Service Manager 7 Reference Configurations

Sizing Guide

Introduction

The reference configuration data supplied in this document is based solely on the usage of the Service Manager (SM) 7.11 Out of the Box (OOTB) environment, including the Web Tier, and the Knowledge Management Search Engine running on top of the Service Manager 7.11 Runtime Environment (RTE).

Individual implementations will most likely see an increase in the amount of resources that are utilized or needed by the application to perform in an acceptable manner. This would include running on an earlier version of the RTE.

Failure to test the application with the concurrent user load and transaction rate that is expected at the height of the daily system usage and utilizing the tailored application may result in an undersized environment to support the requirements.

These recommendations should be considered the minimum requirement to run Service Manager effectively.

Service Manager 7 Sizing Questions

The following list of questions will give you the basic information needed from the customer to be able to provide recommended overall system architecture to support the Service Manager environment.

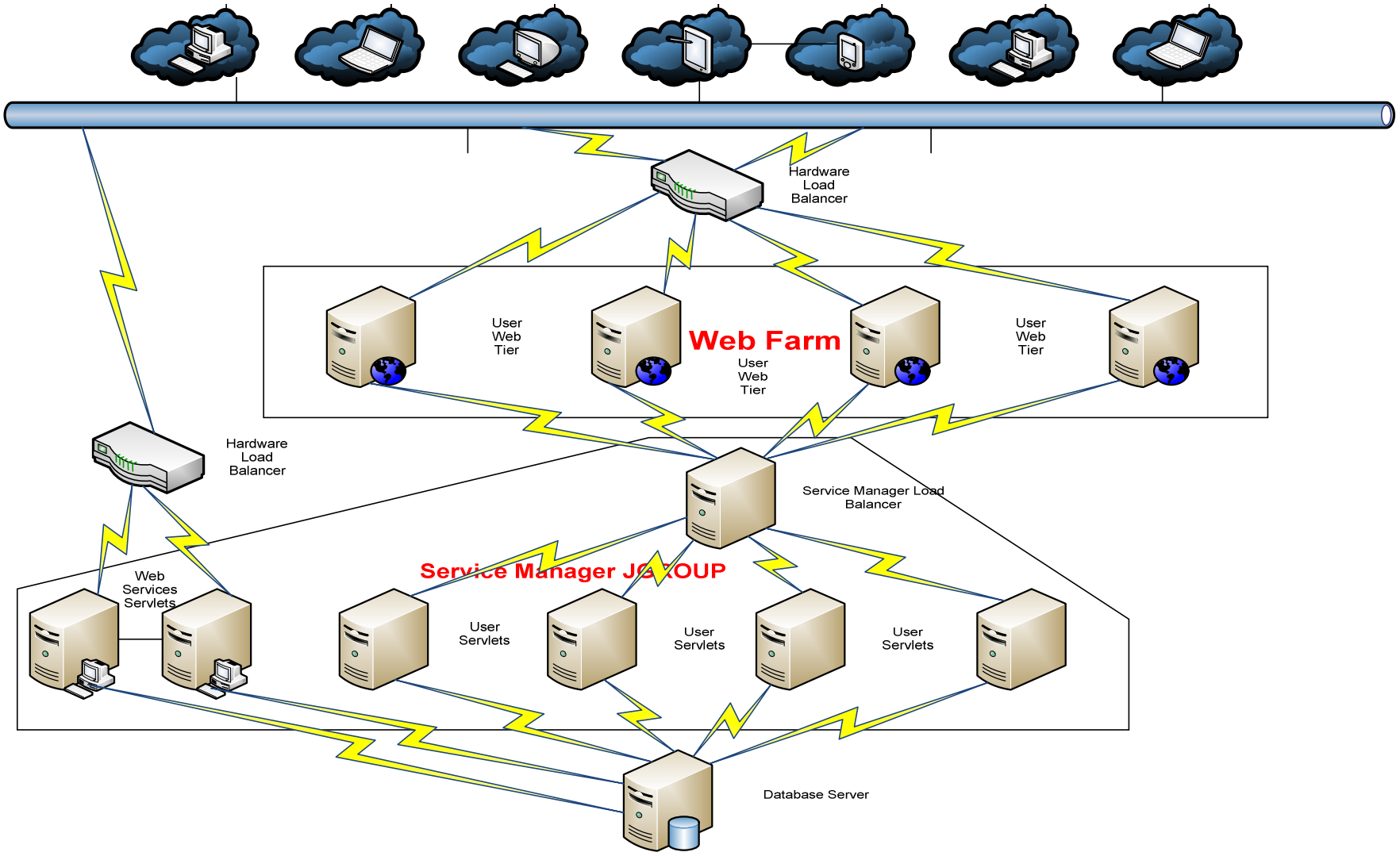
1. What kind of environment do you expect?
    a. In house solution administered by internal IT
    b. In house solution administered by HP
    c. Software as a Service
2. Expected Hardware (HW) / Software (SW) environment
    a. Do you plan to operate in separate Development/Test/Production environments in order to assure quality?
    b. ITSCM/Disaster Recovery (DR) or High Availability (HA) requirements?
    c. Do you plan to operate in a virtualized environment or on physical machines?
3. Do you have existing hardware that you want to reuse?
    a. What Operating Systems (OS) are the OS 32 or 64 bit?
    b. Number of CPU's per machine?
    c. Amount of RAM per machine?
    d. What RDBMS?
4. Can you provide a diagram of your network with minimum latency and bandwidth values?
5. Can you provide a Microsoft Visio™ diagram of your intended deployment? (See Sample Diagram)
6. Which integrations do you plan to employ with HP Service Manager?
    a. Inbound/Outbound Email, SMTP/POP3 requirements?
    b. Active directory (LDAP) integration or Single Sign-on?
    c. Data import of persons/organizations from an HR or other environment?
    d. Integration to Universal Configuration Management Database (UCMDB)/CMS?
    e. Integration to other HP Software solutions?
    f. Import of Configuration Items (CI's)?
    g. other

