



vFoglight™

formerly vCharter Pro™

*Installing on Windows with an Embedded
MySQL Database*



© 2008 Vizioncore, Inc. ALL RIGHTS RESERVED.

This guide contains proprietary information protected by copyright. The software described in this guide is furnished under a software license or nondisclosure agreement. This software may be used or copied only in accordance with the terms of the applicable agreement. No part of this guide may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording for any purpose other than the purchaser's personal use without the written permission of Vizioncore, Inc.

If you have any questions regarding your potential use of this material, contact:

Vizioncore, Inc
975 Weiland Ave
Buffalo Grove, IL 60089
www.vizioncore.com
email: info@vizioncore.com

Refer to our Web site for regional and international office information.

Trademarks

Vizioncore, the Vizioncore logo, and vFoglight are trademarks and registered trademarks of Vizioncore, Inc in the United States of America and other countries. Other trademarks and registered trademarks used in this guide are property of their respective owners.

Third Party Contributions

For a list of third-party components and licenses, see Appendix: License Credits.

Disclaimer

The information in this document is provided in connection with Vizioncore products. No license, express or implied, by estoppel or otherwise, to any intellectual property right is granted by this document or in connection with the sale of Vizioncore products. EXCEPT AS SET FORTH IN VIZIONCORE'S TERMS AND CONDITIONS AS SPECIFIED IN THE LICENSE AGREEMENT FOR THIS PRODUCT, VIZIONCORE ASSUMES NO LIABILITY WHATSOEVER AND DISCLAIMS ANY EXPRESS, IMPLIED OR STATUTORY WARRANTY RELATING TO ITS PRODUCTS INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. IN NO EVENT SHALL VIZIONCORE BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE, SPECIAL OR INCIDENTAL DAMAGES (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS, BUSINESS INTERRUPTION OR LOSS OF INFORMATION) ARISING OUT OF THE USE OR INABILITY TO USE THIS DOCUMENT, EVEN IF VIZIONCORE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Vizioncore makes no representations or warranties with respect to the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. Vizioncore does not make any commitment to update the information contained in this document.

Installation and Setup Guide - Installing on Windows with an Embedded MySQL Database
September 2008
Version 3.0.1

Table of Contents

Introduction to this Guide	5
About vFoglight	6
About this Guide.....	6
vFoglight Documentation Suite	6
Core Documentation Set	7
Cartridge Documentation Sets	8
Feedback on the Documentation.....	8
Text Conventions.....	8
About Vizioncore Inc.	9
Contacting Dell.....	10
Before Installing vFoglight.....	23
What is vFoglight?.....	24
Planning Your Installation or Upgrade.....	25
Using Embedded Databases.....	26
Licensing	27
Hardware Requirements and Guidelines	28
Installation Recommendations	28
Hardware Requirements.....	28
Installing vFoglight	29
Preparing to Install	30
Installing a New Version of the vFoglight Management Server.....	30
Installing the vFoglight Management Server - Standard Install Option	31
Next Steps	43
Installing the vFoglight Management Server - Custom Install Option.....	44

Next Steps	60
Upgrading the vFoglight Management Server	61
Installed Directories	61
vFoglight Settings	63
Editing the foglight.config File	63
Setting Memory Parameters for the Server	63
Setting the SQL Parser Properties.....	64
Configuring vFoglight to Access the Server Only Through The HTTPS Port	64
Setting Up an Encrypted Database Connection with SSL	66
Setting Up an Encrypted LDAP Connection with SSL	67
Uninstalling vFoglight.....	67
Running the vFoglight Management Server	69
Before You Begin.....	70
Migrating Data from an Existing Database	70
Initializing the Database.....	71
Starting and Stopping the vFoglight Management Server	71
Starting the vFoglight Management Server as a Windows Service	71
Stopping the Server	72
Logging in to the vFoglight Browser Interface	73
Running the vFoglight Management Server FAQ.....	74
Appendix A: Switching from an Embedded to an External Database.....	75
Converting to an External Database.....	76

Introduction to this Guide

This chapter provides information about what is contained in the **Installation and Setup Guide**. This guide provides you with detailed instructions for installing the vFoglight Management Server in a Windows environment with an embedded MySQL database. It also provides information about the vFoglight documentation suite and Vizioncore.

This chapter contains the following sections:

About vFoglight.....	6
About this Guide	6
vFoglight Documentation Suite.....	6
Text Conventions.....	8
About Vizioncore Inc.....	9

About vFoglight

vFoglight is an application management solution that reduces or eliminates service disruptions to unify IT and the business. Unlike other solutions, it provides a correlated, 360 degree view of your applications from end user to database and from service levels to infrastructure—to source the root cause of every incident impacting your business and fix them quickly. vFoglight correlates data from multiple perspectives into a single version of the truth to provide deep insight into the service relationships that exist between end users, the business and infrastructure components. Its unique adaptive technology rapidly adjusts to change for improved application performance and service levels, reduced operational cost and risk, and enhanced visibility for all stakeholders.

About this Guide

This guide walks you through a vFoglight installation. Before you begin, ensure that your system and development environments are set up correctly. For more information, refer to the *vFoglight System Requirements and Platform Support Guide*.

This guide is organized as follows:

Chapter 1, Before Installing vFoglight — This chapter introduces vFoglight and outlines the steps you must take in order to assure a successful installation.

Chapter 2, Installing vFoglight — This chapter guides you through the installation process. It also provides information on the vFoglight directory structure, and how to adjust certain vFoglight settings to best suit your environment.

Chapter 3, Running the vFoglight Management Server — This chapter outlines how to start and stop the vFoglight Management Server, how to initialize the database, how to migrate data from an existing database, and how to log into vFoglight.

Appendix A, Switching from an Embedded to an External Database— This appendix describes how to migrate and reconfigure an embedded database used with the vFoglight Management Server to an external database.

vFoglight Documentation Suite

The vFoglight documentation suite is made up of the core documentation set plus documents set for advanced configurations. Documentation is provided in a combination of online help and PDF.

- **Online Help:** You can open online help by selecting the Help tab in the action panel.
- **PDF:** The *Getting Started Guide*, *What's New Guide*, *System Requirements and Platform Support Guide*, *Installation and Setup Guide set*, *Administration and Configuration Guide*, *vFoglight User Guide*, *Command-Line Reference Guide*, *Web Component Guide*, and *Web Component Tutorial*, are provided as PDF files. The PDF guides are included in the zip file downloaded from Vizioncore. Adobe® Reader® is required.

