



**LoadMaster
Release Notes
Product Overview**

*VERSION: 1.27
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Used, under license, U.S. Patent Nos. 6,473,802, 6,374,300, 8,392,563, 8,103,770, 7,831,712, 7,606,912, 7,346,695, 7,287,084 and 6,970,933

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1 Software Release Notes Introduction

This document describes the features in the current and previous LoadMaster releases.

We recommend you fully back up the LoadMaster configuration before upgrading the software. Instructions for backing up the LoadMaster are described in within the documentation which can be found at <http://www.kemptechnologies.com/documentation>.

Installation of this software and reloading of the configuration may take up to five minutes, or possibly more, during which time the LoadMaster being upgraded will be unavailable to carry traffic.

1.1 Pre-requisites

The following are recommendations for upgrading the software:

- The person undertaking the upgrade should be a network administrator or someone with equivalent knowledge.
- In case of issues restoring backup configurations, configuring LoadMaster or other maintenance issues, please refer to the LoadMaster documentation which can be found at <http://www.kemptechnologies.com/documentation>.

1.2 Support

If there are problems loading the software release, please contact KEMP support staff and a KEMP support Engineer will get in touch with you promptly: <http://kemptechnologies.com/load-balancing-support/kemp-support>

1.3 Compatible Products

- LM-2000
- LM-2200
- LM-2400
- LM-2600
- LM-3600
- LM-5300
- LM-5400
- LM-R320
- VLM-100
- VLM-200
- VLM-Exchange
- LM-Exchange
- LoadMaster for vCloud Air
- LM-5500
- VLM-1000
- VLM-2000
- VLM-5000
- VLM-DR
- LM for UCS B Series
- LM for UCS C Series
- LM for Oracle Sun x86 servers
- LM for HP ProLiant servers
- LoadMaster for Fujitsu Primergy
- LoadMaster for Dell R-Series
- LoadMaster for AWS
- LoadMaster for Azure

2 Release 7.1-22b

2.1 Feature Enhancements

1. *Improved logs for SSL thread limit.*

2.2 Issues Resolved

- PD-3287 Fixed an issue with drain time where connections were being dropped without waiting for the drain time.
- PD-3338 Improved security on formatted Uniform Resource Identifiers (URI) attacks.
- PD-3051 Fixed an issue relating to routing and Server NAT when the packet filter is enabled.
- PD-2751 Issues with ActiveSync working with Exchange 2013 have been resolved.

2.1 Known Issues

- PD-2182 When **Permitted Groups** are set for ESP, users receive an incorrect credential prompt at the forms-based login when the LoadMaster contacts child domains for user authentication.
- PD-2586 Virtual IP detail statistics are incorrect.
- PD-221 Access to the LoadMaster WUI using an iPhone is not supported.
- PD-3161 Reverse SSL does not work correctly.
- PD-3160 There is a bug with the **modmap** RESTful API command.
- PD-3106 The Virtual Service status is not updated in the RESTful API when a Real Server is disabled.
- PD-3104 The **addmap** RESTful API command does not work when the **Selection Criteria** is set to **Real Server Load**.
- PD-3075 A superfluous error message appears when you attempt to set the **isolateips** parameter via the PowerShell **ModifyFQDN** command.
- PD-2992 The temperature on the **Statistics** screen only shows details for one CPU.
- PD-2893 It is possible to upload the same template again in the LoadMaster WUI.
- PD-1677 You cannot currently upload RSA config and node secret files to the LoadMaster via the RESTful API. However, it is possible via the WUI.

3 Release 7.1-22

3.1 New Features

1. Application Firewall Pack (AFP)

AFP functionality, including a Web Application Firewall (WAF), has been added to the LoadMaster.

2. New templates

Templates are now available for Edupoint Synergy.

3. Application Firewall Pack (AFP) API commands

Implemented additional API commands for AFP functionality.

4. Template import via API

Templates can now be uploaded to the LoadMaster using an API command.

5. New health check

A new binary data health check has been added.

6. New Azure billing options

New hourly billing options are now available for the LoadMaster for Azure product in the MarketPlace

7. Akamai add-on pack

A new add-on pack is now available which helps to easily set up a LoadMaster to work with Akamai.

3.2 Feature Enhancements

1. *The layout of the manage SSO domain screen has been improved.*

2. *Virtual Service and Real Server status is now available via API commands.*

3. *Updated the time zone data for Russia.*

4. *Add-ons are now named based on the LoadMaster version they were made with.*

5. *Cloud-based Virtual LoadMasters now have a Web User Interface (WUI) certificate that matches their given FQDN.*

6. *When blocking users - different logon styles for the same username are now treated as the same user.*

7. *Arbitrary WUI ports can now be set via the Java API.*

8. *Security enhancements have been made to GEO.*

9. *Multiple Virtual Services with the same IP address can now be added to the GEO Real Server Load Cluster Check.*

10. *Updated the BIND version to 9.9.6-ESV to address CVE-1999-0662.*

3.3 Issues Resolved

PD-2930	Fixed an issue with the "Always check persist" option.
PD-2786	Fixed an issue where ESP logs could not be cleared.
PD-2750	Fixed an issue where creating/editing a Layer 4 Virtual Service would cause connections to drop.

