Novell BorderManager

3.9 www.novell.com

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About This Guide

Novell® BorderManager® 3.9 includes premier firewall and VPN technologies that safeguard your network and help you build a secure identity management solution. With the powerful directory-integrated features in Novell BorderManager, you can monitor users' Internet activities and control their remote access to corporate resources.

This documentation presents an introduction to installing and managing Novell BorderManager 3.9. The audience for this documentation is experienced network administrators.

It includes the following sections:

- Chapter 1, "Installation Requirements," on page 9
- Chapter 2, "Installing Novell BorderManager 3.9," on page 11
- Chapter 3, "Upgrading From Earlier Versions," on page 17

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comments feature at the bottom of each page of the online documentation, or go to www.novell.com/documentation/feedback.html and enter your comments there.

Documentation Updates

For the most recent version of the *Novell BorderManager 3.9 Installation Guide*, visit the Novell Documentation Site (http://www.novell.com/documentation/nbm39/index.html).

Additional Documentation

This Installation Guide is a part of documentation set for Novell BorderManager 3.9. The other documents include:

- Novell BorderManager 3.9 Proxy and Firewall Overview and Planning Guide
- Novell BorderManager 3.9 Administration Guide
- Novell BorderManager 3.9 Virtual Private Network Client Installation Guide
- Novell BorderManager 3.9 Troubleshooting Guide
- Novell BorderManager 3.9 Virtual Private Network Deployment Frequently Asked Questions

Documentation Conventions

In this documentation, a greater-than symbol (>) is used to separate actions within a step and items in a cross-reference path.

Also, a trademark symbol (®, TM, etc.) denotes a Novell trademark. An asterisk (*) denotes a thirdparty trademark. When a single pathname can be written with a backslash for some platforms or a forward slash for other platforms, the pathname is presented with a backslash. Users of platforms that require a forward slash, such as Linux or UNIX, should use forward slashes as required by your software.

Installation Requirements

Novell[®] BorderManager[®] provides Internet access control and supports numerous content-filtering solutions. These features protect your network from undesirable Internet content, including programs that destroy or steal data, games that waste users' time, and Web pages that expose your company to legal liability.

Novell BorderManager includes firewall and VPN technologies that protect networks and resources, while ensuring end-user productivity. This section provides the system requirements and the preparations that you need to make before you install Novell Border Manager 3.9.

- Section 1.1, "System Requirements," on page 9
- Section 1.2, "End User License Agreement," on page 10
- Section 1.3, "Documenting Your Environment," on page 10

1.1 System Requirements

Novell BorderManager 3.9 can be installed on a NetWare or Open Enterprise Server (OES) server and is administered using Novell iManager 2.6.

NOTE: Using NetWare Administrator for configuring Novell BorderManager Proxy is not supported. The BorderManager Proxy is administered using iManager with this release.

1.1.1 Server Hardware

- Intel* Pentium* II or higher processor.
- Minimum of 1 GB of RAM above operating software requirements.
- Minimum of 300 MB of disk space, with an additional 40 MB available during installation (Novell BorderManager needs approximately 150 MB, and NMASTM needs an additional 40 MB).
- CD drive that can read ISO 9660 formatted disks.
- Super VGA or higher resolution display adapter.
- One or more network interfaces.
- PS/2 or serial mouse.
- DOS partition with at least 250 MB.
- 4 GB sys: volume recommended.
- Minimum 2 GB of free drive space for the creation of a dedicated cache volume if you want to use Novell BorderManager 3.9 as a proxy server.

1.1.2 Server Software

The following prerequisites must be installed in this order:

• NetWare 6.5 SP 6 or later or OES SP 3 operating system.

- The installation server and all servers holding a copy of the partition where the Novell BorderManager 3.9 server object resides should have Novell eDirectory[™] 8.7.3 or later. Novell BorderManager 3.9 must be installed on a NetWare server that holds an eDirectory read/write replica of the partition containing that server's object.
- NICI 2.6
- Netnlm32.nlm version 6.00.06 dated September 25, 2006

Special Requirements for VPN:

- TCP/IP secure version. Copy bsdsock, tcp, and tcpip files from:
 - vpn\tcpd directory of CD to the System folder of NetWare 6.5 SP 6:
 - sys:\system\tcpip\tcpd to the system folder for NW 6.5 SP 7 or later.

1.2 End User License Agreement

Before installing Novell BorderManager 3.9, you need to read the End User License Agreement (EULA). The EULA is in the relevant language directory at the root of the product directory $> \EULA$.

