)
- [rna\\_host\\_ip\\_map Sample Query, page 6-27](#)

## rna\_host\_ip\_map Fields

The following table describes the fields you can access in the `rna_host_ip_map` table.

**Table 6-21** *rna\_host\_ip\_map Fields*

Field	Description
host_id	ID number of the host.
ipaddr	A binary representation of the IP address of the host.

## rna\_host\_ip\_map Joins

The following table describes the joins you can perform on the `rna_host_ip_map` table.





## rna\_host\_mac\_map

The `rna_host_mac_map` table correlates host IDs to MAC addresses for hosts in your monitored network.

For more information, see the following sections:

- [rna\\_host\\_mac\\_map Fields](#), page 6-28
- [rna\\_host\\_mac\\_map Joins](#), page 6-28
- [rna\\_host\\_mac\\_map Sample Query](#), page 6-29

## rna\_host\_mac\_map Fields

The following table describes the fields you can access in the `rna_host_mac_map` table.

**Table 6-23** *rna\_host\_mac\_map Fields*

Field	Description
host_id	ID number of the host.
mac_address	The host's MAC address.
mac_vendor	Vendor of the network interface of the detected host.

## rna\_host\_mac\_map Joins

The following table describes the joins you can perform on the `rna_host_mac_map` table.

**Table 6-24** *rna\_host\_mac\_map Joins*

You can join this table on...	And...
host_id	rna_host.host_id rna_host_attribute.host_id rna_host_protocol.host_id rna_host_os_vulns.host_id application_host_map.host_id rna_host_client_app.host_id rna_host_client_app_payload.host_id rna_host_ioc_state.host_id rna_host_ip_map.host_id rna_host_os.host_id rna_host_sensor.host_id rna_host_service.host_id rna_host_service_banner.host_id rna_host_service_info.host_id rna_host_service_payload.host_id rna_host_service_vulns.host_id rna_host_third_party_vuln_bugtraq_id.host_id rna_host_third_party_vuln_cve_id.host_id rna_host_third_party_vuln_rna_id.host_id rna_host_third_party_vuln.host_id

## rna\_host\_mac\_map Sample Query

The following query returns MAC information for the host with `host_id` of 8.

```
SELECT HEX(mac_address)
FROM rna_host_mac_map
WHERE HEX(host_id) = "00000000000000000000000000000008";
```

## rna\_host\_os

The `rna_host_os` table contains information on the operating systems detected on the hosts in your monitored network.

For more information, see the following sections:

- [rna\\_host\\_os Fields, page 6-29](#)
- [rna\\_host\\_os Joins, page 6-30](#)
- [rna\\_host\\_os Sample Query, page 6-30](#)

## rna\_host\_os Fields

The following table describes the fields you can access in the `rna_host_os` table.

**Table 6-25** *rna\_host\_os Fields*

Field	Description
<code>confidence</code>	The Firepower System-assigned confidence rating (from 0 to 100) for the identification of the operating system.
<code>created_sec</code>	The UNIX timestamp of the date and time the system first detected host activity.
<code>host_id</code>	ID number of the host.
<code>last_seen_sec</code>	The UNIX timestamp of the date and time the system last detected host activity.
<code>os_uuid</code>	A unique identifier for the operating system detected on the host. The UUID maps to the operating system name, vendor, and version in the Firepower System database.
<code>product</code>	The operating system detected on the host.
<code>source_type</code>	The source of the host's operating system identity: <ul style="list-style-type: none"> <li>• <code>User</code> — Name of the user who entered the data via the web user interface</li> <li>• <code>Application</code> — Imported from another application via the host input feature</li> <li>• <code>Scanner</code> — Either Nmap or another scanner added through system policy</li> <li>• <code>rna</code> — Detected by the Firepower System, either by a discovery event, port match, or pattern match</li> <li>• <code>NetFlow</code> — The data was exported by a NetFlow-enabled device</li> </ul>
<code>vendor</code>	The vendor of the operating system detected on the host.
<code>version</code>	The version of the operating system detected on the host.

## rna\_host\_os Joins

The following table describes the joins you can perform on the `rna_host_os` table.

**Table 6-26** *rna\_host\_os Joins*

You can join this table on...	And...
host_id	<a href="#">rna_host.host_id</a> <a href="#">rna_host_attribute.host_id</a> <a href="#">rna_host_protocol.host_id</a> <a href="#">application_host_map.host_id</a> <a href="#">rna_host_client_app.host_id</a> <a href="#">rna_host_client_app_payload.host_id</a> <a href="#">rna_host_ioc_state.host_id</a> <a href="#">rna_host_ip_map.host_id</a> <a href="#">rna_host_mac_map.host_id</a> <a href="#">rna_host_sensor.host_id</a> <a href="#">rna_host_service.host_id</a> <a href="#">rna_host_service_banner.host_id</a> <a href="#">rna_host_service_info.host_id</a> <a href="#">rna_host_service_payload.host_id</a> <a href="#">rna_host_service_vulns.host_id</a> <a href="#">rna_host_third_party_vuln_bugtraq_id.host_id</a> <a href="#">rna_host_third_party_vuln_cve_id.host_id</a> <a href="#">rna_host_third_party_vuln_rna_id.host_id</a> <a href="#">rna_host_third_party_vuln.host_id</a>

## rna\_host\_os Sample Query

The following query returns operating system information for the host with `host_id` of 8.

```
SELECT vendor, product, version, source_type, confidence
FROM rna_host_os
WHERE HEX(host_id) = "00000000000000000000000000000008";
```

## rna\_host\_os\_vulns

The `rna_host_os_vulns` table contains information on the vulnerabilities associated with the hosts in your monitored network.

For more information, see the following sections:

- [rna\\_host\\_os\\_vulns Fields](#), page 6-31
- [rna\\_host\\_os\\_vulns Joins](#), page 6-31
- [rna\\_host\\_os\\_vulns Sample Query](#), page 6-31

## rna\_host\_os\_vulns Fields

The following table describes the fields you can access in the `rna_host_os_vulns` table.

**Table 6-27** *rna\_host\_os\_vulns Fields*

Field	Description
<code>host_id</code>	ID number of the host.
<code>invalid</code>	A value indicating whether the vulnerability is valid for the host: <ul style="list-style-type: none"> <li>• 0 — Vulnerability is valid</li> <li>• 1 — Vulnerability is invalid</li> </ul>
<code>rna_vuln_id</code>	An internal identification number for the vulnerability.

## rna\_host\_os\_vulns Joins

The following table describes the joins you can perform on the `rna_host_os_vulns` table.

**Table 6-28** *rna\_host\_os\_vulns Joins*

You can join this table on...	And...
<code>rna_vuln_id</code>	<code>rna_vuln.bugtraq_id</code> <code>rna_vuln.rna_vuln_id</code> <code>rna_host_third_party_vuln_rna_id.rna_vuln_id</code> <code>rna_host_third_party_vuln_cve_id.cve_id</code> <code>rna_host_third_party_vuln_bugtraq_id.bugtraq_id</code>
<code>host_id</code>	<code>rna_host.host_id</code> <code>rna_host_attribute.host_id</code> <code>rna_host_protocol.host_id</code> <code>application_host_map.host_id</code> <code>rna_host_client_app.host_id</code> <code>rna_host_client_app_payload.host_id</code> <code>rna_host_ioc_state.host_id</code> <code>rna_host_ip_map.host_id</code> <code>rna_host_mac_map.host_id</code> <code>rna_host_sensor.host_id</code> <code>rna_host_service.host_id</code> <code>rna_host_service_banner.host_id</code> <code>rna_host_service_info.host_id</code> <code>rna_host_service_payload.host_id</code> <code>rna_host_third_party_vuln_bugtraq_id.host_id</code> <code>rna_host_third_party_vuln_cve_id.host_id</code> <code>rna_host_third_party_vuln_rna_id.host_id</code> <code>rna_host_third_party_vuln.host_id</code>

## rna\_host\_os\_vulns Sample Query

The following query returns the operating system vulnerabilities for the host with `host_id` of 8.

```
SELECT rna_vuln_id, invalid
FROM rna_host_os_vulns
WHERE HEX(host_id) = "00000000000000000000000000000008";
```

## rna\_host\_protocol

The `rna_host_protocol` table contains information on the protocols detected on the hosts in your monitored network.

For more information, see the following sections:

- [rna\\_host\\_protocol Fields, page 6-32](#)
- [rna\\_host\\_protocol Joins, page 6-32](#)
- [rna\\_host\\_protocol Sample Query, page 6-33](#)

## rna\_host\_protocol Fields

The following table describes the fields you can access in the `rna_host_protocol` table.

**Table 6-29** *rna\_host\_protocol Fields*

Field	Description
host_id	ID number of the host.
ip_address	Field deprecated in Version 5.2. Returns null for all queries.
layer	The network layer where the protocol is running: Network or Transport.
mac_address	Field deprecated in Version 5.2. Returns null for all queries.
mac_vendor	Field deprecated in Version 5.2. Returns null for all queries.
protocol_name	The traffic protocol used by the host.
protocol_num	The IANA-specified protocol number for the protocol.

## rna\_host\_protocol Joins

The following table describes the joins you can perform on the `rna_host_protocol` table.

Table 6-30 rna\_host\_protocol Joins

You can join this table on...	And...
host_id	rna_host.host_id rna_host_attribute.host_id rna_host_os_vulns.host_id application_host_map.host_id rna_host_client_app.host_id rna_host_client_app_payload.host_id rna_host_ioc_state.host_id rna_host_ip_map.host_id rna_host_mac_map.host_id rna_host_os.host_id rna_host_sensor.host_id rna_host_service.host_id rna_host_service_banner.host_id rna_host_service_info.host_id rna_host_service_payload.host_id rna_host_service_vulns.host_id rna_host_third_party_vuln_bugtraq_id.host_id rna_host_third_party_vuln_cve_id.host_id rna_host_third_party_vuln_rna_id.host_id rna_host_third_party_vuln.host_id

## rna\_host\_protocol Sample Query

The following query returns all protocol records for the host with `host_id` of 8.

```
SELECT protocol_num, protocol_name
FROM rna_host_protocol
WHERE HEX(host_id) = "00000000000000000000000000000008";
```

## rna\_host\_sensor

The `rna_host_sensor` table lists the host IP addresses in your monitored network and indicates the managed device that detected each one.

The `rna_host_sensor` table supersedes the deprecated `rna_ip_host_sensor` table starting with Version 5.2 of the Firepower System.

For more information, see the following sections:

- [rna\\_host\\_sensor Fields, page 6-33](#)
- [rna\\_host\\_sensor Joins, page 6-34](#)
- [rna\\_host\\_sensor Sample Query, page 6-34](#)

## rna\_host\_sensor Fields

The following table describes the fields you can access in the `rna_host_sensor` table.

**Table 6-31** rna\_host\_sensor Fields

Field	Description
host_id	ID number of the host.
sensor_address	The IP address of the managed device that generated the discovery event. Format is <i>ipv4_address, ipv6_address</i> .
sensor_name	The name of the managed device.
sensor_uuid	A unique identifier for the managed device, or 0 if <i>sensor_name</i> is null.

## rna\_host\_sensor Joins

The following table describes the joins you can perform on the **rna\_host\_sensor** table.

**Table 6-32** rna\_host\_sensor Joins

You can join this table on...	And...
host_id	rna_host.host_id rna_host_attribute.host_id rna_host_protocol.host_id rna_host_os_vulns.host_id application_host_map.host_id rna_host_client_app.host_id rna_host_client_app_payload.host_id rna_host_ioc_state.host_id rna_host_ip_map.host_id rna_host_mac_map.host_id rna_host_os.host_id rna_host_service.host_id rna_host_service_banner.host_id rna_host_service_info.host_id rna_host_service_payload.host_id rna_host_service_vulns.host_id rna_host_third_party_vuln_bugtraq_id.host_id rna_host_third_party_vuln_cve_id.host_id rna_host_third_party_vuln_rna_id.host_id rna_host_third_party_vuln.host_id

## rna\_host\_sensor Sample Query

The following query returns up to 25 hosts, and the sensor that detected them, from the **rna\_host\_sensor** table.

```
SELECT host_id, sensor_address, sensor_name
FROM rna_host_sensor
LIMIT 0, 25;
```



## rna\_host\_service

The `rna_host_service` table contains general information about the servers detected on the hosts in your managed network through network port and traffic protocol combinations.

For more information, see the following sections:

- [rna\\_host\\_service Fields, page 6-35](#)
- [rna\\_host\\_service Joins, page 6-35](#)
- [rna\\_host\\_service Sample Query, page 6-36](#)

## rna\_host\_service Fields

The following table describes the fields you can access in the `rna_host_service` table.

**Table 6-33** *rna\_host\_service Fields*

Field	Description
<code>confidence</code>	The Firepower System-assigned confidence rating (from 0 to 100) for the identification of the server.
<code>hits</code>	The number of times the server was detected.
<code>host_id</code>	ID number of the host.
<code>last_used_sec</code>	UNIX timestamp of the date and time the system last detected server activity.
<code>port</code>	The port used by the server.
<code>protocol</code>	The traffic protocol: TCP or UDP.

## rna\_host\_service Joins

The following table describes the joins you can perform on the `rna_host_service` table.

**Table 6-34** rna\_host\_service Joins

You can join this table on...	And...
host_id	rna_host.host_id rna_host_attribute.host_id rna_host_protocol.host_id rna_host_os_vulns.host_id application_host_map.host_id rna_host_client_app.host_id rna_host_client_app_payload.host_id rna_host_ioc_state.host_id rna_host_ip_map.host_id rna_host_mac_map.host_id rna_host_os.host_id rna_host_sensor.host_id rna_host_service_banner.host_id rna_host_service_info.host_id rna_host_service_payload.host_id rna_host_service_vulns.host_id rna_host_third_party_vuln_bugtraq_id.host_id rna_host_third_party_vuln_cve_id.host_id rna_host_third_party_vuln_rna_id.host_id rna_host_third_party_vuln.host_id
The set of: host_id port protocol	The set of: rna_host_service_banner.host_id rna_host_service_banner.port rna_host_service_banner.protocol  The set of: rna_host_service_info.host_id rna_host_service_info.port rna_host_service_info.protocol  The set of: rna_host_service_payload.host_id rna_host_service_payload.port rna_host_service_payload.protocol

## rna\_host\_service Sample Query

The following query returns the first 25 detected server records for the host with host\_id of 8:

```
SELECT hits, protocol, port, confidence
FROM rna_host_service
WHERE HEX(host_id) = "00000000000000000000000000000008"
LIMIT 0, 25;
```

## rna\_host\_service\_banner

The `rna_ip_host_service_banner` table contains header information from network traffic that advertises vendors and versions (“banners”) for the servers on hosts in your monitored network. Keep in mind that the Firepower System does not store server banners unless you enable the **Capture Banners** option in the your network discovery policy.

For more information, see the following sections:

- [rna\\_host\\_service\\_banner Fields, page 6-37](#)
- [rna\\_host\\_service\\_banner Joins, page 6-37](#)
- [rna\\_host\\_service\\_banner Sample Query, page 6-38](#)

## rna\_host\_service\_banner Fields

The following table describes the fields you can access in the `rna_host_service_banner` table.

**Table 6-35** *rna\_host\_service\_banner Fields*

Field	Description
banner	The server banner, that is, the first 256 bytes of the first packet detected for the server.
host_id	ID number of the host.
port	The port used by the server.
protocol	The traffic protocol: TCP or UDP.

## rna\_host\_service\_banner Joins

The following table describes the joins you can perform on the `rna_host_service_banner` table.

**Table 6-36** *rna\_host\_service\_banner Joins*

You can join this table on...	And...
The set of: host_id port protocol	The set of: rna_host_service.host_id rna_host_service.port rna_host_service.protocol  The set of: rna_host_service_info.host_id rna_host_service_info.port rna_host_service_info.protocol  The set of: rna_host_service_payload.host_id rna_host_service_payload.port rna_host_service_payload.protocol
host_id	rna_host.host_id rna_host_attribute.host_id rna_host_protocol.host_id rna_host_os_vulns.host_id application_host_map.host_id rna_host_client_app.host_id rna_host_client_app_payload.host_id rna_host_ioc_state.host_id rna_host_ip_map.host_id rna_host_mac_map.host_id rna_host_os.host_id rna_host_sensor.host_id rna_host_service.host_id rna_host_service_info.host_id rna_host_service_payload.host_id rna_host_service_vulns.host_id rna_host_third_party_vuln_bugtraq_id.host_id rna_host_third_party_vuln_cve_id.host_id rna_host_third_party_vuln_rna_id.host_id rna_host_third_party_vuln.host_id

## rna\_host\_service\_banner Sample Query

The following query returns the server banner for the host with `host_id` of 8.

```
SELECT port, protocol, banner
FROM rna_host_service_banner
WHERE HEX(host_id) = "00000000000000000000000000000008";
```

## rna\_host\_service\_info

The `rna_host_service_info` table contains detailed information about the servers detected on the hosts in your monitored network.

For more information, see the following sections:

- [rna\\_host\\_service\\_info Fields, page 6-39](#)
- [rna\\_host\\_service\\_info Joins, page 6-40](#)
- [rna\\_host\\_service\\_info Sample Query, page 6-42](#)

## rna\_host\_service\_info Fields

The following table describes the fields you can access in the `rna_host_service_info` table.

**Table 6-37** *rna\_host\_service\_info Fields*

Field	Description
<code>application_id</code>	Field deprecated in Version 5.0. Returns blank for all queries.
<code>application_protocol_id</code>	An internal identifier for the detected application protocol, if available.
<code>application_protocol_name</code>	One of: <ul style="list-style-type: none"> <li>• the name of the application protocol, if a positive identification can be made</li> <li>• pending if the system requires more data</li> <li>• blank if there is no application information in the connection</li> </ul>
<code>business_relevance</code>	An index (from 1 to 5) of the application's relevance to business productivity where 1 is very low and 5 is very high.
<code>business_relevance_description</code>	A description of business relevance (very low, low, medium, high, very high).
<code>created_sec</code>	The UNIX timestamp of the date and time the system first detected the application protocol.
<code>host_id</code>	ID number of the host.
<code>ip_address</code>	Field deprecated in Version 5.2. Returns null for all queries.
<code>last_used_sec</code>	The UNIX timestamp of the date and time the system last detected server activity.
<code>port</code>	The port used by the server.
<code>protocol</code>	The traffic protocol: TCP or UDP.
<code>risk</code>	An index (from 1 to 5) of the application's risk where 1 is very low risk and 5 is very high risk.
<code>risk_description</code>	A description of the risk (very low, low, medium, high, very high).
<code>service_info_id</code>	An internal identification number for the server.
<code>service_name</code>	Field deprecated in Version 5.0. Returns null for all queries.

**Table 6-37** *rna\_host\_service\_info Fields (continued)*

Field	Description
source_type	<p>The source of the identity of the server:</p> <ul style="list-style-type: none"> <li>• <code>User</code> — Name of the user who entered the data via the web user interface</li> <li>• <code>Application</code> — Imported from another application via the host input feature</li> <li>• <code>Scanner</code> — Added through NMAP or imported via the host input feature with a source type of Scanner</li> <li>• <code>rna</code> — Detected by the Firepower System, either by a discovery event, port match, or pattern match</li> <li>• <code>NetFlow</code> — The data was exported by a NetFlow-enabled device</li> </ul>
vendor	The vendor of the server on the host.
version	The version of the server detected on the host.