Core Documentation Set

The core documentation set consists of the following:

- *Release Notes* (PDF)
- *Getting Started Guide* (PDF)
- *What's New Guide* (PDF)
- *System Requirements and Platform Support Guide* (PDF)
- *Installation and Setup Guide set* (all in PDF format):
 - Installation and Setup Guide — *Installing on Windows with an Embedded MySQL Database*
 - Installation and Setup Guide — *Installing on Windows with an External MySQL Database*
 - Installation and Setup Guide — *Installing on Windows with an External Oracle Database*
- *Administration and Configuration Guide* (PDF and online help)
- *vFoglight User Guide* (PDF and online help)
- *Advanced Configuration Guide set* (all in PDF format):
 - *Command-Line Reference Guide* (PDF and online help)
 - *Web Component Guide* (PDF and online help)
 - *Web Component Tutorial* (PDF and online help)
 - *Web Component Reference* (online help)

Cartridge Documentation Sets

When you deploy a cartridge, the documentation set for the cartridge is installed. The online help for the cartridge is integrated automatically with the core vFoglight help. When you open the help, the name of the cartridge is displayed in a top level entry within the table of contents.

Some cartridges include additional PDF guides, which may be one or more of the following: a *Getting Started Guide*, a *Reference Guide*, an *Installation Guide*, or the online help as a *User Guide*.

Feedback on the Documentation

We are interested in receiving feedback from you about our documentation. For example, did you notice any errors in the documentation? Were any features undocumented? Do you have any suggestions on how we can improve the documentation? All comments are welcome. Please submit your feedback to the following email address:

info@vizioncore.com

Please do not submit Technical Support related issues to this email address.

Text Conventions

This section outlines an approach for using this guide, reviews the text conventions that are used, and summarizes the rest of the documentation set.

The following table summarizes how text styles are used in this guide:

Convention	Description
Code	Monospace text represents code, code objects, and command-line input. This includes: • Java language source code and examples of file contents • Classes, objects, methods, properties, constants, and events • HTML documents, tags, and attributes
<i>Variables</i>	Monospace-plus-italic text represents variable code or command-line objects that are replaced by an actual value or parameter.

Convention	Description
Interface	Bold text is used for interface options that you select (such as menu items) as well as keyboard commands.
<i>Files, components, and documents</i>	Italic text is used to highlight the following items: • Pathnames, file names, and programs • Figure captions • The names of other documents referenced in this guide

About Vizioncore Inc.

Vizioncore was formed in July 2002 as a consulting and software-development company with the mission to create easy-to-use software solutions that performed reliable and repeatable automation of datacenter functions specifically for the Citrix platform. A main corporate goal was to enable business partners to offer solutions that targeted real-world IT issues and provided the best possible installation and automation for their clients' systems.

Vizioncore's solutions have proved successful in organizations from small to mid-sized businesses to large enterprises, in a wide variety of vertical industries, including Financial Services, Government, Healthcare, Manufacturing, and High Tech. Vizioncore, Inc. can be found in offices around the globe and at www.vizioncore.com.

Contacting Dell

Note: If you do not have an active Internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell for sales, technical support, or customer service issues:

- 1 Visit <http://support.dell.com>.
- 2 Verify your country or region in the Choose A Country/Region drop-down menu at the bottom of the page.
- 3 Click Contact Us on the left side of the page. Note: Toll-free numbers are for use within the country for which they are listed.
- 4 Select the appropriate service or support link based on your need.
- 5 Choose the method of contacting Dell that is convenient for you.

Country (City)	Service Type	Area Codes, Local Numbers, and Toll-Free Numbers Web and E-Mail Addresses
International Access Code Country Code City Code		
Anguilla	Web Address E-Mail Address Technical Support., Customer Service, Sales	www.Dell.com/ai la-techsupport@dell.com toll-free: 800-335-0031
Antigua and Barbuda	Web Address E-Mail Address Technical Support., Customer Service, Sales	www.Dell.com.ag la-techsupport@dell.com 1-800-805-5924
Aomen	Technical Support Dell™ Dimension™, Dell Inspiron™, Dell Optiplex™, Dell Latitude™, and Dell Precision™ Servers and Storage	0800-105 0800-105
Argentina (Buenos Aires)	Web Address E-Mail Address for Desktop/ Portable Computers E-Mail Address for Servers and EMC® Storage Products Customer Service Technical Support Technical Support Services Sales	www.dell.com.ar la-techsupport@dell.com la_enterprise@dell.com toll-free: 0-800-444-0730 toll-free: 0-800-444-0733 toll-free: 0-800-444-0724 0-800-444-3355
Aruba	Web Address E-Mail Address Technical Support., Customer Service, Sales	www.Dell.com/aw la-techsupport@dell.com toll-free: 800-1578
Australia (Sydney)	Web Address Contact Dell Web Address Technical Support., Customer Service, Sales	support.ap.dell.com support.ap.dell.com/contactus 13DELL-133355
International Access Code: 0011 Country Code: 61 City Code: 2		