PD-2719	Fixed memory issues on units with bonded interfaces.
PD-2707	Stopped the LoadMaster from mangling UDP packets with a 0 checksum.
PD-3086	Fixed an issue with “Use Address for Server NAT” and SubVSs.
PD-2767	Allowed groups can now use the principal name format to log in.
PD-2557	RADIUS authentication should now work with Microsoft (and other vendor-based) RADIUS servers.
PD-3023	Fixed an issue with persistence and cookies.
PD-2656	The RESTful API aclcontrol command now uses correct user permissions.
PD-2574	Issues (relating to ESP and ActiveSync) which were caused by passwords containing non-ASCII characters have been resolved.
PD-2756	A number of GEO bugs have been fixed, for example GEO now listens on the specified additional addresses when the Use for GEO option is enabled on the interface.
PD-3199	Steps taken to mitigate the following security risk – CVE-2014-3566 (“POODLE”)

3.4 Known Issues

PD-2182	When Permitted Groups are set for ESP, users receive an incorrect credential prompt at the forms-based login when the LoadMaster contacts child domains for user authentication.
PD-2586	Virtual IP detail statistics are incorrect.
PD-221	Access to the LoadMaster WUI using an iPhone is not supported.
PD-2751	When using ActiveSync with form-based authentication, occasionally SSO domain connections are dropped.
PD-3161	Reverse SSL does not work correctly.
PD-3160	There is a bug with the modmap RESTful API command.
PD-3106	The Virtual Service status is not updated in the RESTful API when a Real Server is disabled.
PD-3104	The addmap RESTful API command does not work when the Selection Criteria is set to Real Server Load .
PD-3075	A superfluous error message appears when you attempt to set the isolateips parameter via the PowerShell ModifyFQDN command.
PD-2992	The temperature on the Statistics screen only shows details for one CPU.
PD-2893	It is possible to upload the same template again in the LoadMaster WUI.
PD-1677	You cannot currently upload RSA config and node secret files to the LoadMaster via the RESTful API. However, it is possible via the WUI.

4 Release 7.1-20d

4.1 Feature Enhancements

1. *Changes made to allow the Virtual LoadMaster for Azure to be included in the Microsoft Gallery.*

4.2 Known Issues

- | | |
|---------|---|
| PD-2182 | When Permitted Groups are set for ESP, users receive an incorrect credential prompt at the forms-based login when the LoadMaster contacts child domains for user authentication. |
| PD-2586 | Virtual IP detail statistics are incorrect. |
| PD-2656 | The RESTful API aclcontrol command does not have proper user permissions. |
| PD-221 | Access to the LoadMaster WUI using an iPhone is not supported. |
| PD-2574 | Issues with ESP and ActiveSync if the password contains certain non-ASCII characters. |
| PD-2751 | When using ActiveSync with form-based authentication, occasionally SSO domain connections are dropped. |
| PD-2750 | Occasionally some active Layer 4 Virtual Service connections are dropped when another Layer 4 Virtual Service is created or modified. |

5 Release 7.1-20a

5.1 New Features

1. New add-on pack to integrate the LoadMaster with VMware vCenter Log Insight.

New Service Type for Log Insight within a Virtual Service.

2. New templates to leverage the new Log Insight add-on.

Templates which can be used to easily create the Virtual Services needed to work with Log Insight.

3. Support for a new bare metal platform: Fujitsu Primergy.

The LoadMaster is now supported on the Fujitsu Primergy.

4. Support for Kerberos Constrained Delegation (KCD)

KCD functionality, including support for client certification authentication, has been added within the Edge Security Pack (ESP).

5. The ability to designate GEO listening interfaces.

You can now define which interface(s) are used for listening and responding to DNS requests.

6. The ability to use multiple interfaces to listen for GEO requests.

GEO now has the ability to have multiple interfaces used for DNS responses and requests.

7. GEO API commands have been added.

All GEO API commands and parameters have been added.

8. Application Firewall Pack (AFP) – beta release.

AFP functionality including a Web Application Firewall has been added to the LoadMaster.

5.2 Feature Enhancements

1. The OpenSSL version has been upgraded to 1.0.1i.

2. The strength of DHE exchange keys for SSL/TLS has been increased.

*3. A new **Domain/Realm** field has been added to the Manage SSO screen.*

4. The certificate used by the WUI will now take the public name used by Azure/AWS.

5. Implemented new Azure requirements

5.3 Issues Resolved

PD-2267	Fixed an issue with the LoadMaster logging process which, in some circumstances, may lead to excessive wear of our Solid State Drives (SSDs)
PD-2648	Fixed a memory issue relating to the SSO manager.
PD-2380	Changed the log level of successful backup notifications.
PD-2598	Fixed an issue with permanent ESP cookies and Sub-VSs.