## rna\_host\_service\_info Joins

The following table describes the joins you can perform on the `rna_host_service_info` table.

**Table 6-38** *rna\_host\_service\_info Joins*

You can join this table on...	And...
application_protocol_id	app_ids_stats_current_timeframe.application_id application_info.application_id application_host_map.application_id application_tag_map.application_id app_stats_current_timeframe.application_id connection_log.application_protocol_id connection_log.client_application_id connection_log.web_application_id connection_summary.application_protocol_id si_connection_log.application_protocol_name si_connection_log.client_application_id si_connection_log.web_application_id file_event.application_id intrusion_event.application_protocol_id intrusion_event.client_application_id intrusion_event.web_application_id rna_host_client_app_payload.web_application_id rna_host_client_app_payload.client_application_id rna_host_client_app.client_application_id rna_host_client_app.application_protocol_id rna_host_service_payload.web_application_id

**Table 6-38** rna\_host\_service\_info Joins (continued)

You can join this table on...	And...
host_id	rna_host.host_id rna_host_attribute.host_id rna_host_protocol.host_id rna_host_os_vulns.host_id application_host_map.host_id rna_host_client_app.host_id rna_host_client_app_payload.host_id rna_host_ioc_state.host_id rna_host_ip_map.host_id rna_host_mac_map.host_id rna_host_os.host_id rna_host_sensor.host_id rna_host_service.host_id rna_host_service_banner.host_id rna_host_service_payload.host_id rna_host_third_party_vuln_bugtraq_id.host_id rna_host_third_party_vuln_cve_id.host_id rna_host_third_party_vuln_rna_id.host_id rna_host_third_party_vuln.host_id
The set of: host_id and port and protocol	The set of: rna_host_service.host_id rna_host_service.port rna_host_service.protocol  The set of: rna_host_service_banner.host_id rna_host_service_banner.port rna_host_service_banner.protocol  The set of: rna_host_service_payload.host_id rna_host_service_payload.port rna_host_service_payload.protocol

## rna\_host\_service\_info Sample Query

The following query returns information about the application protocols detected on the host with host\_id of 8.

```
SELECT host_id, application_protocol_name, version, vendor, created_sec, last_used_sec,
business_relevance, risk
FROM rna_host_service_info
WHERE HEX(host_id) = "00000000000000000000000000000008";
```



## rna\_host\_service\_payload

The `rna_host_service_payload` table contains information on the web applications associated by the hosts in your monitored network.

For more information, see the following sections:

- [rna\\_host\\_service\\_payload Fields, page 6-43](#)
- [rna\\_host\\_service\\_payload Joins, page 6-43](#)
- [rna\\_host\\_service\\_payload Sample Query, page 6-45](#)

## rna\_host\_service\_payload Fields

The following table describes the fields you can access in the `rna_host_service_payload` table.

**Table 6-39** *rna\_host\_service\_payload Fields*

Field	Description
<code>application_id</code>	Field deprecated in Version 5.0. Returns null for all queries.
<code>application_name</code>	Field deprecated in Version 5.0. Returns null for all queries.
<code>host_id</code>	ID number of the host.
<code>ip_address</code>	Field deprecated in Version 5.2. Returns null for all queries.
<code>payload_name</code>	Field deprecated in Version 5.0. Returns null for all queries.
<code>payload_type</code>	Field deprecated in Version 5.0. Returns null for all queries.
<code>port</code>	The port used by the server.
<code>protocol</code>	The traffic protocol: TCP or UDP.
<code>web_application_id</code>	The internal identification number for the web application.
<code>web_application_name</code>	One of: <ul style="list-style-type: none"> <li>• the name of the web application, if a positive identification can be made</li> <li>• <code>web browsing</code> if the system detects an application protocol of HTTP but cannot identify a specific web application</li> <li>• blank if the connection has no HTTP traffic</li> </ul>

## rna\_host\_service\_payload Joins

The following table describes the joins you can perform on the `rna_host_service_payload` table.

**Table 6-40** *rna\_host\_service\_payload Joins*

You can join this table on...	And...
web_application_id	app_ids_stats_current_timeframe.application_id application_info.application_id application_host_map.application_id application_tag_map.application_id app_stats_current_timeframe.application_id connection_log.application_protocol_id connection_log.client_application_id connection_log.web_application_id connection_summary.application_protocol_id si_connection_log.application_protocol_name si_connection_log.client_application_id si_connection_log.web_application_id file_event.application_id intrusion_event.application_protocol_id intrusion_event.client_application_id intrusion_event.web_application_id rna_host_service_info.application_protocol_id rna_host_client_app_payload.web_application_id rna_host_client_app_payload.client_application_id rna_host_client_app.client_application_id rna_host_client_app.application_protocol_id

**Table 6-40** *rna\_host\_service\_payload Joins (continued)*

You can join this table on...	And...
The set of: host_id port protocol	The set of: rna_host_service.host_id rna_host_service.port rna_host_service.protocol  The set of: rna_host_service_banner.host_id rna_host_service_banner.port rna_host_service_banner.protocol  The set of: rna_host_service_info.host_id rna_host_service_info.port rna_host_service_info.protocol
host_id	rna_host.host_id rna_host_attribute.host_id rna_host_protocol.host_id rna_host_os_vulns.host_id application_host_map.host_id rna_host_client_app.host_id rna_host_client_app_payload.host_id rna_host_ioc_state.host_id rna_host_ip_map.host_id rna_host_mac_map.host_id rna_host_os.host_id rna_host_sensor.host_id rna_host_service.host_id rna_host_service_banner.host_id rna_host_service_info.host_id rna_host_service_vulns.host_id rna_host_third_party_vuln_bugtraq_id.host_id rna_host_third_party_vuln_cve_id.host_id rna_host_third_party_vuln_rna_id.host_id rna_host_third_party_vuln.host_id

## rna\_host\_service\_payload Sample Query

The following query returns information about the web applications detected on the host with `host_id` of 8.

```
SELECT host_id, web_application_id, web_application_name, port, protocol
FROM rna_host_service_payload
WHERE HEX(host_id) = "00000000000000000000000000000008";
```

## rna\_host\_service\_subtype

The `rna_host_service_subtype` table contains information on the sub-servers for a server detected on the hosts in your monitored network.

For more information, see the following sections:

- [rna\\_host\\_service\\_subtype Fields, page 6-46](#)
- [rna\\_host\\_service\\_subtype Joins, page 6-46](#)
- [rna\\_host\\_service\\_subtype Sample Query, page 6-47](#)

## rna\_host\_service\_subtype Fields

The following table describes the fields you can access in the `rna_host_service_subtype` table.

**Table 6-41** *rna\_host\_service\_subtype Fields*

Field	Description
host_id	ID number of the host.
port	The port used by the server.
protocol	The traffic protocol: TCP or UDP.
service_name	One of: <ul style="list-style-type: none"> <li>• the server on the host that is associated with the triggering event</li> <li>• none or blank if data for an identification is unavailable</li> <li>• pending if additional data is required</li> <li>• unknown if the system cannot identify the server based on known server fingerprints</li> </ul>
source_type	The source of the identity of the server: <ul style="list-style-type: none"> <li>• User - name of the user who entered the data via the web user interface</li> <li>• Application - imported from another application via the host input feature</li> <li>• Scanner - added through NMAP or imported via the host input feature with a source type of Scanner</li> <li>• rna - detected by the Firepower System, either by a discovery event, port match, or pattern match</li> <li>• NetFlow - the data was exported by a NetFlow-enabled device</li> </ul>
sub_service_name	The sub-server detected on the host.
sub_service_vendor	The vendor of the sub-server detected on the host.
sub_service_version	The version of the sub-server detected on the host.
vendor	The vendor of the server detected on the host.
version	The version of the server detected on the host.

## rna\_host\_service\_subtype Joins

You cannot perform joins on the `rna_host_service_subtype` table.

## rna\_host\_service\_subtype Sample Query

The following query returns all detected sub-server records for the host with `host_id` of 8.

```
SELECT host_id, service_name, version, sub_service_name, sub_service_version,
sub_service_vendor
FROM rna_host_service_subtype
WHERE HEX(host_id) = "00000000000000000000000000000008";
```

## rna\_host\_service\_vulns

The `rna_host_service_vulns` table contains information on the vulnerabilities mapped to the servers detected on the hosts in your monitored network.

For more information, see the following sections:

- [rna\\_host\\_service\\_vulns Fields, page 6-47](#)
- [rna\\_host\\_service\\_vulns Joins, page 6-48](#)
- [rna\\_host\\_service\\_vulns Sample Query, page 6-48](#)

## rna\_host\_service\_vulns Fields

The following table describes the fields you can access in the `rna_host_service_vulns` table.

**Table 6-42** *rna\_host\_service\_vulns Fields*

Field	Description
<code>application_id</code>	An internal identification number for the application protocol running on the host.
<code>application_name</code>	The application protocol name that appears in the user interface.
<code>host_id</code>	ID number of the host.
<code>invalid</code>	A value indicating whether the vulnerability is valid for the host running the application protocol: <ul style="list-style-type: none"> <li>• 0 — Vulnerability is valid</li> <li>• 1 — Vulnerability is invalid</li> </ul>
<code>ip_address</code>	Field deprecated in Version 5.2. Returns <code>null</code> for all queries.
<code>port</code>	The port used by the server.
<code>protocol</code>	The traffic protocol: TCP or UDP.
<code>rna_vuln_id</code>	An internal identification number for the vulnerability.
<code>service_name</code>	Field deprecated in Version 5.0. Returns <code>null</code> for all queries.
<code>vendor</code>	The vendor of the server detected on the host.
<code>version</code>	The version of the server detected on the host.

## rna\_host\_service\_vulns Joins

The following table describes the joins you can perform on the `rna_host_service_vulns` table.

**Table 6-43** *rna\_host\_service\_vulns Joins*

You can join this table on...	And...
rna_vuln_id	<a href="#">rna_vuln.bugtraq_id</a> <a href="#">rna_vuln.rna_vuln_id</a> <a href="#">rna_host_third_party_vuln_rna_id.rna_vuln_id</a> <a href="#">rna_host_third_party_vuln_cve_id.cve_id</a> <a href="#">rna_host_third_party_vuln_bugtraq_id.bugtraq_id</a>
host_id	<a href="#">rna_host.host_id</a> <a href="#">rna_host_attribute.host_id</a> <a href="#">rna_host_protocol.host_id</a> <a href="#">application_host_map.host_id</a> <a href="#">rna_host_client_app.host_id</a> <a href="#">rna_host_client_app_payload.host_id</a> <a href="#">rna_host_ioc_state.host_id</a> <a href="#">rna_host_ip_map.host_id</a> <a href="#">rna_host_mac_map.host_id</a> <a href="#">rna_host_os.host_id</a> <a href="#">rna_host_sensor.host_id</a> <a href="#">rna_host_service.host_id</a> <a href="#">rna_host_service_banner.host_id</a> <a href="#">rna_host_service_payload.host_id</a> <a href="#">rna_host_third_party_vuln_bugtraq_id.host_id</a> <a href="#">rna_host_third_party_vuln_cve_id.host_id</a> <a href="#">rna_host_third_party_vuln_rna_id.host_id</a> <a href="#">rna_host_third_party_vuln.host_id</a>

## rna\_host\_service\_vulns Sample Query

The following query returns information about all server vulnerabilities for the host with `host_id` of 8.

```
SELECT host_id, rna_vuln_id, vendor, service_name, version, invalid FROM
rna_host_service_vulns
WHERE HEX(host_id) = "00000000000000000000000000000008";
```

## rna\_host\_third\_party\_vuln

The `rna_host_third_party_vuln` table contains information on the third-party vulnerabilities associated with the hosts in your monitored network. Note that the information in this table is determined by the third-party vulnerability data imported via the host input feature.

For more information, see the following sections:

- [rna\\_host\\_third\\_party\\_vuln Fields, page 6-49](#)
- [rna\\_host\\_third\\_party\\_vuln Joins, page 6-49](#)

- [rna\\_host\\_third\\_party\\_vuln Sample Query, page 6-50](#)

## rna\_host\_third\_party\_vuln Fields

The following table describes the fields you can access in the `rna_host_third_party_vuln` table.

**Table 6-44** *rna\_host\_third\_party\_vuln Fields*

Field	Description
<code>description</code>	A description of the vulnerability.
<code>host_id</code>	ID number of the host.
<code>invalid</code>	A value indicating whether the vulnerability is valid for the host: <ul style="list-style-type: none"> <li>• 0 — Vulnerability is valid</li> <li>• 1 — Vulnerability is invalid</li> </ul>
<code>name</code>	The title of the vulnerability.
<code>port</code>	A port number, if the vulnerability is associated with a server or related application detected on a specific port.
<code>protocol</code>	The traffic protocol (TCP or UDP), if the vulnerability is associated with an application using that protocol.
<code>source</code>	The source of the vulnerability.
<code>third_party_vuln_id</code>	An identification number associated with the vulnerability.

## rna\_host\_third\_party\_vuln Joins

The following table describes the joins you can perform on the `rna_host_third_party_vuln` table.

**Table 6-45** *rna\_host\_third\_party\_vuln Joins*

You can join this table on...	And...
<code>host_id</code>	<code>rna_host.host_id</code> <code>rna_host_attribute.host_id</code> <code>rna_host_protocol.host_id</code> <code>rna_host_os_vulns.host_id</code> <code>application_host_map.host_id</code> <code>rna_host_client_app.host_id</code> <code>rna_host_client_app_payload.host_id</code> <code>rna_host_ioc_state.host_id</code> <code>rna_host_ip_map.host_id</code> <code>rna_host_mac_map.host_id</code> <code>rna_host_os.host_id</code> <code>rna_host_sensor.host_id</code> <code>rna_host_service.host_id</code> <code>rna_host_service_banner.host_id</code> <code>rna_host_service_info.host_id</code> <code>rna_host_service_payload.host_id</code> <code>rna_host_service_vulns.host_id</code>

## rna\_host\_third\_party\_vuln Sample Query

The following query returns information about the third party vulnerabilities for host with `host_id` of 8.

```
SELECT host_id, third_party_vuln_id, name, description, source, invalid
FROM rna_host_third_party_vuln
WHERE HEX(host_id) = "00000000000000000000000000000008";
```

## rna\_host\_third\_party\_vuln\_bugtraq\_id

The `rna_host_third_party_vuln_bugtraq_id` table contains information on the third-party vulnerabilities that are mapped to vulnerabilities in the Bugtraq database and also associated with hosts in your monitored network. Note that the third-party vulnerability data in this table is imported via the host input feature.

For more information, see the following sections:

- [rna\\_host\\_third\\_party\\_vuln\\_bugtraq\\_id Fields, page 6-50](#)
- [rna\\_host\\_third\\_party\\_vuln\\_bugtraq\\_id Joins, page 6-51](#)
- [rna\\_host\\_third\\_party\\_vuln\\_bugtraq\\_id Sample Query, page 6-51](#)

## rna\_host\_third\_party\_vuln\_bugtraq\_id Fields

The following table describes the fields you can access in the `rna_host_third_party_vuln_bugtraq_id` table.

**Table 6-46** *rna\_host\_third\_party\_vuln\_bugtraq\_id Fields*

Field	Description
<code>bugtraq_id</code>	The Bugtraq database identification number associated with the vulnerability.
<code>description</code>	A description of the vulnerability.
<code>host_id</code>	ID number of the host.
<code>invalid</code>	A value indicating whether the vulnerability is valid for the host: <ul style="list-style-type: none"> <li>• 0 — Vulnerability is valid</li> <li>• 1 — Vulnerability is invalid</li> </ul>
<code>ip_address</code>	Field deprecated in Version 5.2. Returns <code>null</code> for all queries.
<code>name</code>	The name, or title, of the vulnerability.
<code>port</code>	A port number, if the vulnerability is associated with a server or related application detected on a specific port.
<code>protocol</code>	The traffic protocol (TCP or UDP), if the vulnerability is associated with an application using that protocol.
<code>source</code>	The source of the vulnerability.
<code>third_party_vuln_id</code>	The third-party identification number associated with the vulnerability.



## rna\_host\_third\_party\_vuln\_bugtraq\_id Joins

The following table describes the joins you can perform on the `rna_host_third_party_vuln_bugtraq_id` table.

**Table 6-47** *rna\_host\_third\_party\_vuln\_bugtraq\_id Joins*

You can join this table on...	And...
bugtraq_id	<a href="#">rna_vuln.bugtraq_id</a> <a href="#">rna_vuln.rna_vuln_id</a> <a href="#">rna_host_os_vulns.rna_vuln_id</a> <a href="#">rna_host_service_vulns.rna_vuln_id</a>
host_id	<a href="#">rna_host.host_id</a> <a href="#">rna_host_attribute.host_id</a> <a href="#">rna_host_protocol.host_id</a> <a href="#">rna_host_os_vulns.host_id</a> <a href="#">application_host_map.host_id</a> <a href="#">rna_host_client_app.host_id</a> <a href="#">rna_host_client_app_payload.host_id</a> <a href="#">rna_host_ioc_state.host_id</a> <a href="#">rna_host_ip_map.host_id</a> <a href="#">rna_host_mac_map.host_id</a> <a href="#">rna_host_os.host_id</a> <a href="#">rna_host_sensor.host_id</a> <a href="#">rna_host_service.host_id</a> <a href="#">rna_host_service_banner.host_id</a> <a href="#">rna_host_service_info.host_id</a> <a href="#">rna_host_service_payload.host_id</a> <a href="#">rna_host_service_vulns.host_id</a>

## rna\_host\_third\_party\_vuln\_bugtraq\_id Sample Query

The following query returns the BugTraq vulnerabilities for the host with `host_id` of 8.

```
SELECT host_id, third_party_vuln_id, bugtraq_id, name, description, source, invalid
FROM rna_host_third_party_vuln_bugtraq_id
WHERE HEX(host_id) = "00000000000000000000000000000008";
```

## rna\_host\_third\_party\_vuln\_cve\_id

The `rna_host_third_party_vuln_cve_id` table contains information on the third-party vulnerabilities that are mapped to vulnerabilities in MITRE's CVE database and also associated with the hosts in your monitored network. Note that this table contains third-party vulnerability data imported via the host input feature.

For more information, see the following sections:

- [rna\\_host\\_third\\_party\\_vuln\\_cve\\_id Fields, page 6-52](#)
- [rna\\_host\\_third\\_party\\_vuln\\_cve\\_id Joins, page 6-52](#)

- [rna\\_host\\_third\\_party\\_vuln\\_cve\\_id Sample Query, page 6-53](#)

## rna\_host\_third\_party\_vuln\_cve\_id Fields

The following table describes the fields you can access in the `rna_host_third_party_vuln_cve_id` table.

**Table 6-48** *rna\_host\_third\_party\_vuln\_cve\_id Fields*

Field	Description
<code>cve_id</code>	The identification number associated with the vulnerability in MITRE's CVE database.
<code>description</code>	A description of the vulnerability.
<code>host_id</code>	ID number of the host.
<code>invalid</code>	A value indicating whether the vulnerability is valid for the host: <ul style="list-style-type: none"> <li>• 0 — Vulnerability is valid</li> <li>• 1 — Vulnerability is invalid</li> </ul>
<code>ip_address</code>	Field deprecated in Version 5.2. Returns <code>null</code> for all queries.
<code>name</code>	The name, or title, of the vulnerability.
<code>port</code>	A port number, if the vulnerability is associated with a server or related application detected on a specific port.
<code>protocol</code>	The traffic protocol (TCP or UDP), if the vulnerability is associated with an application using that protocol.
<code>source</code>	The source of the vulnerability.
<code>third_party_vuln_id</code>	The identification number associated with the vulnerability.