Austria (Vienna) International Access Code: 900 Country Code: 43 City Code: 1	Web Address	Support.euro.dell.com
	E-Mail Address	Tech_support_central_europe@dell.com
	Home/Small Business Sales	0820 240 530 00
	Home/Small Business Fax	0820 240 530 49
	Home/Small Business Customer Service	0820 240 530 14
	Home/Small Business Support	0820 240 530 17
	Preferred Accounts/Corporate Customer	0820 240 530 16
	Service Preferred Accounts/Corporate Customer	0820 240 530 17
Bahamas	Switchboard	0820 240 530 00
	Web Address	www.dell.com/bs
	E-Mail Address	la-techsupport@dell.com
Barbados	Technical Support., Customer Service, Sales	toll-free: 1-866-874-3038
	Web Address	www.dell.com/bb
	E-Mail Address	la-techsupport@dell.com
Belgium (Brussels)	Technical Support., Customer Service, Sales	1-800-534-3142
	Web Address	Support.euro.dell.com
	General Support	02 481 92 88
	General Support Fax	02 481 92 95
	Customer Service	02 713 15 65
	Corporate Sales	02 481 91 00
	Fax	02 481 91 99
Bolivia	Switchboard	02 481 91 00
	Web Address	www.dell.com/bo
	E-Mail Address	la_techsupport@dell.com
Brazil International Access Code: 00 Country Code: 55 City Code: 51	Technical Support., Customer Service, Sales	toll-free: 800-10-0238
	Web Address	www.dell.com/br
	E-Mail Address	BR_TechSupport@dell.com
	Customer Service and Tech Support	0800 970 3355
	Technical Support Fax	51 2104 5470
	Customer Service Fax	51 2104 5480
	Sales	0800 722 3498
British Virgin Islands	Technical Support, Customer Service, Sales	toll-free: 1-866-278-6820
Brunei Country Code: 673	Technical Support (Penang, Malaysia)	604 633 4966
	Customer Service (Penang, Malaysia)	604 633 4888
	Transaction Sales (Penang, Malaysia)	604 633 4955
Canada (North York, Ontario) International Access Code: 011	Online Order Status Web Address	www.dell.ca/ostatus
	AutoTech (automated Hardware and Warranty Support)	support.ca.dell.com
	Customer Service	toll-free:1-800-247-9362
	Home/Home Office	toll-free:1-800-847-4096
	Small Business	toll-free:1-800-906-3355
	Medium/Large Business, Government, Education	toll-free:1-800-387-5757
	Hardware Warranty Phone Support	
	Computers for Home/Home Office	toll-free:1-800-847-4096
	Computers for Small/Medium/Large Business	toll-free:1-800-387-5757
	Government	
	Printers, Projectors, Televisions, Handheld, Digital	1-877-335-5767
	Jukebox, and Wireless Sales	toll-free:1-800-999-3355
	Home and Home Office Sales	toll-free:1-800-387-5752
	Small Business	toll-free:1-800-387-5755
	Medium/Large Business, Government	1 866 440 3355
	Spare Parts and Extended Service	
Cayman Islands	E-Mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	1-877-262-5415

Chile (Santiago)	Web Address	www.dell.com/cl
Country Code: 56	E-Mail Address	la-techsupport@dell.com
City Code: 2	Sales and Customer Support	toll-free: 1230-020-4823
China (Xiamen)	Technical Support Web Address	support.dell.com.cn
Country Code: 86	Technical Support E-Mail Address	support.dell.com.cn/email
City Code: 592	Customer Service E-Mail Address	customer_cn@dell.com
	Technical Support Fax	592 818 14350
	Technical Support – Dimension and Inspiron	toll-free: 800 858 2969
	Technical Support – OptiPlex, Latitude and Dell Precision	toll-free: 800 858 0950
	Technical Support – Servers and Storage	toll-free: 800 858 0960
	Technical Support – Projectors, PDAs, Switches, Routers, etc	toll-free: 800 858 2920
	Technical Support – Printers	toll-free: 800 858 2311
	Customer Service	toll-free: 800 858 2060
	Customer Service Fax	592 818 1308
	Home and Small Business	toll-free: 800 858 2222
	Preferred Accounts Division	toll-free: 800 858 2557
	Large Corporate Accounts GCP	toll-free: 800 858 2055
	Large Corporate Accounts Key Accounts	toll-free: 800 858 2628
	Large Corporate Accounts North	toll-free: 800 858 2999
	Large Corporate Accounts North Government and Education	toll-free: 800 858 2955
	Large Corporate Accounts East	toll-free: 800 858 2020
	Large Corporate Accounts East Government and Education	toll-free: 800 858 2669
	Large Corporate Accounts Queue Team	toll-free: 800 858 2572
	Large Corporate Accounts South	toll-free: 800 858 2355
	Large Corporate Accounts West	toll-free: 800 858 2811
	Large Corporate Accounts Spare Parts	toll-free: 800 858 2621
Columbia	Web Address	www.dell.com/co
	E-Mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	01-800-915-4755
Costa Rica	Web Address	www.dell.com/cr
	E-Mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	0800-012-0231
Czech Republic (Prague)	Web Address	support.euro.dell.com
International Access	E-Mail Address	czech_dell@dell.com
Code: 00	Technical Support	22537 2727
Country Code: 420	Customer Service	22537 2707
	Fax	22537 2714
	Technical Fax	22537 2728
	Switchboard	22537 2711
Denmark (Copenhagen)	Web Address	Support.euro.dell.com
International Access	Technical Support	7023 0182
Code: 00	Customer Service – Relational	7023 0184
Country Code: 45	Home/Small Business Customer Service	3287 5505
	Switchboard – Relational	3287 1200
	Switchboard Fax – Relational	3287 1201
	Switchboard – Home/Small Business	3287 5000
	Switchboard Fax – Home/Small Business	3287 5001
Dominica	Web Address	www.dell.com/dm
	E-Mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	toll-free: 1-866-278-6821

Dominican Republic	Web Address	www.dell.com/do
	E-Mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	1-800-156-1588
Ecuador	Web Address	www.dell.com/ec
	E-Mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	
	(Calling from Quito)	toll-free: 999-119-877-655-3355
	Technical Support, Customer Service, Sales	
El Salvador	(Calling from Guayaquil)	toll-free: 1800-999-119-877-655-3355
	Web Address	www.dell.com/sv
	E-Mail Address	la-techsupport@dell.com
Finland (Helsinki) International Access Code: 990 Country Code: 358 City Code: 9	Technical Support, Customer Service, Sales	800-6132
	Web Address	support@euro.dell.com
	E-Mail Address	fi_support@dell.com
	Technical Support	0207 533 555
	Customer Service	0207 533 538
	Switchboard	0207 533 533
	Sales under 500 employees	0207 533 540
	Fax	0207 533 530
	Sales over 500 employees	0207 533 533
	Fax	0207 533 530
France (Paris) (Montpellier) International Access Code: 00 Country Code: 33 City Codes: (1) (4)	Web Address	Support.euro.dell.com
	Home and Small Business	
	Technical Support	0825 387 270
	Customer Service	0825 832 833
	Switchboard	0825 004 700
	Switchboard (calls from outside of France)	04 99 75 40 00
	Sales	0825 004 700
	Fax	0825 004 701
	Fax (calls from outside of France)	04 99 75 40 01
	Corporate	
	Technical Support	0825 004 719
	Customer Service	0825 338 339
	Switchboard	55 94 71 00
	Sales	01 55 94 71 00
Germany (Frankfurt) International Access Code: 00 Country Code: 49 City Code: 69	Web Address	support.euro.dell.com
	E-mail Address	tech_support_central_europe@dell.com
	Technical Support	069 9792-7200
	Home/Small Business Customer Service	0180-5-224400
	Global Segment Customer Service	069 9792-7320
	Preferred Accounts Customer Service	069 9792-7320
	Large Accounts Customer Service	069 9792-7320
	Public Accounts Customer Service	069 9792-7320
	Switchboard	069 9792-7000
Greece International Access Code: 00 Country Code: 49	Web Address	Support.euro.dell.com
	Technical Support	00800-44 14 95 18
	Gold Service Technical Support	00800-44 14 00 83
	Switchboard	2108129810
	Gold Service Switchboard	2108129811
	Sales	2108129800
Grenada	Fax	2108129812
	Web Address	www.dell.com/gd
	E-Mail Address	la-techsuppo@dell.com
	Technical Support, Customer Service, Sales	toll-free: 1-866-540-3355