PD-2559	Fixed an issue where an SSL Virtual Service might crash.
PD-2485	Made the 100-Continue options clearer in the Web User Interface (WUI).
PD-1728	Fixed an issue with terminal service persistence not being set correctly.
PD-1717	Fixed an issue where changing an interface address would cause an additional address to stop working until the LoadMaster was rebooted.
PD-2349	Reworked the re-encrypt Via header to send HTTPS information.
PD-2252	Fixed an issue where non-checked interfaces did not send Gratuitous ARPs.
PD-2341	Fixed an issue where SNMP did not report the correct status for SubVSs.
PD-2466	Fixed an issue where some HA statistic settings would revert to their previous value.
PD-2310	ESP for SMTP can now handle Extended SMTP (ESMTP) chunking.
PD-2481	Fixed a memory issue relating to wildcard Virtual Services.
PD-2508	Fixed an issue where ESP groups had access to other Virtual Services with the same domain.
PD-2560	Enhanced the IMAP health check to make it more RFC compliant.
PD-2641	Increased the strength of the WUI SSL ciphers.
PD-2645	Fixed an issue where statistics were not being refreshed at a proper interval.
PD-2544	GEO wildcard FQDNs are now editable.
PD-2536	The Allow Administrative WUI Access option is now working correctly on the HA shared IP address of additional interfaces.
PD-2253	Memory issue relating to the HA active unit has been fixed.
PD-2101	Fixed an issue where Azure LoadMasters were not starting after a reboot.
PD-2707	Fixed an issue where a 0 checksum UDP packet received from a client was blocked.
PD-2887	The Subject Alternative Name (SAN) in the certificate is now used as part of authentication.
PD-2897	Memory issues with bonded interfaces have been resolved

5.4 Known Issues

1. When **Permitted Groups** are set for ESP, users receive an incorrect credential prompt at the forms-based login when the LoadMaster contacts child domains for user authentication.
2. Virtual IP detail statistics are incorrect.
3. The RESTful API **aclcontrol** command does not have proper user permissions.
4. Access to the LoadMaster WUI using an iPhone is not supported.
5. Issues with ESP and ActiveSync if the password contains certain non-ASCII characters.

6. When using ActiveSync with form-based authentication, occasionally SSO domain connections are dropped.
7. Occasionally some active Layer 4 Virtual Service connections are dropped when another Layer 4 Virtual Service is created or modified.

6 Release 7.1-18b

6.1 New Features

1. VMware vCenter Operations Management Pack released

First release of the VCOPS adapter for the LoadMaster.

2. Azure High Availability (HA) enhancements

A number of enhancements have been made to Azure HA functionality.

a) Azure HA mode health check

New inter-HA health check which allows for LoadMaster HA in an Azure environment

b) Azure HA mode remote synchronization

New inter-HA configuration sync which allows for LoadMaster HA in an Azure environment

c) Azure HA mode WUI changes

New inter-HA WUI changes which allow for LoadMaster HA in an Azure environment

3. GEO enhancements

New GEO features which allow failover and isolates public/private sites. Also, two GEO selection criteria options have been renamed to more appropriately reflect their functions (**Location Based** has been renamed to **Proximity** and **Regional** has been renamed to **Location Based**).

4. Added Hyper-V Tools support

Support added for Hyper-V modules which allow for live migrations.

5. New Reencryption SNI Hostname option

This new option allows you to specify the SNI hostname to be used when connecting to the Real Servers.

6.2 Feature Enhancements

1. *The Exchange 2013 templates have been updated to reflect Exchange 2013 SP1*

2. *The LoadMaster will now pass the host header of HTTPS 1.1 health checks as the server name for Server Name Indication (SNI)*

3. *It is now possible to enable Web User Interface (WUI) access on multiple interfaces*

6.3 Issues Resolved

PD-2270	Fixed an issue with AWS where a reboot was required after licensing
PD-2292	Fixed an issue with L7 transparency and latency on VMware systems
PD-2407	Fixed an issue where certain persistence modes were not selectable in the Web User Interface (WUI)
PD-2421	Stopped the LoadMaster OS from panicking on VMware Workstation

- PD-2445 Fixed an issue that would cause a UDP Virtual Service to not work if a TCP Virtual Service existed using the same IP and port combination
- PD-2365 Improvements have been made to the LoadMaster for AWS in relation to Amazon's policies
- PD-2183 Functions have been added to sanitize input in the WUI in order to resolve some security issues – fix for CVE-2014-5287 and CVE-2014-5288
- PD-2205 Added new allowed HTTP methods to enable Remote Desktop Services on Windows 8.1
- PD-2131 Fixed an issue in Layer 7 UDP services which could have caused the LoadMaster to reboot
- PD-2120 Resolved some issues with Layer 4 FTP
- PD-2082 SSO configuration is now included in automatic configuration backups
- PD-1939 SSO configuration is now included in manual configuration backups
- PD-2065 A new ESP option called **Use Session or Permanent Cookies** was added which needs to be set to a permanent cookies option in order for SharePoint to work correctly with ESP
- PD-2043 Increased the maximum number of characters in the RESTful API **ciphers** parameter to 1023
- PD-1989 The underscore character is now allowed in the **Logoff String** field in the ESP options
- PD-1984 Removed spurious log messages relating to locked users
- PD-1972 Fixed an issue where per-Virtual Service subnet originating addressing was not working when SSL re-encryption was enabled
- PD-1958 Added the **Additional Headers** field in scenarios where it should be displayed but was previously hidden
- PD-1952 Fixed an issue where adding a space in the **Test User Password** field for an SSO domain would cause problems for other fields
- PD-1936 HTTP POST health checks now send complete information to the Real Server
- PD-1935 Fixed an issue where a deleted Virtual Service caused spurious messages in the WUI
- PD-1932 Fixed an issue where ESP could reject valid requests
- PD-1857 Restructured the Exchange templates
- PD-1849 Backslashes are now allowed in the **Test User** field for LDAP SSO domains
- PD-1941 Removed unnecessary options for GEO cluster synchronization
- PD-2309 Fixed a problem where websites behind the LoadMaster were responding slowly when caching and compression was enabled
- PD-2275 Increased thread count to improve throughput

PD-2474 For a SubVS, the HTTP/HTTPS decision is now based on the parent Virtual Service settings

6.4 Known Issues

1. GEO health check intervals do not match the settings configured
2. The RESTful API command to set the SNMP client only supports IP addresses and not host names (the WUI option supports both)
3. Editing an IPv4 address will cause IPv6 addresses to stop responding until a reboot
4. There is no option via the RESTful API interface to upload a configuration and node secret file for RSA settings (this can be done via the WUI)
5. The RESTful API command to set the NTP host does not allow a URL to be set

7 Release 7.1-16b

7.1 New Features

1. Support added for Amazon Web Services (AWS)

A LoadMaster for AWS product is now available.

