

# HPE USLAM SOFTWARE SYSTEM SUPPORT MATRIX

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Software Version: 4.3.0.

This document provides an overview of the system requirements for HPE USLAM Software. This document is intended to augment the *Release Notes*.

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# Hardware and Software Requirements

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Before installing USLAM, verify that your system meets the following minimum requirements. USLAM support Oracle and EDB/PPAS as database server, you can choose one of them.

## Hardware and Operating Systems

	Hardware	Operating System
<b>USLAM Server</b> <b>MyUSLAM Server</b> <b>USLAM ETL Server</b>	Intel 64-bit (x86-64) or AMD 64-bit (AMD64)	Linux 64 bits RHEL Server 6.5
<b>USLAM Reporting Server</b>	Intel 64-bit (x86-64) or AMD 64-bit (AMD64)	Windows Server 2008
<b>USLAM Server DB Oracle 11.2.0.4</b>	Any supported by Oracle 11.2.0.4	Any supported by Oracle 11.2.0.4
<b>USLAM Server DB EDB PPAS 9.3</b>	Any supported by PPAS 9.3	Any supported by PPAS 9.3
<b>USLAM Datamart DB Oracle 11.2.0.4</b>	Any supported by Oracle 11.2.0.4	Any supported by Oracle 11.2.0.4
<b>USLAM Datamart DB EDB PPAS 9.3</b>	Any supported by PPAS 9.3	Any supported by PPAS 9.3

## Local Disk Space Considerations

Before allocating disk space for USLAM Server and USLAM ETL Server consider the following:

Local disk space should take into account space needed for file based collectors. Files collected are stored and kept for some time on local disk.

In addition increasing maximum size and maximum number of log files from the default settings uses more disk space.

Before increasing log file size, validate that you have appropriate disk space.

## Maximum Limits

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- UI
  - A saved filter cannot save more than 4000 characters (in XML). The UI will raise exception in case of limit reach. This represents an unrealistic filter.

## Other Recommendations

### Virtual Memory/Swap Space

Recommended size is at least equal to physical memory.

Verify and adjust the virtual memory:

- Windows: Use *System Properties*.
- Linux: To verify, use the `cat /proc/meminfo | grep Swap` command. To adjust, use the `parted` and `mkswap` commands.

## USLAM Server Operating Systems setting

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```
/etc/security/limits.conf
*      hard   core    unlimited
*      soft   core    unlimited
*      hard   nofile  16383
*      soft   nofile  16383
*      hard   nproc   16383
*      soft   nproc   16383

/etc/security/limits.d/90-nproc.conf
*      soft   nproc   16383
root   soft   nproc   unlimited
```

## Database Considerations

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USLAM stores its data in an external Oracle database (Oracle 11g Release 2 (11.2.0.X, X>=4)) or EDB database (PPAS 9.3).

The network connection between the USLAM Server and the database server running the USLAM Server DB should be at least 1 GB.

The network connection between the USLAM ETL Server and the database server(s) running the USLAM Server DB and the USLAM data mart DB should be at least 1 GB.

## Oracle

The Oracle database user for USLAM Server DB and for USLAM data mart DB must be created with an appropriate table space before USLAM installation and configuration.

### **USLAM Server DB settings**

- CHARACTERSET = "AL32UTF8"
- DATABASETYPE = "OLTP"
- TOTALMEMORY = "X000" (see Disk USLAM Server DB)

Increase the number of Oracle processes for USLAM Server instance:

```
SYSDBA> ALTER SYSTEM SET PROCESSES=300 scope=spfile  
SYSDBA> shutdown immediate  
SYSDBA> startup
```

### **USLAM data mart DB settings**

- CHARACTERSET = "AL32UTF8"
- DATABASETYPE = "DATA\_WAREHOUSING"
- TOTALMEMORY = "X000" (see Disk USLAM data mart DB)

Increase the number of Oracle processes for USLAM Server instance:

```
SYSDBA> ALTER SYSTEM SET PROCESSES=300 scope=spfile  
SYSDBA> shutdown immediate  
SYSDBA> startup
```

## EDB

Please choose the “oracle capability” during install EDB. And then modify the postgresql.conf file after install EDB, to set the following properties:

edb\_dynatune = 100

checkpoint\_segments = 200

## Web Browser

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Supported Web Browsers:

- Internet Explorer
  - 9.0 or Upper
  - 7.0 or 8.0 for Business Objects Web UI
- Firefox 27.0 or upper
- Chrome 32.0 or upper

**Javascript Setting:** Javascript must be enabled for your web browser to be able to run USLAM Web User Interface correctly.

## Tuning the jboss Memory Size

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During installation, the default maximum memory size of the jboss application server is configured in the jboss/bin/run.conf file to 4G. For improved performance in larger environments, it is recommended that you can increase this value. Please contact your support representative in order to get some recommendations on the sizing corresponding to your configuration.

To change the jboss Maximum Java Heap Size (-Xmx) or other Java Virtual Machine parameters:

1. uslam\_stop.sh
2. Edit the jboss/bin/run.conf file
3. Change the Maximum Java Heap Size to the required amount, e.g. -Xmx16G
4. uslam\_start.sh

## Tuning the JBOSS binding address and ports range

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Edit variables JBOSS\_HOST and JBOSS\_PORTS\_RANGE in file `${USLAM_HOME}/bin/uslam_env.sh`.

Use JBOSS\_HOST variable to force JBOSS to bind to the specified IP address.

By default JBOSS binds to all IP addresses (-b 0.0.0.0) on the host, which can be undesirable in some cases.

To specify another binding:

```
JBOSS_HOST=myhost.mydomain.com ; export JBOSS_HOST
```

Use JBOSS\_PORTS\_RANGE variable to force JBOSS to bind to a specific range of IP port numbers.

By default JBOSS binds to ports: 1099, 8080, ... If one of such ports is already used by another application then JBOSS must be configured to use another range of ports.

```
JBOSS_PORTS_RANGE=1; export JBOSS_PORTS_RANGE → JBOSS will use the range 1199, 8180, ...
```

```
JBOSS_PORTS_RANGE=2; export JBOSS_PORTS_RANGE → JBOSS will use the range 1299, 8280, ...
```

## Internationalization and Localization Support

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### **USLAM Server, repository and GUI**

USLAM Server is internationalized and can be used on operating systems configured for non-US-English locales that are supported by the operating systems.

USLAM Server can be localized (or translated) to non-US-English locales. When those localized packages are provided and installed on a project basis, non-US-English is displayed (as output) and USLAM Server accepts non-English characters as input.

### **USLAM reporting**

USLAM Reporting is internationalized and can be used on operating systems configured for non-US-English locales that are supported by the operating systems.

USLAM Reporting can be localized (or translated) to non-US-English locales. When those localized packages are provided and installed on a project basis, non-US-English is displayed (as output) and USLAM Reporting accepts non-English characters as input.

In the environment where the USLAM Reporting Server is running the following environment variable must be set:

- `NLS_LANG=AMERICAN_AMERICA.UTF8`

## **USLAM ETL Server**

USLAM Reporting is internationalized and can be used on operating systems configured for non-US-English locales that are supported by the operating systems.

In the environment where the USLAM ETL Server is running (USLAM ETL user) the following environment variable must be set:

- `NLS_LANG=AMERICAN_AMERICA.UTF8`

## **Integration and Coexistence with Other Products**

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None.