1.3 Documenting Your Environment

There are a number of items that you might need to note before installing Novell BorderManager 3.9.

- Location of license diskettes or path to the license file
- Public and private interfaces and their IP address bindings
- Domain name system host name
- IP addresses for up to three DNS name servers on the network
- Domain name for the Mail Proxy and whether you want to proxy an internal mail server or external mail server or both
- Server certificates if secure LDAP is to be used for schema extension
- Default gateway
- If you are installing VPN services, document the following:
 - Server certificate to be used for the VPN server
 - Trusted root certificate name
 - Trusted root object names

Installing Novell BorderManager 3.9

This section contains the following information:

- Section 2.1, "Prerequisites," on page 11
- Section 2.2, "Installation Procedure," on page 11

2.1 Prerequisites

- If you are downloading the product from the Web, go to the Download Site (http:// download.novell.com), download the zip file, then unzip it on a drive that is accessible from your server.
- Run INETCFG before you install Novell[®] BorderManager[®] 3.9.

2.2 Installation Procedure

To install Novell BorderManager 3.9 on the server:

- **1** Do one of the following:
 - If you are downloading the product from the Web, unzip Novell BorderManager 3.9 on a drive that is accessible from your server.
 - If you are using a product CD, mount the Novell BorderManager 3.9 CD on the server by entering CDROM at the server console.
- **2** On the server side, go to the X-Server Graphical Console. If the X-Server Graphical Console is not loaded, enter STARTX at the server console.

If STARTX is already loaded, press Ctrl+Esc and select the option for X-Server Graphical Console.

- 3 Click *Novell*, then select *Install* to display the list of currently installed products.
- 4 Click *Add*, then browse to the root of the Novell BorderManager 3.9 directory and select product.ni, which is displayed in the right frame. Click *OK*.
- 5 Click OK. The Welcome page is displayed.
- 6 Click Next. The License agreement page is displayed.
- 7 Read the license agreement. If you accept the terms of the agreement, click *I Accept*. The Novell Border Manager Services installation page is displayed.
- 8 Select the check boxes next to the services you want to install them.
- **9** Select *Trial License* or shipping license from the *Enter a License Location Path* drop-down list. Trial Licenses are selected by default. Trial and Shipping licenses are located in the *licenses* directory at the root of the CD.

Novell BorderManager Services Installation				
Horeta Borderman	uger			Novell.
	Minimum	Bequirements Check		
	Product	Installed Version	Minimum Require	Result
	NetWare	6.5.6	6.5.6	
	NICI	2.7.0	2.7.0	
	eDirectory *	87.3.9	87.3.9	
	LDAP	87.3.9	87.3.1	
	Novell BorderManager	-	-	1
	PKI	3.2.0	3.2.0	
	SAS	1.7.5	1.7.0	r
	NETNLM32.NLM	6.0.6	6.0.0	V
	TCP/IP Modules (opti	Null Encryption	Domestic Encryption	V
	Novell iManager (opti	2.6.0	2.6.0	V
Ν	* eDirectory Recomme	nded Version : 87.3.9	Help < Ba	ick Next>

10 Click *Next*. The Minimum Requirements page is displayed.

The Minimum Requirements page displays the installed version as well as the minimum requirement version of the software.

If any of the minimum requirements except TCP/IP modules or iManager 2.6 is not met, the installation stops. Meet the requirements according to the displayed table in the minimum requirements page and restart the installation.

If the base requirements for the TCP/IP modules are not met, a warning is displayed. You can ignore the warning and install, but you need to copy the right TCP/IP modules later if you want to use VPN services.

If iManager 2.6 is not installed, the plug-ins for Novell BorderManager Firewall Configuration, Novell BorderManager Proxy configuration, and Novell BorderManager VPN Configuration are not installed. If that is the case, install iManager 2.6 after Novell BorderManager installation to automatically install the Novell BorderManager Firewall Configuration and Novell BorderManager VPN Configuration plug-ins.

If the minimum system requirements are met, click Next to proceed.

11 On the NDS Authentication page, specify your credentials to log in.

NDS Authentica	ation 🕂 🕹 🔀
The user must be ar the server context. eDirectory schema.	n Admin or Admin equivalent or a Trustee to With these rights you can extend the
User Name	
User Password	
Tree	PROXY23T
User Context	
	OK Cancel Details

User Name: Specify either your fully distinguished name (FDN) or provide only the name. You must have administrative rights to the root of the eDirectory tree. This requirement applies to any user who is a trustee with Supervisor rights at a container at the same level as the server. Administrative rights are required to extend the eDirectory schema, install product licenses, and configure Novell BorderManager 3.9 for the first time.