7.2 Issues Resolved

PD-2123 Remediation for SSL/TLS MITM vulnerability (CVE-2014-0224) – updated OpenSSL version to 1.0.1h

7.3 Known Issues

1. Changing an IPv4 address causes problems with IPv6
2. Issues are experienced when polling the LoadMaster with SNMP when the Default Gateway is on a different interface
3. Access to the LoadMaster WUI using iPhones is not supported.
4. The **Real Servers are Local** option is not working as expected

8 Release 7.1-16

8.1 New Features

1. *A new subscription-based online licensing model for the LoadMaster has been implemented*

This new model is to support customers who have Service Provider License Agreements (SPLA).

2. *Full support for UDP at Layer 7*

Added the ability for the LoadMaster to operate at Layer 7 for UDP Virtual Services.

3. *UDP Layer 7 persistence*

Added the ability to persist based on a specific Session Initiation Protocol (SIP) header for UDP Virtual Services.

4. *The LoadMaster Operating System is now running on Linux kernel 3.10.28*

The LoadMaster has been re-based to Linux kernel version 3.10.28.

5. *Added the ability to duplicate a Virtual Service which has SubVSs*

Now, when a Virtual Service is duplicated, all SubVSs within that Virtual Service will also be copied.

8.2 Feature Enhancements

1. *Added the ability to use a semi-colon in the **SNMP Location** text box*
2. *When ESP is not enabled on any Virtual Service for a particular SSO domain, the SSO domain can now be deleted*
3. *Added support for the HTTP method "report"*
4. *When an SSO image set is updated, changes are now updated automatically*
5. *Error codes for RESTful API have been updated – missing REST objects now return a 404 error and others return 200 plus an error code*
6. *RESTful API GET responses are now consistent with the corresponding SET commands*
7. *Websocket connections are now supported*
8. *A new option has been added to the **Always Check Persist** field which allows the saving of persistence changes mid-connection*
9. *Templates now allow the re-use of Services which have Content Rules*
10. *Users can now specify an alternate port for LDAP servers*

8.3 Issues Resolved

PD-1746	Fixed an issue where the Statistics could report a negative value for compression
PD-1704	Fixed an issue where the Web User Interface (WUI) would allow more than 510 extra ports in a Virtual Service
PD-1678	Some security vulnerabilities have been addressed
PD-1676	Fixed an issue with disabling a Real Server with a domain name

PD-1430 Users can now use sorry servers with a Virtual Service that has SSL re-encryption enabled

8.4 **Known Issues**

1. Changing an IPv4 address causes problems with IPv6
2. Issues are experienced when polling the LoadMaster with SNMP when the Default Gateway is on a different interface
3. Access to the LoadMaster WUI using iPhones is not supported.
4. The **Real Servers are Local** option is not working as expected

9 Release 7.0-14c

9.1 Issues Resolved

PD-1754	The OpenSSL version has been upgraded to version 1.0.1g, which is not vulnerable to the HeartBleed bug
PD-1702	Fixed an issue with multiple Virtual Services using group permissions and the same SSO domain
PD-1705	Issue with High Availability (HA) bonding has been resolved
PD-1706	Enabling ESP on an SMTP service will no longer display a spurious error message
PD-1709	Issues with the LDAPS and LDAP StartTLS authentication protocols and SSO server have been resolved
PD-1714	ESP-enabled SMTP services now correctly pass traffic

9.2 Known Issues

1. Hyper-V Virtual LoadMaster (VLM) NIC alternate IP address settings do not set properly until the machine is rebooted
2. When switching to HA mode from a single unit, changing the local IP when setting up HA results in loss of connectivity to the WUI
3. Users may appear multiple times in the blocked user list
4. Access to the LoadMaster WUI using iPhones is not supported.
5. Cannot install Exchange Virtual Services from a template if existing Virtual Services have been created from a template

10 Release 7.0-14a

10.1 New Features

1. *Support for RSA multi-factor authentication*

The Edge Security Pack (ESP) in the LoadMaster now supports RSA SecurID multi-factor authentication.

10.2 Known Issues

1. Hyper-V Virtual LoadMaster (VLM) NIC alternate IP address settings do not set properly until the machine is rebooted
2. When switching to HA mode from a single unit, changing the local IP when setting up HA results in loss of connectivity to the WUI
3. Users may appear multiple times in the blocked user list
4. Access to the LoadMaster WUI using iPhones is not supported.
5. Cannot install Exchange Virtual Services from a template if existing Virtual Services have been created from a template

11 Release 7.0-14

11.1 New Features

1. *Online checking for software updates*

If automatic checking has been enabled, a message will be displayed on the LoadMaster home page when a new firmware version is available.

