

ANALYTICS SERVER

SMITHMICRO
SOFTWARE

Pre-installation Procedures

June 9, 2011

V 1.1



MOVING MOBILITY FORWARD™



Copyright 2010, Smith Micro Software, Inc. All rights reserved.

This document is the property of Smith Micro Software, Inc. and contains confidential and proprietary information owned by Smith Micro Software, Inc. Any unauthorized copying, use or disclosure of it without the prior written permission of Smith Micro Software, Inc. is strictly prohibited.

Headquarters:

Smith Micro Software, Inc.
51 Columbia
Aliso Viejo, California 92656

For more locations and information please visit:
www.smithmicro.com

- 1.0 Requirements for Analytics Server Software Installation 1**
 - 1.1 Security Prerequisites 1
 - 1.2 Load Balancer Hardware Requirements 2
 - 1.3 Logging/Web Server Hardware Requirements 2
 - 1.4 Processing Server Hardware Requirements 3
 - 1.5 Analytics Server Software Requirements 3
- 2.0 Software Installation Procedure - Debian Linux 4**
- 3.0 Reporting Server Hard Drive Configuration4**
- 4.0 Logging Server Hard Drive Configuration4**
- 5.0 Validate the Reporting Server Hard Drive Configuration5**
- 6.0 Validate the Logging Server Hard Drive Configuration5**
- 7.0 Smith Micro Technical Support6**

This page is intentionally blank.

Analytics Server Pre-installation Procedures

1.0 Requirements for Analytics Server Software Installation

1.1 Security Prerequisites

The Server URL and associated certificates must be installed on the appliance that is to be host to the Analytics Server application prior to the installation of the Analytics Server software in order to ensure the security of the server.

Security Requirements	
Physical Access	Physical access to the Machine Room is controlled and monitored.
Environmental Controls	The environmental conditions (temperature, humidity, ventilation, electrical power, lighting, maintenance, and service access) of the Machine Room shall be appropriately monitored and maintained to provide for the successful contiguous operation of the infrastructure equipment that resides therein.
Server Access	Remote Access to the servers is limited to the following: <ul style="list-style-type: none">• SMSI Operations Personnel• Specific IP Addresses used in conjunction with individual User IDs and Passwords.
Network Access - General	The Production Network for the application can be placed in an isolated network that is not shared with the corporate network (depending upon how it is sold to the customer). Access to the Production Network shall be accomplished through defined Gateway Servers.
Network Access - Internal	Production Servers shall access external network resources through defined Network Gateway Servers. Internal user access shall be managed through Virtual Private Network (VPN) Connections (or equivalent) that require proper credentials.
Network Access - External	Access to Production Infrastructure Elements shall be through an access-limited Firewall and defined Port Access through a Load Balancer. Individual servers shall not have externally visible connections except through Gateway Servers and Load Balancers.

1.2 Load Balancer Hardware Requirements

A Load Balancer is recommended for balancing the stream of Analytics Data Traffic between multiple Logging Servers.

If SSL is to be implemented, the SSL Certification can be installed on most commercial Load Balancers.

The Load Balancer must also have the following items configured:

- “X-Forwarded-For” Header enabled for appropriate pools.
- Logging Server Pool Example:
Server Pool: dev1.analytics.company.com (10.14.62.53) and dev2.analytics.company.com (10.14.62.54) Port 80.
Certificate: Use a certificate, as needed, for the analytics.company.com HTTPS Access.

Note: If SSL is to be used, all applicable firewalls will need to have Port 443 open to the Load Balancer.

1.3 Logging/Web Server Hardware Requirements

The following Hardware Requirements Table describes the minimum hardware requirements for the Analytics Logging/Web Server. Please ensure that the hardware platform complies with the minimum hardware requirements prior to software installation.

Logging/Web Server Hardware Requirements	
Processor	One 2.5GHz Quad-Core CPU
Random Access Memory	16GB
Hard Disk Drive	300GB x 4 Raid 5 Configuration)
Network Connection	100Mbps (minimum LAN Module with persistent Internet Connection.
Other	CD-ROM Drive

1.4 Processing Server Hardware Requirements

The following Hardware Requirements Table describes the minimum hardware requirements for the Analytics Processing Server. Please ensure that the hardware platform complies with the minimum hardware requirements prior to software installation.

