Troubleshoot Secure Web Appliance Latency

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Introduction

This document describes the troubleshooting steps to tackle High Latency, High Disk, and High CPU in Cisco Secure Web Appliance (SWA).

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco SWA administration
- Proxy deployment methods (Explicit and Transparent)
- SWA Command Line Interface (CLI) commands

Components Used

This document is not restricted to specific software and hardware versions.

The information in this document was created from the devices in a specific lab environment. All of 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.

Background Information

When contacting Cisco Technical Support, you are asked to provide details on the SWA outbound and inbound network activity, which can be monitored by running a packet capture to collect traffic for debugging or verification purposes.

Frequent Causes of High Latency in SWA

In general, there are three main categories for the high latency in SWA:

1. Inadequate SWA Sizing or Overloaded Resources
2. Complex Configurations
3. Network-Related Latency Issues

One of the most common causes of high latency in SWA is inadequate sizing of the solution. Proper sizing is critical to ensure that the SWA system has sufficient resources to handle current and expected workloads. If the system is undersized, it can struggle to process requests efficiently, leading to delays in operations and reduced performance. Factors such as the number of users, volume of decryption, and specific scanning demands must be carefully evaluated during deployment to avoid resource constraints. Failure to align the SWA capacity with organizational needs can result in persistent latency and degraded user experience.

Complex configurations can degrade performance and cause latency on the SWA, especially under high load, as each request must be processed through numerous conditions.

Network-related latency can stem from the SWA itself, third-party services like Active Directory, DLP, DNS, or from network delays between the client, SWA, and upstream servers.

Analyzing the requests sent to the SWA, including identifying the top users and the most accessed URLs, can help uncover potential misbehavior and pinpoint the root causes of latency. This information is invaluable for diagnosing performance issues, managing bandwidth consumption, and ensuring appropriate usage of the system.

SWA Latency Troubleshooting Tools

System Status

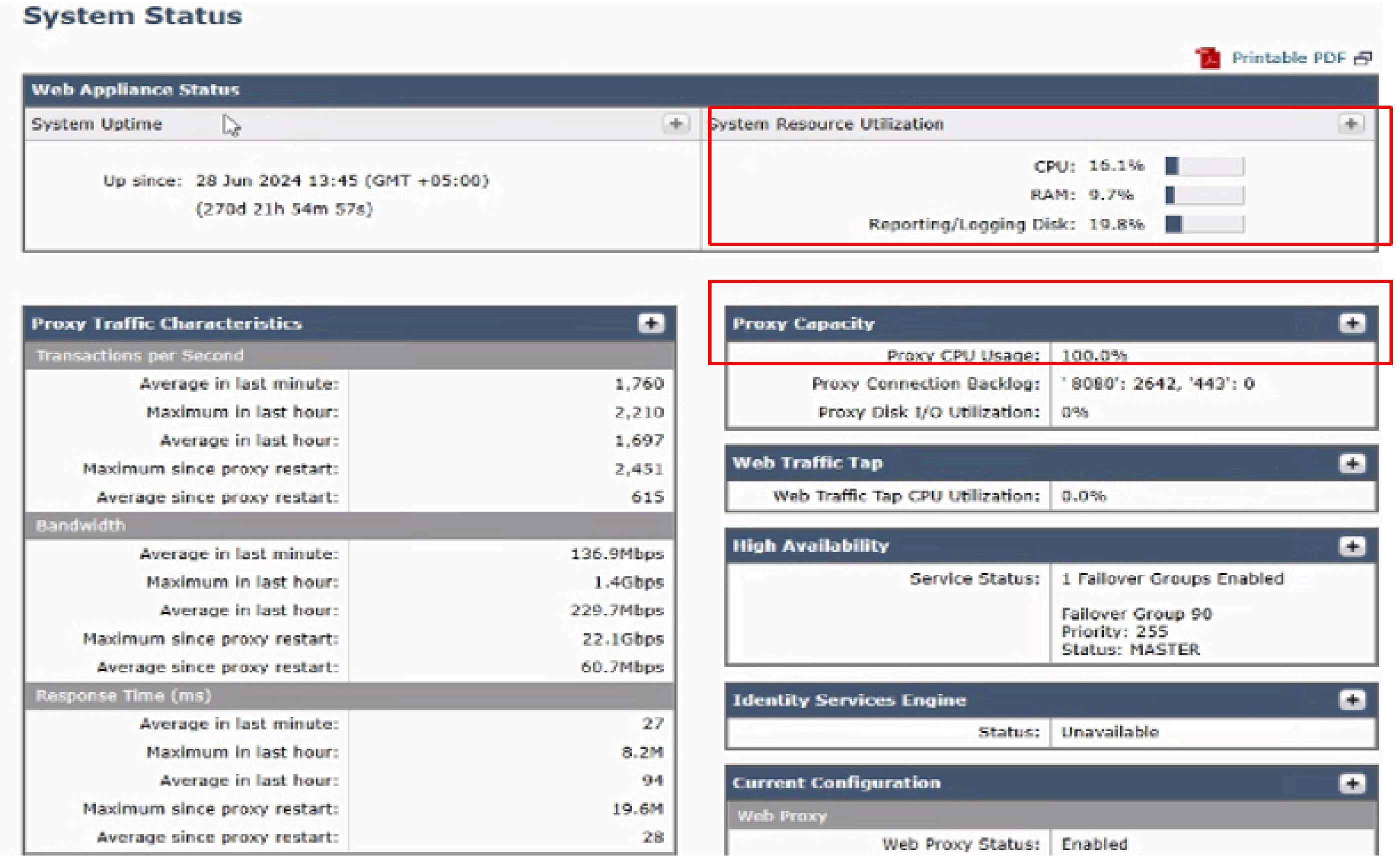
Use these steps to check the current resource consumption in SWA:

Step 1. Access the SWA Graphical User Interface (GUI).

Step 2. Navigate to **Reporting** > **System Information** > **System Status**.

Step 3. Check these critical metrics to assess system performance:

- CPU Usage (%): Indicates the current CPU load
- RAM Usage (%): Reflects the memory utilization
- Reporting/Logging Usage (%): Shows the percentage of disk space being used for reporting and logging
- System Uptime: Displays the total time the system has been running without a restart



Web Appliance Status

System Uptime

Up since: 28 Jun 2024 13:45 (GMT +05:00)
(270d 21h 54m 57s)

System Resource Utilization

CPU:	16.1%
RAM:	9.7%
Reporting/Logging Disk:	19.8%

Proxy Traffic Characteristics

Transactions per Second	
Average in last minute:	1,760
Maximum in last hour:	2,210
Average in last hour:	1,697
Maximum since proxy restart:	2,451
Average since proxy restart:	615
Bandwidth	
Average in last minute:	136.9Mbps
Maximum in last hour:	1.4Gbps
Average in last hour:	229.7Mbps
Maximum since proxy restart:	22.1Gbps
Average since proxy restart:	60.7Mbps
Response Time (ms)	
Average in last minute:	27
Maximum in last hour:	8.2M
Average in last hour:	94
Maximum since proxy restart:	19.6M
Average since proxy restart:	28

Proxy Capacity

Proxy CPU Usage:	100.0%
Proxy Connection Backlog:	' 8080': 2642, '443': 0
Proxy Disk I/O Utilization:	0%

Web Traffic Tap

Web Traffic Tap CPU Utilization:	0.0%

High Availability

Service Status:	1 Failover Groups Enabled Failover Group 90 Priority: 255 Status: MASTER

Identity Services Engine

Status:	Unavailable

Current Configuration

Web Proxy	
Web Proxy Status:	Enabled

Image- System Status

This page provides an overview of the current status of RAM, CPU, and disk usage. To view resource usage over time, from **SWA GUI**, navigate to **Reporting** and choose **System Capacity**.

System Capacity

The System Capacity page in the SWA provides a comprehensive view of resource utilization and performance metrics over a specified time range. This page offers detailed graphs to help monitor and analyze system behavior, ensuring optimal performance and identifying potential bottlenecks.