Guatemala	Web Address	www.dell.com/gt
	E-Mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	1-800-999-0136
Guyana	E-Mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	toll-free: 1-877-270-4609
Hong Kong	Web Address	support.ap.dell.com
International Access Code: 001 Country Code: 852	Technical Support E-mail Address	support.dell.com.cn/email
	Technical Support - Dimension and Inspiron	00852-2969 3188
	Technical Support - OptiPlex, Latitude, and Dell Precision	00852-2969 3191
	Technical Support - Servers and Storage	00852-2969 3196
	Technical Support - Projectors, PDAs, Switches, Routers, etc .	00852-3416 0906
	Customer Service	00852-3416 0910
	Large Corporate Accounts	00852-3416 0907
	Global Customer Programs	00852-3416 0908
	Medium Business Division	00852-3416 0912
	Home and Small Business Division	00852-2969 3105
India	Dell Support Website	support.ap.dell.com
Portable and Desktop Support		
	Desktop Support E-mail Address	india_support_desktop@dell.com
	Portable Support E-mail Address	india_support_notebook@dell.com
	Phone Numbers	080-25068032 or 080-25068034 or your city STD code + 60003355 or toll-free: 1-800-425-8045
Server Support		
	E-mail Address	india_support_Server@dell.com
	Phone Numbers	080-25068032 or 080-25068034 or your city STD code + 60003355 or toll-free: 1-800-425-8045
Gold Support Only		
	E-mail Address	eec_ap@dell.com
	Phone Numbers	080-25068033 or your city STD code + 60003355 or toll-free: 1-800-425-9045
Customer Service		
	Home and Small Business	India_care_HSB@dell.com toll-free : 1800-4254051
	Large Corporate Accounts	India_care_REL@dell.com toll free : 1800-4252067
Sales		
	Large Corporate Accounts	1600 33 8044
	Home and Small Business	1600 33 8046

Ireland (Cherrywood)	Web Address	Support.euro.dell.com
International Access Code: 00	Technical Support	
Country Code: 353	E-mail Address	dell_direct_support@dell.com
City Code: 1	Business computers	1850 543 543
	Home computers	1850 543 543
	At Home Support	1850 200 889
	Sales	
	Home	1850 333 200
	Small Business	1850 664 656
	Medium Business	1850 200 646
	Large Business	1850 200 646
	E-mail Address	Dell_IRL_Outlet@dell.com
	Customer Service	
	Home and Small Business	204 4014
	Business (greater than 200 employees)	1850 200 982
	General	
	Fax/Sales fax	204 0103
	Switchboard	204 4444
	U.K. Customer Service (dealing with U.K. only)	0870 906 0010
	Corporate Customer Service (dial within U.K. only)	0870 907 4499
	U.K. Sales (dial within U.K. only)	0870 907 4000
Italy (Milan)	Web Address	Support.euro.dell.com
International Access Code: 00	Home and Small Business	
Country Code: 39	Technical Support	02 577 826 90
City Code: 02	Customer Service	02 696 821 14
	Fax	02 696 821 13
	Switchboard	02 696 821 12
	Corporate	
	Technical Support	02 577 826 90
	Customer Service	02 577 825 55
	Fax	02 575 035 30
	Switchboard	02 577 821
Jamaica	E-mail Address	ja-techsupport@dell.com
	Technical Support, Customer Service, Sales (dial from within Jamaica only)	1-800-440-920

Japan (Kawasaki) International Access Code: 001 Country Code: 81 City Code: 44	Web Address	support.jp.dell.com
	Technical Support - Dimension and Inspiron	toll-free: 0120-198-26
	Technical Support outside of Japan - Dimension and Inspiron	81-44-520-1435
	Technical Support - Dell Precision, OptiPlex, and Latitude	toll-free: 0120-198-433
	Technical Support outside of Japan - Dell Precision, OptiPlex, and Latitude	81-44-556-3894
	Technical Support - Dell PowerApp™, Dell PowerEdge™, Dell PowerConnect™, and Dell PowerVault™,	toll-free: 0120-198-498
	Technical Support outside of Japan - PowerApp, PowerEdge, PowerConnect, and PowerVault	81-44-556-4162
	Technical Support - Projectors, PDAs, Printers, Routers	toll-free: 0120-981-690
	Technical Support outside of Japan - Projectors, PDAs, Printers, Routers	81-44-556-3468
	Faxbox Service	044-556-3490
	24-Hour Automated Order Status Service	044-556-3801
	Customer Service	044-556-4240
	Business Sales Division - up to 400 employees	044-556-1465
	Preferred Accounts Division Sales - over 400 employees	044-556-3433
	Public Sales - government agencies, educational institutions, and medical institutions	044-556-5963
	Global Segment Japan	044-556-3469
	Individual User	044-556-1657
	Individual User Online Sales	044-556-2203
	Individual User Real Site Sales	044-556-4649
	Switchboard	044-556-4300
Korea (Seoul) International Access Code: 001 Country Code: 82 City Code: 2	Web Address	Support.ap.dell.com
	Technical Support, Customer Service	toll-free: 080-200-3800
	Technical Support - Dimension, PDA, Electronics, and Accessories	toll-free: 080-200-3801
	Sales	toll-free: 080-200-3600
	Fax	2194-6202
Latin America	Switchboard	2194-6000
	Customer Technical Support (Austin, Texas, U.S.A.)	512 728-4093
	Customer Service (Austin, Texas, U.S.A.)	512 728-3619
	Fax (Technical Support and Customer Service) (Austin, Texas, U.S.A.)	512 728-3883
	Sales (Austin, Texas, U.S.A.)	512 728-4397
	SalesFax (Austin, Texas, U.S.A.)	512 728-4600 or 512 728-3772
Luxemborg International Access Code: 00 Country Code: 352	Web Address	Support.euro.dell.com
	Support	3420808075
	Home/Small Business Sales	+32 (0)2 713 15 96
	Corporate Sales	26 25 77 81
	Customer Service	+32 (0)2 481 91 19
Macao Country Code: 83	Fax	26 25 77 82
	Technical Support	toll-free: 0800 105
	Customer Service (Xiamen, China)	34 160 910
	Transaction Sales (Xiamen, China)	29 693 115

