Determine Traffic Handled by a Specific Snort Instance

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Introduction

This document describes how to determine the traffic handled by a specific Snort instance in a Cisco Firepower Threat Defense (FTD) environment.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these products:

- Secure Firepower Management Center (FMC)
- Secure Firepower Threat Defense (FTD)
- Syslog and SNMP
- REST API

Components Used

The information in this document was created from the devices in a specific lab environment. All the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

1. Using CLI Commands

Using the Command Line Interface (CLI) on your FTD device, you can access detailed information about Snort instances and the traffic they handle.

- This command provides the details about the running Snort processes.

```
show snort instances
```

Here is an example for the command output.

> show snort instances

Total number of instances available - 1 +----------+----------+ | INSTANCE | PID | +----------+----------+ | **1** | **4765** | <<< One instance available and its process ID +----------+----------+

- For more detailed information on the traffic statistics handled by Snort instances, these commands can be used. This displays various statistics, including the number of packets processed, dropped, and the alerts generated by each Snort instance.

show snort statistics

Here is an example for the command output.

> show snort statistics Packet Counters: Passed Packets 3791881977 Blocked Packets 707722 Injected Packets 87 **Packets bypassed (Snort Down) 253403701** <<< Packets bypassed **Packets bypassed (Snort Busy) 0** Flow Counters: Fast-Forwarded Flows 294816 Blacklisted Flows 227 Miscellaneous Counters: Start-of-Flow events 0 End-of-Flow events 317032 Denied flow events 14230 Frames forwarded to Snort before drop 0 Inject packets dropped 0 TCP Ack bypass Packets 6412936 TCP Meta-Ack Packets 2729907 Portscan Events 0 Packet decode optimized 21608793 Packet decode legacy 6558642

show asp inspect-dp snort

Here is an example for the command output.

> show asp inspect-dp snort

SNORT Inspect Instance Status Info Id Pid Cpu-Usage Conns Segs/Pkts Status tot (usr | sys) -- ----- ---------- ---------- ---------- -- -------- 0 16450 8% (7%| 0%) 2.2 K 0 READY 1 16453 9% (8%| 0%) 2.2 K 0 READY 2 16451 6% (5%| 1%) 2.3 K 0 READY 3 16454 5% (5%| 0%) 2.2 K 1 READY 4 16456 6% (6%| 0%) 2.3 K 0 READY 5 16457 6% (6%| 0%) 2.3 K 0 READY 6 16458 6% (5%| 0%) 2.2 K 1 READY 7 16459 4% (4%| 0%) 2.3 K 0 READY 8 16452 9% (8%| 1%) 2.2 K 0 READY **9 16455 100% (100%| 0%) 2.2 K 5 READY** <<<< High CPU utilization 10 16460 7% (6%| 0%) 2.2 K 0 READY -- ----- ---------- ---------- ---------- ---------- Summary 15% (14%| 0%) 24.6 K 7

2. Using Firepower Management Center (FMC)

If you are managing your FTD devices through FMC, you can get detailed insights and reports about traffic and Snort instances through the web interface.