2. *Support has been implemented for add-on packages*

Add-on packages can now be installed on the LoadMaster which can provide additional functionality.

3. *VMware Tools support*

A VMware Tools add-on package has been created which provides functionality to gracefully shut down and restart a guest.

4. *Support for Edge Security Pack (ESP) phase 2*

A number of enhancements have been made to ESP functionality.

a) Customizable login forms

It is now possible to customize the look and feel of the ESP login form.

b) Public/private options for ESP login form

There is an option to add a public/private radio button to the ESP login form. Session and idle timeout (which is customizable) is dependent on which option the user selects on the form.

c) Support soft lock out for users

It is now possible to lock out users after a specified number of failed login attempts. It is also possible to unblock locked users.

d) Additional workloads are now supported with ESP

ESP has been tested with some additional workloads.

e) RADIUS is now an option for the authentication server

It is now possible to select RADIUS as the pre-authentication method.

5. *LoadMaster for Amazon Web Services (AWS)*

The LoadMaster will be available in the AWS environment.

6. *Templates for VMware Horizon Workspace are now available*

These templates will quickly configure the Virtual Services and rules needed in the LoadMaster for it to work with VMware Horizon Workspace.

11.2 Feature Enhancements

1. *More information is provided when resetting your password via the local console*

2. *The legacy heartbeat option is now hidden in the Web User Interface (WUI)*

3. *Wildcard certificate matches are now presented in an SNI configuration*

11.3 Issues Resolved

PD-890	Issue with using non-alphanumeric characters in automated backup passwords has been resolved
PD-1200	Issue with setting a large cache percentage on high memory LoadMasters has been resolved
PD-1284	Issue with statistics when disabling a Real Server has been resolved
PD-1498	Issue where using preferred host in HA can cause both units to become standby has been resolved
PD-1404	SubVSs now honor the "Use for SNAT" setting
PD-1452	Restoring backups to inappropriate devices is now prevented, for example restoring a HA backup on a single system
PD-1539	Resolved several minor HA-related issues
PD-1206	Resolved issue related to SNMP and SubVSs

11.4 Known Issues

1. Hyper-V Virtual LoadMaster (VLM) NIC alternate IP address settings do not set properly until the machine is rebooted
2. When switching to HA mode from a single unit, changing the local IP when setting up HA results in loss of connectivity to the WUI
3. The unblock locked user function may not work in all browsers (there are problems in Chrome and Internet Explorer)
4. Users may appear multiple times in the blocked user list
5. Access to the LoadMaster WUI using iPhones is not supported.
6. Cannot install Exchange Virtual Services from a template if existing Virtual Services have been created from a template

12 Release 7.0-12a

The LM-2500 and LM-3500 are not supported from LoadMaster version 7.0-12a and above. Support for these models, and FIPS models, is offered at version 7.0-10 and below.

12.1 New Features

1. *SSL Performance Optimizations*

The performance of SSL on the LoadMaster has been enhanced and additional features such as TLS 1.2 support, SNI support and configurable ciphers have been added.

2. *Support for Oracle Sun x86 servers*

The LoadMaster for Oracle Sun x86 supports Oracle Sun x86 rack mount servers.

3. *Support for HP ProLiant servers*

The LoadMaster for HP ProLiant servers supports HP ProLiant rack mount servers.

4. *Support for VMware vSphere 5.5*

The LoadMaster supports VMware vSphere 5.5.

5. *Licensing Enhancements*

Licensing functionality within LoadMaster has been enhanced including the display of the license related information on the LoadMaster WUI home screen and various enhancements to the Automated Licensing Support Infrastructure.

6. *Windows 2012 R2 Hyper-V Virtual LoadMaster (VLM)*

A new VLM package, to support VLM installation within a Windows 2012 R2 Hyper-V, para-virtualized environment is available.

7. *New ESP functionality added*

Idle and session timeout can be set and it is possible to switch between idle and session timeout

12.2 Feature Enhancements

1. *Additional commands and functionality have been added to the RESTful API*

2. *Additional licensing information has been added to the backup file*

12.3 Issues Resolved

PD-797	Issue with the Packet Routing Filter after upgrading licenses has been resolved
PD-839	Improved Layer 4 handling of configuration changes enhancing the generation of SNMP traps has been added
PD-934	Issue with sharing persistency across SubVSs has been resolved
PD-1023	High-Availability failover issue when adding high number of interfaces has been resolved

PD-1043	Issue with Access Control Lists and IPv6 has been resolved
PD-1070	The HA 'Forced Switchover' functionality has been removed
PD-1089	Issue with the Use Address for Server NAT option in new servers has been resolved
PD-1094	Issue with using the RESTful API to create a Virtual Service using Adaptive Scheduling has been resolved
PD-452	Issue with VLAN trunking on Hyper-V VLMs has been resolved
PD-1174	Security vulnerability (CVE-2004-0230) resolved. This vulnerability may still be reported after running a security test but this is because the test checks the kernel version. The fix has been backported into the LoadMaster but the kernel version has not been updated which is why the vulnerability is still reported even though it does not exist.
PD-1144	ESP issue with publishing a calendar in Exchange 2013 has been resolved

12.4 Known Issues

1. Access to the LoadMaster WUI using iPhones is not supported.
2. The Netconsole IP is not applied immediately to both units of a HA pair
3. Automated FTP backups must not contain special characters.
4. Cannot immediately set the shared and partner IP addresses for HA if the IP address has been only obtained from DHCP. A workaround for this is to set the IP address again.
5. A reboot is required if you add IPv6 as an alternative address, create an IPv6 Virtual Service and then create an Access Control List. The reboot is required before entries can be added to the Access Control List.
6. On a GEO LM, it is not possible to specify an alternate address on an interface to receive DNS requests.
7. Within a Virtual LoadMaster, the alternative NIC IP address settings are not being picked up until the machine is rebooted.