Service Manager 7 Sizing Questions

7. Licensing requirements? **See Note**
    a. Is Service Catalog to be part of the configuration?
    b. Is Knowledge Management (KM) to be part of the configuration?
    c. What is the expected number of KM users? (Authors, Editors, Administrators)
    d. Which language/languages do you expect to operate?
    e. What is the overall number of IT specialists? (Technicians, Administrators, Helpdesk)
    f. How many of them should have guaranteed access to Service Manager?(Named Users)
    g. What are your module level user requirements for Service Manager?
8. The Web Tier should be the expected client used for Service Manager user access.
    a. What potential number of Self Service users will have the ability to access the software?
        - Use Calculation in the Rules of thumb for Self Service users to calculate concurrency.
9. What is the geographical breakdown of your Web User base?
10. What are your expected data volumes by Module including attachments?
    a. Service Desk
    b. Incident Management
    c. Change Management
    d. Problem Management
    e. Knowledge Management
    f. Request Management
    g. Configuration Management
    h. Service Level Management
11. What are your Reporting requirements?
    a. Will you use the bundled Crystal Reports solution?
    b. Or an external reporting solution?
    c. Or will you use data replication into a Data Warehouse for reporting?

Note: This information is not required for Sizing of the environment but is very useful information to obtain.

Sample Service Manager 7 Deployment Diagram



Service Manager 7 Application Server

Minimum Required Reference Configurations

- Small (<200 concurrent users)

  Windows / Linux:

  Service Manager: HP DL360-G4p – 2 CPU cores, 8GB RAM, 36GB HD

  RDBMS: HP DL360-G4p –2 CPU cores, 4GB RAM, 2 x 36GB RAID

- Medium (201 – 600 concurrent users)

  Windows / Linux:

  Service Manager: HP DL585 – 4 CPU cores, 16GB RAM, 36GB HD

  RDBMS: HP DL585 – 2-4 CPU cores, 8GB RAM, 3 x 36GB RAID

  Unix:

  Service Manager: HP rx6600 – HP-UX 11i, 4 CPU cores, 16GB RAM, 36GB HD

  RDBMS: HP rx6600 – HP-UX 11i, 2-4 CPU cores, 8GB RAM, 3 x 36GB RAID

- Large (601 – 1,000 concurrent users)

  Windows / Linux:

  Service Manager: HP DL585 – 8 CPU cores, 32GB RAM, 36GB HD

  RDBMS: HP DL585 – 4-8 CPU cores, 16GB RAM, 3 x 36GB RAID

  Unix:

  Service Manager: HP rx6600 – HP-UX 11i, 8 CPU cores, 32GB RAM, 36GB HD

  RDBMS: HP rx6600 – HP-UX 11i, 4-8 CPU cores, 16GB RAM, 5 x 36GB RAID

Service Manager 7 Web Tier

- Web Tier (400 concurrent users) ***see Rules of Thumb***

  Windows / Linux:

  HP DL360-G4p – 2 CPU cores, 4GB RAM, 36GB HD

  Unix:

  HP rx2600 – HP-UX 11i, 2 CPU cores, 4GB RAM, 36GB HD

Service Manager 7 Help Server

- HP DL360-G4p – 2 CPU cores, 2GB RAM, 36GB HD ***see Rules of Thumb***

Service Manager Load Balancer Server

- HP DL360-G4p – 2 CPU cores, 2GB RAM, 36GB HD ***see Rules of Thumb***

Service Manager Knowledge Search Engine Server

- Small (<200 concurrent users)

  Windows / Linux:

  HP DL360-G4p –1 CPU cores, 2GB RAM, 36GB HD

  Unix:

  HP rx2600 – HP-UX 11i, 1 CPU cores, 2GB RAM, 36GB HD

- Medium and Large (>200 concurrent users)

  Windows / Linux:

  HP DL360-G4p – 2 CPU cores, 4GB RAM, 36GB HD

  Unix:

  HP rx2600 – HP-UX 11i, 2 CPU cores, 4GB RAM, 36GB HD

Rules of Thumb

Service Manager Application Server (servlet container)

A servlet container requires approximately 2 GB of Ram

- 500 MB JVM requirement including the 256MB of Default JAVA heap
- 50 MB for the process overhead
- 10 MB – 20 MB per users session (thread) (see **Note *** below)
- Plus shared_memory setting value in the sm.ini file. (counted only once for all Servlet containers on a single machine)

When running in a 32 bit Operating system it is recommend starting with ***50 threads*** (users) per process (servlet container) in the ***UNIX*** environment and then increase based on process memory usage being experienced in your environment.

When running in a 32 bit Operating system it is recommend starting with ***30 threads*** (users) per process (servlet container) in the ***Windows*** environment and then increase based on process memory usage being experienced in your environment.

When running in a 64 bit Operating system it is recommend starting with **100 threads** (users) per process (servlet container) and increase based upon process memory usage being experienced in your environment to a maximum of **125 threads**. This is valid for all 64 Bit operating system platforms designated in the Service Manager Compatibility Matrix.

Note * Increases in user session memory usage can be caused by inappropriately large global lists, usage of global variables that are not cleaned up and multiple application threads being opened simultaneously. This will have a direct effect on the number of user threads that can be supported per servlet container. *All Servers running in the Service Manager group must be running the same base operating system. For example all must be Window based or Linux based or Unix based. You cannot mix operating systems within the JGROUP.*

Service Manager Web Tier

The Service Manager Web Tier configuration is based upon Tomcat with **3** JVM's running **1.2 GB** of RAM Java Heap per JVM, and an Apache Web Server for connection distribution to the JVM's, add machines as required with additional Tomcat JVM's to create a Web Farm in order to support additional user load.

Self Service / Catalog User considerations:

It is important to remember to include or consider the Self Service / Catalog user base when calculating the hardware requirements for supporting the environment. In general a good rule of thumb to use for calculating the number of concurrent users that will need to be supported can be calculated using a rule of 2 – 3% of the total number of expected users. For example: 200,000 total user base * .03 = 6, 000 total number of projected Concurrent Self Service/Catalog users.

Service Manager Help Server

With Service Manager 7.11 the Service Manager Help Server must be deployed in a Windows environment but can be configured to run on one of the machines configured or accessible via the

Web Tier. It can also be configured to be on a standalone machine using a small machine configuration.

Service Manager Load Balancer

The Service Manager Load Balancer should be located on a separate machine and should always be sized as a small machine since it performs no other function than connection redirection to an available servlet. It also must be run using the same Operating System as the Service Manager Application Servers.

This is the one component of the configuration that can be considered a single point of failure, should be replicated and placed in a clustered environment for high availability. Failure of this component will only affect new user connections that are attempting to initially connect into the environment until such time as the Load Balancer is restarted or failed over. All currently active users connected to the environment would be unaffected by the loss of the Load Balancer.

Load balanced machines and servlet machines should use the server sizing given in this document and the number of nodes would depend on size of machine chosen and total number of concurrent production users

RDBMS server

The RDBMS server sizing specified above are the configurations that were used during the benchmarking runs for the Service Manager product. The actual servers that will be used in a production environment should plan their storage needs based upon expected data volumes including attachments, etc. The CPU and memory requirements for the selected database should be based upon the recommendations of the Database vendor for supporting the expected transaction volumes.

Virtualized Environment (VMware)

An addition of approximately 30% above the recommended Service Manager sizing must be made in order to efficiently run that Service Manager component in a Virtual environment.

For more information

Please visit the HP Management Software support Web site at:

http://www.hp.com/managementsoftware/support

This Web site provides contact information and details about the products, services, and support that HP Management Software offers.

HP Management Software online software support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valued customer, you can benefit by being able to:

- Search for knowledge documents of interest
- Submit and track progress on support cases
- Submit enhancement requests online
- Download software patches
- Manage a support contract
- Look up HP support contacts
- Review information about available services
- Enter discussions with other software customers
- Research and register for software training

Note: Most of the support areas require that you register as an HP Passport user and sign in. Many also require an active support contract.

To find more information about support access levels, go to the following URL:

http://www.hp.com/managementsoftware/access_level

To register for an HP Passport ID, go to the following URL:

http://www.managementsoftware.hp.com/passport-registration.html

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