Available Graphs and Metrics in System Capacity page are:

1. Overall CPU Usage: Displays the total CPU usage, giving a high-level overview of system performance.
2. CPU Usage by Function: Breaks down CPU usage based on specific functions, including:

- Web Proxy
- Logging

- Reporting
- McAfee
- Sophos
- Webroot
- Acceptable Use and Reputation

3. Response Time/Latency (milliseconds): Tracks response times to identify any delays in processing requests.

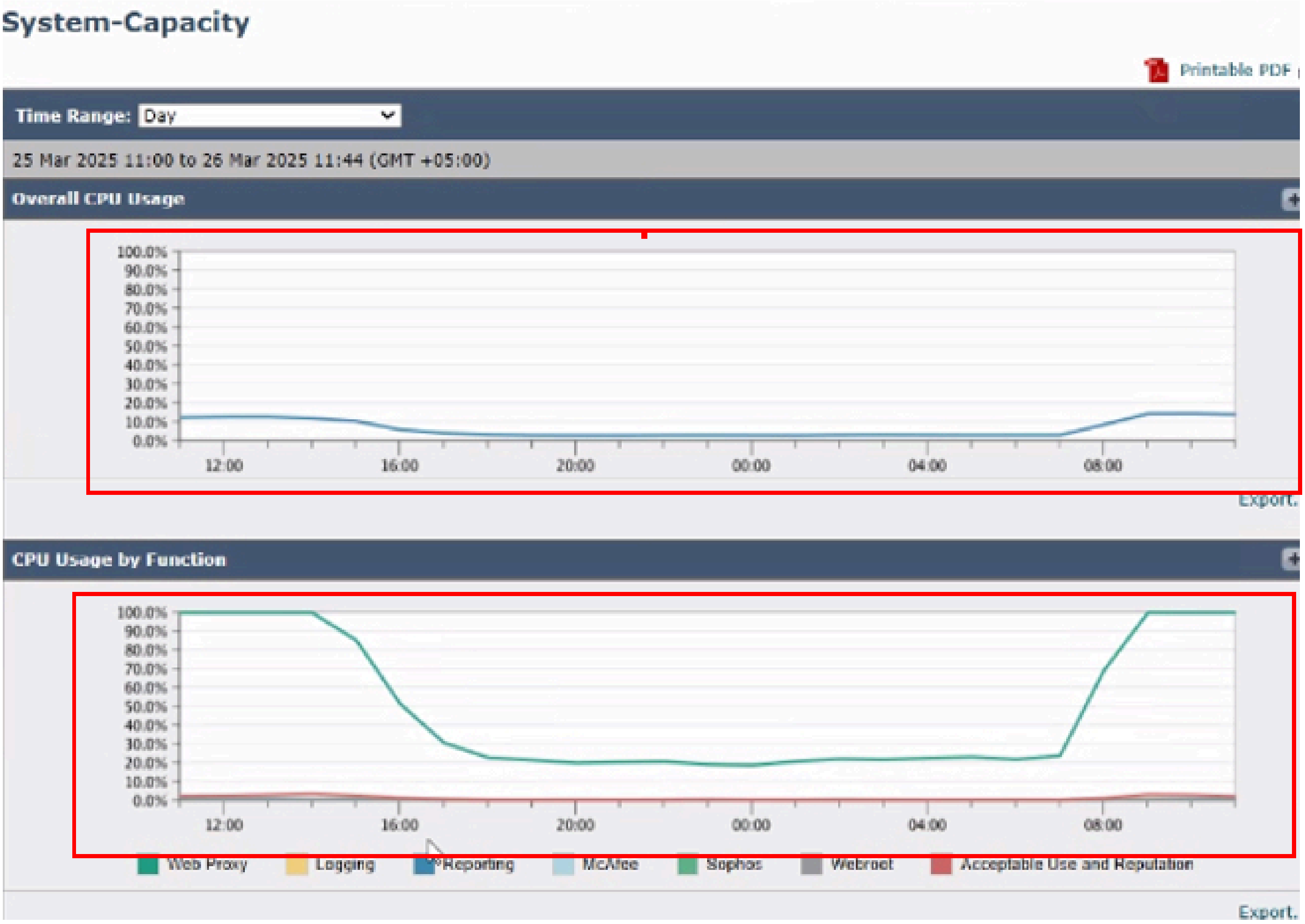
4. Transactions Per Second: Shows the number of transactions being handled by the SWA per second.

5. Connections Out: Monitors the number of outbound connections being established.

6. Bandwidth Out (Bytes): Measures the amount of outbound bandwidth being utilized.

7. Proxy Buffer Memory (%): Displays the percentage of memory used by the proxy process.

Check the metrics for any signs of high resource usage in this dashboard.