- Monitoring

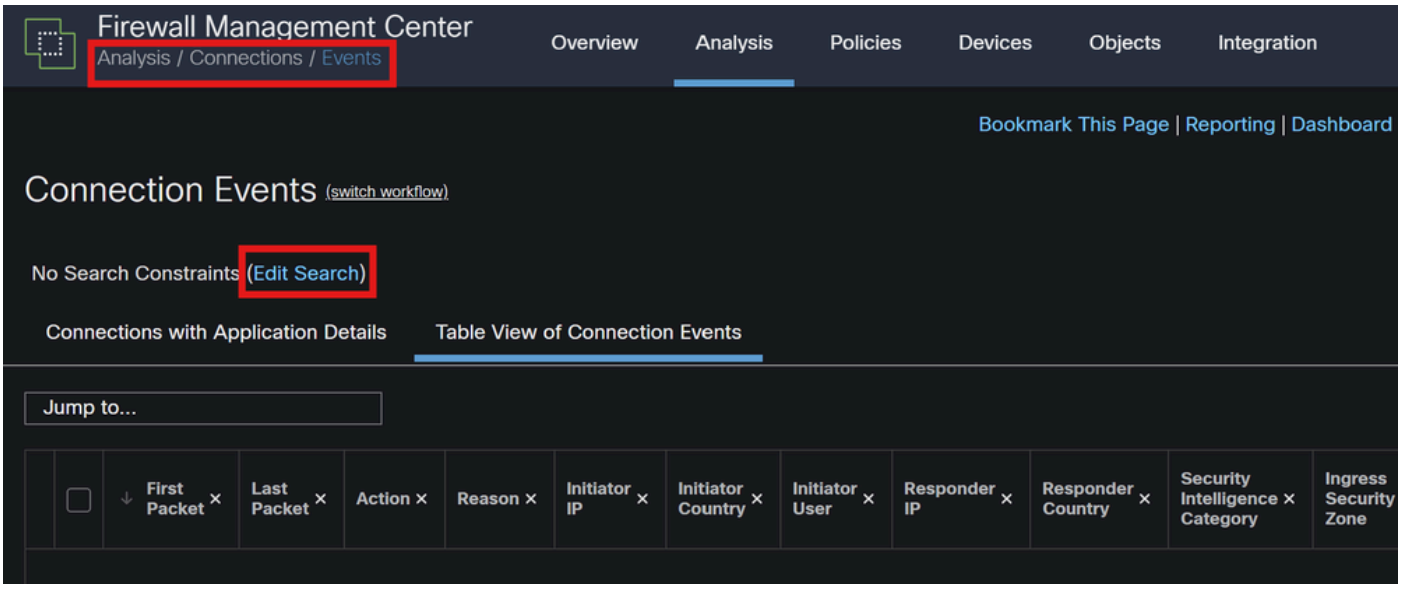
FMC Dashboard: Navigate to the dashboard where you can see an overview of the system status, including Snort instances.

Health Monitoring: In the health monitoring section, you can get detailed statistics about Snort processes, including traffic handled.

