Oracle® Traffic Director

Release Notes

11g Release 1 (11.1.1.9)

E21039-05

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This document contains information about the new features and known issues for Oracle Traffic Director 11.1.1.9.

1 What's New in This Release?

The following are the new features in Oracle Traffic Director 11.1.1.9. For more information, see *Oracle Traffic Director Administrator's Guide*.

- Oracle Traffic Director now allows administrators to handle back-end application maintenance efficiently. Administrators can now configure a custom response code and an HTML page for an origin server pool when all the servers in the origin server pool are offline. This capability, combined with the ability to drain traffic to an application server allows administrators to minimize and handle an application maintenance window.

  For more information, see "Configuring a Custom Maintenance Page" in *Oracle Traffic Director Administrator's Guide*.

- Oracle Traffic Director now supports the modern SSL protocols, TLS 1.1 and TLS 1.2.

- Oracle Traffic Director now supports a generic health check hook-up mechanism, where customers can write their own health check programs/scripts to monitor the health of specific origin servers. An external executable is especially useful for a protocol-level health check monitor for the origin servers when Oracle Traffic Director is doing TCP load balancing.

- Oracle Traffic Director can now be configured within a Solaris Zone/Container and provide high availability for IP over InfiniBand (IPoIB) on Solaris. There is no longer a restriction that Oracle Traffic Director must be installed in a global zone to provide high availability for Solaris.

  This capability requires Oracle Traffic Director 11.1.1.9 to be deployed on Solaris 11.2 with update SRU3 or higher.

- Oracle Traffic Director now monitors the status of origin servers, and displays the status in the origin servers page in the user interface. Oracle Traffic Director can also show status for dynamically discovered origin servers if available and enabled.

- Oracle Traffic Director now supports optionally associating an origin server pool with an external HTTP (forward) proxy server so that all origin servers within this pool are reachable via this external proxy server. This feature supports an environment where access to intended origin servers are restricted through corporate proxy servers.

- Oracle Traffic Director can now rewrite HTTP request/response headers and entity data by applying the standard regular expression syntax rules (compliant with `sed` regular expression syntax). You will need to manually edit the Oracle Traffic Director load balancer configuration files to achieve this capability.

  For more information, see "Predefined Server Application Functions and Filters in obj.conf" in *Oracle Traffic Director Configuration Files Reference*.

2 Resolved Issues

For a list of issues that have been fixed in this release, see the My Oracle Support (MOS) note 1988308.1 on the My Oracle Support customer support portal. Also, note the following resolved issues:

- "Oracle Traffic Director Service Issue"
- "Introduction of a New IP-Hash Load Balancing Policy to Support Client IP Persistence"
- "Reduced Number of Packages Needed for Installation on Oracle Linux 5"

2.1 Oracle Traffic Director Service Issue

Administrators can configure Oracle Traffic Director 11.1.1.x as a 'service' so that the load balancer service is available immediately after an operating system is started or restarted. However, the Linux operating system, by default, assigns a very low number (default is 1024) of File Descriptor resources to the process started as a 'service'. This restriction severely affected Traffic Director's ability to provide acceptable performance.

Oracle Traffic Director 11.1.1.9 addresses this issue by assigning itself higher number of File Descriptor resource at the time of initializing the service to allow serving a large number of concurrent users.

2.2 Introduction of a New IP-Hash Load Balancing Policy to Support Client IP Persistence

Oracle recommends customers to leverage this load balancing policy if the incoming requests from a same client IP should land at the same content origination server. This load balancing policy is especially useful in the context of TCP Load Balancing.

2.3 Reduced Number of Packages Needed for Installation on Oracle Linux 5

In Oracle Traffic Director 11.1.1.9, there are a reduced number of packages that are needed for installing Oracle Traffic Director on Oracle Linux 5. For the list of packages, see *Oracle Traffic Director Installation Guide*.

3 Known Issues

This section provides information about the known issues for Oracle Traffic Director 11.1.1.9 along with possible workarounds:

- "Minimum Supported JDK Version; JAVA_HOME Environment Variable"
- "Limitation on Oracle Enterprise Linux Support"
- "Issue with /tmp Directory and tmpwatch Cleanup"

- Error While Starting Oracle Traffic Director after upgrade

3.1 Minimum Supported JDK Version; JAVA_HOME Environment Variable

Oracle Traffic Director Release 11.1.1.9 mandates JDK 7 u60 as the minimum supported JDK version. Oracle Traffic Director 11.1.1.6 bundles JDK6 for its own administration purposes. Now, Oracle Traffic Director 11.1.1.9 bundles JDK 7.