System-Capacity

Time Range: Day

25 Mar 2025 11:00 to 26 Mar 2025 11:44 (GMT +05:00)

Image- System Capacity

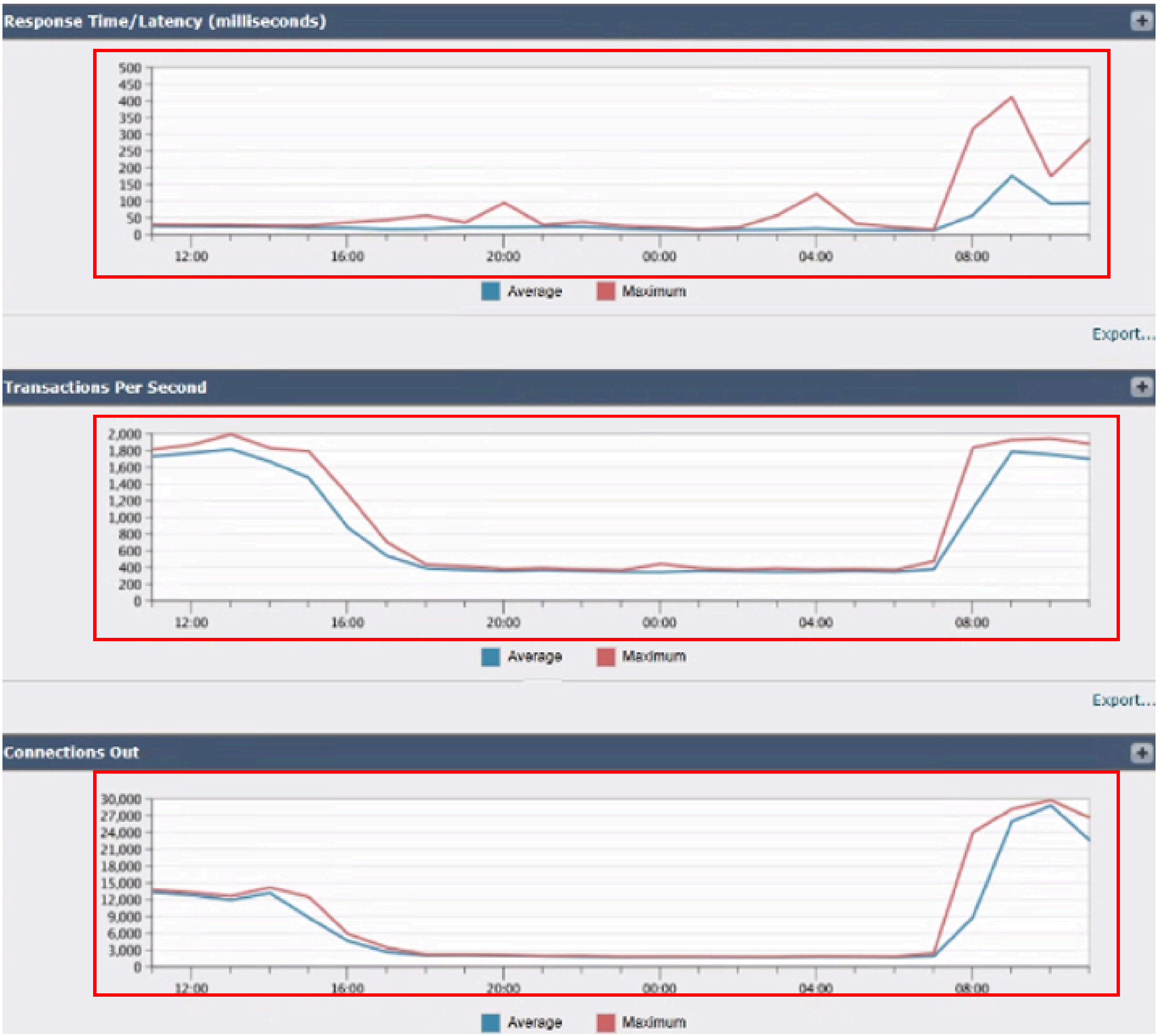


Image- SWA Transactions Per Second and Connections Out

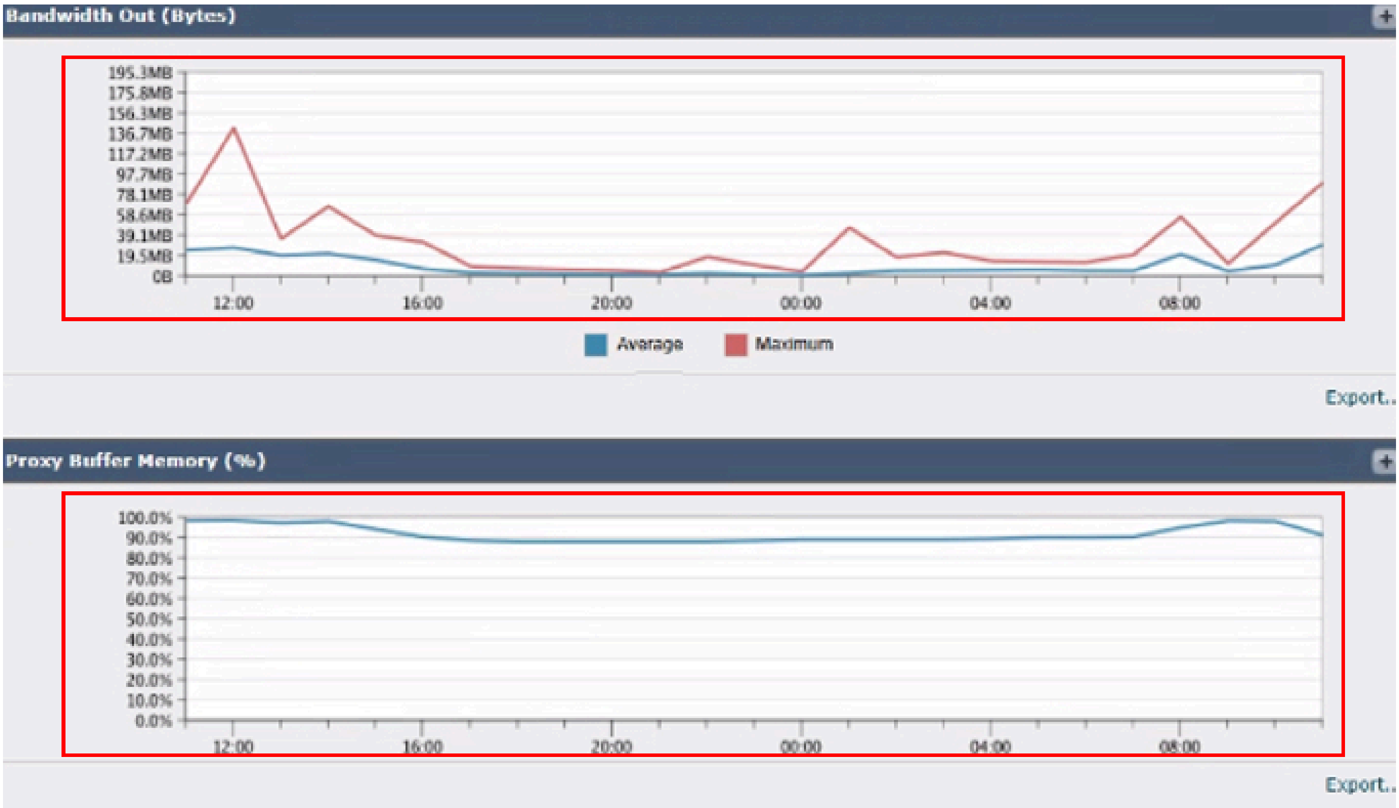


Image- SWA Memory Usage

Analyze Top Destinations

To analyze top destinations, navigate to the **SWA GUI**, navigate to **Reporting**, and select **Websites**. Review the list of top HTTP/HTTPS websites and identify high-traffic or frequently accessed domains.

Based on your findings, consider bypassing or exempting generic URLs, such as Microsoft Updates, Adobe, Office365, and online meeting platforms. This approach helps reduce traffic on the SWA, leading to lower latency and a reduced proxy processing load.

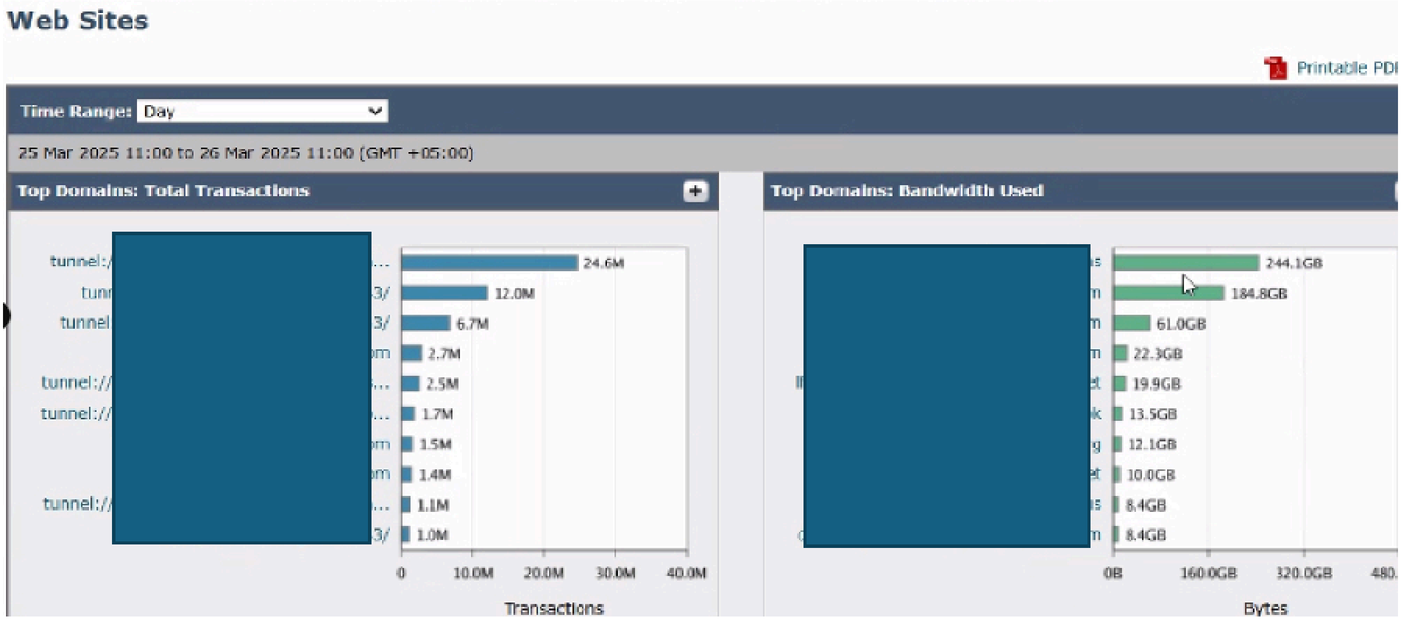
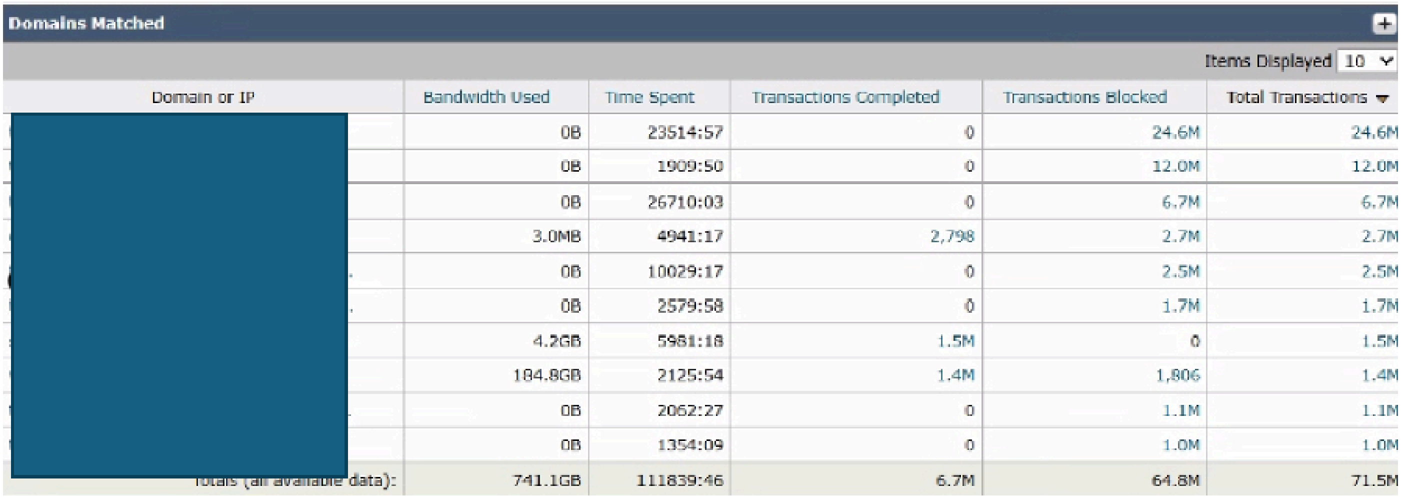