13 Release 7.0-10h

13.1 Issues Resolved

- PD-3146 Steps taken to mitigate the following security risk – CVE-2014-3566 (“POODLE”).
- PD-3201 Added the option to disable weak SSL ciphers.

13.2 Known Issues

1. Trunked VLANs are not permitted on Hyper-V VLMs.
2. Automated FTP backups must not contain special characters.
3. Access to the LoadMaster WUI using iPhones is not supported.
4. Intermittent issue with encryption ASIC driver under atypical conditions.
5. The HA ‘Force Switchover’ button behaves erratically

14 Release 7.0-10g

14.1 Issues Resolved

PD-2976 Steps taken to mitigate the following security risks – CVE-2014-6271 and CVE-2014-7169.

14.2 Known Issues

1. Trunked VLANs are not permitted on Hyper-V VLMs.
2. Automated FTP backups must not contain special characters.
3. Access to the LoadMaster WUI using iPhones is not supported.
4. Intermittent issue with encryption ASIC driver under atypical conditions.
5. The HA 'Force Switchover' button behaves erratically

15 Release 7.0-10f

15.1 Issues Resolved

- | | |
|---------|--|
| PD-2274 | Fixed an issue with the LoadMaster logging process which, in some circumstances, may lead to excessive wear of our Solid State Drives (SSDs) |
| PD-2376 | Added functions to sanitize input in the Web User Interface (WUI) to improve security – fix for CVE-2014-5287 and CVE-2014-5288 |

15.2 Known Issues

1. Trunked VLANs are not permitted on Hyper-V VLMs.
2. Automated FTP backups must not contain special characters.
3. Access to the LoadMaster WUI using iPhones is not supported.
4. Intermittent issue with encryption ASIC driver under atypical conditions.
5. The HA 'Force Switchover' button behaves erratically

16 Release 7.0-10e

16.1 Issues Resolved

PD-2123 Security fix for CVE-2014-0224

16.2 Known Issues

1. Trunked VLANs are not permitted on Hyper-V VLMs.
2. Automated FTP backups must not contain special characters.
3. Access to the LoadMaster WUI using iPhones is not supported.
4. Intermittent issue with encryption ASIC driver under atypical conditions.
5. The HA 'Force Switchover' button behaves erratically

17 Release 7.0-10d

17.1 Issues Resolved

PD-1413	Security fix for CVE-2004-0230
PD-1487	Security fix for XSS attack on ESP
PD-1617	Driver update: ixgbe drivers have been updated to version 3.18.7
PD-1925	Fixed an issue where setting up an HA standby unit could cause service interruption in certain cases
PD-1931	Fixed an issue to prevent spurious log messages appearing
PD-1965	Fixed a potential issue where logging into an ESP Virtual Service would be blocked

17.2 Known Issues

1. Trunked VLANs are not permitted on Hyper-V VLMs.
2. Automated FTP backups must not contain special characters.
3. Access to the LoadMaster WUI using iPhones is not supported.
4. Intermittent issue with encryption ASIC driver under atypical conditions.
5. The HA 'Force Switchover' button behaves erratically

18 Release 7.0-10

18.1 New Features

1. *Lync 2013 Templates*

Templates to facilitate the implementation of Lync 2013 virtual services are available.

2. *Windows 2012 Hyper-V Virtual LoadMaster (VLM)*

A new VLM package, to support VLM installation within a Windows 2012 Hyper-V, para-virtualized environment is available.

3. *Windows 8 Hyper-V Virtual LoadMaster (VLM)*

A new VLM package, to support VLM installation within a Windows 8 Hyper-V, para-virtualized environment is available.

18.2 Feature Enhancements

1. *Additional commands have been added to the RESTful API*
2. *A hyperlink within the WUI opens a WUI connection to the other unit within a HA pair*
3. *Enhancements to the ALSI have been implemented*
4. *Statistics collection is now configurable*
5. *'Sorry Server' is available for UDP services*

18.3 Issues Resolved

PD-536	Issue with disabling Real Servers has been resolved
PD-537	Issue with RADIUS authorization when not in session mode has been resolved
PD-544	Minor inconsistencies with the display of real server statistics has been resolved
PD-557	Issue with L7 Drain Time has been resolved
PD-570	Added a limit to the size of the files that can be compressed
PD-643	The HTTP 1.1 PATCH method is now supported
PD-645	Issue in handling 'SuperHTTP or Source IP Address' persistence method has been resolved
PD-769	Inconsistency in visibility of Add HTTP Headers field has been resolved
PD-774	Issue with configuring UDP 'Sorry Server' has now been resolved
PD-785	Issue with use of special characters in the SSO Greeting Message has been resolved
PD-787	Issue with Perform if Flag functionality has been resolved
PD-790	Issue with supporting TLS 1.0 for LoadMaster initiated connections has been resolved

