
NetIQ® LDAP Proxy 1.5

Sizing Guide

November 2019

Legal Notice

For information about legal notices, trademarks, disclaimers, warranties, export and other use restrictions, U.S. Government rights, patent policy, and FIPS compliance, see <https://www.netiq.com/company/legal/>.

Copyright © 2019 NetIQ Corporation, a Micro Focus company. All Rights Reserved.

1 Introduction	5
Get Started With Sizing Estimation	5
2 Sizing Guidance	7
Scenario # 1 - Read Intensive Operations	7
Scenario # 2 - Write Intensive Operations	9

1 Introduction

This guide helps estimating the software and hardware requirements for deploying NetIQ LDAP Proxy along with eDirectory as back-end server. To help you estimate your sizing requirements, we have provided the most useful estimation factors along with various performance scenarios, which are tested under the controlled lab environment with specific configuration parameters in place.

Get Started With Sizing Estimation

Before deploying LDAP Proxy, you must estimate the hardware requirements for achieving the optimal performance out of your Proxy setup. The performance of LDAP Proxy depends on multiple factors regarding how an enterprise plans to use it. Some of the factors to take into consideration for your estimation are:

- ♦ Number and type of concurrent LDAP operations to be performed
- ♦ Type of policies going to be configured for LDAP Proxy
- ♦ Type of hardware (for both LDAP Proxy server and Back-end server):
 - ♦ Processor
 - ♦ RAM
 - ♦ Number of CPU

Once you have gathered the above mentioned information, you can refer to [Chapter 2, “Sizing Guidance,” on page 7](#).

2 Sizing Guidance

In this chapter, we present our recommendations based on performance data for commonly used scenarios. This data will help you to determine the optimal hardware for your environment. Our recommendation is based on 500 milliseconds as acceptable response time. We have also fine tuned the eDirectory back-end servers for optimal performance and creating indexes. For more information, see [eDirectory Tuning Guide](#).

The following sections explain the test scenarios considered for sizing estimation:

- ♦ “Scenario # 1 - Read Intensive Operations” on page 7
- ♦ “Scenario # 2 - Write Intensive Operations” on page 9

Scenario # 1 - Read Intensive Operations

This read intensive operation is a combination of read/write operations with majority of **LDAP search user** operation. We have considered the following hardware and configuration parameters for this test:

- ♦ **Product Version:**
 - ♦ eDirectory 9.1 SP3
 - ♦ LDAP Proxy 1.5 SP3
- ♦ **Policy Configured:**
 - ♦ Connection Route Policy
- ♦ **Number of Servers**
 - ♦ eDirectory: 2
 - ♦ LDAP Proxy: 1
- ♦ **Operations Performed:**

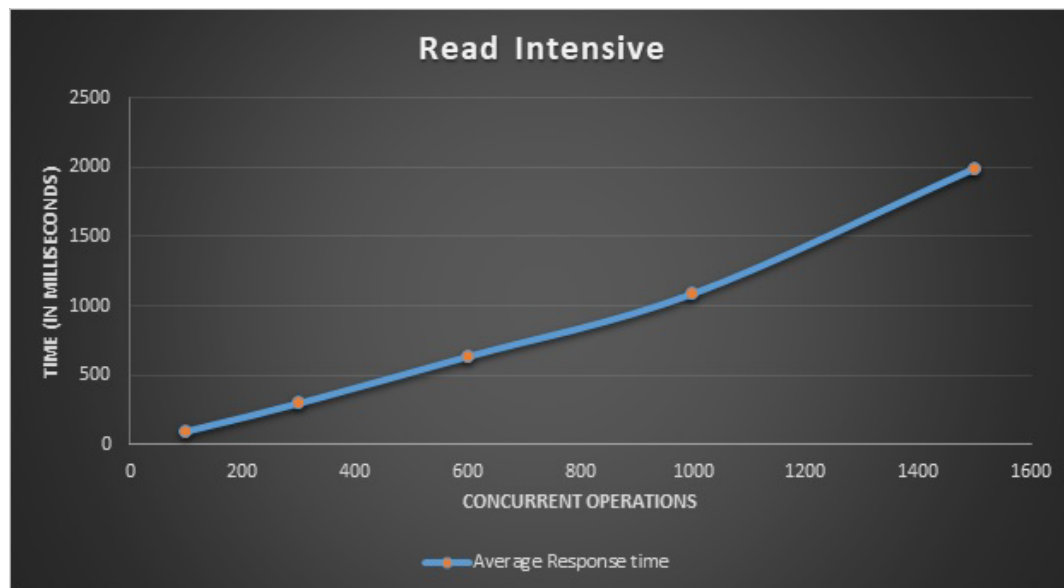
Operations	Operation Distribution by Users	Operation Details
Add Users	5%	This adds users with DN, such as <code>cn=userX</code> . Each object has only <code>sn</code> attribute defined.
Delete Users	5%	This deletes users with DN, such as <code>cn=userX</code> .
Modify Users	20%	This modifies user object such as <code>cn=userX</code> with the following attribute modified: <code>replace => [title => "EngineerX"]</code>
Search Users	70%	This performs a search operation for <code>cn</code> .