Malaysia (Penang) International Access Code: 00 Country Code: 60 City Code: 4	Web Address	Support.ap.dell.com
	Technical Support - Dell Precision, OptiPlex, and Latitude	toll-free: 1800 880 193
	Technical Support - Dimension, Inspiron, and Electronics and Accessories	toll-free: 1800 881 306
	Technical Support - PowerApp, PowerEdge, PowerConnect, and PowerVault	toll-free: 1800 881 386
	Customer Service	toll-free: 1800 881 306 (option 6)
	Transaction Sales	toll-free: 1800 888 202
Mexico International Access Code: 00 Country Code: 52	Corporate Sales	toll-free: 1800 888 213
	Web Address	www.dell.com/mx
	E-mail Address	la-techsupport@dell.com
	Customer Technical Support	001-877-384-8979 or 001-877-269-3383
	Sales	50-81-8800 or 01-800-888-3355
	Customer Service	001-877-384-8979 or 001-877-269-3383
Montserrat	Main	50-81-8800 or 01-800-888-3355
	E-mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	Toll-free: 1-866-278-6822
Netherlands Antilles Netherlands (Amsterdam) International Access Code: 00 Country Code: 31 City Code: 20	E-mail Address	la-techsupport@dell.com
	Web Address	support.euro.dell.com
	Technical Support	020 674 45 00
	Technical Support Fax	020 674 47 66
	Home/Small Business Customer Service	020 674 42 00
	Relational Customer Service	020 674 43 25
	Home/Small Business Sales	020 674 55 00
	Relational Sales	020 674 50 00
	Home/Small Business Sales Fax	020 674 47 75
	Relational Sales Fax	020 674 47 50
	Switchboard	020 674 50 00
	Switchboard Fax	020 674 47 50
New Zealand International Access Code: 00 Country Code: 64	Web Address	Support.ap.dell.com
	E-mail Address	Support.ap.dell.com/contactus
	Technical Support, Customer Service, Sales	0800 441 567
Nicaragua	Web Address	www.dell.com/ni
	E-mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	001-800-220-1377
Norway (Lysaker) International Access Code: 00 Country Code: 47	Web Address	Support.euro.dell.com
	Technical Support	671 16882
	Relational Customer Service	671 17575
	Home/Small Business Customer Service	231 62298
	Switchboard	671 16800
Panama	Fax Switchboard	671 16865
	Web Address	www.dell.com/pa
	E-mail Address	la-techsupport@dell.com
Peru	Technical Support, Customer Service, Sales	011-800-507-1264
	Web Address	www.dell.com/pe
	E-mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	0800-50-669

Poland (Warsaw) International Access Code: 011 Country Code: 48 City Code: 22	Web Address	support.euro.dell.com
	E-mail Address	pl_support_tech@dell.com
	Customer Service Phone	57 95 700
	Customer Service	57 95 999
	Sales	57 95 999
	Customer Service Fax	57 95 806
	Reception Desk Fax	57 95 998
Portugal International Access Code: 00 Country Code: 351	Switchboard	57 95 999
	Web Address	Support.euro.dell.com
	Technical Support	707200149
	Customer Service	800 300 413
	Sales	800-300-410 or 800-300 -411 or 800-300-412 or 21-422-07-10
	Fax	21-424-01-12
	Web Address	www.dell.com/pr
Puerto Rico	E-mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	1-877-537-3355
	Web Address	www.dell.com/kn
St. Kitts and Nevis	E-mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	toll-free: 1-866-540-3355
	Web Address	www.dell.com/lc
St. Lucia	E-mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	toll-free: 1-866-464-4352
	Web Address	www.dell.com/vc
St. Vincent and the Grenadines	E-mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	toll-free: 1-866-464-4353
	Web Address	
Singapore International Access Code: 005 Country Code: 65	NOTE: The phone numbers in this section should be called from within Singapore or Malaysia only.	
	Web Address	support.ap.dell.com
	Technical Support - Dimension, Inspiron, and Electronics and Accessories	toll-free: 1 800 394 7430
	Technical Support - OptiPlex, Latitude, and Dell Precision	toll-free: 1 800 394 7488
	Technical Support - PowerApp, PowerEdge, PowerConnect, and PowerVault	toll-free: 1 800 394 7478
	Customer Service	toll-free: 1 800 394 7430 (option 6)
	Transaction Sales	toll-free: 1 800 394 7412
	Corporate Sales	toll-free: 1 800 394 7419
	Web Address	support.euro.dell.com
	E-mail Address	czech_dell@dell.com
Slovakia (Prague) International Access Code: 00 Country Code: 421	Technical Support	02 5441 5727
	Customer Service	420 22537 2707
	Fax	02 5441 8328
	Tech Fax	02 5441 8328
	Switchboard (Sales)	02 5441 8328
		02 5441 7585
	Web Address	support.euro.dell.com
South Africa (Johannesburg) International Access Code: 09/091 Country Code: 27 City Code: 11	E-mail Address	dell_za_support@dell.com
	Gold Queue	011 709 7713
	Technical Support	011 709 7710
	Customer Service	011 709 7707
	Sales	011 709 7700
	Web Address	