PD-791 Issue with port numbers in returned SNMP values has been resolved

18.4 Known Issues

1. Trunked VLANs are not permitted on Hyper-V VLMs.
2. Automated FTP backups must not contain special characters.
3. Access to the LoadMaster WUI using iPhones is not supported.
4. Intermittent issue with encryption ASIC driver under atypical conditions.
5. The HA 'Force Switchover' button behaves erratically

19 Release 7.0-8e

19.1 Feature Enhancements

1. *Automated Licensing and Support Infrastructure (ALSI) Enhancements*

19.2 Issues Resolved

PD-675	Corrected available TLS cipher suite for LM-5305-FIPS
PD-708	SSL Re-encrypt now works properly on LM-5305-FIPS
PD-700	Fixed reboot issue when changing service types
PD-739	Additional special characters are now allowed in SSO passwords
PD-758	Fixed issue where the initial SSO login would not properly pass query string to the server
PD-581	The “ character is now allowed in the SSO greeting message

19.3 Known Issues

1. Access to the LoadMaster WUI using iPhones is not supported.
2. Warnings (which can be ignored) appear when deploying .ovf files.
3. Intermittent issue with encryption ASIC driver under atypical conditions
4. Update issues with Real Server statistics
5. Intermittent issue with disabling Real Servers
6. The HA 'Force Switchover' button behaves erratically

20 Release 7.0-8a

20.1 Feature Enhancements

1. *Automated Licensing and Support Infrastructure Enhancements*

20.2 Issues Resolved

PD-415 Issue with SSOMGR has been resolved

20.3 Known Issues

1. Access to the LoadMaster WUI using iPhones is not supported.
2. Warnings (which can be ignored) appear when deploying .ovf files.
3. Intermittent issue with encryption ASIC driver under atypical conditions
4. Update issues with Real Server statistics
5. Intermittent issue with disabling Real Servers
6. Cannot enter the “ character in the SSO Greeting Message
7. The HA ‘Force Switchover’ button behaves erratically

21 Release 7.0-8

21.1 New Features

1. *Automated Licensing and Support Infrastructure*

The LoadMaster supports automated licensing.

2. *Cisco UCS C Series Support*

The LoadMaster for Cisco UCS supports the C Series Servers.

3. *Geo Server Load Balancer Feature Pack*

All GEO specific features can be enabled on KEMP LoadMaster products by enabling the GSLB Feature Pack.

4. *New Virtual LoadMaster Products*

Introducing the VLM-200, VLM-2000 and VLM-5000

21.2 Feature Enhancements

1. *Configurable login format for ESP*

21.3 Issues Resolved

- | | |
|--------|--|
| PD-154 | Additional characters supported in SNMP community strings |
| PD-188 | Quicksetup help auto-popup issue resolved in the CLI. |
| PD-327 | Compression issue with short content lengths resolved. |
| PD-335 | Issue with simultaneous use of SNMP and 'Drop on Fail' has been corrected |
| PD-336 | Issue with LoadMaster Config viewer is resolved |
| PD-341 | Issue with accessing the WUI while using software FIPS is resolved |
| PD-386 | Can now connect to Virtual Services, with persistence enabled, during connection drain time. |
| PD-389 | Minor issues with the Exchange Wizard have been resolved |
| PD-393 | HA issue when creating VLANs under load is resolved. |
| PD-401 | Issue with ESP logs is resolved |
| PD-414 | Issue with weighting of SubVS has been resolved |
| PD-437 | Issue with forwarding emails containing the licensing blob is resolved |
| PD-446 | Issue with LoadMaster 2200 under high load resolved. |
| PD-449 | Resolved Certificate Manager issue in configurations with large number of Virtual Services. |
| PD-550 | mail_util.php is now included in srcfiles. |

21.4 Known Issues

1. Access to the LoadMaster WUI using iPhones is not supported.
2. Warnings (which can be ignored) appear when deploying .ovf files.
3. Intermittent issue with encryption ASIC driver under atypical conditions
4. Update issues with Real Server statistics
5. Intermittent issue with disabling Real Servers
6. Cannot enter the “ character in the SSO Greeting Message
7. The HA 'Force Switchover' button behaves erratically
8. Rare segfault with SSOMGR under atypical conditions

22 Release 7.0-6

22.1 New Features

1. *Quickstart Wizard – Exchange 2010*

The QuickStart Wizard provides a simplified method of configuring LoadMaster to work within an Exchange 2010 environment.

2. *RESTful API v.2.0*

The RESTful API provides a REST-like interface designed to allow remote applications access to the LoadMaster in a simple and consistent manner.

3. *Cisco UCS B Series Support*

The LoadMaster for Cisco UCS supports the B Series Blade Servers.

4. *Call Home - Phase 1*

The Call Home licensing model is released for selected VLM evaluations.