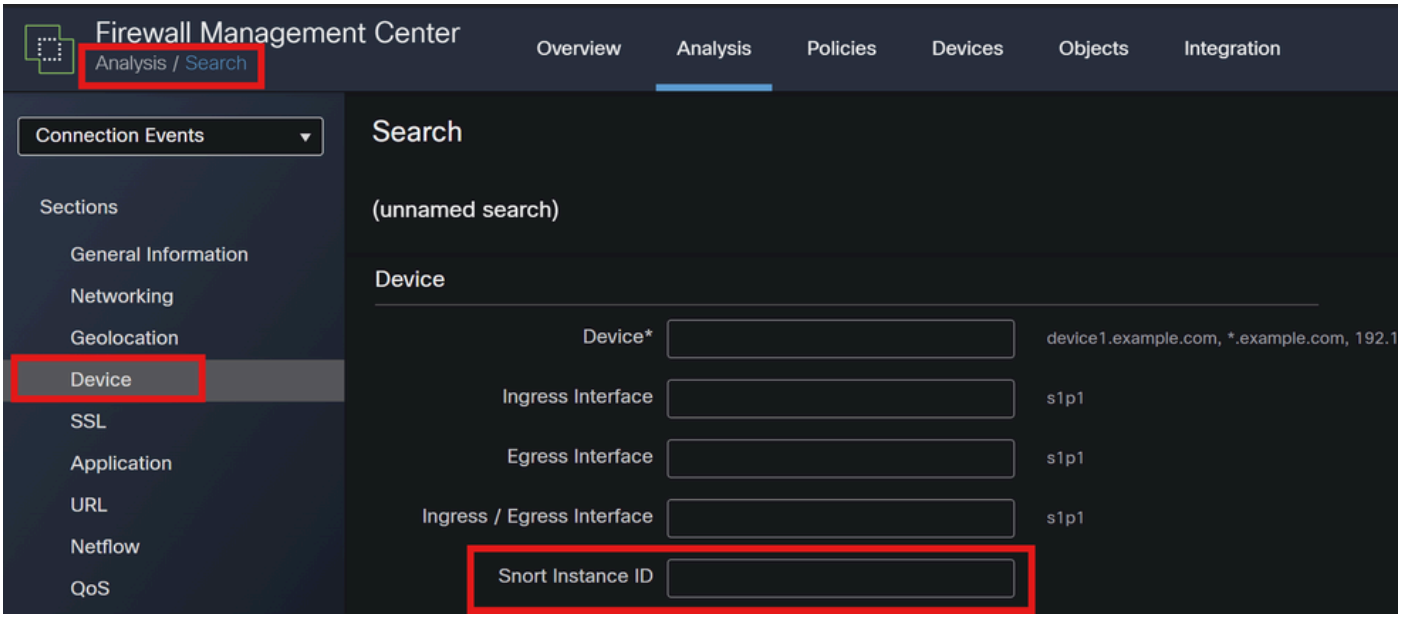
- Analysis

Analysis: Navigate to **Analysis > Connection Events**.

Filters: Use filters to narrow down the data to the specific Snort instance or traffic you are interested in.



Connection Events



Snort Instance ID

3. Using Syslog and SNMP

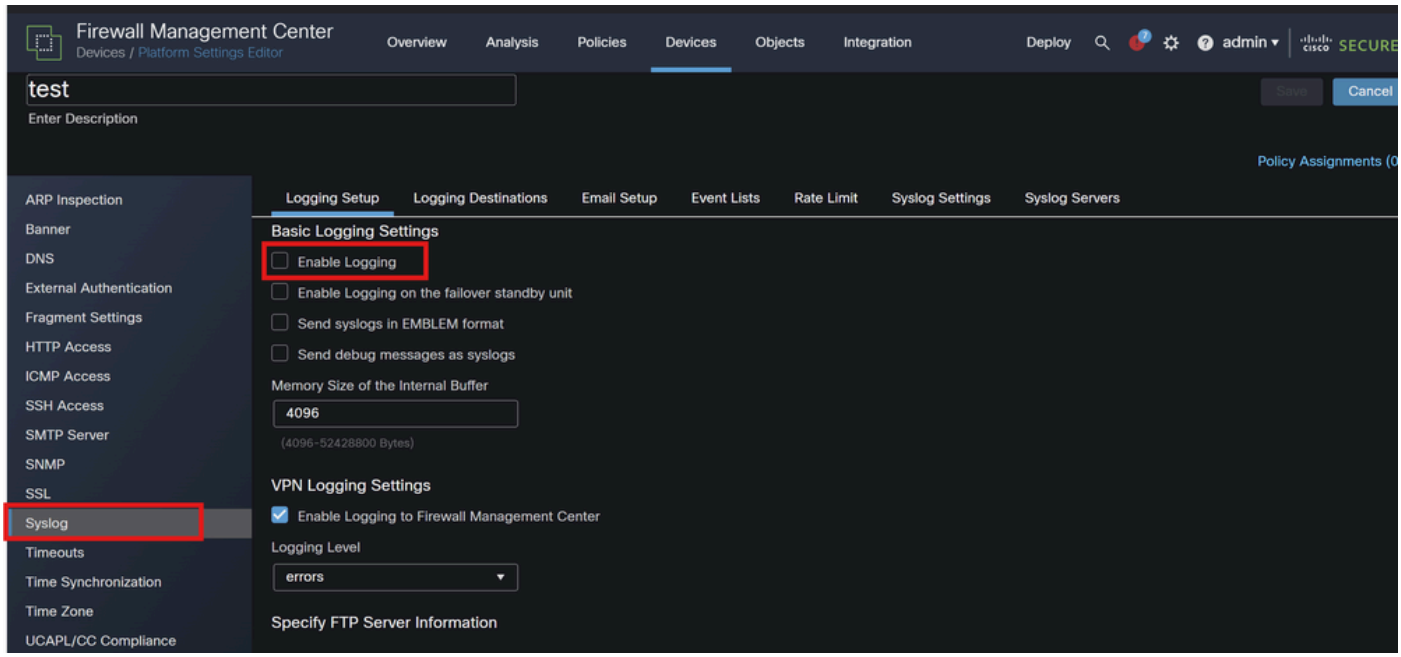
You can configure your FTD to send syslog messages or SNMP traps to an external monitoring system where you can analyze the traffic data.

- Syslog Configuration

Devices: In FMC, navigate to **Devices > Platform Settings**.

Create or Edit a Policy: Choose the appropriate platform settings policy.

Syslog: Configure syslog settings to include Snort alerts and statistics.