## rna\_host\_third\_party\_vuln\_cve\_id Joins

The following table describes the joins you can perform on the `rna_host_third_party_vuln_cve_id` table.

**Table 6-49** *rna\_host\_third\_party\_vuln\_cve\_id Joins*

You can join this table on...	And...
cve_id	<a href="#">rna_vuln.bugtraq_id</a> <a href="#">rna_vuln.rna_vuln_id</a> <a href="#">rna_host_os_vulns.rna_vuln_id</a> <a href="#">rna_host_service_vulns.rna_vuln_id</a>
host_id	<a href="#">rna_host.host_id</a> <a href="#">rna_host_attribute.host_id</a> <a href="#">rna_host_protocol.host_id</a> <a href="#">rna_host_os_vulns.host_id</a> <a href="#">application_host_map.host_id</a> <a href="#">rna_host_client_app.host_id</a> <a href="#">rna_host_client_app_payload.host_id</a> <a href="#">rna_host_ioc_state.host_id</a> <a href="#">rna_host_ip_map.host_id</a> <a href="#">rna_host_mac_map.host_id</a> <a href="#">rna_host_os.host_id</a> <a href="#">rna_host_sensor.host_id</a> <a href="#">rna_host_service.host_id</a> <a href="#">rna_host_service_banner.host_id</a> <a href="#">rna_host_service_info.host_id</a> <a href="#">rna_host_service_payload.host_id</a> <a href="#">rna_host_service_vulns.host_id</a>

## rna\_host\_third\_party\_vuln\_cve\_id Sample Query

The following query returns the CVE vulnerabilities for the host with `host_id` of 8.

```
SELECT host_id, third_party_vuln_id, cve_id, name, description, source, invalid
FROM rna_host_third_party_vuln_cve_id
WHERE HEX(host_id) = "00000000000000000000000000000008";
```

## rna\_host\_third\_party\_vuln\_rna\_id

The `rna_host_third_party_vuln_rna_id` table contains information on third-party vulnerabilities that are mapped to vulnerabilities in the Firepower System vulnerability database (VDB) and also associated with hosts in your monitored network. Note that the third-party vulnerability data in this table is imported via the host input feature.

For more information, see the following sections:

- [rna\\_host\\_third\\_party\\_vuln\\_rna\\_id Fields, page 6-54](#)
- [rna\\_host\\_third\\_party\\_vuln\\_rna\\_id Joins, page 6-54](#)
- [rna\\_host\\_third\\_party\\_vuln\\_rna\\_id Sample Query, page 6-55](#)

## rna\_host\_third\_party\_vuln\_rna\_id Fields

The following table describes the fields you can access in the `rna_host_third_party_vuln_rna_id` table.

**Table 6-50** *rna\_host\_third\_party\_vuln\_rna\_id Fields*

Field	Description
<code>description</code>	A description of the vulnerability.
<code>host_id</code>	ID number of the host.
<code>invalid</code>	A value indicating whether the vulnerability is valid for the host: <ul style="list-style-type: none"> <li>0 — Vulnerability is valid</li> <li>1 — Vulnerability is invalid</li> </ul>
<code>ip_address</code>	Field deprecated in Version 5.2. Returns <code>null</code> for all queries.
<code>name</code>	The name, or title, of the vulnerability.
<code>port</code>	A port number, if the vulnerability is associated with a server or related application detected on a specific port.
<code>protocol</code>	The traffic protocol (TCP or UDP), if the vulnerability is associated with an application using that protocol.
<code>rna_vuln_id</code>	The vulnerability identification number that Cisco uses to track the vulnerability.
<code>source</code>	The source of the vulnerability.
<code>third_party_vuln_id</code>	The identification number associated with the vulnerability.

## rna\_host\_third\_party\_vuln\_rna\_id Joins

The following table describes the joins you can perform on the `rna_host_third_party_vuln_rna_id` table.

**Table 6-51** *rna\_host\_third\_party\_vuln\_rna\_id Joins*

You can join this table on...	And...
rna_vuln_id	rna_vuln.bugtraq_id rna_vuln.rna_vuln_id rna_host_os.rna_vuln_id rna_host_service_vulns.rna_vuln_id
host_id	rna_host.host_id rna_host_attribute.host_id rna_host_protocol.host_id rna_host_os_vulns.host_id application_host_map.host_id rna_host_client_app.host_id rna_host_client_app_payload.host_id rna_host_ioc_state.host_id rna_host_ip_map.host_id rna_host_mac_map.host_id rna_host_os.host_id rna_host_sensor.host_id rna_host_service.host_id rna_host_service_banner.host_id rna_host_service_info.host_id rna_host_service_payload.host_id rna_host_service_vulns.host_id

## rna\_host\_third\_party\_vuln\_rna\_id Sample Query

The following query returns all third party vulnerabilities with VDB IDs for the host with `host_id` of 8.

```
SELECT host_id, third_party_vuln_id, rna_vuln_id, name, description, source, invalid
FROM rna_host_third_party_vuln_rna_id
WHERE HEX(host_id) = "00000000000000000000000000000008";
```

## rna\_vuln

The `rna_vuln` table contains information on the vulnerabilities in the Cisco VDB.

For more information, see the following sections:

- [rna\\_vuln Fields](#), page 6-55
- [rna\\_vuln Joins](#), page 6-57
- [rna\\_vuln Sample Query](#), page 6-57

## rna\_vuln Fields

The following table describes the fields you can access in the `rna_vuln` table.

Table 6-52 rna\_vuln Fields

Field	Description
authentication	Whether authentication is required to exploit the vulnerability: <ul style="list-style-type: none"> <li>• Required</li> <li>• Not Required</li> <li>• Unknown</li> </ul>
availability	When the vulnerability can be exploited: <ul style="list-style-type: none"> <li>• Always</li> <li>• User Initiated</li> <li>• Time Dependent</li> <li>• Unknown</li> </ul>
available_exploits	Whether there are available exploits for the vulnerability: <ul style="list-style-type: none"> <li>• TRUE</li> <li>• FALSE</li> </ul>
bugtraq_id	The identification number associated with the vulnerability in the Bugtraq database.
class	The class of vulnerability: <ul style="list-style-type: none"> <li>• Configuration Error</li> <li>• Boundary Condition Error</li> <li>• Design Error</li> </ul>
credibility	How credible the vulnerability is: <ul style="list-style-type: none"> <li>• Conflicting Reports</li> <li>• Conflicting Details</li> <li>• Single Source</li> <li>• Reliable Source</li> <li>• Multiple Sources</li> <li>• Vendor Confirmed</li> </ul>
credit	The person or organization credited with reporting the vulnerability.
ease	The ease of exploiting the vulnerability: <ul style="list-style-type: none"> <li>• No Exploit Required</li> <li>• Exploit Available</li> <li>• No Exploit Available</li> </ul>
effect	Details on what could happen when the vulnerability is exploited.
entry_date	The date the vulnerability was entered in the database.
exploit	Information on where you can find exploits for the vulnerability.
impact	The vulnerability impact, corresponding to the impact level determined through correlation of intrusion data, discovery events, and vulnerability assessments. The value can be from 1 to 10, with 10 being the most severe. The impact value of a vulnerability is determined by the writer of the Bugtraq entry.

**Table 6-52** *rna\_vuln Fields (continued)*

Field	Description
local	Indicates whether the vulnerability must be exploited locally: <ul style="list-style-type: none"> <li>• TRUE</li> <li>• FALSE</li> </ul>
long_description	A general description of the vulnerability.
mitigation	A description of how you can mitigate the vulnerability.
modified_date	The date of the most recent modification to the vulnerability, if applicable.
publish_date	The date the vulnerability was published.
remote	Indicates whether the vulnerability can be exploited across a network: <ul style="list-style-type: none"> <li>• TRUE</li> <li>• FALSE</li> </ul>
rna_vuln_id	The Cisco vulnerability ID number that the system uses to track vulnerabilities.
scenario	A description of a scenario where an attacker is exploiting the vulnerability.
short_description	A summary description of the vulnerability.
snort_id	The identification number associated with the vulnerability in the Snort ID (SID) database. That is, if an intrusion rule can detect network traffic that exploits a particular vulnerability, that vulnerability is associated with the intrusion rule's SID.
solution	The solution to the vulnerability.
technical_description	The technical description of the vulnerability.
title	The title of the vulnerability.

## rna\_vuln Joins

The following table describes the joins you can perform on the `rna_vuln` table.

**Table 6-53** *rna\_vuln Joins*

You can join this table on...	And...
rna_vuln_id	<code>rna_host_os_vulns.rna_vuln_id</code>
or	<code>rna_host_service_vulns.rna_vuln_id</code>
bugtraq_id	<code>rna_host_third_party_vuln_rna_id.rna_vuln_id</code>
	<code>rna_host_third_party_vuln_cve_id.cve_id</code>
	<code>rna_host_third_party_vuln_bugtraq_id.bugtraq_id</code>

## rna\_vuln Sample Query

The following query returns information about up to 25 vulnerabilities. The records are sorted in order of most events generated based on the vulnerability.

```
SELECT rna_vuln_id, bugtraq_id, snort_id, title, publish_date, impact, remote, exploit,
long_description, technical_description, solution, count(*) as count
FROM rna_vuln
```

```
GROUP BY rna_vuln_id
ORDER BY rna_vuln_id DESC LIMIT 0, 25;
```

## tag\_info

The **tag\_info** table contains information on the tags that are associated with the applications detected on your network. Note that an application can have multiple associated tags.

For more information, see the following sections:

- [tag\\_info Fields, page 6-58](#)
- [tag\\_info Joins, page 6-58](#)
- [tag\\_info Sample Query, page 6-58](#)

## tag\_info Fields

The following table describes the fields you can access in the **tag\_info** table.

**Table 6-54** tag\_info Fields

Field	Description
domain_name	Name of the domain on which the application was detected.
domain_uuid	UUID of the domain on which the application was detected. This is presented in binary.
tag_description	Tag description.
tag_id	Internal identifier for the tag.
tag_name	Text of the tag that appears in the user interface.
tag_type	One of the following: <ul style="list-style-type: none"> <li>• category</li> <li>• tag</li> </ul>

## tag\_info Joins

The following table describes the joins you can perform on the **tag\_info** table.

**Table 6-55** tag\_info Joins

You can join this table on...	And...
tag_id	<code>application_tag_map.tag_id</code>

## tag\_info Sample Query

The following query returns the application tag record for a selected tag ID within the Global \ Company B \ Edge domain.

```
SELECT tag_id, tag_name, tag_type, tag_description
```



```
FROM tag_info
WHERE tag_id="100" AND domain_name= "Global \ Company B \ Edge";
```

## url\_categories

The **url\_categories** table lists the categories that characterize URLs requested by hosts in your monitored network.

For more information, see the following sections:

- [url\\_categories Fields, page 6-59](#)
- [url\\_categories Joins, page 6-59](#)
- [url\\_categories Sample Query, page 6-59](#)

## url\_categories Fields

The following table describes the fields in the **url\_categories** table.

**Table 6-56** *url\_categories Fields*

Field	Description
category_description	The description of the URL category.
category_id	The internal identification number of the URL category.

## url\_categories Joins

You cannot perform joins on the **url\_categories** table.

## url\_categories Sample Query

The following query returns a category record for the selected category ID.

```
SELECT category_id, category_description
FROM url_categories
WHERE category_id="1";
```

## url\_reputations

The **url\_reputations** table lists the reputations that characterize URLs requested by hosts in your monitored request.

For more information, see the following sections:

- [url\\_reputations Fields, page 6-60](#)
- [url\\_reputations Joins, page 6-60](#)

- [url\\_reputations Sample Query, page 6-60](#)

## url\_reputations Fields

The following table describes the fields in the `url_reputations` table.

**Table 6-57** *url\_reputations Fields*

Field	Description
<code>reputation_description</code>	The description of the reputation.
<code>reputation_id</code>	An internal identification number for the URL reputation.

## url\_reputations Joins

You cannot perform joins on the `url_reputations` table.

## url\_reputations Sample Query

The following query returns URL reputation information for a reputation ID.

```
SELECT reputation_id, reputation_description
FROM url_reputations
WHERE reputation_id="1";
```

## user\_ipaddr\_history

The `user_ipaddr_history` table contains information on user activity for a particular host in your monitored network.

For more information, see the following sections:

- [user\\_ipaddr\\_history Fields, page 6-60](#)
- [user\\_ipaddr\\_history Joins, page 6-61](#)
- [user\\_ipaddr\\_history Sample Query, page 6-62](#)

## user\_ipaddr\_history Fields

The following table describes the fields you can access in the `user_ipaddr_history` table.

**Table 6-58** *user\_ipaddr\_history* Fields

Field	Description
authentication_type	Type of authentication used by the user. Values may be: <ul style="list-style-type: none"> <li>• 0 - no authorization required</li> <li>• 1 - passive authentication, AD agent, or ISE session</li> <li>• 2 - captive portal successful authentication</li> <li>• 3 - captive portal guest authentication</li> <li>• 4 - captive portal failed authentication</li> </ul>
domain_name	Name of the domain on which the user was detected.
domain_uuid	UUID of the domain on which the user was detected. This is presented in binary.
endpoint_profile	Name of the type of device used by the connection endpoint.
end_time_sec	The UNIX timestamp of the date and time the Firepower System detected a different user logging into the host, marking the assumed end of the previous user's session. Note that the Firepower System does not detect logoffs.
id	An internal identification number for the user history record.
ipaddr	A binary representation of the IP address of the host.
location_ip	IP address of the interface communicating with ISE. Can be IPv4 or IPv6.
start_time_sec	The UNIX timestamp of the date and time the Firepower System detected the user logging into host.
security_group	ID number of the network traffic group.
user_dept	The department of the user.
user_email	The email address of the user.
user_first_name	The first name of the user.
user_id	An internal identification number for the user.
user_last_name	The last name of the user.
user_last_seen_sec	The UNIX timestamp of the date and time the Firepower System last detected user activity for the user.
user_last_updated_sec	The UNIX timestamp of the date and time the Firepower System last updated the user record for the user.
user_name	The user name of the user.
user_phone	The phone number of the user.
user_rna_service	Name of the application protocol being used when the user was detected, if available.

## user\_ipaddr\_history Joins

The following table describes the joins you can perform on the `user_ipaddr_history` table.

Table 6-59 user\_ipaddr\_history Joins

You can join this table on...	And...
ipaddr	compliance_event.dst_ipaddr compliance_event.src_ipaddr connection_log.initiator_ipaddr connection_log.responder_ipaddr connection_summary.initiator_ipaddr connection_summary.responder_ipaddr fireamp_event.dst_ipaddr fireamp_event.src_ipaddr intrusion_event.dst_ipaddr intrusion_event.src_ipaddr network_discovery_event.ipaddr rna_host_ip_map.ipaddr si_connection_log.initiator_ipaddr si_connection_log.responder_ipaddr user_discovery_event.ipaddr white_list_event.ipaddr
user_id	discovered_users.user_id user_discovery_event.user_id rna_host_ioc_state.host_id

## user\_ipaddr\_history Sample Query

The following query returns all user activity records for the selected IP address after the specified start timestamp.

```

SELECT ipaddr, start_time_sec, end_time_sec, user_name, user_rna_service,
user_last_seen_sec, user_last_updated_sec
FROM user_ipaddr_history
WHERE HEX(ipaddr) = "00000000000000000000000000000000FFFF0A0A0A04" AND start_time_sec >=
UNIX_TIMESTAMP("2011-10-01 00:00:00");

```



## Schema: Connection Log Tables

This chapter contains information on the schema and supported joins for connection data.

For more information, see the sections listed in the following table. The Version column indicates the Database Access versions supported by each listed table.

**Table 7-1**      *Schema for Connection Log Tables*

See...	For the table that stores information on...	Version
<a href="#">connection_log</a> , page 7-1	Individual connections. Supersedes deprecated table <code>rna_flow</code> .	5.0+
<a href="#">connection_summary</a> , page 7-15	Connection log summaries. Supersedes deprecated table <code>rna_flow_summary</code> .	5.0+
<a href="#">si_connection_log</a> , page 7-19	Individual connections. Used for security intelligence.	5.3+

### connection\_log

The `connection_log` table contains information on connection events. The Firepower System generates a connection event when a connection between a monitored host and any other host is established; the event contains detailed information about the monitored traffic.

The `connection_log` table supersedes the deprecated `rna_flow` table starting with Version 5.0 of the Firepower System.

For more information, see the following sections:

- [connection\\_log Fields](#), page 7-1
- [connection\\_log Joins](#), page 7-15
- [connection\\_log Sample Query](#), page 7-15

### connection\_log Fields

The following table describes the database fields you can access in the `connection_log` table.

Table 7-2 connection\_log Fields

Field	Description
access_control_policy_name	The access control policy that contains the access control rule (or default action) that logged the connection.
access_control_policy_UUID	The UUID of the access control policy that contains the access control rule (or default action) that logged the connection.
access_control_reason	The reason that the access control rule logged the connection. One or more of the following: <ul style="list-style-type: none"> <li>• IP Block</li> <li>• IP Monitor</li> <li>• User Bypass</li> <li>• File Monitor</li> <li>• File Block</li> <li>• Intrusion Monitor</li> <li>• Intrusion Block</li> <li>• File Resume Block</li> <li>• File Resume Allow</li> <li>• File Custom Detection</li> <li>• SSL Block</li> <li>• DNS Block</li> <li>• DNS Monitor</li> <li>• URL Block</li> <li>• URL Monitor</li> <li>• HTTP Injection</li> <li>• Intelligent App Bypass</li> <li>• blank if there is no connection logged</li> </ul>
access_control_rule_action	The action associated with the access control rule (or default action): allow, block, and so on.
access_control_rule_id	An internal identification number for the rule.
access_control_rule_name	The access control rule (or default action) that logged the connection.
application_protocol_id	An internal identification number of the application protocol.
application_protocol_name	One of: <ul style="list-style-type: none"> <li>• the name of the application, if a positive identification can be made</li> <li>• unknown if the system cannot identify the server based on known server fingerprints</li> <li>• pending if the system requires more data</li> <li>• blank if there is no application information in the connection</li> </ul>
bytes_recv	The total number of bytes transmitted by the session responder.
bytes_sent	Total number of bytes transmitted by the session initiator.
cert_valid_end_date	The Unix timestamp on which the SSL certificate used in the connection ceases to be valid.

**Table 7-2** *connection\_log Fields (continued)*

<b>Field</b>	<b>Description</b>
cert_valid_start_date	The Unix timestamp when the SSL certificate used in the connection was issued.
client_application_id	An internal identification number for the client application that was used in the intrusion event.
client_application_name	The client application, if available, that was used in the intrusion event. One of: <ul style="list-style-type: none"> <li>the name of the application, if a positive identification can be made.</li> <li>a generic client name if the system detects a client application but cannot identify a specific one.</li> <li>blank if there is no client application information in the connection.</li> </ul>
client_application_version	The version of the client application.
connection_type	The detection source for the connection information. Either: <ul style="list-style-type: none"> <li>rna, if detected by a Cisco device</li> <li>netflow, if exported by a NetFlow-enabled device</li> </ul>
counter	Counter for the intrusion event associated with the connection event.
dns_ttl	The time to live for the DNS response, in seconds.