♦ **Hardware Used:**

	Server (LDAP and eDirectory)	Client (JMeter)
Make	Dell	Dell
Model	PowerEdge R710	PowerEdge R710
Processor	Intel Xeon CPU X5670 @2.93GHz	Intel Xeon CPU X5670 @2.93GHz
Operating System	Linux – SLE12SP2	Linux – SLE12SP2
RAM	16 GB	16 GB
CPU	4x2	4x2

The following graphical representation shows how average response time change while performing the above-mentioned operations concurrently:

Figure 2-1 Change in average response time based on number of operations performed concurrently



Recommendation

As per this read intensive test, the specified hardware can be used for optimal performance if 0 - 300 concurrent operations are performed. This hardware can also support up to 500 concurrent operations. As the average response time increases with load, we recommend you to choose a better hardware for concurrent operations beyond 500.

Scenario # 2 - Write Intensive Operations

This write intensive operation is a combination of read/write operations with majority of **LDAP modify user** operation. We have considered the following hardware and configuration parameters for this test:

- ♦ **Product Version:**
 - ♦ eDirectory 9.1 SP3
 - ♦ LDAP Proxy 1.5 SP3
- ♦ **Policy Configured:**
 - ♦ Connection Route Policy
- ♦ **Number of Servers**
 - ♦ eDirectory: 2
 - ♦ LDAP Proxy: 1
- ♦ **Operations Performed:**

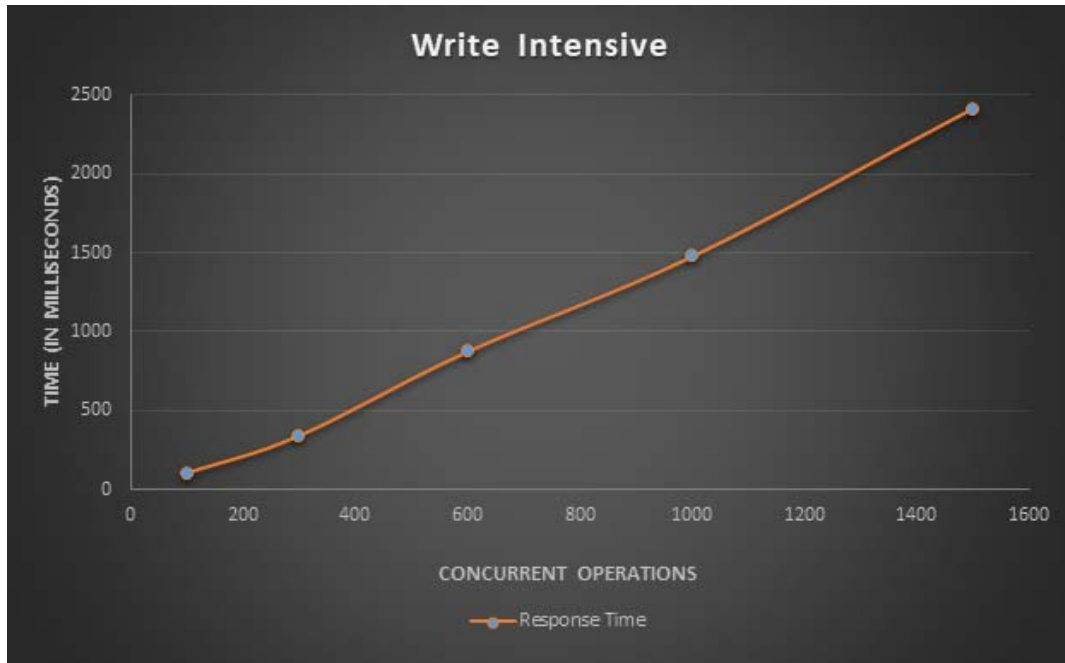
Operations	Operation Distribution by Users	Operation Details
Add Users	15%	This adds users with DN, such as <code>cn=userX</code> . Each object has only <code>sn</code> attribute defined.
Delete Users	15%	This deletes users with DN, such as <code>cn=userX</code> .
Modify Users	40%	This modifies user object such as <code>cn=userX</code> with the following attribute modified: <code>replace => [title => "EngineerX"]</code>
Search Users	30%	This performs a search operation for <code>cn</code> .

- ♦ **Hardware Used:**

	Server (LDAP and eDirectory)	Client (JMeter)
Make	Dell	Dell
Model	PowerEdge R710	PowerEdge R710
Processor	Intel Xeon CPU X5670 @2.93GHz	Intel Xeon CPU X5670 @2.93GHz
Operating System	Linux – SLE12SP2	Linux – SLE12SP2
RAM	16 GB	16 GB
CPU	4x2	4x2

The following graphical representation shows how the average response time change while performing the above-mentioned operations concurrently:

Figure 2-2 *Change in average response time based on number of operations performed concurrently*



Recommendation

As per this write intensive test, the specified hardware can be used for optimal performance if 0 - 300 concurrent operations are performed. This hardware can also support up to 500 concurrent operations. As the average response time increases with load, we recommend you to choose a better hardware for concurrent operations beyond 500.