User Password: Specify your password.

Tree: Specify the name of the tree.

User Context: Specify the user context in the tree. You must specify this information if you have not entered your FDN in the *User Name* field.

- 12 Click OK.
- **13** If you are installing Novell BorderManager firewall/caching services or Novell BorderManager VPN services, review the list of network interfaces and their IP bindings.

For firewall and caching services, you must specify a public IP address to secure the network border. Public IP addresses specify server interfaces to a public network, typically the Internet. Private IP addresses specify server interfaces to a private network or intranet.

- **13a** Select the *Public* or *Private* check box to specify a network interface as public, private, or both for proxy and firewall services.
- **13b** Specify the default gateway in the *Default Gateway Field*.
- **13c** By default, the *Install iManager Snap-ins for Firewall* check box is selected. Deselect the check box if you do not want to install the iManager plug-ins.
- **14** Click *Next*. The Novell BorderManager Services Installation page is displayed.

15 Select the check boxes for the services that you want to enable. Filter exceptions for these services are created on the public interface.

N Novell BorderMana	ger Services Installation		⋎ ि
Novell. BorderMana	ager*		Novell
	Select Services And Set	Filter Exce	eptions
	Enable		
	HTTP		FTP
	Mail		News
	Real Audio and RTSP		DNS
	HTTP Transparent		TELNET Transparent
	VPN		IP Packet Filtering
			Click to activate and use this control
_	Select All		Clear All
N	 Description Real Audio and Real Time Streaming I firewall to connect to a requested serie enable Real Audio and RTSP proxies excentions to allow use of this service 	Protocol (F rver outsic as well as	RTSP) proxies allow players inside the det the firewall. Select this option to to to add minimum necessary default filter
	Can	ncel	Help < Back Next >

On a single interface machine, filter exceptions are created but the filters are not enabled. Filter exceptions corresponding to the selected services are created on the public interface. Filter exceptions are activated along with the filters if *IP Packet Filtering* is selected. IP packet filtering is not enabled if only one interface is available. If this is an upgrade, existing filters are preserved. *Deny All Filters* is not set on public interfaces.

- 16 Click Next.
- **17** (Optional) If you selected *Mail*, select either or both of the External/Internal check boxes in order to set appropriate filter exceptions, depending on whether you want to proxy internal mail servers, external mail servers, or both. Specify the name of one domain for the mail proxy.
- **18** (Optional) NetWare provides the facility to create cache volumes automatically. If HTTP, FTP, HTTP Transparent is selected in the Select Services and Filter Exception page, click *Create Volume* and provide the required details to create traditional volumes for caching. You can also use existing traditional volumes for caching.

NOTE: If you do not create a volume or select a traditional volume for caching, the sys:\etc\proxy\cache directory is used.

To create a new cache volume, see the *Novell BorderManager 3.9 Troubleshooting Guide*.

19 The *Access Control* check box is enabled by default. We recommend that you accept the default. Access control enforces additional security by denying all proxy services traffic.

Access control rules can be set using the iManager. Access rules are used to allow or deny access from any source or to any destination. This option comes up only if you selected *Proxy Services* on the previous page.

- **20** Click *Next* to continue.
- **21** Specify a unique DNS domain name for your network in the *DNS Domain Name* field, then click *Next*.
- **22** Click *Add*, then specify at least one or up to three DNS server IP addresses. By default, the existing DNS entry is used.

Use the *Up* and *Down* buttons to move the order of IP addresses, if you have added two or more IP addresses.

To delete a DNS server IP address, click Delete.

- **23** Click *Next* to continue.
- **24** By default the *Install iManager Plug-Ins for VPN* check box is selected. Deselect the box if you do not want the plug-ins to be installed.

Click Next.

- **25** Click *Finish* if you are done, or click *Back* to return to previous pages and modify your selections.
- **26** Do one of the following:
 - Click *Reboot* for Novell BorderManager 3.9 services to come up.
 - Click *Close* to complete the installation and return to the GUI screen.
 - Click *Readme* to view the Readme.

The install summary is available in sys: \ni\data\nbm_instlog.csv. The Readme is available at the root of the CD under Documents/ReadMes/enu.