Table 7-2 connection\_log Fields (continued)

Field	Description
dns_response	<p>DNS Response. Possible values include:</p> <ul style="list-style-type: none"> <li>• 0 — NoError — No Error</li> <li>• 1 — FormErr — Format Error</li> <li>• 2 — ServFail — Server Failure</li> <li>• 3 — NXDomain — Non-Existent Domain</li> <li>• 4 — NotImp — Not Implemented</li> <li>• 5 — Refused — Query Refused</li> <li>• 6 — YXDomain — Name Exists when it should not</li> <li>• 7 — YXRRSet — RR Set Exists when it should not</li> <li>• 8 — NXRRSet — RR Set that should exist does not</li> <li>• 9 — NotAuth — Not Authorized</li> <li>• 10 — NotZone — Name not contained in zone</li> <li>• 16 — BADSIG — TSIG Signature Failure</li> <li>• 17 — BADKEY — Key not recognized</li> <li>• 18 — BADTIME — Signature out of time window</li> <li>• 19 — BADMODE — Bad TKEY Mode</li> <li>• 20 — BADNAME — Duplicate key name</li> <li>• 21 — BADALG — Algorithm not supported</li> <li>• 22 — BADTRUNC — Bad Truncation</li> <li>• 3841 — NXDOMAIN — NXDOMAIN response from firewall</li> <li>• 3842 — SINKHOLE — Sinkhole response from firewall</li> </ul>
domain_name	Name of the domain for the session.
domain_uuid	UUID of the domain for the session. This is presented in binary.
endpoint_profile	Name of the type of device used by the connection endpoint.
file_count	The number of files identified by Snort in a session. A record is generated for each file identified in the session.
first_packet_sec	The UNIX timestamp of the date and time the first packet of the session was seen.
flow_id	An internal identification number for the connection.
http_response_code	The response code given to the HTTP request in the connection.
hostname_in_query	The hostname used if the connection is a DNS query.
icmp_code	ICMP code if the event is ICMP traffic, or null if the event was not generated from ICMP traffic.
icmp_type	ICMP type if the event is ICMP traffic, or null if the event was not generated from ICMP traffic.



Table 7-2 connection\_log Fields (continued)

Field	Description
initiator_continent_name	The name of the continent of the host that initiated the session: ** — Unknown na — North America as — Asia af — Africa eu — Europe sa — South America au — Australia an — Antarctica
initiator_country_id	Code for the country of the host that initiated the session.
initiator_country_name	Name of the country of the host that initiated the session.
initiator_ip	Field deprecated in Version 5.2. Due to backwards compatibility the value in this field is not set to null, but it is not reliable.
initiator_ip_address	Field deprecated in Version 5.0. Returns null for all queries.
initiator_ipaddr	A binary representation of the IP address of the host that initiated the session.
initiator_ipv4	Field deprecated in Version 5.2. Returns null for all queries.
initiator_port	The port used by the session initiator.
initiator_user_dept	The department of the user who last logged into the initiator host.
initiator_user_email	The email address of the user who last logged into the initiator host.
initiator_user_first_name	The first name of the user who last logged into the initiator host.
initiator_user_id	An internal identification number for the user who last logged into the initiator host.
initiator_user_last_name	The last name of the user who last logged into the initiator host.
initiator_user_last_seen_sec	The UNIX timestamp of the date and time the Firepower System last detected user activity for the user who last logged into the initiator host.
initiator_user_last_updated_sec	The UNIX timestamp of the date and time the Firepower System last updated the user record for the user who last logged into the initiator host.
initiator_user_name	The user name of the user who last logged into the initiator host.
initiator_user_phone	The phone number of the user who last logged into the initiator host.
instance_id	Numerical ID of the Snort instance on the managed device that generated the event.
interface_egress_name	The ingress interface associated with the connection.
interface_ingress_name	The egress interface associated with the connection.
ioc_count	Number of indications of compromise found in the connection.
ips_event_count	The number of intrusion events generated in the connection prior to intrusion event thresholding.

Table 7-2 connection\_log Fields (continued)

Field	Description
last_packet_sec	The UNIX timestamp of the date and time the last packet of the session was seen.
location_ip	IP address of the interface communicating with ISE. Can be IPv4 or IPv6.
monitor_rule_id_1	The ID of the first monitor rule associated with the connection. This ID is associated with the name stored in monitor_rule_name_1.
monitor_rule_id_2	The ID of the second monitor rule associated with the connection. This ID is associated with the name stored in monitor_rule_name_2.
monitor_rule_id_3	The ID of the third monitor rule associated with the connection. This ID is associated with the name stored in monitor_rule_name_3.
monitor_rule_id_4	The ID of the fourth monitor rule associated with the connection. This ID is associated with the name stored in monitor_rule_name_4.
monitor_rule_id_5	The ID of the fifth monitor rule associated with the connection. This ID is associated with the name stored in monitor_rule_name_5.
monitor_rule_id_6	The ID of the sixth monitor rule associated with the connection. This ID is associated with the name stored in monitor_rule_name_6.
monitor_rule_id_7	The ID of the seventh monitor rule associated with the connection. This ID is associated with the name stored in monitor_rule_name_7.
monitor_rule_id_8	The ID of the eighth monitor rule associated with the connection. This ID is associated with the name stored in monitor_rule_name_8.
monitor_rule_name_1	The name of the first monitor rule associated with the connection. This name is associated with the ID stored in monitor_rule_id_1.
monitor_rule_name_2	The name of the second monitor rule associated with the connection. This name is associated with the ID stored in monitor_rule_id_2.
monitor_rule_name_3	The name of the third monitor rule associated with the connection. This name is associated with the ID stored in monitor_rule_id_3.
monitor_rule_name_4	The name of the fourth monitor rule associated with the connection. This name is associated with the ID stored in monitor_rule_id_4.
monitor_rule_name_5	The name of the fifth monitor rule associated with the connection. This name is associated with the ID stored in monitor_rule_id_5.
monitor_rule_name_6	The name of the sixth monitor rule associated with the connection. This name is associated with the ID stored in monitor_rule_id_6.
monitor_rule_name_7	The name of the seventh monitor rule associated with the connection. This name is associated with the ID stored in monitor_rule_id_7.
monitor_rule_name_8	The name of the eighth monitor rule associated with the connection. This name is associated with the ID stored in monitor_rule_id_8.
netbios_domain	The NetBIOS domain used in the connection.
netflow_dst_as	Netflow autonomous system number of the destination, either origin or peer.
netflow_dst_mask	Netflow destination address prefix mask.
netflow_dst_tos	Type of service from the IP header when packets are flowing from the destination to the source.

Table 7-2 connection\_log Fields (continued)

Field	Description
netflow_snmp_in	ID of the interface used by packets flowing from the source to the destination.
netflow_snmp_out	ID of the interface used by packets flowing from the destination to the source.
netflow_src_as	Netflow autonomous system number of the source, either origin or peer.
netflow_src_mask	Netflow source address prefix mask.
netflow_src_tos	Type of service from the IP header when packets are flowing from the source to the destination.
network_analysis_policy_name	The network analysis policy associated with the intrusion policy that generated the intrusion event.
network_analysis_policy_UUID	The UUID of the network analysis policy associated with the intrusion policy that generated the intrusion event.
original_client_continent_name	The name of the continent of the host that originally initiated the session: ** — Unknown na — North America as — Asia af — Africa eu — Europe sa — South America au — Australia an — Antarctica This field is used when there is a proxy in the connection.
original_client_country_id	Code for the country of the host that originally initiated the session. This field is used when there is a proxy in the connection.
original_client_country_name	Name of the country of the host that originally initiated the session. This field is used when there is a proxy in the connection.
original_client_ipaddr	A binary representation of the IP address of the host that originally initiated the session. This field is used when there is a proxy in the connection.
packets_recv	The total number of packets received by the host that initiated the session.
packets_sent	The total number of packets transmitted by the host that initiated the session.
prefilter_policy_name	The name of the prefilter policy that generated the intrusion event.
prefilter_policy_UUID	The UUID of the prefilter policy that generated the intrusion event.
prefilter_rule_id	The integer ID of the prefilter/tunnel rule.
prefilter_rule_name	The name of the prefilter/tunnel rule.
protocol_name	The name of the protocol used in the connection.
protocol_num	The IANA number of the protocol as listed in <a href="http://www.iana.org/assignments/protocol-numbers">http://www.iana.org/assignments/protocol-numbers</a> .
qos_applied_interface_name	The name of the interface on which QoS was applied.

Table 7-2 connection\_log Fields (continued)

Field	Description
qos_dropped_bytes_recv	The number of responder bytes dropped due to QoS.
qos_dropped_bytes_sent	The number of initiator bytes dropped due to QoS.
qos_dropped_packets_recv	The number of responder packets dropped due to QoS.
qos_dropped_packets_sent	The number of initiator packets dropped due to QoS.
qos_policy_name	The name of the QoS policy.
qos_policy_uuid	The UUID of the QoS policy.
qos_rule_id	The integer ID of the QoS rule.
qos_rule_name	The name of the QoS rule.
responder_continent_name	The name of the continent of the host that responded to the session initiator: ** — Unknown na — North America as — Asia af — Africa eu — Europe sa — South America au — Australia an — Antarctica
responder_country_id	Code for the country of the host that responded to the session initiator.
responder_country_name	Name of the country of the host that responded to the session initiator.
responder_ip	Field deprecated in Version 5.2. Due to backwards compatibility the value in this field is not set to null, but it is not reliable.
responder_ip_address	Field deprecated in Version 5.2. Returns null for all queries.
responder_ipaddr	A binary representation of the IPv4 or IPv6 address for the host that responded to the session initiator.
responder_ipv4	Field deprecated in Version 5.2. Returns null for all queries.
responder_port	The port used by the session responder.
responder_user_dept	The department of the user who last logged into the host that responded to the session initiator.
responder_user_email	The email address of the user who last logged into the host that responded to the session initiator.
responder_user_first_name	The first name of the user who last logged into the host that responded to the session initiator.
responder_user_id	An internal identification number for the user who last logged into the host that responded to the session initiator.
responder_user_last_name	The last name of the user who last logged into the host that responded to the session initiator.

Table 7-2 connection\_log Fields (continued)

Field	Description
responder_user_last_seen_sec	The UNIX timestamp of the date and time the Firepower System last detected user activity for the user who last logged into the host that responded to the session initiator.
responder_user_last_updated_sec	The UNIX timestamp of the date and time the Firepower System last updated the user record for the user who last logged into the host that responded to the session initiator.
responder_user_name	The user name of the user who last logged into the host that responded to the session initiator.
responder_user_phone	The phone number of the user who last logged into the host that responded to the session initiator.
security_context	Description of the security context (virtual firewall) that the traffic passed through. Note that the system only populates this field for ASA FirePOWER devices in multi-context mode.
security_group	ID number of the network traffic group.
security_intelligence_category	The Security Intelligence category associated with the connection.
security_intelligence_ip	Whether the Security Intelligence-monitored IP address associated with the connection is a source IP ( <i>src</i> ) or destination IP ( <i>dst</i> ).
security_zone_egress_name	The egress security zone in the connection event.
security_zone_ingress_name	The ingress security zone in the connection event.
sensor_address	The IP address of the managed device that generated the event. Format is <i>ipv4 address, ipv6 address</i> .
sensor_name	The name of the managed device that monitored the session.
sensor_uuid	A unique identifier for the managed device, or 0 if <i>sensor_name</i> is null.
sinkhole	Revision UUID associated with the sinkhole object.
source_device	Field deprecated in Version 5.0. Returns <i>null</i> for all queries.
src_device_ip	Field deprecated in Version 5.2. Due to backwards compatibility the value in this field is not set to <i>null</i> , but it is not reliable.
src_device_ipaddr	Either: <ul style="list-style-type: none"> <li>A binary representation of the IP address of the NetFlow-enabled device that exported the connection data</li> <li>0, for connections detected by Cisco managed devices.</li> </ul>
src_device_ipv4	<ul style="list-style-type: none"> <li>Field deprecated in Version 5.2. Returns <i>null</i> for all queries.</li> </ul>

Table 7-2 connection\_log Fields (continued)

Field	Description
ssl_actual_action	<p>The action performed on the connection based on the SSL Rule. This may differ from the expected action, as the action as specified in the rule may be impossible. Possible values include:</p> <ul style="list-style-type: none"> <li>• Unknown</li> <li>• Do Not Decrypt</li> <li>• Block</li> <li>• Block With Reset</li> <li>• Decrypt (Known Key)</li> <li>• Decrypt (Replace Key)</li> <li>• Decrypt (Resign)</li> </ul>
ssl_cipher_suite	<p>Encryption suite used by the SSL connection. The value is stored in decimal format. See <a href="http://www.iana.org/assignments/tls-parameters/tls-parameters.xhtml">www.iana.org/assignments/tls-parameters/tls-parameters.xhtml</a> for the cipher suite designated by the value.</p>
ssl_expected_action	<p>The action which should be performed on the connection based on the SSL Rule. Possible values include:</p> <ul style="list-style-type: none"> <li>• <i>Unknown</i></li> <li>• <i>Do Not Decrypt</i></li> <li>• <i>Block</i></li> <li>• <i>Block With Reset</i></li> <li>• <i>Decrypt (Known Key)</i></li> <li>• <i>Decrypt (Replace Key)</i></li> <li>• <i>Decrypt (Resign)</i></li> </ul>

Table 7-2 connection\_log Fields (continued)

Field	Description
ssl_flow_flags	<p>The debugging level flags for an encrypted connection. Possible values include:</p> <ul style="list-style-type: none"> <li>• 0x00000001 — NSE_FLOW__VALID — must be set for other fields to be valid</li> <li>• 0x00000002 — NSE_FLOW__INITIALIZED — internal structures ready for processing</li> <li>• 0x00000004 — NSE_FLOW__INTERCEPT — SSL session has been intercepted</li> <li>• 0x40000000 — CH_CIPHERS_MODIFIED — Ciphers have been modified in the client hello.</li> <li>• 0x80000000 — CH_CURVES_MODIFIED — Cipher curves have been modified in the client hello.</li> <li>• 0x100000000 — CH_TLS_DOWNGRADED — The client side has downgraded the TLS version of the connection.</li> <li>• 0x200000000 — CH_SESSION_ID_ZEROED — The session ID in the client hello was removed.</li> <li>• 0x400000000 — CH_SESSION_TICKET_ZEROED — The session ticket in the client hello was removed.</li> <li>• 0x800000000 — CH_EXTENSION_REMOVED — A TLS extension was removed from the client hello.</li> <li>• 0x1000000000 — CH_ALPN_MODIFIED — The ALPN extension in the client hello was modified.</li> <li>• 0x2000000000 — CH_PADDING_MODIFIED — The padding extension in the client hello was modified.</li> <li>• 0x4000000000 — CH_MISMATCH — The cached server certificate used at client hello time was changed.</li> <li>• 0x8000000000 — CH_ALPN_HAS_H2 — The client hello's ALPN extension had HTTP/2.</li> <li>• 0x10000000000 — SH_ALPN_HAS_H2 — The server hello's ALPN extension had HTTP/2.</li> </ul>

Table 7-2 connection\_log Fields (continued)

Field	Description
ssl_flow_messages	<p>The messages exchanged between client and server during the SSL handshake. See <a href="http://tools.ietf.org/html/rfc5246">http://tools.ietf.org/html/rfc5246</a> for more information.</p> <ul style="list-style-type: none"> <li>• 0x00000001 — NSE_MT__HELLO_REQUEST</li> <li>• 0x00000002 — NSE_MT__CLIENT_ALERT</li> <li>• 0x00000004 — NSE_MT__SERVER_ALERT</li> <li>• 0x00000008 — NSE_MT__CLIENT_HELLO</li> <li>• 0x00000010 — NSE_MT__SERVER_HELLO</li> <li>• 0x00000020 — NSE_MT__SERVER_CERTIFICATE</li> <li>• 0x00000040 — NSE_MT__SERVER_KEY_EXCHANGE</li> <li>• 0x00000080 — NSE_MT__CERTIFICATE_REQUEST</li> <li>• 0x00000100 — NSE_MT__SERVER_HELLO_DONE</li> <li>• 0x00000200 — NSE_MT__CLIENT_CERTIFICATE</li> <li>• 0x00000400 — NSE_MT__CLIENT_KEY_EXCHANGE</li> <li>• 0x00000800 — NSE_MT__CERTIFICATE_VERIFY</li> <li>• 0x00001000 — NSE_MT__CLIENT_CHANGE_CIPHER_SPEC</li> <li>• 0x00002000 — NSE_MT__CLIENT_FINISHED</li> <li>• 0x00004000 — NSE_MT__SERVER_CHANGE_CIPHER_SPEC</li> <li>• 0x00008000 — NSE_MT__SERVER_FINISHED</li> <li>• 0x00010000 — NSE_MT__NEW_SESSION_TICKET</li> <li>• 0x00020000 — NSE_MT__HANDSHAKE_OTHER</li> <li>• 0x00040000 — NSE_MT__APP_DATA_FROM_CLIENT</li> <li>• 0x00080000 — NSE_MT__APP_DATA_FROM_SERVER</li> </ul>



Table 7-2 connection\_log Fields (continued)

Field	Description
ssl_flow_status	<p>Status of the SSL Flow. These values describe the reason behind the action taken or the error message seen. Possible values include:</p> <ul style="list-style-type: none"> <li>• 'Unknown'</li> <li>• 'No Match'</li> <li>• 'Success'</li> <li>• 'Uncached Session'</li> <li>• 'Unknown Cipher Suite'</li> <li>• 'Unsupported Cipher Suite'</li> <li>• 'Unsupported SSL Version'</li> <li>• 'SSL Compression Used'</li> <li>• 'Session Undecryptable in Passive Mode'</li> <li>• 'Handshake Error'</li> <li>• 'Decryption Error'</li> <li>• 'Pending Server Name Category Lookup'</li> <li>• 'Pending Common Name Category Lookup'</li> <li>• 'Internal Error'</li> <li>• 'Network Parameters Unavailable'</li> <li>• 'Invalid Server Certificate Handle'</li> <li>• 'Server Certificate Fingerprint Unavailable'</li> <li>• 'Cannot Cache Subject DN'</li> <li>• 'Cannot Cache Issuer DN'</li> <li>• 'Unknown SSL Version'</li> <li>• 'External Certificate List Unavailable'</li> <li>• 'External Certificate Fingerprint Unavailable'</li> <li>• 'Internal Certificate List Invalid'</li> <li>• 'Internal Certificate List Unavailable'</li> <li>• 'Internal Certificate Unavailable'</li> <li>• 'Internal Certificate Fingerprint Unavailable'</li> <li>• 'Server Certificate Validation Unavailable'</li> <li>• 'Server Certificate Validation Failure'</li> <li>• 'Invalid Action'</li> </ul>
ssl_issuer_common_name	Issuer Common name from the SSL certificate. This is typically the host and domain name of the certificate issuer, but may contain other information.
ssl_issuer_country	The country of the SSL certificate issuer.