Spain (Madrid)	Web Address	Support.euro.com
International Access	Home and Small Business	
Code: 00	Technical Support	902 100 130
Country Code: 34	Customer Service	902 118 540
City Code: 91	Sales	902 118 541
	Switchboard	902 118 541
	Fax	902 118 539
	Corporate	
	Technical Support	902 100 130
	Customer Service	902 115 236
	Switchboard	91 722 92 00
	Fax	91 722 95 83
Sweden (Upplands Vasby)	Web Address	support.euro.dell.com
International Access	Technical Support	08 590 05 199
Code: 00	Relational Customer Service	08 590 05 642
Country Code: 46	Home/Small Business Customer Service	08 587 70 527
City Code: 8	Employee Purchase Program (EPP) Support	020 140 14 44
	Technical Support Fax	08 590 05 594
Switzerland (Geneva)	Web Address	Support.euro.dell.com
International Access	E-mail Address	Tech_support_central_Europe@dell.com
Code: 00		
Country Code: 41	Technical Support – Home and Small Business	0844 811 411
City Code: 22	Technical Support – Corporate	0844 822 844
	Customer Service – Home and Small Business	0848 802 202
	Customer Service – Corporate	0848 821 721
	Fax	022 799 01 90
	Switchboard	022 799 01 01
Taiwan	Web Address	support.ap.dell.com
International Access	E-mail Address	support.dell.com.cn/email
Code: 002	Technical Support - OptiPlex, Latitude, Inspiron, Dimension, and Electronics and Accessories	toll-free: 0080 186 1011
Country Code: 886	Technical Support - Servers and Storage	toll-free: 0080 160 1256
	Customer Service	toll-free: 0080 160 1250 (option 5)
	Transaction Sales	toll-free: 0080 165 1228
	Corporate Sales	toll-free: 0080 165 1227
Thailand	Web Address	Support.ap.dell.com
International Access	Technical Support (OptiPlex, Latitude, and Dell Precision)	toll-free: 1800 0060 07
Code: 001		
Country Code: 66	Technical Support (PowerApp, PowerEdge, PowerConnect, and PowerVault)	toll-free: 1800 0600 09
	Customer Service	toll-free: 1800 006 007 (option 7)
	Corporate Sales	toll-free: 1800 006 009
	Transaction Sales	toll-free: 1800 006 006
Trinidad/Tobago	Web Address	www.dell.com/ff
	E-mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	toll-free: 1-888-799-5908
Turks and Caicos Islands	Web Address	www.dell.com/tc
	E-mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	toll-free: 1-877-441-4735

U.K.(Bracknell)	Web Address	upport.euro.dell.com
	E-mail Address	dell_direct_support@dell.com
International Access Code: 00	Customer Service Website	support.euro.dell.com/uk/en/ECare/form/home.asp
Country Code: 44	Sales	
City Code: 1344	Home and Small Business Sales	0870 907 4000
	Corporate/Public Sector Sales	01344 860 456
	Customer Service	
	Home and Small Business	0870 906 0010
	Corporate	01344 373 185
	Preferred Accounts (500-5000 employees)	0870 906 0010
	Global Accounts	01344 373 186
	Central Government	01344 373 196
	Local Government & Education	01344 373 199
	Health	01344 373 194
	Technical Support	
	Corporate/Preferred Accounts/PCA (1000+ employees)	0870 908 0500
	Other Dell Products	0870 353 0800
	General	
	Home and Small Business Fax	0870 907 4006
Uruguay	Web Address	www.dell.com/uy
	E-mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	toll-free: 000-413-598-2521
U.S.A. (Austin, Texas)	Automated Order-Status Service	toll-free: 1-800-433-9014
	AutoTech (portable and desktop computers)	toll-free: 1-800-247-9362
International Access Code: 011	Hardware and Warranty Support (Dell TV, Printers, and Projectors) for Relationship customers	toll-free: 1-877-459-7298
Country Code: 1	Consumer (Home and Home Office) Support for Dell products	toll-free: 1-800-624-9896
	Customer Service	toll-free: 1-800-624-9897
	Employee Purchase Program (EPP) Customers	toll-free: 1-800-695-8133
	Financial Services Web Address	www.dellfinancialservices.com
	Financial Services (lease/loans)	toll-free: 1-877-577-3355
	Financial Services (Dell Preferred Accounts [DPA])	toll-free: 1-800-283-2210
	Business	
	Customer Service	toll-free: 1-800-624-9897
	Employee Purchase Program (EPP)	toll-free: 1-800-695-8133
	Customer s Support for printers, projectors, PDAs, and MP3 players	toll-free: 1-877-459-7298
	Public (government, education, and healthcare)	
	Customer Service and Support	toll-free: 1-800-456-3355
	Employee Purchase Program (EPP) Customers	toll-free: 1-800-695-8133
	Dell Sales	toll-free: 1-800-289-3355 or toll-free: 1-800-879-3355
	Dell Outlet Store (Dell refurbished computers)	toll-free: 1-888-798-7561
	Software and Peripherals Sales	toll-free: 1-800-671-3355
	Spare Parts Sales	toll-free: 1-800-357-3355
	Extended Service and Warranty Sales	toll-free: 1-800-247-4618
	Fax	toll-free: 1-800-727-8320
	Dell Services for the Deaf, Hard-of-Hearing, or Speech-Impaired	toll-free: 1-877-DELLTTY (1-877-335-5889)

U.S. Virgin Islands	Web Address	www.dell.com/vi
	E-mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	toll-free: 1-877-702-4360
Venezuela	Web Address	www.dell.com/ve
	E-mail Address	la-techsupport@dell.com
	Technical Support, Customer Service, Sales	0800-100-4752

Before Installing vFoglight

This chapter provides you with setup information and provides an initial overview of installing vFoglight or upgrading your vFoglight installation.

This chapter contains the following sections:

What is vFoglight?	24
Planning Your Installation or Upgrade	25
Hardware Requirements and Guidelines	28

What is vFoglight?