Review the status of your JDK installation as follows:

- If you did not use your own JDK at the time of installing Oracle Traffic Director 11.1.1.6/7, then you do not need to consider JDK version while upgrading to Oracle Traffic Director 11.1.1.9.
- If you did use your own JDK while installing Oracle Traffic Director 11.1.1.6/.7, then you will need to now provide JDK version 7 Update 60 or above as the JDK version while upgrading to Oracle Traffic Director 11.1.1.9.

You must also have a correctly set `JAVA_HOME` variable. If you have `JAVA_HOME` set to JDK 6 in your environment. and run an Oracle Traffic Director CLI command, then you may see the following error:

```
 $ORACLE_HOME/bin/tadm configure-server --user=user1 --instance-home=$INSTANCE_
HOME/instance1  --server-user=root

Exception in thread "main" java.lang.UnsupportedClassVersionError:
com/sun/web/admin/cli/shelladapter/WSadminShell : Unsupported major.minor version
51.0
        at java.lang.ClassLoader.defineClass1(Native Method)
        at java.lang.ClassLoader.defineClassCond(ClassLoader.java:631)
        at java.lang.ClassLoader.defineClass(ClassLoader.java:615)
        at java.security.SecureClassLoader.defineClass(SecureClassLoader.java:141)
        at java.net.URLClassLoader.defineClass(URLClassLoader.java:283)
        at java.net.URLClassLoader.access$000(URLClassLoader.java:58)
        at java.net.URLClassLoader$1.run(URLClassLoader.java:197)
        at java.security.AccessController.doPrivileged(Native Method)
        at java.net.URLClassLoader.findClass(URLClassLoader.java:190)
        at java.lang.ClassLoader.loadClass(ClassLoader.java:306)
        at sun.misc.Launcher$AppClassLoader.loadClass(Launcher.java:301)
        at java.lang.ClassLoader.loadClass(ClassLoader.java:247)
Could not find the main class: com.sun.web.admin.cli.shelladapter.WSadminShell.
Program will exit.
```

Workaround: remove the `JAVA_HOME` in your environment.

3.2 Limitation on Oracle Enterprise Linux Support

Oracle Traffic Director Release 11.1.1.9 supports Oracle Linux (OEL) 5.x and 6.x (64-bit).

3.3 Issue with /tmp Directory and tmpwatch Cleanup

Oracle Traffic Director uses the `/tmp` directory to keep its internal runtime files. These runtime files are largely static and do not significantly consume disk space. If you are using tools such as `tmpwatch` to clean up the `/tmp` directory, then this tool can affect Oracle Traffic Director's administration capabilities.

Oracle Traffic Director 11.1.1.9 now prefers to store its internal runtime files:

- within `/var/run/otd` (if configured as root), or
- within `<instance-root>/net-<config>/logs` (when applicable) before leveraging `/tmp`
- you can configure another location (preferably a local directory) as the `tmp` directory at the time of creating an Admin Server or Admin Node(s) by running the following command:

  ```
  set-config-prop --user=.. --config=.. ... --temp-path
  ```

Alternatively, you can also configure tools such `tmpwatch` to exclude Oracle Traffic Director files by running a command within the `/etc/cron.daily/tmpwatch` script such as:

```
tmpwatch -X '/tmp/admin-server-*' -X '/tmp/net-*'
```

3.4 Error While Starting Oracle Traffic Director after upgrade

The following error appears after upgrading Oracle Traffic Director to 11.1.1.9.0, and while starting an Oracle Traffic Director instance.

```
Oracle Traffic Director 11.1.1.9.0 B01/19/2015 12:34
[ERROR:32] [OTD-10251] Error running Init function load-modules: dlopen of
/scratch/oamdemo/IDM/BASEDIR/OTD_WG/webgate/iplanet/lib/webgate.so failed
(/scratch/oamdemo/IDM/BASEDIR/OTD_WG/webgate/iplanet/lib/webgate.so:
undefined symbol: nzos_GetSessionMasterSecret)
[ERROR:32] server initialization failed
```

Workaround: Copy the `libnnz11.so` file from `$OTD_WG_HOME/webgate/iplanet/lib` folder to the `$OTD_WG_HOME/lib` folder.

4 Support for new set-http-listener-prop property

The `set-http-listener-prop` now supports property, `set-max-requests-per-connection`. See "set-http-listener-prop" in *Oracle Traffic Director Command Line Reference Guide*.

5 Deprecation Notice

The following log-related executable files will be deprecated.

- binlog: A tool for storing binary and un-formatted log data (path: `<install_root>/bin/binlog`)
- flexanlg: A tool for analyzing server log data and generating server statistics (path: `<install_root>/bin/flexanlg`)

6 Documentation Errata

The online help for the `tadm` command `get-admin-prop` lists `install-root` as one of its properties. However, this property is not supported.

7 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

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