Table 7-2 connection\_log Fields (continued)

Field	Description
ssl_issuer_organization	The organization of the SSL certificate issuer.
ssl_issuer_organization_unit	The organizational unit of the SSL certificate issuer.
ssl_policy_action	The default action configured for the policy when no rules match.
ssl_policy_name	ID number of the SSL policy that handled the connection.
ssl_policy_reason	The reason the SSL policy logged the SSL session.
ssl_rule_action	The action selected in the user interface for the SSL rule (allow, block, and so forth).
ssl_rule_name	ID number of the SSL rule or default action that handled the connection.
ssl_serial_number	The serial number of the SSL certificate, assigned by the issuing CA.
ssl_server_name	Name provided in the server name indication in the SSL Client Hello.
ssl_subject_common_name	Subject Common name from the SSL certificate. This is typically the host and domain name of the certificate subject, but may contain other information.
ssl_subject_country	The country of the SSL certificate subject.
ssl_subject_organization	The organization of the SSL certificate subject.
ssl_subject_organization_unit	The organizational unit of the SSL certificate subject.
ssl_url_category	Category of the flow as identified from the server name and certificate common name.
ssl_version	The SSL or TLS protocol version used to encrypt the connection.
tcp_flags	The TCP flags detected in the session.
url	The URL requested by the monitored host during the session, if available.
url_category	The category of the URL requested by the monitored host.
url_reputation	The reputation of the URL requested by the monitored host. One of the following: <ul style="list-style-type: none"> <li>• 1 — High risk</li> <li>• 2 — Suspicious sites</li> <li>• 3 — Benign sites with security risks</li> <li>• 4 — Benign sites</li> <li>• 5 — Well known</li> </ul>
web_application_id	An internal identification number for the web application.
web_application_name	One of: <ul style="list-style-type: none"> <li>• the name of the application, if a positive identification can be made.</li> <li>• web browsing if the system detects an application protocol of HTTP but cannot identify a specific web application.</li> <li>• blank if the connection has no HTTP traffic.</li> </ul>

## connection\_log Joins

The following table describes the joins you can perform using the `connection_log` table.

**Table 7-3** *connection\_log Joins*

You can join this table on...	And...
application_protocol_id or client_application_id or web_application_id	application_info.application_id application_host_map.application_id application_tag_map.application_id rna_host_service_info.application_protocol_id rna_host_client_app_payload.web_application_id rna_host_client_app_payload.client_application_id rna_host_client_app.client_application_id rna_host_client_app.application_protocol_id rna_host_service_payload.web_application_id
initiator_ipaddr or responder_ipaddr	rna_host_ip_map.ipaddr user_ipaddr_history.ipaddr

## connection\_log Sample Query

The following query returns up to 25 connection event records from the `connection_log` table, sorted in descending order based on packet timestamps.

```
SELECT first_packet_sec, last_packet_sec, initiator_ipaddr, responder_ipaddr,
security_zone_ingress_name, security_zone_egress_name, initiator_port, protocol_name,
responder_port, application_protocol_id, client_application_id, web_application_id, url,
url_category, url_reputation
FROM connection_log
WHERE first_packet_sec <= UNIX_TIMESTAMP("2011-10-01 00:00:00" ) ORDER BY
first_packet_sec
DESC, last_packet_sec DESC LIMIT 0, 25;
```

## connection\_summary

The `connection_summary` table contains information on connection summaries or aggregated connections. The Firepower System aggregates connections over five-minute intervals. To be aggregated, connections must:

- have the same source and destination IP addresses
- use the same protocol
- use the same application
- either be detected by the same managed device (for sessions detected by managed devices with Firepower) or be exported by the same NetFlow-enabled device and processed by the same managed device

The aggregated data in a connection summary includes the total number of packets and bytes sent by the initiator and responder hosts, as well as the number of connections in the summary.

The `connection_summary` table supersedes the deprecated `rna_flow_summary` table starting with Version 5.0 of the Firepower System.

For more information, see the following sections:

- [connection\\_summary Fields, page 7-16](#)
- [connection\\_summary Joins, page 7-18](#)
- [connection\\_summary Sample Query, page 7-18](#)

## connection\_summary Fields

The following table describes the database fields you can access in the `connection_summary` table.

**Table 7-4** *connection\_summary Fields*

Field	Description
<code>application_protocol_id</code>	An internal identification number for the application protocol.
<code>application_protocol_name</code>	One of: <ul style="list-style-type: none"> <li>• the name of the application, if a positive identification can be made</li> <li>• <code>unknown</code> if the system cannot identify the server based on known server fingerprints</li> <li>• <code>pending</code> if the system requires more data</li> <li>• blank if there is no application information in the connection</li> </ul>
<code>bytes_recv</code>	The total number of bytes transmitted by the session responder.
<code>bytes_sent</code>	The total number of bytes transmitted by the session initiator.
<code>connection_type</code>	The detection source for the connection information. Either: <ul style="list-style-type: none"> <li>• <code>rna</code>, if detected by a Cisco device</li> <li>• <code>netflow</code>, if exported by a NetFlow-enabled device</li> </ul>
<code>domain_name</code>	Name of the domain for the session.
<code>domain_uuid</code>	UUID of the domain for the session. This is presented in binary.
<code>flow_type</code>	Field deprecated in Version 5.0. Returns <code>null</code> for all queries.
<code>id</code>	An internal identification number for the connection summary.
<code>initiator_ip_address</code>	Field deprecated in Version 5.2. Returns <code>null</code> for all queries.
<code>initiator_ipaddr</code>	A binary representation of the IP address of the host that initiated the session.
<code>initiator_user_dept</code>	The department of the user who last logged into the initiator host.
<code>initiator_user_email</code>	The email address of the user who last logged into the initiator host.
<code>initiator_user_first_name</code>	The first name of the user who last logged into the initiator host.
<code>initiator_user_id</code>	An internal identification number for the user who last logged into the initiator host.
<code>initiator_user_last_name</code>	The last name of the user who last logged into the initiator host.

Table 7-4 connection\_summary Fields (continued)

Field	Description
initiator_user_last_seen_sec	The UNIX timestamp of the date and time the Firepower System last detected user activity for the user who last logged into the initiator host.
initiator_user_last_updated_sec	The UNIX timestamp of the date and time the Firepower System last updated the user record for the user who last logged into the initiator host.
initiator_user_name	The user name of the user who last logged into the initiator host.
initiator_user_phone	The phone number of the user who last logged into the initiator host.
interface_egress_name	The ingress interface associated with the connection.
interface_ingress_name	The egress interface associated with the connection.
netmap_num	Netmap ID for the domain on which the connection was detected.
num_connections	The number of connections in the summary. For long-running connections, that is, connections that span multiple connection summary intervals, only the first connection summary is incremented.
original_client_ipaddr	A binary representation of the IP address of the host that originally initiated the session. This field is used when there is a proxy in the connection.
packets_recv	The total number of packets transmitted by the session responder.
packets_sent	The total number of packets transmitted by the session initiator.
protocol_name	The name of the protocol used in the aggregated sessions.
protocol_num	The IANA number of the protocol as listed in <a href="http://www.iana.org/assignments/protocol-numbers">http://www.iana.org/assignments/protocol-numbers</a> .
responder_ip_address	Field deprecated in Version 5.2. Returns null for all queries.
responder_ipaddr	A binary representation of the IP address of the host that responded to the initiator of the aggregated sessions.
responder_port	The port used by the responder in the aggregated sessions.
responder_user_dept	The department of the user who last logged into the host that responded to the initiator of the aggregated sessions.
responder_user_email	The email address of the user who last logged into the host that responded to the initiator of the aggregated sessions.
responder_user_first_name	The first name of the user who last logged into the host that responded to the initiator of the aggregated sessions.
responder_user_id	An internal identification number for the user who last logged into the host that responded to the initiator of the aggregated sessions.
responder_user_last_name	The last name of the user who last logged into the host that responded to the initiator of the aggregated sessions.
responder_user_last_seen_sec	The UNIX timestamp of the date and time the Firepower System last detected user activity for the user who last logged into the host that responded to the initiator of the aggregated sessions.
responder_user_last_updated_sec	The UNIX timestamp of the date and time the Firepower System last updated the user record for the user who last logged into the host that responded to the session initiator.
responder_user_name	The user name of the user who last logged into the host that responded to the initiator of the aggregated sessions.

**Table 7-4** connection\_summary Fields (continued)

Field	Description
responder_user_phone	The phone number of the user who last logged into the host that responded to the initiator of the aggregated sessions.
security_zone_egress_name	The egress security zone in the connection event.
security_zone_ingress_name	The ingress security zone in the connection event.
sensor_address	The IP address of the managed device that generated the event. Format is <i>ipv4_address</i> , <i>ipv6_address</i> .
sensor_name	The name of the managed device that monitored the aggregated sessions.
sensor_uuid	A unique identifier for the managed device, or 0 if <i>sensor_name</i> is null.
source_device	The identification of the source device, which is either: <ul style="list-style-type: none"> <li>the IP address of the NetFlow-enabled device that exported the data for the connection</li> <li>Firepower if the connection was detected by a Cisco managed device</li> </ul>
start_time_sec	The UNIX timestamp of the date and time the five-minute interval used to aggregate the sessions in the summary started.

## connection\_summary Joins

The following table describes the joins you can perform using the `connection_summary` table.

**Table 7-5** connection\_summary Joins

You can join this table on...	And...
application_protocol_id	<pre>application_info.application_id application_host_map.application_id application_tag_map.application_id rna_host_service_info.application_protocol_id rna_host_client_app_payload.web_application_id rna_host_client_app_payload.client_application_id rna_host_client_app.client_application_id rna_host_client_app.application_protocol_id rna_host_service_payload.web_application_id</pre>
initiator_ipaddr or responder_ipaddr	<pre>rna_host_ip_map.ipaddr user_ipaddr_history.ipaddr</pre>

## connection\_summary Sample Query

The following query returns up to five connection event summary records detected by the selected device.

```
SELECT initiator_ipaddr, responder_ipaddr, protocol_name, application_protocol_id,
source_device, sensor_name, sensor_address, packets_rcv, packets_sent, bytes_rcv,
bytes_sent, connection_type, num_connections
```

```
FROM connection_summary
WHERE sensor_name='linden' limit 5;
```

## si\_connection\_log

The `si_connection_log` table contains information on security intelligence events. The Firepower System generates a Security Intelligence event when a connection is blocked or monitored by Security Intelligence; the event contains detailed information about the monitored traffic.

For more information, see the following sections:

- [si\\_connection\\_log Fields, page 7-19](#)
- [si\\_connection\\_log Joins, page 7-31](#)
- [si\\_connection\\_log Sample Query, page 7-31](#)

## si\_connection\_log Fields

The following table describes the database fields you can access in the `si_connection_log` table.

**Table 7-6** *si\_connection\_log Fields*

Field	Description
<code>access_control_policy_name</code>	The access control policy that contains the access control rule (or default action) that logged the connection.
<code>access_control_policy_UUID</code>	The UUID of the access control policy that contains the access control rule (or default action) that logged the connection.

Table 7-6 si\_connection\_log Fields (continued)

Field	Description
access_control_reason	The reason that the access control rule logged the connection. One or more of the following: <ul style="list-style-type: none"> <li>• IP Block</li> <li>• IP Monitor</li> <li>• User Bypass</li> <li>• File Monitor</li> <li>• File Block</li> <li>• Intrusion Monitor</li> <li>• Intrusion Block</li> <li>• File Resume Block</li> <li>• File Resume Allow</li> <li>• File Custom Detection</li> <li>• SSL Block</li> <li>• DNS Block</li> <li>• DNS Monitor</li> <li>• URL Block</li> <li>• URL Monitor</li> <li>• HTTP Injection</li> <li>• Intelligent App Bypass</li> <li>• blank if there is no connection logged</li> </ul>
access_control_rule_action	The action associated with the access control rule (or default action): allow, block, and so on.
access_control_rule_id	An internal identification number for the rule.
access_control_rule_name	The access control rule (or default action) that logged the connection.
application_protocol_id	An internal identification number of the application protocol.
application_protocol_name	One of: <ul style="list-style-type: none"> <li>• the name of the application, if a positive identification can be made</li> <li>• unknown if the system cannot identify the server based on known server fingerprints</li> <li>• pending if the system requires more data</li> <li>• blank if there is no application information in the connection</li> </ul>
bytes_recv	The total number of bytes transmitted by the session responder.
bytes_sent	Total number of bytes transmitted by the session initiator.
cert_valid_end_date	The Unix timestamp on which the SSL certificate used in the connection ceases to be valid.
cert_valid_start_date	The Unix timestamp when the SSL certificate used in the connection was issued.
client_application_id	An internal identification number for the client application that was used in the intrusion event.



Table 7-6 *si\_connection\_log Fields (continued)*

Field	Description
client_application_name	The client application, if available, that was used in the intrusion event. One of: <ul style="list-style-type: none"> <li>the name of the application, if a positive identification can be made</li> <li>a generic client name if the system detects a client application but cannot identify a specific one</li> <li>blank if there is no client application information in the connection</li> </ul>
client_application_version	The version of the client application.
connection_type	The detection source for the connection information. Either: <ul style="list-style-type: none"> <li>rna, if detected by a Cisco device</li> <li>netflow, if exported by a NetFlow-enabled device</li> </ul>
counter	Counter for the intrusion event associated with the connection event.
dns_ttl	The time to live for the DNS response, in seconds.
dns_response	DNS Response. Possible values include: <ul style="list-style-type: none"> <li>0 — NoError — No Error</li> <li>1 — FormErr — Format Error</li> <li>2 — ServFail — Server Failure</li> <li>3 — NXDomain — Non-Existent Domain</li> <li>4 — NotImp — Not Implemented</li> <li>5 — Refused — Query Refused</li> <li>6 — YXDomain — Name Exists when it should not</li> <li>7 — YXRRSet — RR Set Exists when it should not</li> <li>8 — NXRRSet — RR Set that should exist does not</li> <li>9 — NotAuth — Not Authorized</li> <li>10 — NotZone — Name not contained in zone</li> <li>16 — BADSIG — TSIG Signature Failure</li> <li>17 — BADKEY — Key not recognized</li> <li>18 — BADTIME — Signature out of time window</li> <li>19 — BADMODE — Bad TKEY Mode</li> <li>20 — BADNAME — Duplicate key name</li> <li>21 — BADALG — Algorithm not supported</li> <li>22 — BADTRUNC — Bad Truncation</li> <li>3841 — NXDOMAIN — NXDOMAIN response from firewall</li> <li>3842 — SINKHOLE — Sinkhole response from firewall</li> </ul>
domain_name	Name of the domain for the session.
domain_uuid	UUID of the domain for the session. This is presented in binary.
endpoint_profile	Name of the type of device used by the connection endpoint.

Table 7-6 si\_connection\_log Fields (continued)

Field	Description
file_count	The number of files identified by snort in a session. A record is generated for each file identified in the session.
first_packet_sec	The UNIX timestamp of the date and time the first packet of the session was seen.
http_response_code	The response code given to the HTTP request in the connection.
hostname_in_query	The hostname used if the connection is a DNS query.
icmp_code	ICMP code if the event is ICMP traffic, or null if the event was not generated from ICMP traffic.
icmp_type	ICMP type if the event is ICMP traffic, or null if the event was not generated from ICMP traffic.
initiator_continent_name	The name of the continent of the host that initiated the session. ** — Unknown na — North America as — Asia af — Africa eu — Europe sa — South America au — Australia an — Antarctica
initiator_country_id	Code for the country of the host that initiated the session.
initiator_country_name	Name of the country of the host that initiated the session.
initiator_ipaddr	A binary representation of the IP address of the host that initiated the session.
initiator_port	The port used by the session initiator.
initiator_user_dept	The department of the user who last logged into the initiator host.
initiator_user_email	The email address of the user who last logged into the initiator host.
initiator_user_first_name	The first name of the user who last logged into the initiator host.
initiator_user_id	An internal identification number for the user who last logged into the initiator host.
initiator_user_last_name	The last name of the user who last logged into the initiator host.
initiator_user_last_seen_sec	The UNIX timestamp of the date and time the Firepower System last detected user activity for the user who last logged into the initiator host.
initiator_user_last_updated_sec	The UNIX timestamp of the date and time the Firepower System last updated the user record for the user who last logged into the initiator host.
initiator_user_name	The user name of the user who last logged into the initiator host.
initiator_user_phone	The phone number of the user who last logged into the initiator host.
instance_id	Numerical ID of the Snort instance on the managed device that generated the event.

Table 7-6 *si\_connection\_log Fields (continued)*

Field	Description
interface_egress_name	The ingress interface associated with the connection.
interface_ingress_name	The egress interface associated with the connection.
ioc_count	Number of indications of compromise found in the connection.
ips_event_count	The number of intrusion events generated in the connection prior to intrusion event thresholding.
last_packet_sec	The UNIX timestamp of the date and time the last packet of the session was seen.
location_ip	IP address of the interface communicating with ISE. Can be IPv4 or IPv6.
monitor_rule_id_1	The ID of the first monitor rule associated with the connection. This ID is associated with the name stored in <code>monitor_rule_name_1</code> .
monitor_rule_id_2	The ID of the second monitor rule associated with the connection. This ID is associated with the name stored in <code>monitor_rule_name_2</code> .
monitor_rule_id_3	The ID of the third monitor rule associated with the connection. This ID is associated with the name stored in <code>monitor_rule_name_3</code> .
monitor_rule_id_4	The ID of the fourth monitor rule associated with the connection. This ID is associated with the name stored in <code>monitor_rule_name_4</code> .
monitor_rule_id_5	The ID of the fifth monitor rule associated with the connection. This ID is associated with the name stored in <code>monitor_rule_name_5</code> .
monitor_rule_id_6	The ID of the sixth monitor rule associated with the connection. This ID is associated with the name stored in <code>monitor_rule_name_6</code> .
monitor_rule_id_7	The ID of the seventh monitor rule associated with the connection. This ID is associated with the name stored in <code>monitor_rule_name_7</code> .
monitor_rule_id_8	The ID of the eighth monitor rule associated with the connection. This ID is associated with the name stored in <code>monitor_rule_name_8</code> .
monitor_rule_name_1	The name of the first monitor rule associated with the connection. This name is associated with the ID stored in <code>monitor_rule_id_1</code> .
monitor_rule_name_2	The name of the second monitor rule associated with the connection. This name is associated with the ID stored in <code>monitor_rule_id_2</code> .
monitor_rule_name_3	The name of the third monitor rule associated with the connection. This name is associated with the ID stored in <code>monitor_rule_id_3</code> .
monitor_rule_name_4	The name of the fourth monitor rule associated with the connection. This name is associated with the ID stored in <code>monitor_rule_id_4</code> .
monitor_rule_name_5	The name of the fifth monitor rule associated with the connection. This name is associated with the ID stored in <code>monitor_rule_id_5</code> .
monitor_rule_name_6	The name of the sixth monitor rule associated with the connection. This name is associated with the ID stored in <code>monitor_rule_id_6</code> .
monitor_rule_name_7	The name of the seventh monitor rule associated with the connection. This name is associated with the ID stored in <code>monitor_rule_id_7</code> .
monitor_rule_name_8	The name of the eighth monitor rule associated with the connection. This name is associated with the ID stored in <code>monitor_rule_id_8</code> .
netbios_domain	The NetBIOS domain used in the connection.

