



# Beta Extended L7 Debug

## Technical Note

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# Table of Contents

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<b>1 Introduction .....</b>	<b>4</b>
<b>2 Extended Debug WUI Options .....</b>	<b>5</b>
<b>Last Updated Date .....</b>	<b>7</b>

# 1 Introduction

This document relates to additional logging capabilities that enable debug and client trace logging at a per-Virtual Service (VS) level. Because this is a beta feature, only configuring using the Web User Interface (WUI) is supported, no Application Program Interface (API) functionality has been implemented.

# 2 Extended Debug WUI Options

There is a global debug option called **Enable L7 Debug Traces** that enables debugging on all Layer 7 (L7) connections. This global setting has precedence over the new Extended L7 debug feature capabilities outlined below.

This new beta feature allows additional logging capabilities that enables debug logging on a per-VS level and a further option to limit the logging by specifying the client IP address. All logs associated with this feature are recorded in the system messages file **messages.txt**.

Debug Options

Disable All Transparency	<b>Disable Transparency</b>
Enable L7 Debug Traces	<b>Enable Traces</b>
Enable Extended L7 Debug	<b>Enable Extended Debug</b>
Perform an l7adm	<b>l7adm</b>
Enable WAF Debug Logging	<b>Enable Logging</b>
Enable IRQ Balance	<b>Enable IRQ Balance</b>
Enable TSO	<b>Enable TSO</b>
Enable TCP SACK	<b>Enable TCP SACK</b>
Enable Bind Debug Traces	<b>Enable Bind Traces</b>
Perform a PS	<b>ps</b>
Perform Top	<b>top</b> Iterations <input type="text" value="10"/> Interval <input type="text" value="1"/> sec <input type="checkbox"/> Show Threads <input type="checkbox"/> Sort by Memory usage
Include Top in Backups	<input type="checkbox"/>
Display Meminfo	<b>Meminfo</b>
Display Slabinfo	<b>Slabinfo</b>
Perform an Ifconfig	<b>Ifconfig</b>
Perform a Netstat	<b>Netstat</b>
Include Netstat in Backups	<input checked="" type="checkbox"/>
Reset Statistic Counters	<b>Reset Statistics</b>
Flush OCSPD Cache	<b>Flush Cache</b>
Enable SSOMGR Debug Traces	<b>Enable Traces</b>
Flush SSO Authentication Cache	<b>Flush SSO Cache</b>
Linear SSO Logfiles	<input type="checkbox"/>
Start IPsec IKE Daemon	<b>Start IPsec IKE Daemon</b>
Perform an IPsec Status	<b>IPsec Status</b>
Enable IKE Debug Level Logs	<b>Enable Logs</b>
Netconsole Host	<input type="text"/> Interface <input type="text" value="eth0"/> <b>Set Netconsole Host</b>
Ping Host	<input type="text"/> Interface <input type="text" value="eth0"/> <b>Ping</b>
Ping6 Host	<input type="text"/> Interface <input type="text" value="Automatic"/> <b>Ping6</b>
Traceroute Host	<input type="text"/> <b>Traceroute</b>
Kill LoadMaster (658747)	<input type="text"/> <b>Kill LoadMaster</b>

You can enable this feature using the **Enable Extended L7 Debug** setting in the **System Configuration >**

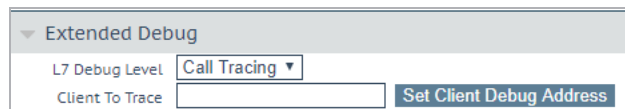
Logging Options > System Log Files > Debug Options page.

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Enabling Extended L7 Debug does not start logging. By default, the **L7 Debug Level** is set to **No Debug** for all Virtual Services and SubVSs. To enable logging for a particular Virtual Service or SubVS, you must set the **L7 Debug Level** to **Call Tracing** or **Full Debug** in the **Extended Debug** section of the Virtual Service or SubVS modify screen.

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When this option is enabled, the **Extended Debug** configuration item is made available to all VSs. When using Sub-Virtual Services (SubVSs), the **Extended Debug** settings are also inherited by the SubVS, so that a single call can be logged in its entirety. It is also possible to enable debug on only a single SubVS if required.



Extended Debug	
L7 Debug Level	Call Tracing ▼
Client To Trace	<input type="text"/>
<a href="#">Set Client Debug Address</a>	

When **Enable Extended L7 Debug** is set, the **Extended Debug** options are available when configuring or modifying a VS. The options available are:

- **L7 Debug Level:** There are currently three levels available; **No Debug**, **Call Tracing**, and **Full Debug**. **Call Tracing** is a basic level log that displays most relevant operations, while **Full Debug** displays all available debug logs, which is the same as the global setting of **Enable L7 Debug Traces** but on a per-VS level.
- **Client To Trace:** It is also possible to limit the debug information even further by specifying a client IP address (you can specify an IPv4 or IPv6 address). If an address is specified, only connections coming from that specific client IP are logged/traced. This allows debugging capability from a single address.

# Last Updated Date

This document was last updated on 27 July 2023.