Image- SWA Top Websites Dashboard



Domains Matched

Items Displayed 10

Domain or IP	Bandwidth Used	Time Spent	Transactions Completed	Transactions Blocked	Total Transactions
[redacted]	0B	23514:57	0	24.6M	24.6M
[redacted]	0B	1909:50	0	12.0M	12.0M
[redacted]	0B	26710:03	0	6.7M	6.7M
[redacted]	3.0MB	4941:17	2,798	2.7M	2.7M
[redacted]	0B	10029:17	0	2.5M	2.5M
[redacted]	0B	2579:58	0	1.7M	1.7M
[redacted]	4.2GB	5981:18	1.5M	0	1.5M
[redacted]	184.8GB	2125:54	1.4M	1,806	1.4M
[redacted]	0B	2062:27	0	1.1M	1.1M
[redacted]	0B	1354:09	0	1.0M	1.0M
[redacted] data):	741.1GB	111839:46	6.7M	64.8M	71.5M

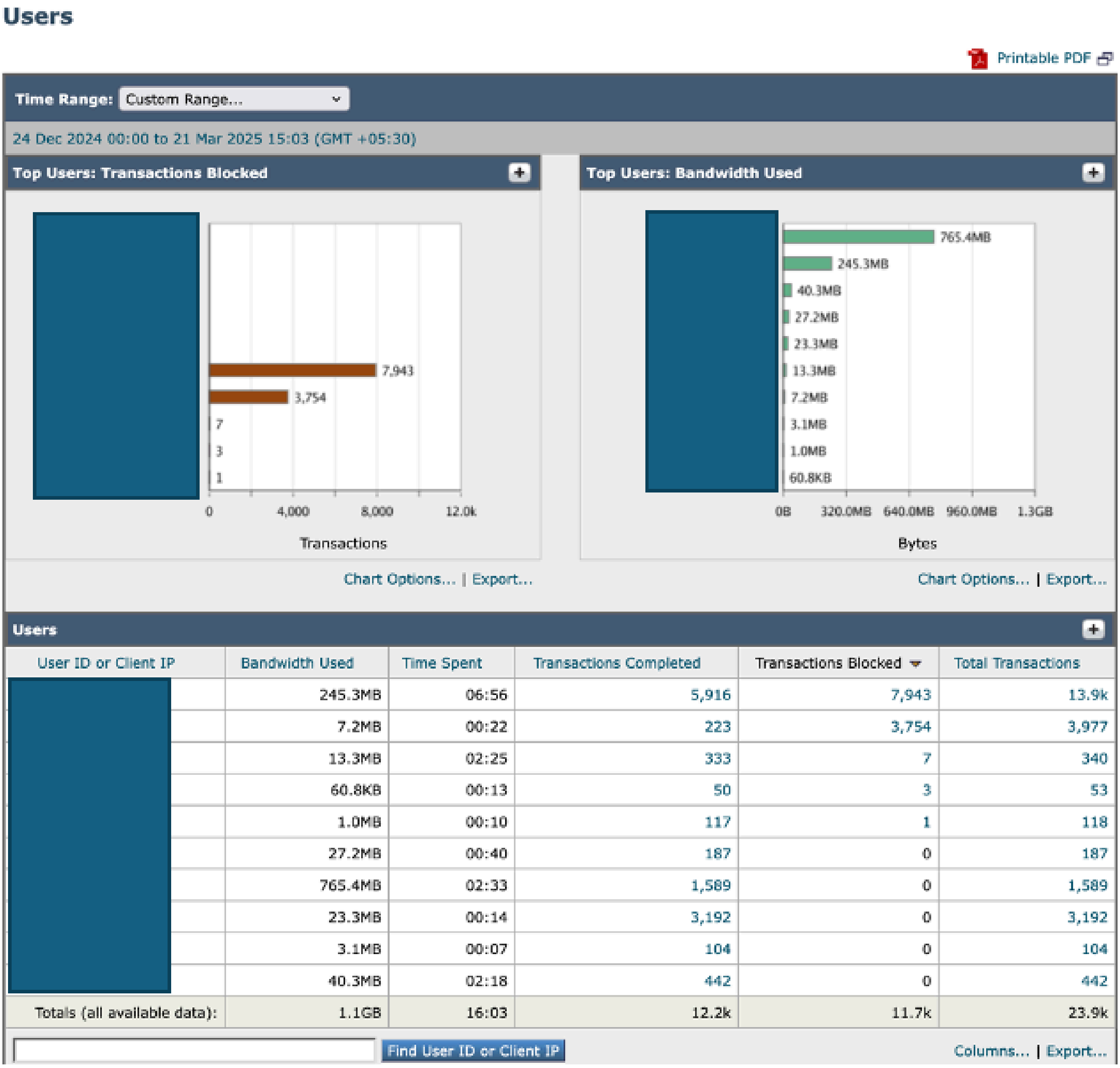
Image- SWA Top Domains Dashboard

Analyze Top Users

To identify potential sources of excessive traffic, navigate to the **SWA GUI** from **Reporting** choose **Users**.

Review the list to determine which users are generating the highest number of transactions to the SWA. Additionally, check for user machines that are generating the highest number of transactions to the SWA and consuming the maximum bandwidth.

This analysis can help pinpoint users or devices responsible for significant traffic loads, enabling targeted actions to reduce overall system strain.


Users
Printable PDF
Time Range: Custom Range...
24 Dec 2024 00:00 to 21 Mar 2025 15:03 (GMT +05:30)
Top Users: Transactions Blocked
[redacted]
7,943
3,754
7
3
1
0
4,000
8,000
12.0k
Transactions
Chart Options... | Export...
Top Users: Bandwidth Used
[redacted]
765.4MB
245.3MB
40.3MB
27.2MB
23.3MB
13.3MB
7.2MB
3.1MB
1.0MB
60.8KB
0B
320.0MB
640.0MB
960.0MB
1.3GB
Bytes
Chart Options... | Export...
Users

User ID or Client IP	Bandwidth Used	Time Spent	Transactions Completed	Transactions Blocked	Total Transactions
[redacted]	245.3MB	06:56	5,916	7,943	13.9k
[redacted]	7.2MB	00:22	223	3,754	3,977
[redacted]	13.3MB	02:25	333	7	340
[redacted]	60.8KB	00:13	50	3	53
[redacted]	1.0MB	00:10	117	1	118
[redacted]	27.2MB	00:40	187	0	187
[redacted]	765.4MB	02:33	1,589	0	1,589
[redacted]	23.3MB	00:14	3,192	0	3,192
[redacted]	3.1MB	00:07	104	0	104
[redacted]	40.3MB	02:18	442	0	442
Totals (all available data):	1.1GB	16:03	12.2k	11.7k	23.9k

Image-SWA Top Users Dashboard

SHD Logs

By reviewing the SHD_log, you can analyze some of the performance metrics such as number of sessions from users to SWA (CliConn), number of sessions from SWA to the Internet (SrvConn), the average requests per seconds (Reqs) and so on.