Table 7-6 *si\_connection\_log* Fields (continued)

Field	Description
netflow_dst_as	Netflow autonomous system number of the destination, either origin or peer.
netflow_dst_mask	Netflow destination address prefix mask.
netflow_dst_tos	Type of service from the IP header when packets are flowing from the destination to the source.
netflow_snmp_in	ID of the interface used by packets flowing from the source to the destination.
netflow_snmp_out	ID of the interface used by packets flowing from the destination to the source.
netflow_src_as	Netflow autonomous system number of the source, either origin or peer.
netflow_src_mask	Netflow source address prefix mask.
netflow_src_tos	Type of service from the IP header when packets are flowing from the source to the destination.
network_analysis_policy_name	The network analysis policy associated with the intrusion policy that generated the intrusion event.
network_analysis_policy_UUID	The UUID of the network analysis policy associated with the intrusion policy that generated the intrusion event.
original_client_continent_name	The name of the continent of the host that originally initiated the session: ** — Unknown na — North America as — Asia af — Africa eu — Europe sa — South America au — Australia an — Antarctica This field is used when there is a proxy in the connection.
original_client_country_id	Code for the country of the host that originally initiated the session. This field is used when there is a proxy in the connection.
original_client_country_name	Name of the country of the host that originally initiated the session. This field is used when there is a proxy in the connection.
original_client_ipaddr	A binary representation of the IP address of the host that originally initiated the session. This field is used when there is a proxy in the connection.
packets_recv	The total number of packets received by the host that initiated the session.
packets_sent	The total number of packets transmitted by the host that initiated the session.
prefilter_policy_name	The name of the prefilter policy that generated the intrusion event.
prefilter_policy_UUID	The UUID of the prefilter policy that generated the intrusion event.
prefilter_rule_id	The integer ID of the prefilter/tunnel rule.

Table 7-6 *si\_connection\_log Fields (continued)*

Field	Description
prefilter_rule_name	The name of the prefilter/tunnel rule.
protocol_name	The name of the protocol used in the connection.
protocol_num	The IANA number of the protocol as listed in <a href="http://www.iana.org/assignments/protocol-numbers">http://www.iana.org/assignments/protocol-numbers</a> .
qos_applied_interface_name	The name of the interface on which QoS was applied.
qos_dropped_bytes_recv	The number of responder bytes dropped due to QoS.
qos_dropped_bytes_sent	The number of initiator bytes dropped due to QoS.
qos_dropped_packets_recv	The number of responder packets dropped due to QoS.
qos_dropped_packets_sent	The number of initiator packets dropped due to QoS.
qos_policy_name	The name of the QoS policy.
qos_policy_uuid	The UUID of the QoS policy.
qos_rule_id	The integer ID of the QoS rule.
qos_rule_name	The name of the QoS rule.
responder_continent_name	The name of the continent of the host that responded to the session initiator. ** — Unknown na — North America as — Asia af — Africa eu — Europe sa — South America au — Australia an — Antarctica
responder_country_id	Code for the country of the host that responded to the session initiator.
responder_country_name	Name of the country of the host that responded to the session initiator.
responder_ipaddr	A binary representation of the IPv4 or IPv6 address for the host that responded to the session initiator.
responder_port	The port used by the session responder.
responder_user_dept	The department of the user who last logged into the host that responded to the session initiator.
responder_user_email	The email address of the user who last logged into the host that responded to the session initiator.
responder_user_first_name	The first name of the user who last logged into the host that responded to the session initiator.
responder_user_id	An internal identification number for the user who last logged into the host that responded to the session initiator.
responder_user_last_name	The last name of the user who last logged into the host that responded to the session initiator.

Table 7-6 si\_connection\_log Fields (continued)

Field	Description
responder_user_last_seen_sec	The UNIX timestamp of the date and time the Firepower System last detected user activity for the user who last logged into the host that responded to the session initiator.
responder_user_last_updated_sec	The UNIX timestamp of the date and time the Firepower System last updated the user record for the user who last logged into the host that responded to the session initiator.
responder_user_name	The user name of the user who last logged into the host that responded to the session initiator.
responder_user_phone	The phone number of the user who last logged into the host that responded to the session initiator.
security_context	Description of the security context (virtual firewall) that the traffic passed through. Note that the system only populates this field for ASA FirePOWER devices in multi-context mode.
security_group	ID number of the network traffic group.
security_intelligence_category	The Security Intelligence category associated with the connection.
security_intelligence_ip	Whether the Security Intelligence-monitored IP address associated with the connection is a source IP ( <i>src</i> ) or destination IP ( <i>dst</i> ).
security_zone_egress_name	The egress security zone in the connection event.
security_zone_ingress_name	The ingress security zone in the connection event.
sensor_address	The IP address of the managed device that generated the event. Format is <i>ipv4 address, ipv6 address</i> .
sensor_name	The name of the managed device that monitored the session.
sensor_uuid	A unique identifier for the managed device, or 0 if <i>sensor_name</i> is null.
sinkhole	Revision UUID associated with the sinkhole object.
src_device_ipaddr	Either: <ul style="list-style-type: none"> <li>A binary representation of the IP address of the NetFlow-enabled device that exported the connection data</li> <li>0, for connections detected by Cisco managed devices.</li> </ul>
ssl_actual_action	The action performed on the connection based on the SSL Rule. This may differ from the expected action, as the action as specified in the rule may be impossible. Possible values include: <ul style="list-style-type: none"> <li>'Unknown'</li> <li>'Do Not Decrypt'</li> <li>'Block'</li> <li>'Block With Reset'</li> <li>'Decrypt (Known Key)'</li> <li>'Decrypt (Replace Key)'</li> <li>'Decrypt (Resign)'</li> </ul>

Table 7-6 *si\_connection\_log Fields (continued)*

Field	Description
ssl_cipher_suite	Encryption suite used by the SSL connection. The value is stored in decimal format. See <a href="http://www.iana.org/assignments/tls-parameters/tls-parameters.xhtml">www.iana.org/assignments/tls-parameters/tls-parameters.xhtml</a> for the cipher suite designated by the value.
ssl_expected_action	The action which should be performed on the connection based on the SSL Rule. Possible values include: <ul style="list-style-type: none"> <li>• 'Unknown'</li> <li>• 'Do Not Decrypt'</li> <li>• 'Block'</li> <li>• 'Block With Reset'</li> <li>• 'Decrypt (Known Key)'</li> <li>• 'Decrypt (Replace Key)'</li> <li>• 'Decrypt (Resign)'</li> </ul>
ssl_flow_flags	The debugging level flags for an encrypted connection. Possible values include: <ul style="list-style-type: none"> <li>• 0x00000001 — NSE_FLOW__VALID — must be set for other fields to be valid</li> <li>• 0x00000002 — NSE_FLOW__INITIALIZED — internal structures ready for processing</li> <li>• 0x00000004 — NSE_FLOW__INTERCEPT — SSL session has been intercepted</li> </ul>

Table 7-6 *si\_connection\_log* Fields (continued)

Field	Description
ssl_flow_messages	<p>The messages exchanged between client and server during the SSL handshake. See <a href="http://tools.ietf.org/html/rfc5246">http://tools.ietf.org/html/rfc5246</a> for more information.</p> <ul style="list-style-type: none"> <li>• 0x00000001 — NSE_MT__HELLO_REQUEST</li> <li>• 0x00000002 — NSE_MT__CLIENT_ALERT</li> <li>• 0x00000004 — NSE_MT__SERVER_ALERT</li> <li>• 0x00000008 — NSE_MT__CLIENT_HELLO</li> <li>• 0x00000010 — NSE_MT__SERVER_HELLO</li> <li>• 0x00000020 — NSE_MT__SERVER_CERTIFICATE</li> <li>• 0x00000040 — NSE_MT__SERVER_KEY_EXCHANGE</li> <li>• 0x00000080 — NSE_MT__CERTIFICATE_REQUEST</li> <li>• 0x00000100 — NSE_MT__SERVER_HELLO_DONE</li> <li>• 0x00000200 — NSE_MT__CLIENT_CERTIFICATE</li> <li>• 0x00000400 — NSE_MT__CLIENT_KEY_EXCHANGE</li> <li>• 0x00000800 — NSE_MT__CERTIFICATE_VERIFY</li> <li>• 0x00001000 — NSE_MT__CLIENT_CHANGE_CIPHER_SPEC</li> <li>• 0x00002000 — NSE_MT__CLIENT_FINISHED</li> <li>• 0x00004000 — NSE_MT__SERVER_CHANGE_CIPHER_SPEC</li> <li>• 0x00008000 — NSE_MT__SERVER_FINISHED</li> <li>• 0x00010000 — NSE_MT__NEW_SESSION_TICKET</li> <li>• 0x00020000 — NSE_MT__HANDSHAKE_OTHER</li> <li>• 0x00040000 — NSE_MT__APP_DATA_FROM_CLIENT</li> <li>• 0x00080000 — NSE_MT__APP_DATA_FROM_SERVER</li> </ul>



Table 7-6 *si\_connection\_log Fields (continued)*

Field	Description
ssl_flow_status	<p>Status of the SSL Flow. These values describe the reason behind the action taken or the error message seen. Possible values include:</p> <ul style="list-style-type: none"> <li>• 'Unknown'</li> <li>• 'No Match'</li> <li>• 'Success'</li> <li>• 'Uncached Session'</li> <li>• 'Unknown Cipher Suite'</li> <li>• 'Unsupported Cipher Suite'</li> <li>• 'Unsupported SSL Version'</li> <li>• 'SSL Compression Used'</li> <li>• 'Session Undecryptable in Passive Mode'</li> <li>• 'Handshake Error'</li> <li>• 'Decryption Error'</li> <li>• 'Pending Server Name Category Lookup'</li> <li>• 'Pending Common Name Category Lookup'</li> <li>• 'Internal Error'</li> <li>• 'Network Parameters Unavailable'</li> <li>• 'Invalid Server Certificate Handle'</li> <li>• 'Server Certificate Fingerprint Unavailable'</li> <li>• 'Cannot Cache Subject DN'</li> <li>• 'Cannot Cache Issuer DN'</li> <li>• 'Unknown SSL Version'</li> <li>• 'External Certificate List Unavailable'</li> <li>• 'External Certificate Fingerprint Unavailable'</li> <li>• 'Internal Certificate List Invalid'</li> <li>• 'Internal Certificate List Unavailable'</li> <li>• 'Internal Certificate Unavailable'</li> <li>• 'Internal Certificate Fingerprint Unavailable'</li> <li>• 'Server Certificate Validation Unavailable'</li> <li>• 'Server Certificate Validation Failure'</li> <li>• 'Invalid Action'</li> </ul>
ssl_issuer_common_name	Issuer Common name from the SSL certificate. This is typically the host and domain name of the certificate issuer, but may contain other information.
ssl_issuer_country	The country of the SSL certificate issuer.

Table 7-6 si\_connection\_log Fields (continued)

Field	Description
ssl_issuer_organization	The organization of the SSL certificate issuer.
ssl_issuer_organization_unit	The organizational unit of the SSL certificate issuer.
ssl_policy_action	The default action configured for the policy when no rules match.
ssl_policy_name	ID number of the SSL policy that handled the connection.
ssl_policy_reason	The reason the SSL policy logged the SSL session.
ssl_rule_action	The action selected in the user interface for the SSL rule (allow, block, and so forth).
ssl_rule_name	ID number of the SSL rule or default action that handled the connection.
ssl_serial_number	The serial number of the SSL certificate, assigned by the issuing CA.
ssl_server_name	Name provided in the server name indication in the SSL Client Hello.
ssl_subject_common_name	Subject Common name from the SSL certificate. This is typically the host and domain name of the certificate subject, but may contain other information.
ssl_subject_country	The country of the SSL certificate subject.
ssl_subject_organization	The organization of the SSL certificate subject.
ssl_subject_organization_unit	The organizational unit of the SSL certificate subject.
ssl_url_category	Category of the flow as identified from the server name and certificate common name.
ssl_version	The SSL or TLS protocol version used to encrypt the connection.
tcp_flags	The TCP flags detected in the session.
url	The URL requested by the monitored host during the session, if available.
url_category	The category of the URL requested by the monitored host.
url_reputation	The reputation of the URL requested by the monitored host. One of the following: <ul style="list-style-type: none"> <li>• 1 — High risk</li> <li>• 2 — Suspicious sites</li> <li>• 3 — Benign sites with security risks</li> <li>• 4 — Benign sites</li> <li>• 5 — Well known</li> </ul>
web_application_id	An internal identification number for the web application.
web_application_name	One of: <ul style="list-style-type: none"> <li>• the name of the application, if a positive identification can be made.</li> <li>• web browsing if the system detects an application protocol of HTTP but cannot identify a specific web application.</li> <li>• blank if the connection has no HTTP traffic.</li> </ul>

## si\_connection\_log Joins

The following table describes the joins you can perform using the `si_connection_log` table.

**Table 7-7** *si\_connection\_log Joins*

You can join this table on...	And...
application_protocol_name or application_id or client_application_id or web_application_id	application_info.application_id application_host_map.application_id application_tag_map.application_id rna_host_service_info.application_protocol_id rna_host_client_app_payload.web_application_id rna_host_client_app_payload.client_application_id rna_host_client_app.client_application_id rna_host_client_app.application_protocol_id rna_host_service_payload.web_application_id
initiator_ipaddr or responder_ipaddr	rna_host_ip_map.ipaddr user_ipaddr_history.ipaddr

## si\_connection\_log Sample Query

The following query returns up to 25 connection event records from the `si_connection_log` table, sorted in descending order based on packet timestamps.

```
SELECT first_packet_sec, last_packet_sec, initiator_ipaddr, responder_ipaddr,
security_zone_ingress_name, security_zone_egress_name, initiator_port, protocol_name,
responder_port, application_protocol_id, client_application_id, web_application_id, url,
url_category, url_reputation
FROM si_connection_log
WHERE first_packet_sec <= UNIX_TIMESTAMP("2011-10-01 00:00:00") ORDER BY
first_packet_sec
DESC, last_packet_sec DESC LIMIT 0, 25;
```





## Schema: User Activity Tables

This chapter contains information on the schema and supported joins for user activity and identity events. The Firepower System can detect user activity on your network by tracking various types of user logins, including LDAP, POP3, IMAP, SMTP, AIM, and SIP.

For more information, see the sections listed in the following table.

**Table 8-1** Schema for User Identity Tables

See...	For the table that stores information on...	Version
<a href="#">discovered_users, page 8-1</a>	Information about the users detected by the system.	5.0+
<a href="#">user_discovery_event, page 8-2</a>	User discovery events, which communicate the details of user activity on your network.	5.0+
<a href="#">user_ioc_state, page 8-4</a>	Stores compromise state for users.	6.2+

### discovered\_users

The `discovered_users` table contains detailed information about each user detected by the system.

The `discovered_users` table supersedes the deprecated `rua_user` table starting with Version 5.0 of the Firepower System.

For more information, see the following sections:

- [discovered\\_users Fields, page 8-1](#)
- [discovered\\_users Joins, page 8-2](#)
- [discovered\\_users Sample Query, page 8-2](#)

### discovered\_users Fields

The following table describes the fields you can access in the `discovered_users` table.

**Table 8-2** `discovered_users` Fields

Field	Description
dept	The department of the user.
email	The email address for the user.

Table 8-2 *discovered\_users Fields (continued)*

Field	Description
first_name	The first name for the user.
ip_address	This field has been deprecated and returns null for all queries.
ipaddr	A binary representation of the IPv4 or IPv6 address for the host where the user login was detected.
last_name	The last name for the user.
last_seen_sec	The UNIX timestamp of the date and time the system last reported a login for the user.
last_updated_sec	The UNIX timestamp of the date and time the user's information was last updated.
name	The name for the user.
phone	The phone number for the user.
rna_service	Field deprecated in Version 5.0. Returns null for all queries.
user_id	The internal identification number of the user who last logged onto the host.

## discovered\_users Joins

The following table describes the joins you can perform on the `rna_user` table.

Table 8-3 *discovered\_users Joins*

You can left join on this field...	With other tables that have join type of...
user_id	<pre>user_discovery_event.user_id user_ipaddr_history.user_id user_ioc_state.user_id</pre>

## discovered\_users Sample Query

The following query returns up to 25 discovered user records that were generated since a specified date and time.

```
SELECT user_id, ip_address, email, name, last_seen_sec, last_updated_sec
FROM discovered_users
WHERE last_seen_sec >= UNIX_TIMESTAMP("2011-10-01 00:00:00")
LIMIT 0, 25;
```

## user\_discovery\_event

The `user_discovery_event` table contains a record for each user discovery event.

Note that starting in Version 5.0, the Firepower System records the detection of user activity at the managed device level, no longer by detection engine. The `detection_engine_name` and `detection_engine_uuid` fields in this table have been replaced by the `sensor_name` and `sensor_uuid` fields respectively. Queries on these fields will return information about the managed device that generated the user discovery event.

For more information, see the following sections:

- [user\\_discovery\\_event Fields, page 8-3](#)
- [user\\_discovery\\_event Joins, page 8-4](#)
- [user\\_discovery\\_event Sample Query, page 8-4](#)

## user\_discovery\_event Fields

The following table describes the fields you can access in the `user_discovery_event` table.

**Table 8-4** *user\_discovery\_event Fields*

Field	Description
<code>application_protocol_id</code>	An internal identifier for the detected application protocol.
<code>application_protocol_name</code>	One of: <ul style="list-style-type: none"> <li>• the name of the application used in the connection: LDAP, POP3, and so on</li> <li>• <code>pending</code> if the system cannot identify the application for one of several reasons</li> <li>• blank if there is no application information in the connection</li> </ul>
<code>description</code>	The user name when the discovery event type is either Delete User Identity, or User Identity Dropped. Otherwise, blank.
<code>domain_name</code>	Name of the domain for the on which the user was detected.
<code>domain_uuid</code>	UUID of the domain in which the user was detected. This is presented in binary.
<code>endpoint_profile</code>	Name of the type of device used by the connection endpoint.
<code>event_id</code>	An internal identification number for the discovery event.
<code>event_time_sec</code>	The UNIX timestamp of the date and time of the discovery event.
<code>event_type</code>	The type of discovery event. For example, New User Identity Or User Login.
<code>ip_address</code>	Field deprecated in Version 5.2. Returns <code>null</code> for all queries.
<code>ipaddr</code>	A binary representation of the IP address of the host where the user activity was detected.
<code>location_ip</code>	IP address of the interface communicating with ISE. Can be IPv4 or IPv6.
<code>reported_by</code>	The IPv4 address, IPv6 address, or NetBIOS name of the Active Directory server reporting a user login.
<code>security_group</code>	ID number of the network traffic group.
<code>sensor_address</code>	The IP address of the managed device that detected the user discovery event. Format is <code>ipv4_address</code> , <code>ipv6_address</code> .
<code>sensor_name</code>	The text name of the managed device that detected the user discovery event.
<code>sensor_uuid</code>	A unique identifier for the managed device, or 0 if <code>sensor_name</code> is <code>null</code> .
<code>user_dept</code>	The department of the user who last logged onto the host.
<code>user_email</code>	The email address of the user who last logged onto the host.
<code>user_first_name</code>	The first name of the user.
<code>user_id</code>	The internal identification number of the user who last logged onto the host.
<code>user_last_name</code>	The last name of the user.

**Table 8-4** *user\_discovery\_event Fields (continued)*

Field	Description
user_last_seen_sec	The UNIX timestamp of the date and time the system last reported a login for the user.
user_last_updated_sec	The UNIX timestamp of the date and time the user's information was last updated.
user_name	The user name for the user who last logged onto the host.
user_phone	The phone number for the user who last logged onto the host.