Upgrading From Earlier Versions

To upgrade from Novell BorderManager 3.8 to Novell Border Manager 3.9, do the following:

- **1** Do one of the following:
 - If you are downloading the product from the Web, unzip Novell BorderManager 3.9 on a drive that is accessible from your server.
 - If you are using a product CD, mount the Novell BorderManager 3.9 CD on the server by entering CDROM at the server console.
- **2** On the server side, go to the X-Server Graphical Console. If the X-Server Graphical Console is not loaded, enter STARTX at the server console.

If STARTX is already loaded, press Ctrl+Esc and select the option for X-Server Graphical Console.

- **3** Click *Novell*, then select *Install* to display the list of currently installed products.
- 4 Click *Add*, then browse to the root of the Novell BorderManager 3.9 directory and select product.ni, which is displayed in the right frame. Click *OK*.
- 5 Click OK. The Welcome page is displayed.
- 6 Click Next. The License agreement page is displayed.
- 7 Read the license agreement. If you accept the terms of the agreement, click *I Accept*. The Novell Border Manager Services installation page is displayed.
- 8 Select the check boxes next to the services you want to install them.
- **9** Select *Trial License* or shipping license from the *Enter a License Location Path* drop-down list. Trial Licenses are selected by default. Trial and Shipping licenses are located in the *licenses* directory at the root of the CD.
- **10** Click *Next*. The Minimum Requirements page is displayed.

N Novell BorderManager Services Installation 不ピ 図 Novell. BorderManager?			
Minimur	n Requirements Check		
Product	Installed Version	Minimum Require	Result
NetWare	6.5.6	6.5.6	
NICI	2.7.0	2.7.0	
eDirectory *	87.3.7	87.3.9	
LDAP	87.3.0	87.3.1	
Novell BorderManager	3.8.5	3.8.0	
PKI	3.2.0	3.2.0	
SAS	1.7.5	1.7.0	
NETNLM32.NLM	6.0.6	6.0.0	
TCP/IP Modules (opti	Null Encryption	Domestic Encryption	
Novell iManager (opti	. 2.5.0	2.6.0	

The Minimum Requirements page displays the installed version as well as the minimum requirement version of the software.

Meet the requirements according to the displayed table in the minimum requirements page and restart the installation. Click *Next* to continue.

11 On the NDS Authentication page, specify your credentials to log in.

NDS Authentica	ntion 🕂 🕂 🖉 🗵				
The user must be an Admin or Admin equivalent or a Trustee to the server context. With these rights you can extend the eDirectory schema.					
User Name					
User Password					
Tree	PROXY23T				
	OK Cancel Details				

User Name: Specify either your fully distinguished name (FDN) or provide only the name. You must have administrative rights to the root of the eDirectory tree. This requirement applies to any user who is a trustee with Supervisor rights at a container at the same level as the server. Administrative rights are required to extend the eDirectory schema, install product licenses, and configure Novell BorderManager 3.9 for the first time.

User Password: Specify your password.

Tree: Specify the name of the tree.

User Context: Specify the user context in the tree. You must specify this information if you have not entered your FDN in the *User Name* field.

- **12** Click *OK* to continue.
- **13** You are prompted with the following dialog box:

N Ir	nformation 🕂 🖉 🗵
١	A version of Novell BorderManager 3.8 already exists on this server. The existing configuration will be preserved. Any future changes to the configuration can be made by using iManager after completing this install.
	proceeding further with the installation.
	OK

Click OK to proceed.

14 By default the *Install iManager plug-ins for VPN* check box is selected. Deselect the box if you do not want the plug-ins to be installed.

Click Next.

- **15** Click *Finish* if you are done, or click *Back* to return to previous pages and modify your selections.
- **16** Do one of the following:
 - Click *Reboot* for Novell BorderManager 3.9 services to come up.
 - Click *Close* to complete the installation and return to the GUI screen.
 - Click *Readme* to view the Readme.

The install summary is available in sys:\ni\data\nbm_instlog.csv. The Readme is available at the root of the CD under Documents/ReadMes/enu.

NOTE: Novell BorderManager 3.9 provides the option to recover from a failed install. The Install program pops up an option after the authentication dialog box (Step 11 on page 13). To recover from a failed install, select the Fresh Install Option or select the Upgrade option. Continuing with the Fresh Install option with a working Novell BorderManager 3.9 server may give unexpected results, particularly with existing filter exceptions. After using this option, review your iManager configuration and filter exceptions.