For more information about the SHD Log, refer to link Troubleshoot Secure Web Appliance Performance with SHD Logs,

Some key Parameters to review in the SHD logs are:

- ClientConns: Number of active client connections
- ServerConns: Number of active server connections
- ProxLd: Average Proxy process load

- CPULD: Average overall CPU load
- RAMUTIL**:** RAM utilization
- Latency**:** Average service time in one minute
- DiskUtil**:** Disk usage and I/O performance

As in this example, having around 1,600 Requests per Seconds, leads to high proxy process load.

```
Wed Mar 26 11:09:30 2025 Info: Status: CPULd 16.3 DskUtil 19.9 RAMUtil 9.3 Reqs 1661 Band 152966 Latenc
Wed Mar 26 11:10:31 2025 Info: Status: CPULd 13.6 DskUtil 19.9 RAMUtil 9.5 Reqs 1699 Band 107048 Latenc
Wed Mar 26 11:11:31 2025 Info: Status: CPULd 15.0 DskUtil 19.9 RAMUtil 9.5 Reqs 1669 Band 178803 Latenc
Wed Mar 26 11:12:31 2025 Info: Status: CPULd 17.6 DskUtil 19.9 RAMUtil 9.2 Reqs 1785 Band 143721 Latenc
```

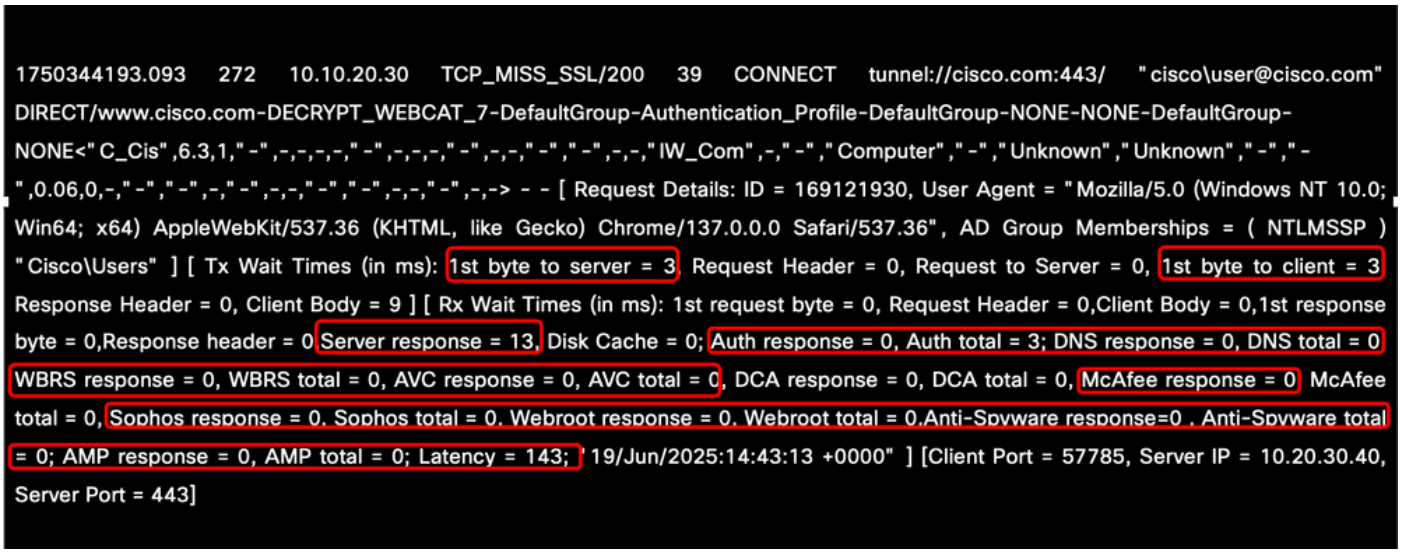
Using Access Logs to Troubleshoot Latency Issues

When latency issues occur with traffic being proxied through an SWA, Access Logs can serve as a valuable tool for identifying the probable root cause. To enhance troubleshooting efforts, you can either modify the existing Access Log settings or create a new Access Log. By including Performance Parameters in the Custom Field, you can gain deeper insights into factors contributing to latency, enabling more effective analysis and resolution.

For more information about the Performance Parameters and the configuration steps, refer to link: Configure Performance Parameter in Access Logs

Here is the detailed guide to collect logs in the SWA: Access Secure Web Appliance Logs

Latency sources can be analyzed by examining key parameters that help determine whether delays occur between the client and the SWA, inside SWA internal processes or between the SWA and the web server. Important indicators to consider include network-based services such as DNS resolution, authentication time, and server or client response times. Additionally, delays caused by scanning engines like AMP, Sophos, and AVC must be evaluated to identify their impact on overall latency.



```
1750344193.093 272 10.10.20.30 TCP_MISS_SSL/200 39 CONNECT tunnel://cisco.com:443/ "cisco\user@cisco.com" DIRECT/www.cisco.com-DECRYPT_WEBCAT_7-DefaultGroup-Authentication_Profile-DefaultGroup-NONE-NONE-DefaultGroup-NONE<"C_Cis",6.3,1,"-",-,-,-,-,"-",-,-,-,"-",-,-,"-","-",-,-,"IW_Com",-,"-","Computer","-","Unknown","Unknown","-","-",0.06,0,-,"-","-",-,"-",-,-,"-","-",-,-,"-",-,-,-> - - [ Request Details: ID = 169121930, User Agent = "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/137.0.0.0 Safari/537.36", AD Group Memberships = ( NTLMSSP ) "Cisco\Users" ] [ Tx Wait Times (in ms): 1st byte to server = 3, Request Header = 0, Request to Server = 0, 1st byte to client = 3 Response Header = 0, Client Body = 9 ] [ Rx Wait Times (in ms): 1st request byte = 0, Request Header = 0,Client Body = 0,1st response byte = 0,Response header = 0 Server response = 13, Disk Cache = 0; Auth response = 0, Auth total = 3; DNS response = 0, DNS total = 0 WBRS response = 0, WBRS total = 0, AVC response = 0, AVC total = 0, DCA response = 0, DCA total = 0, McAfee response = 0 McAfee total = 0, Sophos response = 0, Sophos total = 0, Webroot response = 0, Webroot total = 0,Anti-Spyware response=0 , Anti-Spyware total = 0; AMP response = 0, AMP total = 0; Latency = 143; '19/Jun/2025:14:43:13 +0000" ] [Client Port = 57785, Server IP = 10.20.30.40, Server Port = 443]
```