## user\_discovery\_event Joins

The following table describes the joins you can perform on the `user_discovery_event` table.

**Table 8-5** *user\_discovery\_event Joins*

You can join this table on...	And...
ipaddr	<code>rna_host_ip_map.ipaddr</code> <code>user_ipaddr_history.ipaddr</code>
user_id	<code>discovered_users.user_id</code> <code>user_ipaddr_history.user_id</code> <code>user_ioc_state.user_id</code>

## user\_discovery\_event Sample Query

The following query returns up to 25 user event records generated by a selected managed device since a particular date and time.

```
SELECT event_time_sec, ipaddr, sensor_name, event_type, user_name, user_last_seen_sec,
user_last_updated_sec
FROM user_discovery_event
WHERE sensor_name = sensor_name
AND user_last_seen_sec >= UNIX_TIMESTAMP("2011-10-01 00:00:00") ORDER BY event_type ASC
LIMIT 0, 25;
```

## user\_ioc\_state

The `user_ioc_state` table stores the IOC state for users in your monitored network.

For more information, see the following sections:

- [user\\_ioc\\_state Fields, page 8-5](#)
- [user\\_ioc\\_state Joins, page 8-7](#)
- [user\\_ioc\\_state Sample Query, page 8-7](#)



## user\_ioc\_state Fields

The following table describes the fields you can access in the `user_ioc_state` table.

**Table 8-6** *user\_ioc\_state Fields*

Field	Description
<code>first_seen</code>	Unix timestamp when the compromise was first detected.
<code>first_seen_sensor_address</code>	The IP address of the managed device that first detected the compromise. Format is <i>ipv4_address, ipv6_address</i> .
<code>first_seen_sensor_name</code>	The managed device that first detected the compromise.
<code>user_id</code>	ID number of the user.
<code>ioc_category</code>	The category for the compromise. Possible values include: <ul style="list-style-type: none"> <li>• CnC Connected</li> <li>• Exploit Kit</li> <li>• High Impact Attack</li> <li>• Low Impact Attack</li> <li>• Malware Detected</li> <li>• Malware Executed</li> <li>• Dropper Infection</li> <li>• Java Compromise</li> <li>• Word Compromise</li> <li>• Adobe Reader Compromise</li> <li>• Excel Compromise</li> <li>• PowerPoint Compromise</li> <li>• QuickTime Compromise</li> </ul>
<code>ioc_description</code>	Description of the compromise.

Table 8-6 user\_ioc\_state Fields (continued)

Field	Description
ioc_event_type	<p>The event type for the compromise. Possible values include:</p> <ul style="list-style-type: none"> <li>• Adobe Reader launched shell</li> <li>• Dropper Infection Detected by AMP for Endpoints</li> <li>• Excel Compromise Detected by AMP for Endpoints</li> <li>• Excel launched shell</li> <li>• Impact 1 Intrusion Event – attempted-admin</li> <li>• Impact 1 Intrusion Event – attempted-user</li> <li>• Impact 1 Intrusion Event – successful-admin</li> <li>• Impact 1 Intrusion Event – successful-user</li> <li>• Impact 1 Intrusion Event – web-application-attack</li> <li>• Impact 2 Intrusion Event – attempted-admin</li> <li>• Impact 2 Intrusion Event – attempted-user</li> <li>• Impact 2 Intrusion Event – successful-admin</li> <li>• Impact 2 Intrusion Event – successful-user</li> <li>• Impact 2 Intrusion Event – web-application-attack</li> <li>• Intrusion Event – exploit-kit</li> <li>• Intrusion Event – malware-backdoor</li> <li>• Intrusion Event – malware-CnC</li> <li>• Java Compromise Detected by AMP for Endpoints</li> <li>• Java launched shell</li> <li>• PDF Compromise Detected by AMP for Endpoints</li> <li>• PowerPoint Compromise Detected by AMP for Endpoints</li> <li>• PowerPoint launched shell</li> <li>• QuickTime Compromise Detected by AMP for Endpoints</li> <li>• QuickTime launched shell</li> <li>• Security Intelligence Event – CnC</li> <li>• Suspected Botnet Detected by AMP for Endpoints</li> <li>• Threat Detected by AMP for Endpoints – Subtype is 'executed'</li> <li>• Threat Detected by AMP for Endpoints – Subtype is not 'executed'</li> <li>• Threat Detected in File Transfer – Action is not 'block'</li> <li>• Word Compromise Detected by AMP for Endpoints</li> <li>• Word launched shell</li> </ul>
ioc_id	Unique ID number for the compromise.
is_disabled	Whether this compromise has been disabled.
last_seen	Unix timestamp when this compromise was last detected.

**Table 8-6** *user\_ioc\_state Fields (continued)*

Field	Description
last_seen_sensor_address	The IP address of the managed device that last detected the compromise. Format is <i>ipv4_address, ipv6_address</i> .
last_seen_sensor_name	The managed device that last detected the compromise.

## user\_ioc\_state Joins

The following table describes the joins you can perform on the `user_ioc_state` table.

**Table 8-7** *user\_ioc\_state Joins*

You can join this table on...	And...
user_id	<code>discovered_users.user_id</code> <code>user_ipaddr_history.user_id</code> <code>user_discovery_event.user_id</code>

## user\_ioc\_state Sample Query

The following query returns up to 25 hosts with their ioc within a specified timespan.

```
SELECT user_id, ioc_id
FROM user_ioc_state
WHERE first_seen
BETWEEN UNIX_TIMESTAMP("2011-10-01 00:00:00")
AND UNIX_TIMESTAMP("2011-10-07 23:59:59")
ORDER BY ioc_id DESC
LIMIT 0, 25;
```





## Schema: Correlation Tables

This chapter contains information on the schema and supported joins for correlation-related events, including remediation status and allow list events. For more information, see the sections listed in the following table.

**Table 9-1**      *Schema for Correlation Tables*

See...	For the table that stores information on...	Version
<a href="#">compliance_event, page 9-1</a>	Correlation events, which are generated when a correlation rule within an active correlation policy triggers.	4.10.x+
<a href="#">remediation_status, page 9-6</a>	Remediation status events, which are generated when an active correlation policy triggers a remediation as a response.	4.10.x+
<a href="#">white_list_event, page 9-7</a>	Allow list events, which are generated when the system detects a host out of compliance with a allow list in an active allow list compliance policy.	4.10.x+
<a href="#">white_list_violation, page 9-9</a>	Allow list violations, which track the ways that the hosts on your network violate the compliance allow lists in active compliance policies.	4.10.x+

### compliance\_event

The **compliance\_event** table contains information about the correlation events that your Firepower Management Center generates.

For more information, see the following sections:

- [compliance\\_event Fields, page 9-2](#)
- [compliance\\_event Joins, page 9-5](#)
- [compliance\\_event Sample Query, page 9-5](#)

## compliance\_event Fields

Keep in mind that many of the fields in the table can be blank, depending on what type of event triggered the correlation rule. For example, if the Firepower Management Center generates a correlation event because the system detects a specific application protocol or web application running on a specific port, that correlation event does not include intrusion-related information. Fields in this table can also be blank depending on your Firepower System configuration. For example, if you do not have a Control license, correlation events do not include user identity information.

Note that starting in Version 5.0, the Firepower System records the detection of network and user activity at the managed device level, rather than by detection engine. The `detection_engine_name` and `detection_engine_uuid` fields in the `compliance_event` table now return only blanks, and queries that join on those fields return zero records. You must query on the `sensor_uuid` field instead of `detection_engine_uuid` for information about the location of an event's detection.

The following table describes the fields you can access in the `compliance_event` table.

**Table 9-2** *compliance\_event Fields*

Field	Description
<code>blocked</code>	Value indicating what happened to the packet that triggered the intrusion event: <ul style="list-style-type: none"> <li>0 — Packet not dropped</li> <li>1 — Packet dropped (inline, switched, or routed deployments)</li> <li>2 — Packet that triggered the event would have been dropped, if the intrusion policy had been applied to a device in an inline, switched, or routed deployment</li> </ul>
<code>description</code>	Information about the correlation event and how it was triggered.
<code>detection_engine_name</code>	Field deprecated in Version 5.0. Returns <code>null</code> for all queries.
<code>detection_engine_uuid</code>	Field deprecated in Version 5.0. Returns <code>null</code> for all queries.
<code>domain_name</code>	Name of the domain on which the event was detected.
<code>domain_uuid</code>	UUID of the domain on which the event was detected. This is presented in binary.
<code>dst_host_criticality</code>	The user-assigned host criticality of the destination host involved in the correlation event: None, Low, Medium, Or High.
<code>dst_host_type</code>	The destination host type: Host, Router, Bridge, NAT Device, Or Load Balancer.
<code>dst_ip_address</code>	Field deprecated in Version 5.2. Due to backwards compatibility the value in this field is not set to <code>null</code> , but it is not reliable.
<code>dst_ip_address_v6</code>	Field deprecated in Version 5.2. Due to backwards compatibility the value in this field is not set to <code>null</code> , but it is not reliable.
<code>dst_ipaddr</code>	A binary representation of the IPv4 or IPv6 address for the destination host involved in the triggering event.
<code>dst_os_product</code>	The operating system name on the destination host.
<code>dst_os_vendor</code>	The operating system's vendor on the destination host.
<code>dst_os_version</code>	The operating system's version number on the destination host.
<code>dst_port</code>	The port number for the host receiving the traffic if the event protocol type is TCP or UDP. The ICMP code if the protocol type is ICMP.

Table 9-2 *compliance\_event Fields (continued)*

Field	Description
<code>dst_rna_service</code>	If identified, the application protocol on the source host that is associated with the triggering event. If not identified, one of the following: <ul style="list-style-type: none"> <li><code>none</code> or blank - no application protocol traffic</li> <li><code>unknown</code> - the server cannot be identified based on known server fingerprints</li> <li><code>pending</code> - the system needs more information</li> </ul>
<code>dst_user_dept</code>	The department of the destination user.
<code>dst_user_email</code>	The email address of the destination user.
<code>dst_user_first_name</code>	The first name of the destination user.
<code>dst_user_id</code>	The internal identification number for the destination user; that is, the user who last logged into the destination host before the event occurred.
<code>dst_user_last_name</code>	The last name of the destination user.
<code>dst_user_last_seen_sec</code>	The UNIX timestamp of the date and time the system last reported a login for the destination user.
<code>dst_user_last_updated_sec</code>	The UNIX timestamp of the date and time the destination user's information was last updated.
<code>dst_user_name</code>	The user name for the destination user.
<code>dst_user_phone</code>	The destination user's phone number.
<code>dst_vlan_id</code>	The destination host's VLAN identification number, if applicable.
<code>event_id</code>	The identification number of the triggering intrusion event generated by the device.
<code>event_time_sec</code>	The UNIX timestamp of the date and time of the triggering event.
<code>event_time_usec</code>	The microsecond increment of the triggering event timestamp.
<code>event_type</code>	The type of underlying event that triggered the correlation rule or caused the Firepower Management Center to generate the correlation event. Values are: <ul style="list-style-type: none"> <li><code>ids</code>, for intrusion event triggers</li> <li><code>rna</code>, for discovery event, host input event, connection event, or traffic profile change triggers</li> <li><code>rua</code>, for user discovery event triggers</li> <li><code>whitelist</code>, for compliance allow list violation triggers</li> </ul>
<code>host_event_type</code>	The event type, for example, <code>New Host Or Identity Conflict</code> .
<code>id</code>	An internal identification number for the correlation event.
<code>impact</code>	The impact flag value of the event. Values are: <ul style="list-style-type: none"> <li>1 — Red (vulnerable)</li> <li>2 — Orange (potentially vulnerable)</li> <li>3 — Yellow (currently not vulnerable)</li> <li>4 — Blue (unknown target)</li> <li>5 — Gray (unknown impact)</li> </ul> Set only when the correlation rule was triggered by an intrusion event.

Table 9-2 compliance\_event Fields (continued)

Field	Description
interface_egress_name	The ingress interface associated with the connection.
interface_ingress_name	The egress interface associated with the connection.
policy_name	The correlation policy that was violated.
policy_rule_name	The correlation rule that triggered the policy violation.
policy_rule_uuid	A unique identifier for the correlation rule.
policy_time_sec	The UNIX timestamp of the date and time the correlation event was generated.
policy_uuid	A unique identifier for the correlation policy.
priority	The priority for the correlation event, which is set in the user interface. The event priority is determined by the priority of either the triggered rule or the violated correlation policy.
protocol_name	The protocol associated with the event, if available.
protocol_num	The IANA-specified protocol number, if available.
rna_event_type	Field deprecated in Version 5.0. Returns null for all queries.
rua_event_type	Field deprecated in Version 5.0. Returns null for all queries.
rule_generator_id	The generator ID number (GID) of the component that generated the triggering intrusion event.
rule_message	Explanatory text about the intrusion event that triggered the correlation rule. For rule-based events, the message is generated from the rule. For decoder- and preprocessor-based events, the message is hard coded.
rule_signature_id	The signature ID (SID) for the event. Identifies the specific rule or rules, decoder message, or preprocessor message that caused the triggering intrusion event to be generated.
security_zone_egress_name	The egress security zone in the correlation event.
security_zone_ingress_name	The ingress security zone in the correlation event.
sensor_address	The IP address of the managed device that generated the underlying event that triggered the compliance event. Format is <i>ipv4_address, ipv6_address</i> .
sensor_name	The managed device that generated the underlying event that triggered the compliance event.
sensor_uuid	A unique identifier for the managed device, or 0 if <i>sensor_name</i> is null.
src_host_criticality	The user-assigned host criticality of the source host involved in the compliance event: None, Low, Medium, OR High.
src_host_type	The source host type: Host, Router, Bridge, NAT Device, OR Load Balancer.
src_ip_address	Field deprecated in Version 5.2. Due to backwards compatibility the value in this field is not set to null, but it is not reliable.
src_ip_address_v6	Field deprecated in Version 5.2. Due to backwards compatibility the value in this field is not set to null, but it is not reliable.
src_ipaddr	A binary representation of the IPv4 or IPv6 address for the source host involved in the triggering event.
src_os_product	The operating system's name on the source host.
src_os_vendor	The operating system's vendor on the source host.



**Table 9-2** *compliance\_event Fields (continued)*

Field	Description
src_os_version	The operating system's version number on the source host.
src_port	The port number on the source host. For ICMP traffic, the ICMP type appears instead.
src_rna_service	If identified, the application protocol on the source host that is associated with the triggering event. If not identified, one of the following: <ul style="list-style-type: none"> <li>• none or blank - no application protocol traffic</li> <li>• unknown - the server and application protocol cannot be identified based on known server fingerprints</li> <li>• pending - the system needs more information</li> </ul>
src_user_dept	The department of the source user.
src_user_email	The email address of the source user.
src_user_first_name	The first name of the source user.
src_user_id	The internal identification number for the source user; that is, the user who last logged into the source host before the event occurred.
src_user_last_name	The last name of the source user.
src_user_last_seen_sec	The UNIX timestamp of the date and time the system last reported a login for the source user.
src_user_last_updated_sec	The UNIX timestamp of the date and time the source user's information was last updated.
src_user_name	The login user name for the source user.
src_user_phone	The source user's phone number.
src_vlan_id	The source host's VLAN identification number, if applicable.
user_event_type	The type of triggering user event, for example, New User Identity Or User Login.

## compliance\_event Joins

The following table describes the joins you can perform on the `compliance_event` table.

**Table 9-3** *compliance\_event Joins*

You can join this table on...	And...
dst_ipaddr	<code>rna_host_ip_map.ipaddr</code>
or	<code>user_ipaddr_history.ipaddr</code>
src_ipaddr	

## compliance\_event Sample Query

The following query returns up to 25 correlation event records from a week, with event information such as the event time, source and destination IP addresses, source and destination ports, policy information, and so on.

```

SELECT event_id, policy_time_sec, impact, blocked, src_ipaddr, dst_ipaddr, src_port,
dst_port, description, policy_name, policy_rule_name, priority, src_host_criticality,
dst_host_criticality, security_zone_egress_name, security_zone_ingress_name,
sensor_name, interface_egress_name, interface_ingress_name

FROM compliance_event WHERE event_type!="whitelist"

AND policy_time_sec

BETWEEN UNIX_TIMESTAMP("2011-10-01 00:00:00")

AND UNIX_TIMESTAMP("2011-10-07 23:59:59")

domain_name= "Global \ Company B \ Edge"

ORDER BY policy_time_sec

DESC LIMIT 0, 25;

```

## remediation\_status

The **remediation\_status** table contains information about remediation events, which are generated when the Firepower Management Center launches a remediation in response to a correlation policy violation.

For more information, see the following sections:

- [remediation\\_status Fields, page 9-6](#)
- [remediation\\_status Joins, page 9-7](#)
- [remediation\\_status Sample Query, page 9-7](#)

## remediation\_status Fields

The following table describes the database fields you can access in the **remediation\_status** table.

**Table 9-4** remediation\_status Fields

Field	Description
id	The identification number of the policy that was violated and triggered the remediation.
policy_name	The correlation policy that was violated and triggered the remediation.
policy_rule_name	The specific correlation rule that triggered the remediation.
policy_rule_uuid	A unique identifier for the correlation rule.
policy_time_sec	The UNIX timestamp of the date and time that the correlation event that triggered the remediation was generated.
policy_uuid	A unique identifier for the correlation policy that triggered the correlation event.
remediation_name	The remediation that was launched.
remediation_time_sec	The UNIX timestamp of the date and time the Firepower Management Center launched the remediation.
status_text	A message that describes what happened when the remediation was launched, such as "successful completion of remediation."

## remediation\_status Joins

You cannot perform joins on the `remediation_status` table.

## remediation\_status Sample Query

The following query returns up to 25 records generated before a given date. These records include remediation status information such as the remediation timestamp, the status message, and so on.

```
SELECT policy_time_sec, remediation_time_sec, remediation_name, policy_name,
policy_rule_name, status_text
FROM remediation_status WHERE remediation_time_sec <= UNIX_TIMESTAMP("2011-10-01
00:00:00")
ORDER BY policy_time_sec
DESC LIMIT 0, 25;
```

## white\_list\_event

The `white_list_event` table contains allow list events that are generated when the system detects a host not compliant with a allow list in an active allow list compliance policy.

Note that starting in Version 5.0, the Firepower System records the detection of network and user activity at the managed device level, no longer by detection engine. The `detection_engine_name` and `detection_engine_uuid` fields in the `white_list_event` table now return only `null`, and queries that join on those fields return zero records. Querying on the `sensor_uuid` field instead of `detection_engine_uuid` provides the equivalent information.

For more information, see the following sections:

- [white\\_list\\_event Fields, page 9-7](#)
- [white\\_list\\_event Joins, page 9-9](#)
- [white\\_list\\_event Sample Query, page 9-9](#)

## white\_list\_event Fields

The following table describes the database fields you can access in the `white_list_event` table.

**Table 9-5** *white\_list\_event Fields*

Field	Description
<code>description</code>	A description of how the allow list was violated.
<code>detection_engine_name</code>	Field deprecated in Version 5.0. Returns <code>null</code> for all queries.
<code>detection_engine_uuid</code>	Field deprecated in Version 5.0. Returns <code>null</code> for all queries.