Processing Server Hardware Requirements	
Processor	Two 2.5GHz Quad-Core CPUs
Random Access Memory	48GB
Hard Disk Drive	<ul style="list-style-type: none"> • 300GB x 2 (RAID Configuration) for OS and Applications • [TBD] for Local Storage
Network Connection	100Mbps (minimum) LAN Module with a persistent Internet Connection
Other	CD-ROM Drive

1.5 Analytics Server Software Requirements

The following Software Requirements Table describes the software that is required for successful installation of the Analytics Server software.

Software Requirements	
Operating System	Debian Linux 6.0.1a 64-bit Version
Secure Shell (SSH) Package	SSH Package ? installed

2.0 Software Installation Procedure - Debian Linux

Follow the directions for installing Debian Linux for your configuration located at <http://www.debian.org/releases/stable/installmanual>.

3.0 Reporting Server Hard Drive Configuration

Smith Micro recommends configuring the Hard Drives as follows:

1. Use the minimum configuration needed for RAID Redundancy on the OS.
2. The remainder of the Hard Drives are to be mounted individually to "/hadoop-[a-z]" respectively in order by Disk/Drive Number.

For example, if the server comes equipped with five Hard Drives:

- a. Configure two Hard Drives as RAID 1 (needed for OS Fault Tolerance / Redundancy).
- b. Configure the remaining three Hard Drives as individual entities (non-RAID).

NOTE: *Smith Micro recommends that the EXT3 Format be used for all partitions.*

4.0 Logging Server Hard Drive Configuration

Smith Micro recommends configuring Hard Drives in the following configuration:

1. Use RAID1 Partitioning for OS Hard Drives.
2. Use RAID 5 or RAID 10 for the remaining Application Hard Drives.

For example, if the server comes equipped with five Hard Drives:

- a. Configure two Hard Drives as RAID 1 (needed for OS Fault Tolerance / Redundancy).
- b. Configure the remaining three Hard Drives as RAID 5 (RAID 10 requires a minimum of four Hard Drives).

5.0 Validate the Reporting Server Hard Drive Configuration

Using a five Hard Drive System as an example, the Linux “df” Command should produce the following response:

```
root@analytics1:~# df -h
Filesystem Size Used Avail Use% Mounted on
/dev/sda1 129G 3.8G 119G 4% /
...
/dev/sdb1 134G 188M 127G 1% /hadoop-a
/dev/sdc2 134G 188M 127G 1% /hadoop-b
/dev/sdd3 134G 188M 127G 1% /hadoop-c

root@analytics1:~# mount
/dev/sda1 on / type ext3 (rw,errors=remount-ro)
...
/dev/sdb1 on /hadoop-a type ext3 (rw)
/dev/sdc2 on /hadoop-b type ext3 (rw)
/dev/sdd3 on /hadoop-c type ext3 (rw)
```

6.0 Validate the Logging Server Hard Drive Configuration

Using a five Hard Drive System as an example, the Linux “df” Command should produce the following response:

```
root@logger1~# df -h
Filesystem Size Used Avail Use% Mounted on
/dev/sda1 264G 4.2G 246G 2% /
...
/dev/sdb1 824G 402M 782G 1% /data
```

7.0 Smith Micro Technical Support

To obtain additional product information or technical support, please contact <http://www.smithmicro.com/enterprisesupport> or call 949-268-2349.

QuickLink® Mobile Server (QLMS) Pre-installation Guide

© 2008-2010 Smith Micro Software, Inc. All Rights Reserved.

QuickLink® is a registered trademark of Smith Micro Software, Inc. All other products and company names mentioned in this document may be the trademarks or registered trademarks of their respective manufacturers.

Under copyright laws, this manual or the software described within may not be copied, in whole or in part, without the written consent of Smith Micro Software, Inc., except in the normal use of software to make a backup copy. The same proprietary and copyright notices must be affixed to any permitted copies as were affixed to the original.