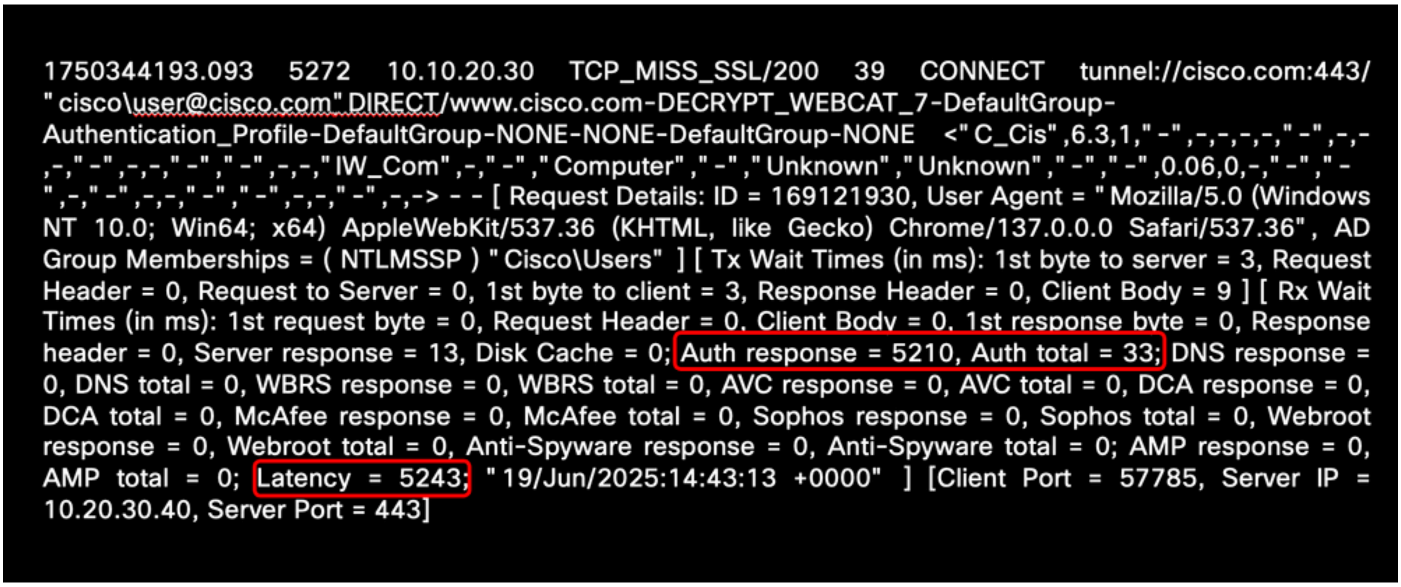
Image - Performance Parameters in the AccessLog

High Authentication Time

If the authentication response time is high, this information is required for TAC to troubleshoot the authentication latency better and faster:

- Current SWA configuration
- Authentication logs in debug or trace mode
- Packet captures from
  - Client machine.
  - SWA (With filter to capture the Client traffic and the SWA traffic to all active directories configured in the realm settings.)
- Make sure Accesslogs has both custom field %m and %g to identify the authentication mechanism and groups
- HAR file from the Client while reproducing the issue
- The output of **testauthconfig** command from the CLI

This example shows the high latency time related to Authentication:



```
1750344193.093 5272 10.10.20.30 TCP_MISS_SSL/200 39 CONNECT tunnel://cisco.com:443/
" cisco\user@cisco.com" DIRECT/www.cisco.com-DECRYPT_WEBCAT_7-DefaultGroup-
Authentication_Profile-DefaultGroup-NONE-NONE-DefaultGroup-NONE <" C_Cis" ,6.3,1," -" ,-,-,-,-," -" ,-,-
,-," -" ,-,-," -" ," -" ,-,-," IW_Com" ,-," -" ," Computer" ," -" ," Unknown" ," Unknown" ," -" ," -" ,0.06,0,-," -" ," -
" ,-," -" ,-,-," -" ," -" ,-,-," -" ,-,-> - - [ Request Details: ID = 169121930, User Agent = " Mozilla/5.0 (Windows
NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/137.0.0.0 Safari/537.36" , AD
Group Memberships = ( NTLMSSP ) " Cisco\Users" ] [ Tx Wait Times (in ms): 1st byte to server = 3, Request
Header = 0, Request to Server = 0, 1st byte to client = 3, Response Header = 0, Client Body = 9 ] [ Rx Wait
Times (in ms): 1st request byte = 0, Request Header = 0, Client Body = 0, 1st response byte = 0, Response
header = 0, Server response = 13, Disk Cache = 0; Auth response = 5210, Auth total = 33; DNS response =
0, DNS total = 0, WBRS response = 0, WBRS total = 0, AVC response = 0, AVC total = 0, DCA response = 0,
DCA total = 0, McAfee response = 0, McAfee total = 0, Sophos response = 0, Sophos total = 0, Webroot
response = 0, Webroot total = 0, Anti-Spyware response = 0, Anti-Spyware total = 0; AMP response = 0,
AMP total = 0; Latency = 5243; " 19/Jun/2025:14:43:13 +0000" ] [Client Port = 57785, Server IP =
10.20.30.40, Server Port = 443]
```

Image - Sample of High Authentication Latency

High DNS Time

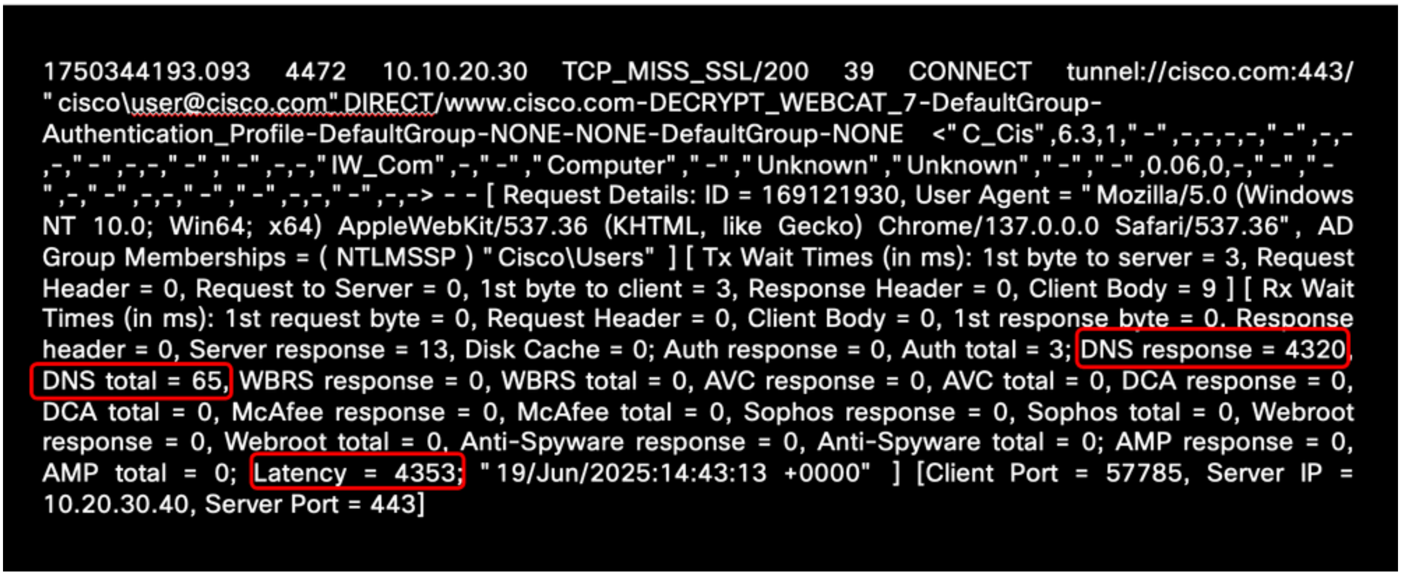
If the DNS response time is high, this information is required for TAC to troubleshoot DNS latency issues:

- Current SWA configuration
- System logs in trace mode
- DNS servers IP address
- Packet captures from
  - Client machine

    - SWA (Filtering with DNS servers IP address.)
- Make sure your Accesslogs have both %:<d and %:>d in the custom field
- HAR file from the Client while reproducing the issue

To read more about the DNS configuration and troubleshooting, refer to link Troubleshoot Secure Web Appliance DNS Service