Table 9-5 white\_list\_event Fields (continued)

Field	Description
host_criticality	The user-assigned criticality of the host that is out of compliance with the allow list: None, Low, Medium, or High.
host_type	The host type: Host, Router, Bridge, NAT Device, OR Load Balancer.
id	An internal unique identifier for the allow list event.
ip_address	Field deprecated in Version 5.2. Returns null for all queries.
ip_address_v6	Field deprecated in Version 5.2. Returns null for all queries.
ipaddr	A binary representation of the IP address of the non-compliant host.
os_product	The operating system's product name.
os_vendor	The operating system's vendor.
os_version	The operating system's version number.
policy_name	The violated compliance policy that includes the allow list.
policy_time_sec	The UNIX timestamp of the date and time the event was generated.
policy_uuid	A unique identifier for the compliance policy that includes the allow list event.
port	The port, if any, associated with the event that triggered a service allow list violation (that is, when a violation occurs as a result of a non-compliant service). For other types of allow list violations, the field is blank.
priority	The priority for the allow list event, which is set in the user interface.
protocol_name	The protocol associated with the event, if available.
protocol_num	The IANA-specified protocol number, if available.
rna_service	The service that triggered the allow list violation, if available.
sensor_address	IP address of the managed device that detected the traffic. Format is <i>ipv4_address, ipv6_address</i> .
sensor_name	The device that generated the allow list event.
sensor_uuid	A unique identifier for the managed device, or 0 if <i>sensor_name</i> is null.
user_dept	The department of the user.
user_email	The email address for the user.
user_first_name	The first name for the user.
user_id	Internal identification number of the user who last logged into the host before the event occurred.
user_last_name	The last name for the user.
user_last_seen_sec	The UNIX timestamp of the date and time the system last reported a login for the user.
user_last_updated_sec	The UNIX timestamp of the date and time the user's information was last updated.
user_name	The login user name for the user.
user_phone	The phone number for the user.
vlan_id	The VLAN identification number, if applicable.
white_list_name	The allow list that was violated.
white_list_uuid	A unique identifier for the allow list.

## white\_list\_event Joins

The following table describes the joins you can perform on the `white_list_event` table.

**Table 9-6** *white\_list\_event Joins*

You can join this table on...	And...
ipaddr	<code>rna_host_ip_map.ipaddr</code> <code>user_ipaddr_history.ipaddr</code>

## white\_list\_event Sample Query

The following query returns up to 25 records generated before a specified time. The records include allow list event information such as the compliance policy name, timestamp the event was generated, allow list name, and so on.

```
SELECT policy_name, policy_time_sec, ipaddr, user_name, port, description,
white_list_name, priority, host_criticality, sensor_name
FROM white_list_event WHERE policy_time_sec <= UNIX_TIMESTAMP("2011-10-01 00:00:00")
ORDER BY policy_time_sec DESC LIMIT 0, 25;
```

## white\_list\_violation

The `white_list_violation` table track compliance allow list violations, which track the ways that the hosts on your network violate the compliance allow lists in active compliance policies.

For more information, see the following sections:

- [white\\_list\\_violation Fields, page 9-9](#)
- [white\\_list\\_violation Joins, page 9-10](#)
- [white\\_list\\_violation Sample Query, page 9-10](#)

## white\_list\_violation Fields

The following table describes the database fields you can access in the `white_list_violation` table.

**Table 9-7** *white\_list\_violation Fields*

Field	Description
<code>host_id</code>	ID number of the host in violation of the allow list.
<code>info</code>	Any available vendor, product, or version information associated with the allow list violation. For protocols that violate a allow list, the field also indicates whether the violation is due to a network or transport protocol.
<code>ip_address</code>	Field deprecated in Version 5.2. Returns null for all queries.

**Table 9-7** *white\_list\_violation Fields (continued)*

Field	Description
port	The port, if any, associated with the event that triggered a service allow list violation (that is, when a violation occurs as a result of a non-compliant service). For other types of allow list violations, the field is blank.
protocol_name	The protocol associated with the event.
type	The type of allow list violation, indicating whether the violation occurred due to a non-compliant: <ul style="list-style-type: none"> <li>operating system (<code>os</code>)</li> <li>service (<code>service</code>)</li> <li>client application (<code>client app</code>)</li> <li>protocol (<code>protocol</code>)</li> </ul>
violation_time_sec	The UNIX timestamp of the date and time the violation was logged.
white_list_name	The allow list that was violated.
white_list_uuid	A unique identifier for the allow list.

## white\_list\_violation Joins

You cannot perform joins on the `white_list_violation` table.

## white\_list\_violation Sample Query

The following query returns up to 25 records with allow list violation information such as the host IP address violating the allow list, the violated allow list name, and the count of violations.

```
SELECT host_id, white_list_name, count(*)
FROM white_list_violation
GROUP BY white_list_name, host_id
ORDER BY white_list_name
DESC LIMIT 0, 25;
```



## Schema: File Event Tables

This chapter contains information on the schema and supported joins for file events. For more information, see the section listed in the following table.

**Table 10-1** Schema for File Event Tables

See...	For the table that stores information on...	Version
<a href="#">file_event, page 10-1</a>	File events generated when file transfers are detected in the monitored network.	5.1.1+

While the following tables are available, Cisco does not currently support lookups on them:

- `file_categories`
- `file_rules`
- `file_types`
- `file_type_rule_map`
- `file_type_category_map`

### file\_event

The `file_event` table contains information about the file events that your Firepower Management Center generates. A new file event is generated each time a file transfer is detected on the monitored network. Files identified as malware by AMP for Firepower generate both a file event and a malware event. Endpoint-based malware events do not have corresponding file events, and file events do not have AMP for Endpoints-related fields.

For more information, see the following sections:

- [file\\_event Fields, page 10-2](#)
- [file\\_event Joins, page 10-5](#)
- [file\\_event Sample Query, page 10-6](#)

## file\_event Fields

The `file_event` table contains information on files that are detected passing through the monitored network. Each file event can be correlated with a connection event. Details of the file and file transfer are recorded, including the name, size, source, destination, and direction of the file, a SHA256 hash of the file, the device that detected the file, and whether it is considered to be malware.

**Table 10-2** *file\_event Fields*

Field	Description
<code>action</code>	The action taken on the file based on the file type. Can have the following values: <ul style="list-style-type: none"> <li>• 1 — Detect</li> <li>• 2 — Block</li> <li>• 3 — Malware Cloud Lookup</li> <li>• 4 — Malware Block</li> <li>• 5 — Malware Allow List</li> <li>• 6 — Cloud Lookup Timeout</li> </ul>
<code>application_id</code>	ID number that maps to the application using the file transfer.
<code>application_name</code>	One of the following: <ul style="list-style-type: none"> <li>• the name of the application used in the connection</li> <li>• <code>pending</code> or <code>unknown</code> if the system cannot identify the application</li> <li>• blank if there is no application information in the connection</li> </ul>
<code>archived</code>	Indicates whether the file has been archived.
<code>cert_valid_end_date</code>	The Unix timestamp on which the SSL certificate used in the connection ceases to be valid.
<code>cert_valid_start_date</code>	The Unix timestamp when the SSL certificate used in the connection was issued.
<code>client_application_id</code>	The internal identification number for the client application, if applicable.
<code>client_application_name</code>	The name of the client application, if applicable.
<code>connection_sec</code>	UNIX timestamp (seconds since 00:00:00 01/01/1970) of the connection event associated with the file event.
<code>counter</code>	Specific counter for the event, used to distinguish among multiple events that happened during the same second.
<code>direction</code>	Whether the file was uploaded or downloaded. Currently the value depends entirely on the protocol (for example, if the connection is HTTP it is a download).
<code>disposition</code>	The malware status of the file. Possible values include: <ul style="list-style-type: none"> <li>• <code>CLEAN</code> — The file is clean and does not contain malware.</li> <li>• <code>UNKNOWN</code> — It is unknown whether the file contains malware.</li> <li>• <code>MALWARE</code> — The file contains malware.</li> <li>• <code>UNAVAILABLE</code> — The software was unable to send a request to the Cisco cloud for a disposition, or the Cisco cloud services did not respond to the request.</li> <li>• <code>CUSTOM SIGNATURE</code> — The file matches a user-defined hash, and is treated in a fashion designated by the user.</li> </ul>



**Table 10-2** *file\_event Fields (continued)*

Field	Description
domain_name	Name of the domain on which the .event was detected
domain_uuid	UUID of the domain on which the event was detected. This is presented in binary.
dst_continent_name	The name of the continent of the destination host. ** — Unknown na — North America as — Asia af — Africa eu — Europe sa — South America au — Australia an — Antarctica
dst_country_id	Code for the country of the destination host.
dst_country_name	Name of the country of the destination host.
dst_ip_address_v6	Field deprecated in Version 5.2. Returns null for all queries.
dst_ipaddr	A binary representation of the IP address of the destination host involved in the triggering event.
dst_port	Port number for the destination of the connection.
event_description	The additional event information associated with the event type.
event_id	Event identification number.
file_name	Name of the detected file. This name can contain UTF-8 characters.
file_sha	SHA256 hash of the file.
file_size	Size of the detected file in bytes.
file_type	The file type of the detected or quarantined file.
file_type_category	Description of the file category.
file_type_category_id	Numeric identifier for the file category.
file_type_id	ID number that maps to the file type.
http_response_code	The response code given to the HTTP request in the event.
instance_id	Numerical ID of the Snort instance on the managed device that generated the event.
netmap_num	Netmap ID for the domain on which the event was detected.
policy_uuid	Identification number that acts as a unique identifier for the access control policy that triggered the event.

Table 10-2 file\_event Fields (continued)

Field	Description
sandboxed	Indicates whether the file was sent for dynamic analysis. Possible values are: <ul style="list-style-type: none"> <li>• Sent for Analysis</li> <li>• Failed to Send</li> <li>• File Size is Too Small</li> <li>• File Size is Too Large</li> <li>• Sent for Analysis</li> <li>• Analysis Complete</li> <li>• Failure (Network Issue)</li> <li>• Failure (Rate Limit)</li> <li>• Failure (File Too Large)</li> <li>• Failure (File Read Error)</li> <li>• Failure (Internal Library Error)</li> <li>• File Not Sent, Disposition Unavailable</li> <li>• Failure (Cannot Run File)</li> <li>• Failure (Analysis Timeout)</li> <li>• File Not Supported</li> </ul>
score	A numeric value from 0 to 100 based on the potentially malicious behaviors observed during dynamic analysis.
security_context	Description of the security context (virtual firewall) that the traffic passed through. Note that the system only populates this field for ASA FirePOWER devices in multi-context mode.
sensor_address	A binary representation of the IP address of the device that provided the event.
sensor_id	ID for the device that provided the event.
sensor_name	The text name of the managed device that generated the event record. This field is null when the event refers to the reporting device itself, rather than to a connected device.
sensor_uuid	A unique identifier for the managed device, or 0 if sensor_name is null.
signature_processed	Indicated whether the file's signature was processed.
src_continent_name	The name of the continent of the source host. <ul style="list-style-type: none"> <li>** — Unknown</li> <li>na — North America</li> <li>as — Asia</li> <li>af — Africa</li> <li>eu — Europe</li> <li>sa — South America</li> <li>au — Australia</li> <li>an — Antarctica</li> </ul>

**Table 10-2** *file\_event Fields (continued)*

Field	Description
src_country_id	Code for the country of the source host.
src_country_name	Name of the country of the source host.
src_ip_address_v6	Field deprecated in Version 5.2. Returns null for all queries.
src_ipaddr	A binary representation of the IPv4 or IPv6 address of the source host involved in the triggering event.
src_port	Port number for the source of the connection.
ssl_issuer_common_name	Issuer Common Name from the SSL certificate. This is typically the host and domain name of the certificate issuer, but may contain other information.
ssl_issuer_country	The country of the SSL certificate issuer.
ssl_issuer_organization	The organization of the SSL certificate issuer.
ssl_issuer_organization_unit	The organizational unit of the SSL certificate issuer.
ssl_serial_number	The serial number of the SSL certificate, assigned by the issuing CA.
ssl_subject_common_name	Subject Common name from the SSL certificate. This is typically the host and domain name of the certificate subject, but may contain other information.
ssl_subject_country	The country of the SSL certificate subject.
ssl_subject_organization	The organization of the SSL certificate subject.
ssl_subject_organization_unit	The organizational unit of the SSL certificate subject.
storage	The storage status of the file. Possible values are: <ul style="list-style-type: none"> <li>File Stored</li> <li>Unable to Store File</li> <li>File Size is Too Large</li> <li>File Size is Too Small</li> <li>Unable to Store File</li> <li>File Not Stored, Disposition Unavailable</li> </ul>
threat_name	Name of the threat.
timestamp	UNIX timestamp when enough of the file has been transmitted to identify the file type.
url	URL of the file source.
user_id	The internal identification number for the destination user; that is, the user who last logged into the destination host before the event occurred.
username	Name associated with the user_id.
web_application_id	The internal identification number for the web application, if applicable.
web_application_name	Name of the web application, if applicable.

## file\_event Joins

The following table describes the joins you can perform on the `file_event` table.

Table 10-3 file\_event Joins

You can join this table on...	And...
application_id	application_info.application_id application_host_map.application_id application_tag_map.application_id rna_host_service_info.application_protocol_id rna_host_client_app_payload.web_application_id rna_host_client_app_payload.client_application_id rna_host_client_app.client_application_id rna_host_client_app.application_protocol_id rna_host_service_payload.web_application_id

## file\_event Sample Query

The following query returns up to 10 file events with the application name, connection information, and file name, where the disposition is not CLEAN.

```
SELECT file_event.application_name, file_event.connection_sec, file_event.counter,
file_event.file_name
FROM file_event
WHERE file_event.disposition != "CLEAN" limit 10;
```



# Deprecated Tables

This appendix contains information on tables which were used in previous releases and are now deprecated. Although you can still query these tables, the values in the fields may not be correct, and in most cases are null. There are no supported joins for these tables.

**Table A-1**      **Deprecated Tables**

Table	Superseded by	Last Used Version
application_ip_map	<a href="#">application_host_map</a> , page 6-5	5.1.1
rna_ip_host	<a href="#">rna_host</a> , page 6-13	5.1.1
rna_ip_host_attribute	<a href="#">rna_host_attribute</a> , page 6-15	5.1.1
rna_ip_host_client_app	<a href="#">rna_host_client_app</a> , page 6-17	5.1.1
rna_ip_host_client_app_payload	<a href="#">rna_host_client_app_payload</a> , page 6-19	5.1.1
rna_ip_host_os	<a href="#">rna_host_os</a> , page 6-29	5.1.1
rna_ip_host_os_vulns	<a href="#">rna_host_os_vulns</a> , page 6-30	5.1.1
rna_ip_host_sensor	<a href="#">rna_host_sensor</a> , page 6-33	5.1.1
rna_ip_host_service	<a href="#">rna_host_service</a> , page 6-35	5.1.1
rna_ip_host_service_banner	<a href="#">rna_host_service_banner</a> , page 6-37	5.1.1
rna_ip_host_service_info	<a href="#">rna_host_service_info</a> , page 6-38	5.1.1
rna_ip_host_service_payload	<a href="#">rna_host_service_payload</a> , page 6-43	5.1.1
rna_ip_host_service_subtype	<a href="#">rna_host_service_subtype</a> , page 6-46	5.1.1
rna_ip_host_service_vulns	<a href="#">rna_host_service_vulns</a> , page 6-47	5.1.1
rna_ip_host_third_party_vuln	<a href="#">rna_host_third_party_vuln</a> , page 6-48	5.1.1
rna_ip_host_third_party_vuln_bugtraq_id	<a href="#">rna_host_third_party_vuln_bugtraq_id</a> , page 6-50	5.1.1
rna_ip_host_third_party_vuln_cve_id	<a href="#">rna_host_third_party_vuln_cve_id</a> , page 6-51	5.1.1
rna_ip_host_third_party_vuln_rna_id	<a href="#">rna_host_third_party_vuln_rna_id</a> , page 6-53	5.1.1
rna_ip_host_user_history	<a href="#">user_ipaddr_history</a> , page 6-60	5.1.1
rna_mac_host	<a href="#">rna_host_mac_map</a> , page 6-28	5.1.1
rna_mac_host_sensor	<a href="#">rna_host_mac_map</a> , page 6-28	5.1.1

**Table A-1**      *Deprecated Tables*

<b>Table</b>	<b>Superseded by</b>	<b>Last Used Version</b>
rna_mac_ip_map	<a href="#">rna_host_ip_map, page 6-26</a> <a href="#">rna_host_mac_map, page 6-28</a>	5.1.1
sru_import_log	NONE	6.0



---

## A

app\_ids\_stats [5-4](#), [5-11](#), [5-13](#), [5-14](#), [5-16](#), [5-17](#), [5-18](#), [5-20](#), [5-22](#),  
[5-24](#), [5-25](#)  
app\_stats [5-6](#), [5-9](#), [5-10](#)  
application\_info [6-8](#)  
application\_ip\_map [6-6](#)  
application\_tag\_map [6-10](#), [6-11](#)  
audit\_log [3-1](#)

---

## C

compliance\_event [9-2](#)  
connection\_log [7-2](#), [7-19](#)  
connection\_summary [7-16](#)

---

## D

DHCP [2-2](#)  
discovered\_users [8-1](#)

---

## F

file\_event [10-1](#)  
fireamp\_event [3-2](#)

---

## H

health\_event [3-9](#)

---

## I

intrusion\_event [4-2](#)

intrusion\_event\_packet [4-7](#)

---

## N

network\_discovery\_event [6-12](#)  
network settings using DHCP [2-2](#)

---

## R

remediation\_status [9-6](#)  
rna\_host\_protocol [6-32](#)  
rna\_ip\_host\_attribute [6-16](#)  
rna\_ip\_host\_client\_app [6-17](#)  
rna\_ip\_host\_client\_app\_payload [6-20](#)  
rna\_ip\_host\_os [6-29](#)  
rna\_ip\_host\_os\_vulns [6-31](#)  
rna\_ip\_host\_sensor [6-34](#)  
rna\_ip\_host\_service [6-35](#)  
rna\_ip\_host\_service\_banner [6-37](#)  
rna\_ip\_host\_service\_info [6-39](#)  
rna\_ip\_host\_service\_payload [6-43](#)  
rna\_ip\_host\_service\_subtype [6-46](#)  
rna\_ip\_host\_service\_vulns [6-47](#)  
rna\_ip\_host\_third\_party\_vuln [6-49](#)  
rna\_ip\_host\_third\_party\_vuln\_bugtraq\_id [6-50](#)  
rna\_ip\_host\_third\_party\_vuln\_cve\_id [6-52](#)  
rna\_ip\_host\_third\_party\_vuln\_rna\_id [6-54](#)  
rna\_ip\_host\_user\_history [6-61](#)  
rna\_mac\_ip\_map [6-23](#), [6-26](#), [6-28](#), [8-5](#)  
rna\_vuln [6-56](#), [6-57](#)  
rule\_message [4-8](#), [4-9](#)

---

## T

tag\_info [6-58](#)

---

## U

url\_categories [6-59](#)

url\_category\_stats [5-26](#)

url\_reputation\_stats [5-27](#)

url\_reputations [6-60](#)

user\_discovery\_event [8-3](#)

user\_ids\_stats [5-29](#)

user\_stats [5-30](#)

---

## W

white\_list\_event [9-7](#)

white\_list\_violation [9-9](#)