22.2 Feature Enhancements

1. *After installing or replacing a certificate, there is now an option to return to the Virtual Service page*

2. *Quality of Service functionality is now configurable within Virtual Services*

3. *The image sets for the ESP login screens now support a number of different languages*

4. *The character limit within the Message of the Day has been increased*

5. *When applying a temporary license, feedback is now provided if a temporary license has already been applied*

6. *The traceroute and netstat utilities are available debug options*

7. *Bulk disabling of Real Servers is possible*

8. *L7 Transparency is available for selection within a SubVS when the parent Virtual Service uses SSL Acceleration with re-encryption enabled.*

22.3 Issues Resolved

PD-371, PD370 Issues configuring eth0 on a 64 bit LoadMaster have been resolved

PD-293 Removed restriction on creating a VLAN with an identifier of 1

PD-270 Issue with deleting VSs in a state of Security Down is resolved

PD-263 Issue with HA time out values resolved

PD-257 Issue with Health Checks on ESP enabled Virtual Services have been resolved

PD-247 To conserve CPU, gathering statistics is restricted to the items displayed on the Home page, unless specified in the Collect All WUI option

PD-246 Issue with Port Following is resolved

PD-231	ACLs now working as expected when Virtual Services are set to additional ports
PD-230	Initial maximum cache size on LoadMaster for UCS is now within the valid range
PD-188	Within the LoadMaster console, an inappropriate call of Quick Help has been resolved
PD-157	Can now configure shared interfaces in the HA setup process before rebooting
PD-140	A failed adaptive health check disables the Real Server
PD-205	SNORT 2.9 rules imports correctly

22.4 Known Issues

1. A page is not delivered when using compression and http content-length is 0 bytes
2. Issues may occur with SNMP traffic when the Drop at Drain Time End option is enabled

23 Release 7.0-4

23.1 New Features

1. *Edge Security Pack*

A range of new security features has been added to the LoadMaster.

2. *SubVS Support*

The LoadMaster now supports the creation and management of SubVSs.

3. *Graphical Metrics*

There is a new dashboard home screen with the capability to display graphical performance information.

4. *New License format*

A new license format has been introduced

5. *Oracle VirtualBox VLM*

A new VLM package, to support VLM installation within an Oracle VirtualBox environment is available

23.2 Feature Enhancements

1. *MIB files have been updated*

2. *SID and revision information included in IPS logging*

3. *VLAN Separation per Interface*

4. *Support for larger TCP window sizes*

5. *'Kill switch' is now supported on all LoadMaster versions*

6. *LM-R320 has its serial number visible on the WUI*

7. *The Netconsole Host interface is configurable via the WUI*

23.3 Issues Resolved

- 1850 Issue with SMTP STARTTLS when a client sends an EHLO is resolved
- 2325 Issue with ACL whitelist allowing other IPs is resolved
- 2584 Issue with switching VS types under load is resolved
- 2669, 2556 Some reboot issues have been resolved
- 2657 An issue with caching on Firefox has been resolved
- 2788 The “-“ character is now allowed in the DNS Search Domain field
- 2598 Issues with the MIBS have been resolved
- 2675 A circular routing problem has been resolved
- 2278 SNMP trap Source IP has been changed to pre 5.1-48 behaviour
- 2328 SSL renegotiation can be toggled on/off
- 2528 SSLv2 is no longer used for LoadMaster initiated SSL connections
- 2578 An issue with Not Available Redirection XSS has been resolved
- 2599 The Default IP is now displayed on the WUI when DHCP fails

- 2390 An issue with VS Specific insert X-Clientside header being overwritten by system default has been resolved
- 2475 The “-“ character is now allowed in the User Login field
- 2529 An issue with the Fail on Match functionality has been resolved
- 2671 An issue with Maximum Cache Size has been resolved

23.4 Known Issues

1. Quick setup Help appears automatically if no IP address is configured on the LM if a VLAN is configured on eth0 and no IP address is assigned to the underlying interface (eth0)

Document History

Date	Change	Reason for Change	Ver.	Resp
May 2013	Initial Draft of the document	Release 7.0-4	1.0	DD
July 2013	Updated document	Release 7.0-6	1.1	DD
Sep 2013	Updated document	Release 7.0-8	1.2	DD
Sep 2013	Updated document	Release 7.0-8a	1.3	LB
Nov 2013	Updated document	Release 7.0-8e	1.4	LB
Nov 2013	Updated document	Release 7.0-10	1.5	DD
Feb 2014	Updated document	Release 7.0-12a	1.6	DD
Mar 2014	Updated document	Release 7.0-14	1.7	LB
Mar 2014	Updated document	Release 7.0-14a	1.8	LB
Apr 2014	Updated document	Release 7.0-14c	1.9	LB
Apr 2014	Updated document	Release 7.1-16	1.10	LB
May 2014	Updated document	Release 7.0-10d	1.11	LB
June 2014	Updated document	Release 7.0-10e	1.12	LB
June 2014	Updated document	Release 7.1-16b	1.13	LB
July 2014	Updated document	Release 7.1-18a	1.14	LB
July 2014	Updated document	Release 7.1-18b	1.15	LB
July 2014	Updated document	Resolved issue added	1.16	LB
July 2014	Updated document	Release 7.0-10f	1.17	LB
Sep 2014	Updated document	Release 7.1-20	1.18	LB
Sep 2014	Updated document	Defect resolved	1.19	LB
Sep 2014	Updated document	Release 7.1-20a	1.20	LB

Date	Change	Reason for Change	Ver.	Resp
Sep 2014	Updated document	Known issues added	1.21	LB
Sep 2014	Updated document	Release 7.0-10g	1.22	LB
Oct 2014	Updated document	Release 7.1-20d	1.23	LB
Oct 2014	Updated document	Release 7.1-22	1.24	LB
Oct 2014	Updated document	Release 7.0-10h	1.25	LB
Oct 2014	Updated document	Minor changes	1.26	LB
Dec 2014	Updated document	Release 7.1-22b	1.27	LB