This example shows the high latency time related to DNS name resolution:



```
1750344193.093   4472   10.10.20.30   TCP_MISS_SSL/200   39   CONNECT   tunnel://cisco.com:443/
" cisco\user@cisco.com" DIRECT/www.cisco.com-DECRYPT_WEBCAT_7-DefaultGroup-
Authentication_Profile-DefaultGroup-NONE-NONE-DefaultGroup-NONE   <" C_Cis" ,6.3,1," -" ,-,-,-,-," -" ,-,-
,-," -" ,-,-," -" ," -" ,-,-," IW_Com" ,-," -" ," Computer" ," -" ," Unknown" ," Unknown" ," -" ," -" ,0.06,0,-," -" ," -
" ,-," -" ,-,-," -" ," -" ,-,-," -" ,-,-> - - [ Request Details: ID = 169121930, User Agent = " Mozilla/5.0 (Windows
NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/137.0.0.0 Safari/537.36" , AD
Group Memberships = ( NTLMSSP ) " Cisco\Users"  ] [ Tx Wait Times (in ms): 1st byte to server = 3, Request
Header = 0, Request to Server = 0, 1st byte to client = 3, Response Header = 0, Client Body = 9 ] [ Rx Wait
Times (in ms): 1st request byte = 0, Request Header = 0, Client Body = 0, 1st response byte = 0, Response
header = 0, Server response = 13, Disk Cache = 0; Auth response = 0, Auth total = 3; DNS response = 4320,
DNS total = 65, WBRS response = 0, WBRS total = 0, AVC response = 0, AVC total = 0, DCA response = 0,
DCA total = 0, McAfee response = 0, McAfee total = 0, Sophos response = 0, Sophos total = 0, Webroot
response = 0, Webroot total = 0, Anti-Spyware response = 0, Anti-Spyware total = 0; AMP response = 0,
AMP total = 0; Latency = 4353; " 19/Jun/2025:14:43:13 +0000"  ] [Client Port = 57785, Server IP =
10.20.30.40, Server Port = 443]
```

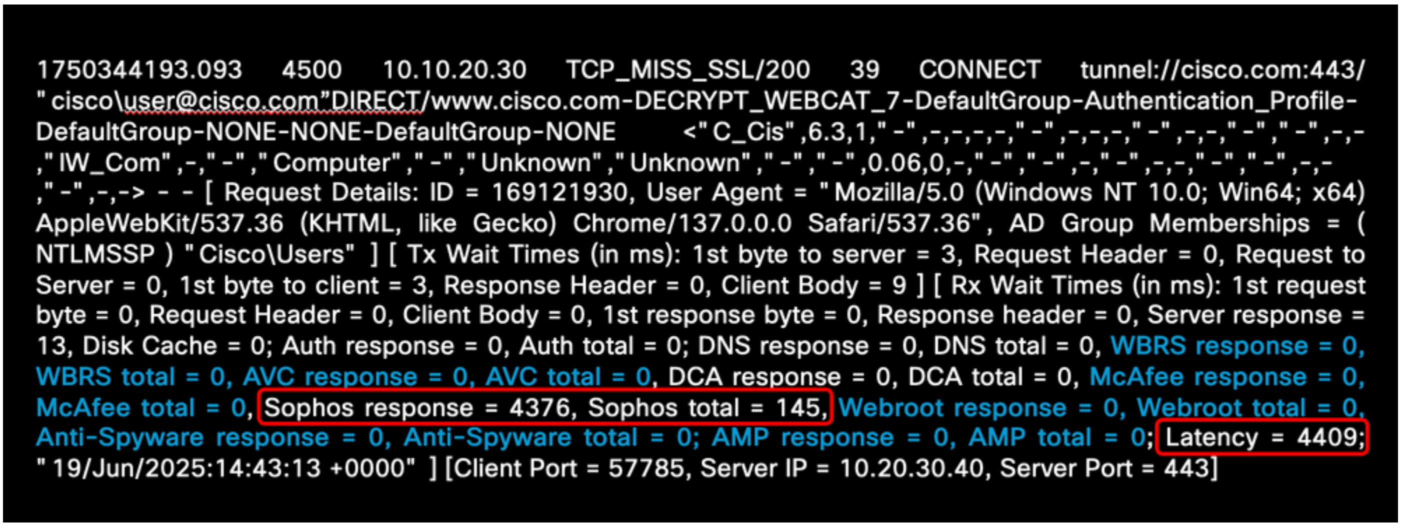
Image - Sample of High DNS Resolution Latency

High Scanning Engine Time

If the response time is high for Web Reputation Score (WBRS), Application and Visibility Control (AVC), and Malware Scanning engines, this information is required for TAC to troubleshoot scanning engine high response time:

- Current SWA configuration.
- Depends on the Engine that has high response time, change the logging level to debug.

This example shows the high latency time related to Sophos Engine:



```
1750344193.093    4500    10.10.20.30    TCP_MISS_SSL/200    39    CONNECT    tunnel://cisco.com:443/
" cisco\user@cisco.com"DIRECT/www.cisco.com-DECRYPT_WEBCAT_7-DefaultGroup-Authentication_Profile-
DefaultGroup-NONE-NONE-DefaultGroup-NONE        <" C_Cis" ,6.3,1," -" ,-,-,-,-," -" ,-,-,-," -" ,-,-," -" ," -" ,-,-
," IW_Com" ,-," -" ," Computer" ," -" ," Unknown" ," Unknown" ," -" ," -" ,0.06,0,-," -" ," -" ,-," -" ,-,-," -" ," -" ,-,-
," -" ,-,-,-> - - [ Request Details: ID = 169121930, User Agent = " Mozilla/5.0 (Windows NT 10.0; Win64; x64)
AppleWebKit/537.36 (KHTML, like Gecko) Chrome/137.0.0.0 Safari/537.36" , AD Group Memberships = (
NTLMSSP ) " Cisco\Users"  ] [ Tx Wait Times (in ms): 1st byte to server = 3, Request Header = 0, Request to
Server = 0, 1st byte to client = 3, Response Header = 0, Client Body = 9 ] [ Rx Wait Times (in ms): 1st request
byte = 0, Request Header = 0, Client Body = 0, 1st response byte = 0, Response header = 0, Server response =
13, Disk Cache = 0; Auth response = 0, Auth total = 0; DNS response = 0, DNS total = 0, WBRS response = 0,
WBRS total = 0, AVC response = 0, AVC total = 0, DCA response = 0, DCA total = 0, McAfee response = 0,
McAfee total = 0, Sophos response = 4376, Sophos total = 145, Webroot response = 0, Webroot total = 0,
Anti-Spyware response = 0, Anti-Spyware total = 0; AMP response = 0, AMP total = 0; Latency = 4409;
" 19/Jun/2025:14:43:13 +0000"  ] [Client Port = 57785, Server IP = 10.20.30.40, Server Port = 443]
```

Image - Malware Scanning Engine High Latency

If the scanning engines show high response, for immediate recovery, you can restart the **scanning service** from CLI using these steps:

Step 1. Type **diagnostic** and press **Enter** (This is a hidden command and you need to type the exact command.)

Step 2. Choose **SERVICES**.

Step 3. To restart the **WBRS service**, choose **WBRS** else skip to step 6.

Step 4. Choose **RESTART**.

Step 5. Keep pressing **Enter** to exit the wizard.

Step 6. In case you are planning to restart any Malware scanning engine, choose **ANTIVIRUS**.

Step 7. Select your **scanners**.

Step 8. Choose **RESTART**.

Step 9. Keep pressing **Enter** to exit the wizard.

Warning: Restarting the internal services causes service interruption. Recommend to perform this in off-production hours or by caution.

Best Practice While Connecting Packet Capture

While performing any packet capture please collect and share this information with Cisco TAC.

- Client IP address.
- The URL which you were trying to access.
- The IP address resolved for that URL from Client PC and from the SWA.
- User experience (such as page did not load or has partial load, and if there are any error messages, please take a screen shot).
- Time-stamp of the test.
- Close all other browsers and apps on the client machine. Access the **website, capture logs** in Notepad for one success/failure attempt, and share with **Cisco Support**.

For detailed information about how to perform packet capture in SWA, refer to link Configure Packet Capture on Content Security Appliance

Configuration Complexity

Another common cause of high latency and poor performance is configuration complexity. This occurs when the SWA is configured with an excessive number of conditions, profiles, and policies. Such complexity can significantly increase response times and place a heavy load on the proxy process. This issue tends to become more pronounced during peak hours, when traffic is at its highest.

