

Oracle Service Registry Sizing Guidelines

This document outlines Oracle Service Registry deployment and sizing scenarios for a range of performance and scalability requirements. Its purpose is to suggest production deployment recommendations for typical usage scenarios, as described in Table 2 in this document.

These scenarios primarily differ in numbers of registry inquiries/second and numbers of concurrent users required for run-time and design-time usage, respectively, although they are based on the same test data and operations executed.

The document notes recommendations for the following Service Registry configurations:

- Standalone Registry: One or more basic Registry instances, all shared by service publishers and service consumers
- Multi-Registry: One or more Publication and Discovery Registries configured to provide a staging/production environment

This sizing is based on a Service Registry installation containing 2500 businessEntities and 2500 tModels. Each businessEntity has:

- 2 contacts with 3 descriptions, 2 emails and 2 addresses
- 2 names
- 3 descriptions
- 5 keyedReferences
- 4 businessServices. Each businessService in turn has:
 - 2 names
 - 3 descriptions
 - 5 keyedReferences
 - 10 bindingTemplates

The operation invoked is a UDDI v3 get_serviceDetail query.

Table 1 below describes four different server classes that are listed in the sizing recommendations. They vary primarily in numbers of CPU but are all based on the same CPU, operating systems (Windows Server 2003 and Redhat 9 Linux) and RDBMS (Oracle 9, SQLServer 2000) that comprise the test environment.

Server Class	Specification
Class I	1-CPU, 1.8GHz, 1GB RAM, Windows Server 2003/Linux (RedHat 9), Oracle 9/SQLServer 2000
Class II	2-CPU, 2.8GHz, 1.5GB RAM, Windows Server 2003/Linux (RedHat 9), Oracle 9/SQLServer 2000
Class III	4-CPU, 2.8GHz, 10GB RAM, Windows Server 2003/Linux (RedHat 9), Oracle 9/SQLServer 2000
Class IV	8-CPU, 2.8GHz, 10GB RAM, Windows Server 2003/Linux (RedHat 9), Oracle 9/SQLServer 2000

Table 2 below describes five different usage scenarios, as mentioned above, and recommends sizing for each of them. The sizing varies primarily in terms of class of machine recommended for both the Service Registry and the supporting database.

Use Case	Department or workgroup	Division	Small Enterprise	Mid size Enterprise	Global Enterprise
Usage Characteristics	<ul style="list-style-type: none"> • Design time: Up to 10 concurrent users • Run time: 1-3 inquiry transactions per second 	<ul style="list-style-type: none"> • Design Time: Up to 100 concurrent users • Run time: up to 20 inquiry transactions 	<ul style="list-style-type: none"> • Design Time: Up to 175 concurrent users • Run time: up to 35 inquiry transactions per second 	<ul style="list-style-type: none"> • Design Time: Up to 350 concurrent users • Run time: up to 70 inquiry transactions per second 	<ul style="list-style-type: none"> • Design Time: Up to 700 concurrent users • Run time: up to 140 inquiry transactions per second
Deployment Characteristics	<ul style="list-style-type: none"> • No High Availability • All components co-located on same machine 	<ul style="list-style-type: none"> • High Availability configured 	<ul style="list-style-type: none"> • High Availability configured 	<ul style="list-style-type: none"> • High Availability configured 	<ul style="list-style-type: none"> • High Availability configured
Standalone Registry	<ul style="list-style-type: none"> • 1 Class I Server 	<ul style="list-style-type: none"> • 2 Class I servers for Service Registry instances • 1 Class I server for RDBMS Server 	<ul style="list-style-type: none"> • 2 Class II servers for Service Registry instances • 1 Class II server for RDBMS Server 	<ul style="list-style-type: none"> • 2 Class III servers for Service Registry instances • 1 Class III server for RDBMS Server 	<ul style="list-style-type: none"> • 2 Class IV servers for Service Registry instances • 1 Class IV server for RDBMS Server
Publication (Staging) Registry	<ul style="list-style-type: none"> • 1 Class I Server 	<ul style="list-style-type: none"> • 1 Class I server for Service Registry • 1 Class I machine for RDBMS Server 	<ul style="list-style-type: none"> • 1 Class II server for Service Registry • 1 Class II machine for RDBMS Server 	<ul style="list-style-type: none"> • 1 Class II server for Service Registry • 1 Class II machine for RDBMS Server 	<ul style="list-style-type: none"> • 1 Class III server for Service Registry • 1 Class III machine for RDBMS Server
Discovery (Production) Registry	<ul style="list-style-type: none"> • 1 Class I Server 	<ul style="list-style-type: none"> • 2 Class I servers for HA Service Registry • 1 Class I server for RDBMS Server 	<ul style="list-style-type: none"> • 2 Class II servers for HA Service Registry • 1 Class II server for RDBMS Server 	<ul style="list-style-type: none"> • 2 Class III servers for HA Service Registry • 1 Class III server for RDBMS Server 	<ul style="list-style-type: none"> • 2 Class IV servers for HA Service Registry • 1 Class IV server for RDBMS Server