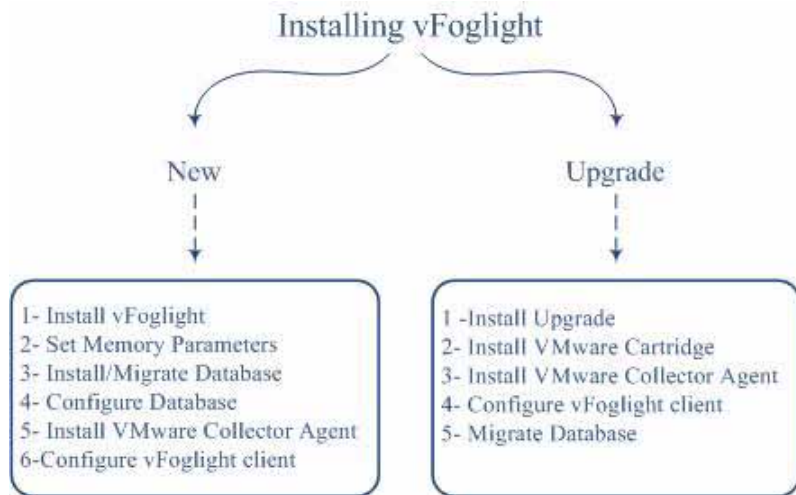
vFoglight is a powerful system and application performance management solution that detects problems and alerts information technology managers. vFoglight has the ability to dynamically create unique data schemas based on any data from any source. Rather than store data based on how it is collected by the agents, vFoglight organizes data based on your perception of the data. Using vFoglight, application and information technology managers can understand user service levels and notify stakeholders when those service levels are violated.

vFoglight helps you to:

- Focus on system and application availability and performance.
- Observe system capacity and efficiency.
- Identify and bridge gaps between business and information technology staff.
- Highlight historical information for planning and reporting.

Planning Your Installation or Upgrade

Before you install or upgrade vFoglight, you need to review the components that you are going to install or upgrade. Ensure that you have the necessary information, such as port numbers and server names, and the locations where you are going to install the components.



The following list summarizes the main steps involved in installing (or upgrading) and configuring vFoglight:

Step 1: Install the vFoglight Management Server (or upgrade your installation to version 3.0.1) and configure the Management Server. The Management Server is the data collection and processing server.

Step 2: Install the database (or upgrade it, if you are upgrading your Management Server installation to version 3.0.1) and configure the database. You can choose to use an embedded database or an external database. The instructions in this guide are for external database installations only.

Step 3: Install and configure the VMware cartridge. A cartridge contains one or more cartridge components, such as agents for deployment, communication capabilities, modifications to the way that data is transformed or handled, rules, reports, and views.

Note The VMware cartridge is installed automatically with vFoglight, but can be upgraded separately from the application.

Step 4: Install and configure Agents. Agents are deployed on VirtualCenters in your monitored environment and send data to the vFoglight Management Server. If your environment includes only one VirtualCenter, the installation of the VMware Infrastructure Agent is automated by the vFoglight installer. If your environment includes multiple VirtualCenters, the installation of the first VMware Infrastructure Agent will be automated, but the remaining agents must be installed manually.

Using Embedded Databases

vFoglight offers the option to use MySQL (5.0.27) as an embedded database. The lifecycle of the embedded database matches that of the vFoglight Management Server. If the Management Server is stopped or started, the embedded database is automatically stopped or started.

Licensing

This section provides information about licensing for vFoglight.

Providing a License File During Installation

You can install a license file during the installation process. See “[Step 9: Add vFoglight License File](#)” on page 52 in [Installing vFoglight](#).

Managing a License After Installation

You can also manage licenses after installing vFoglight. There are three ways of providing a license file to the Management Server after installation.

Manual Process

- Move an existing license file into the `<vfoglight_home>\license` folder.

Using the vFoglight Administration module

- Upload a license file using the vFoglight Administration module. See the *Administration and Configuration Guide* for instructions.

Using the Command Line

- 1 Start the vFoglight Management Server.
- 2 Ensure that `JAVA_HOME` is set.
- 3 If you have not already done so, extract the file *fglcmd.zip* in `<vfoglight_home>\tools`.
- 4 Upload a license by navigating to `<vfoglight_home>\tools` and entering the following commands:

```
fglcmd -usr <username> -pwd <password> -cmd license:import -f <license-file>
fglcmd -usr <username> -pwd <password> -cmd license:list
fglcmd -usr <username> -pwd <password> -cmd license:remove -serial <serial>
```

Note The commands listed above assume that you are using a default port=8080 and a localhost. If you are not running with these default values, use the following options to indicate server and port:

```
-prt <xx> -srv <servername>
```

Hardware Requirements and Guidelines

The hardware requirements to run vFoglight can vary widely, based on a number of factors, including:

- The number and type of agents that are being used
- The persistence and data-rollup policies
- Agent configuration settings

You should not consider doing a production implementation without conducting a proper scoping and sizing exercise with a qualified Vizioncore representative. You can arrange for a sizing analysis by contacting your Vizioncore Sales Representative. At a minimum, you will be required to provide hardware matching the specifications below.

Installation Recommendations

Running a vFoglight server requires:

- The vFoglight Management Server
- The vFoglight database repository

While these components can be installed on a single tier or on multiple tiers, it is critical to realize that the management server and database repository will require separately dedicated resources to support them. In order to help facilitate sizing, the resources required to support each component are addressed separately. They can either be summed to support a single-tier installation, or treated independently as the requirements for each server in a two-tier installation.

Hardware Requirements

For the current single- and multi-tier hardware requirements, consult the *vFoglight System Requirements and Platform Support Guide*.

Installing vFoglight

The vFoglight 3.0.1 installer allows you either to install a new instance of the vFoglight Management Server or to upgrade an existing installation of a vFoglight 3.x vFoglight Service Manager.

This chapter contains the following sections:

Preparing to Install.....	30
Installing a New Version of the vFoglight Management Server	30
Installing the vFoglight Management Server - Standard Install Option	31
Installing the vFoglight Management Server - Custom Install Option.....	44
Upgrading the vFoglight Management Server	61
Installed Directories.....	61
vFoglight Settings	63
Uninstalling vFoglight	67

Note The vFoglight Management Server should be installed on a dedicated physical machine.

Preparing to Install

You will need the following to install vFoglight:

- A machine to host the vFoglight Management Server. The vFoglight Service Manager should run on a dedicated machine because it must process and store large volumes of data.
- Administrator or root access to all machines requiring a vFoglight agent.
- An administrator password for vFoglight. The user name *vfoglight* and the default password for this account can initially be used to log in to the consoles and use command-line options with administrator privileges. Vizioncore recommends that you change the default password for this account.

