

Migrating from BorderManager to Superlumin Nemesis

**Revision 1.0
October 7, 2011**

**Craig Johnson
Craig Johnson Consulting, LLC
www.craigjconsulting.com
480-575-0629**

Table of Contents

TABLE OF CONTENTS	I
ABOUT THE AUTHOR	V
CHAPTER 1 – MIGRATION STRATEGY	1
Parallel Implementation	1
BorderManager server:	1
Nemesis server:	1
What If I Have No Public IP Address Available?	4
Nemesis Server Behind BorderManager	4
BorderManager Server Behind Nemesis	5
CHAPTER 2 – BASICS	6
BorderManager – Where You Are Coming From	6
BorderManager Packet Filtering Basics	6
Nemesis Packet Filtering Basics	10
Example.....	11
MIGRATION CHECKLIST	13
Things to Check on BorderManager	13
Preparing for Superlumin Nemesis – Before Installation	15
Installing Superlumin Nemesis.....	16
Superlumin Nemesis – quickstart (Initial Nemesis Configuration)	16
Superlumin Nemesis – First Configuration	17
Licensing, IP Addressing, and Routing	17
Enabling Firewall and Dynamic NAT.....	18
Initial Internet Communications Testing	19
FORWARD PROXY (HTTP)	21
Description	21
Pros & Cons	21
Pros	21
Cons	21
Example: Configuring a Forward Proxy	23
Example: Configuring Authentication to eDirectory	24
Example: Setting Up an Access Control List for an eDirectory Tree	26
Differences between BorderManager and Nemesis	26
The Actual Example: Access Rules for Forward Proxy	29
Policy 1 – Allowed Sites without Authentication.....	31
Policy Number 2 – Authenticate Users in the Internal Network	35
Authenticating to eDirectory with Single-Sign On	37
Authenticating Users to eDirectory Without Single Sign-on.....	40
Policy 3 – Allow All URL's for an eDirectory User	42
Policy 4 – Allow Playboy for Selected Users.....	46
Policy 5 – Deny Sites to Selected Hosts (ContentKeeper used)	47
Blocking a URL for a User and a Specific Host IP Address	48
Blocking Categories of Sites with ContentKeeper	49
Policy 6 – Allow All for eDirectory Tree Users.....	52
Policy 7 – Block the Rest.....	55
Enforcing the Rules in Forward Proxy.....	57
TRANSPARENT PROXY	59

Description	59
Pros and Cons	59
Pros	59
Cons	59
Example: Transparent Proxy	59
Add a Secondary IP Address	60
Configure Transparent Proxy using a Wizard	63
Configure Filter Exceptions for Transparent Proxy	69
Add Access Control to Transparent Proxy	73
REVERSE PROXY	76
Description	76
Pros and Cons	76
Pros	76
Cons	76
Example: Reverse Proxy	77
Configure a Listener	77
Configure Reverse Proxy	82
Configure Filter Exceptions for Reverse Proxy	86
Troubleshooting	88
GENERIC PROXY	89
Description	89
Pros and Cons	89
Pros	89
Cons	90
Example: Configure Generic Proxy for VNC to Internal PC	91
Configure a Listener	91
Configure the Generic Proxy	93
Configure Filter Exceptions for Generic Proxy	95
STATIC NAT	97
Description	97
Pros and Cons	97
Pros	97
Cons	97
Procedure.....	97
Example – Mail Server: SMTP, POP3, IMAP, WebAccess	98
SMTP In.....	98
POP3 In.....	99
IMAP In.....	100
WebAccess In (HTTP).....	101
WebAccess In (SSL)	102
SMTP Out.....	102
Example: RCONAG6 In	103
Example – Terminal Server or RDP host.....	104
ALLOW TRAFFIC OUT WITH PACKET FILTERING AND NAT	105
Lock Down Outbound Traffic with a Drop Filter	106
Examples of Common Services Allowed Out	107
DNS	107
NTP	108
POP3	109
SMTP (only from a mail server)	111
ICMP	113
VNC	114
All Traffic from Internal BorderManager	116
Some Common Port Numbers.....	117

APPENDIX 1 – FORMATTING DISKS FOR CACHING.....	119
APPENDIX 2 – RENAMING INTERFACES	121
Some background on SLES11.....	121
Using slash to see or modify interfaces	122
APPENDIX 3 – PACKET FILTER LOGGING.....	124
Enable Filter Logging	124
Retrieve the Filter Log File.....	124
What to Look For.....	125
APPENDIX 4 – TROUBLESHOOTING LDAP AUTHENTICATION TO EDIRECTORY.....	126
APPENDIX 5 - INSTALLING CONTENT KEEPER IN SUPERLUMIN NEMESIS	132
APPENDIX 6 – CHANGING THE MANAGEMENT IP ADDRESS OR PORT	133
INDEX.....	135

This page intentionally left blank.

About the Author

Craig Johnson has been working with computers since he wrote his first computer program in college at Purdue University in 1971. Currently Craig is a consultant, owner of Craig Johnson Consulting, LLC, and he works on many network projects, including a sizeable number of BorderManager installations. Craig has been a Novell Support Connection Sysop from 1998 to 2010.

Craig is the author of two e-books on BorderManager, one on DNS, DHCP and Web Servers, and a short guide on NetWare's RADIUS product in addition to this guide. You can find his other books at <http://www.craigjconsulting.com>.

Craig has been working with BorderManager since before the official release of BorderManager version 2.1, and with SuperLumin since before the release of Nemesis as a BorderManager replacement.

Craig has been a speaker at Novell's BrainShare conference more than 10 times.

When not spending 12 hours per day at a computer, Craig likes to work out in Taekwondo, where he holds the rank of Black Belt, fourth degree, and is a certified instructor. He also enjoys photography as a hobby.

Craig sometimes adds the following letters to his resume / CV:

- Novell MCNE, CNE6, CNE5, CNE 4.11, CNE 4, CNE3
- Novell CLE (Certified Linux Engineer)
- Cisco CCNA
- Compaq ASE
- IBM PSE.
- BSMT, Purdue University
- MBA MGT, Western International University

This page intentionally left blank