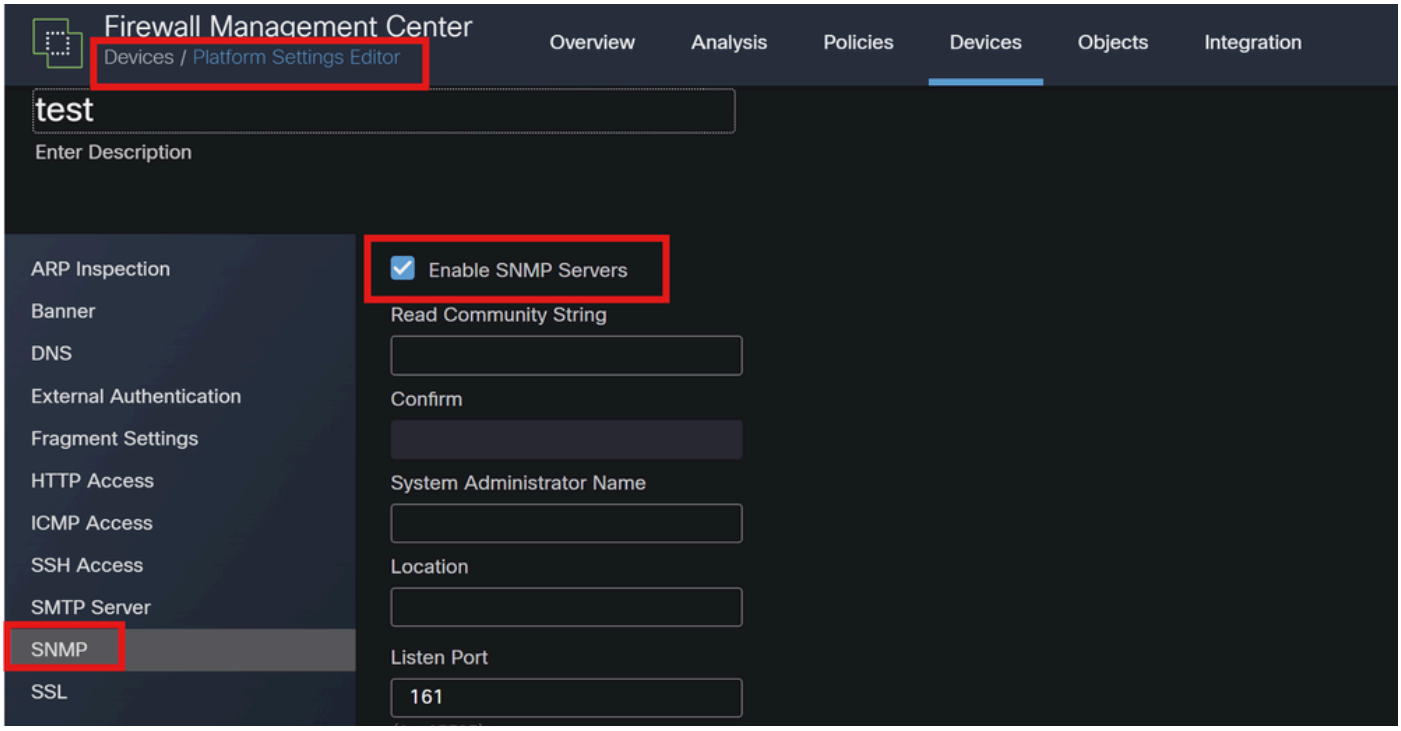


Syslog Configuration

- SNMP Configuration

SNMP Settings: Similar to syslog, configure SNMP settings under **Devices > Platform Settings**.

Traps: Ensure that the necessary SNMP traps are enabled for Snort instance statistics.



SNMP Configuration

4. Using the Custom Scripts

For advanced users, you can write custom scripts that use the FTD REST API to gather statistics about Snort instances. This approach requires familiarity with scripting and API usage.

- REST API

API Access: Ensure that API access is enabled on your FMC.

API Calls: Use the appropriate API calls to fetch Snort statistics and traffic data.

This returns JSON data that you can parse and analyze to determine traffic handled by specific Snort instances.

By combining these methods, you can get a comprehensive understanding of the traffic handled by each Snort instance in your Cisco FTD deployment.