Here are some tips to Optimize Configuration:

1. Limit HTTPS Decryption: Only decrypt the traffic essential to your security policies. Whenever possible, reduce processing overhead while maintaining security.
2. Prioritize Policies for Efficiency: Arrange the most frequently used policies at the top of the policy list. This ensures faster processing by addressing most demanding traffic first.
3. Streamline Policy Design: Simplify policies by minimizing their number as much as possible. This reduces unnecessary processing and improves overall system performance.
4. Optimize Anti-Malware and Anti-Virus Scanning: Review scanning configurations for anti-malware and anti-virus processes. These can be CPU-intensive, so fine-tuning them can significantly lower resource consumption without compromising security.
5. Use Lightweight Regular Expressions: Avoid complex or resource-heavy regular expressions. Ensure characters like dots (.) and stars (*) are properly escaped to reduce processing strain and prevent inefficiencies.

For detailed information about SWA Best Practice, visit Use Secure Web Appliance Best Practices

CLI Commands

Version

Use **version** command to verify hardware allocation (for Virtual SWA) and RAID status (for physical SWA). Check hardware configuration: Ensure number of CPU cores, Memory and Hard disks are allocated as expected. In virtual models, RAID status shows as Unknown, if the RAID Status is Degraded or Failed in physical appliance, please contact Cisco TAC to review the disk status from back end.

Here is a Sample of allocating more CPU to the SWA that can lead to misbehavior:

```
SWA Lab> version
Current Version
===============
Product: Cisco S100V Secure Web Appliance
Model: S100V
BIOS: 6.00
CPUs: 3 expected, 4 allocated
Memory: 8192 MB expected, 8192 MB allocated
Hard disk: 200 GB, or 250 GB expected; 200 GB allocated
RAID: NA
RAID Status: Optimal
```

displayalerts

Use **displayalerts** command to check SWA network related alert messages that can indicate the root cause.

In this example, the DNS server at IP address 10.10.10.10 was not responding, and the message "The File Reputation service is not reachable" can indicate a network connectivity issue.

```
SWA LAB> displayalerts
Date and Time Stamp           Description
--------------------------------------------------------------------------------
26 Mar 2025 11:20:07 +0500 The File Reputation service is not reachable.
26 Mar 2025 11:20:07 +0500 Critical: Reached maximum failures querying DNS server 10.10.10.10
26 Mar 2025 11:20:07 +0500 Critical: Reached maximum failures querying DNS server 10.10.10.10
26 Mar 2025 10:16:18 +0500 Warning: Communication with the File Reputation service has been established
```

process_status

Use **process_status** command to view process and memory usage of SWA internal services.

If the Prox process, which is the main process handling traffic proxying, consistently exceeds 100% usage for several minutes, it indicates a sustained high load on the process. However, occasional short spikes in CPU usage on the Prox or other processes are normal and expected.

<#root>

```
SWA LAB> process_status
USER     PID

  %CPU



%MEM

   VSZ     RSS TT  STAT STARTED           TIME

COMMAND


root      11 2805.4  0.0       0     512  -  RNL  28Jun24 11863204:12.63 idle
root   71189

102.0



19.5

 6670700 6478032  -  R    23Feb25    18076:32.80

prox


root   91880   99.0  0.6  369564  214832  -  R    28Jun24    58854:51.78 counterd
root   91267   76.0  0.9  379804  292324  -  R    28Jun24    59371:01.26 counterd
root      12   25.9  0.0       0    1600  -  WL   28Jun24    30899:57.88 intr
root   46955   25.0  0.2   91260   59336  -  S    23Jan25     7547:02.96 wbnpd
root   95056   23.0 11.2 5369332 3710348  -  I    28Jun24    31719:23.99 java
root   93190   12.0  1.4 3118384  456088  -  S    01:15         29:57.05 beakerd
root   64579   11.0  0.2  101336   71204  -  S     6Aug24    12074:55.55 coeuslogd
```

status detail

The **status detail** command provides a real-time summary of system resource usage, network traffic metrics, and connection statistics, reflecting the overall health and performance of the SWA. It mirrors the System Status view in the GUI for quick monitoring and troubleshooting.

<#root>

```
SWA LAB> Status detail

Status as of:                  Wed Mar 26 11:51:27 2025 PKT


Up since:                      Fri Jun 28 13:45:43 2024 PKT (270d 22h 5m 43s)


System Resource Utilization:


CPU                                    16.0%


  RAM                                    10.3%


  Reporting/Logging Disk                 19.8%


Transactions per Second:
  Average in last minute                  1745
  Maximum in last hour                    2210
  Average in last hour                    1708
  Maximum since proxy restart             2451
  Average since proxy restart              615
Bandwidth (Mbps):
  Average in last minute               149.699
  Maximum in last hour                1356.387
  Average in last hour                 229.634
  Maximum since proxy restart        22075.244
  Average since proxy restart           60.689
Response Time (ms):
  Average in last minute                    99
  Maximum in last hour                 8194128
  Average in last hour                      87
  Maximum since proxy restart         19608632
  Average since proxy restart               28
Cache Hit Rate:
  Average in last minute                     3
  Maximum in last hour                       6
  Average in last hour                       2
  Maximum since proxy restart                89
  Average since proxy restart                2
Connections:
  Idle client connections                 3481
  Idle server connections                  754


Total client connections               21866
```

```
  Total server connections               19049


SSLJobs:
  In queue Avg in last minute                0
  Average in last minute                 12050
  SSLInfo Average in last min                0
Network Events:
  Average in last minute                  16.0
  Maximum in last minute                   171
  Network events in last min            151918
```

Ipcheck

The **ipcheck** command displays detailed system information for the Secure Web Appliance, including hardware specs, disk usage, network interfaces, installed software keys, and version details, providing a comprehensive snapshot of the appliance's current state.

<#root>

```
SWA LAB > ipcheck
  Ipcheck Rev           1
  Date                  Fri Mar 21 16:34:56 2025
  Model                 S100V
  Platform              vmware (VMware Virtual Platform)
  Secure Web Appliance Version  Version: 15.2.1-011
  Build Date            2024-10-03
  Install Date          2025-02-13 17:49:24
  Burn-in Date          Unknown
  BIOS Version          6.00
  RAID Version          NA
  RAID Status           Unknown
  RAID Type             NA
  RAID Chunk            Unknown
  BMC Version           NA
  Disk 0                200GB VMware Virtual disk 1.0 at mpt0 bus 0 scbus2 target 0 lun 0
  Disk Total            200GB

  Root                  4GB 64%



  Nextroot              4GB 65%



  Var                   400MB 38%



  Log                   130GB 24%



  DB                    2GB 0%


  Swap                  8GB
  Proxy Cache           50GB
  RAM Total             8192M
```

rate

The **rate** command prints the connection rates and the number of requests per seconds for every 10 seconds .

<#root>

```
SWA LAB> rate
Press Ctrl-C to stop.

%proxy  reqs                        client    server    %bw  disk disk

  CPU  /sec    hits blocks misses    kb/sec    kb/sec  saved  wrs   rds

100.00  1800     17  16352   1626    178551    178551    0.0  2366   0

100.00  1813     18  16453   1659    226301    224952    0.6  3008   0

99.00  1799      10  16338   1645    206234    206234    0.0  3430   1
```

Collecting Logs for High Latency

It depends on the section that you are seeing high response time from Access Logs or high process load from SHD logs, for further troubleshooting, it is best to change the corresponding log subscription to Debug.

Warning: Setting the log level to debug or trace can lead to increased resource usage and cause log files to rotate or overwrite quickly.

Access Log Field	**SHD Log Field**	**Corresponding Log Subscription**
Auth response , Auth total	--	authlogs
DNS response, DNS total	--	system_logs
WBRS response, WBRS total	Wbrs_WucLd	Contact Cisco TAC
AVC response, AVC total	--	avc_logs
McAfee response, McAfee total	McafeeLd	mcafee_logs

Sophos response, Sophos total	SophosLd	sophos_logs
Webroot response, Webroot total	WebrootLd	webrootlogs
AMP response, AMP total	AMPLd	amp_logs

Related Information

Troubleshoot Secure Web Appliance Performance with SHD Logs

Access Secure Web Appliance Logs

Configure Packet Capture on Content Security Appliance

Use Secure Web Appliance Best Practices

Configure Performance Parameter in Access Logs

Troubleshoot Unusual Process States in SWA

Determine Decryption Rate in SWA

Troubleshoot Secure Web Appliance DNS Service

Access Secure Web Appliance Logs