

# NetIQ Privileged User Manager

## Performance and Sizing Guidelines

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# 1 Introduction

This document details the performance and sizing recommendations for NetIQ Privileged User Manager so that you can deploy the correct configuration in your environment. The test results are simulated and every environment is different. But, the data should help in determining the design of your system. This document specifically refers to the 2.4 release of NetIQ Privileged User Manager.

## 2 Test Scope

Following are the test scenarios/data considered for the tests:

- Number of RDP Relay sessions, Maximum 50 concurrent session on one PUM Manager
- Memory Utilization when all the sessions are active on PUM manager
- CPU Utilization when all the sessions are active on PUM manager
- Response time for different admin/non-admin applications

## 3 Test Setup

### 3.1. PUM Windows Installer

PUM Manager is installed on Windows 2008 R2, with remote desktop services role installed. PUM Manager contains the RDP relay manager as well as Audit manager.

#### Hardware Configuration of the PUM Manager Computer

RAM Size	8 GB
CPU	2.50 GHz
Hard Disk	40 GB

PUM Agents are installed on different windows operating systems including windows 2008 and windows 2008 r2 machine, all the agents machine also have terminal server and remote services role installed.

## Hardware Configuration of the PUM Agents Computer

### Windows 2008 Machine

RAM Size	8 GB
CPU	2.50 GHz
Hard Disk	40 GB

RAM Size - 8 GB

CPU - 2.50 GHz

Hard Disk - 20 GB

### Windows 2008 R2 Machine

RAM Size	8 GB
CPU	2.50 GHz
Hard Disk	40 GB

RAM Size - 8 GB

CPU - 2.66 GHz

Hard Disk - 20 GB

### Agent 1

Scenario	# session	Time took to login	Time delay to start any admin application
No of Windows RDP session to Windows 2008 Server	2	2 Min	5 Seconds
No of PUM RDP Relay session to Windows 2008 Server	2	2 Min	20 Seconds
No of PUM RDP Relay session to Windows 2008 Server	5	2 Min	25 Seconds
No of PUM RDP Relay session to Windows 2008 Server	10	2 Min	20 Seconds

## Agent 2

Scenario	# session	Time Took to login	Time delay to start any admin application
No of Windows RDP session to Windows 2008 R2 Server	10	1 Min	5 Seconds
No of Windows RDP session to Windows 2008 R2 Server	25	4 Min	1-2 Minutes
No of PUM RDP Relay session to Windows 2008 R2 Server	2	1 Min	5 Seconds
No of PUM RDP Relay session to Windows 2008 R2 Server	10	1 Min	5 Seconds
No of PUM RDP Relay session to Windows 2008 R2 Server	15	2 Min	20 Seconds
No of PUM RDP Relay session to Windows 2008 R2 Server	20	2 Min	40 Seconds
No of PUM RDP Relay session to Windows 2008 R2 Server	25	4 Min	1-2 Minutes
No of PUM RDP Relay session to PUM Agent on Windows 2008 R2 Server	30	10 Min	5-10 Minutes

### 3.2. PUM Linux Installer

#### Hardware Details of the PUM Manager Computer

RAM Size - 4 GB

CPU - 2.50 GHz

Hard Disk - 15 GB

#### Hardware Details of the PUM Agents Computer

(Win2k3 Agent are having 2 GB RAM)

RAM Size - 2 GB and 4 GB

CPU - 2.50 GHz

Hard Disk - 15 GB

PUM Manager contains the RDP relay manager as well as Audit manager. 25 Parallel RDP Relay connections to 10 Agents work properly.

SNO	Scenario	#Session	Time Took to login	Time delay to start any admin application
1	No of Parallel RDP Relay Session	10	30 Seconds	30 Seconds
2	No of Parallel RDP Relay Session	12	40 Seconds	30 Seconds
3	No of Parallel RDP Relay Session	15	Approx. 1 Min	30 Seconds
4	No of Parallel RDP Relay Session	20	Approx. 1 Min	30 Seconds
5	No of Parallel RDP Relay Session	25	Approx. 1 Min	45 Seconds
6	No of Parallel RDP Relay Session	30	Approx. 1 Min	Approximately 1 Min
7	No of Parallel RDP Relay Session	35	1 Min 30 seconds	Approximately 1 Min

**For Scenario 6**

Here PUM manager CPU Utilization when all the connection are logging to Agent = 25 – 30 %

Once RDP Relay connection is connected, CPU utilization comes down to 10%

When all RDP relay connection are logoff CPU utilization comes down to 2-5%

Here PUM Manager Memory Utilization when all the connection are active = 15 -20%

Once RDP Relay connection is connected, Memory utilization depends on the user activity, on idle connection Memory Utilization remain same, and when user perform some activities it goes little higher to 20-25%.

### For Scenario 7

Here PUM manager CPU Utilization when all the connection are logging to Agent = 35 – 50 %

Once RDP Relay connection is connected, CPU utilization comes down to 10%

When all RDP relay connection are logoff CPU utilization comes down to 2-5%

Here PUM Manager Memory Utilization when all the connection are active = 45 -60%

Once RDP Relay connection is connected, Memory utilization depends on the user activity, on idle connection Memory Utilization remain same, and when user perform some activities it goes little higher to 20-25%.

## 4 Sizing Recommendation for Session Capture with Video Recording

The following table describes scenarios for video capturing:

Scenario	File Size
If the session is idle	800 KB - 1.3 MB
If the session is active	1 MB - 4.5 MB

**Note:** These are approximate values.