Installing a New Version of the vFoglight Management Server

Once all system requirements are in place you are ready to install the vFoglight Management Server. The installer prompts you to input data, and provides you with progress feedback during the installation process.

The vFoglight installer offers two installation options:

- **Standard** - This option accepts all of the installer defaults, and installs an embedded SQL database only. To use this option, follow the instructions in [“Installing the vFoglight Management Server - Standard Install Option”](#) on page 31.
- **Custom** - This option allows you to modify the installer defaults, and to choose an external database type. To use this option, following the instructions in [“Installing the vFoglight Management Server - Custom Install Option”](#) on page 44.

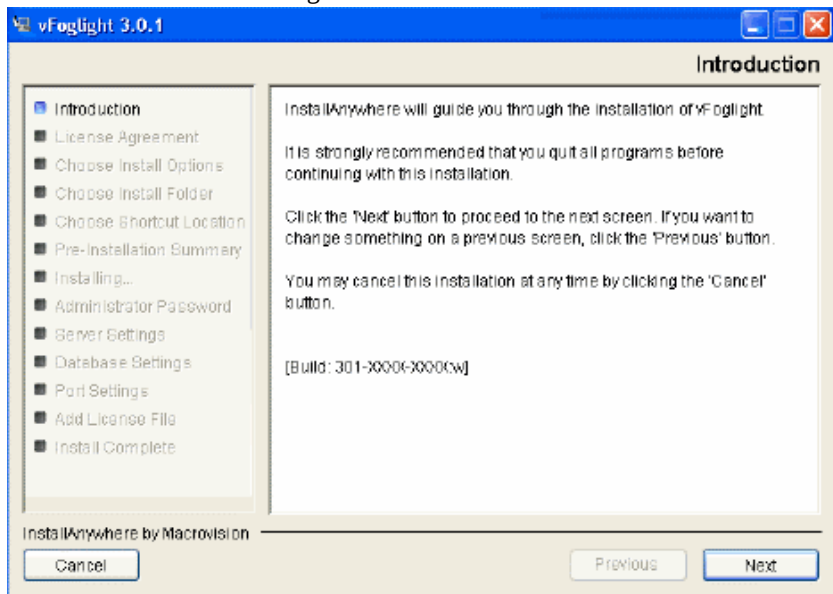
The vFoglight installation process consists of the same basic steps for all platforms. For specific platform customizations, see [“Installed Directories”](#) on page 61.

Installing the vFoglight Management Server - Standard Install Option

Start the installation process by initiating the executable included on the vFoglight install media. Each installation screen includes a **Previous** button, allowing you to go back and adjust the information you have entered.

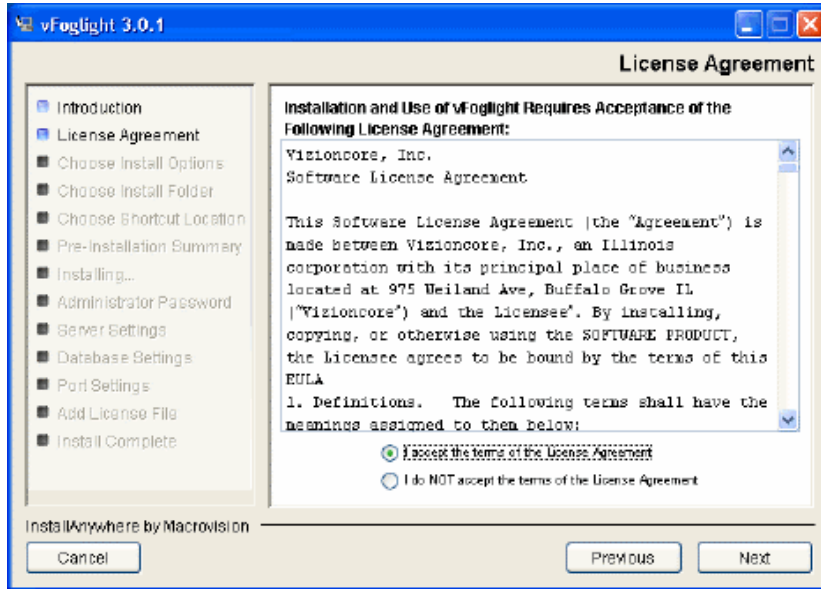
Step 1: Introduction

The Introduction screen provides an overview of the mechanics of the installation interface. Click **Next** after reading the contents of this screen.



Step 2: License Agreement

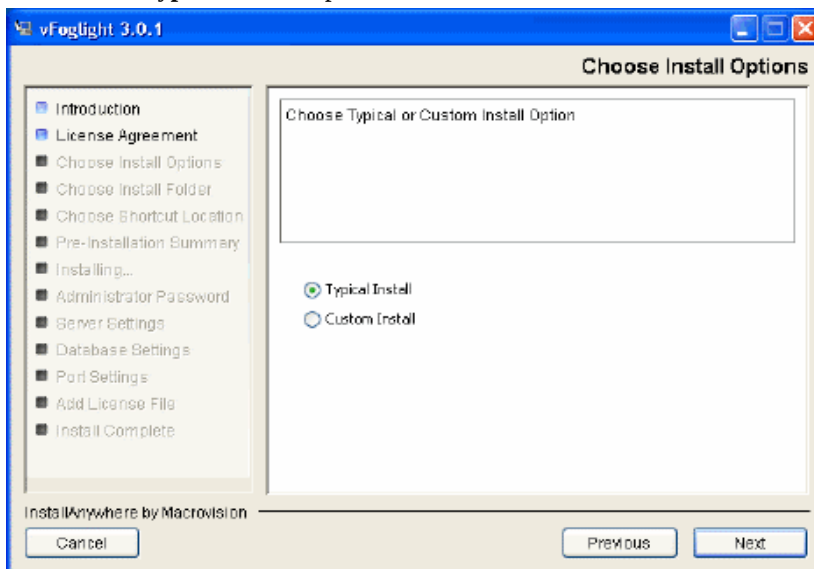
- 1 Read through the License Agreement statement, and accept or decline the terms of the license agreement.



- 2 If you selected **I accept the terms of the License Agreement**, click **Next**.

Step 3: Select Installation

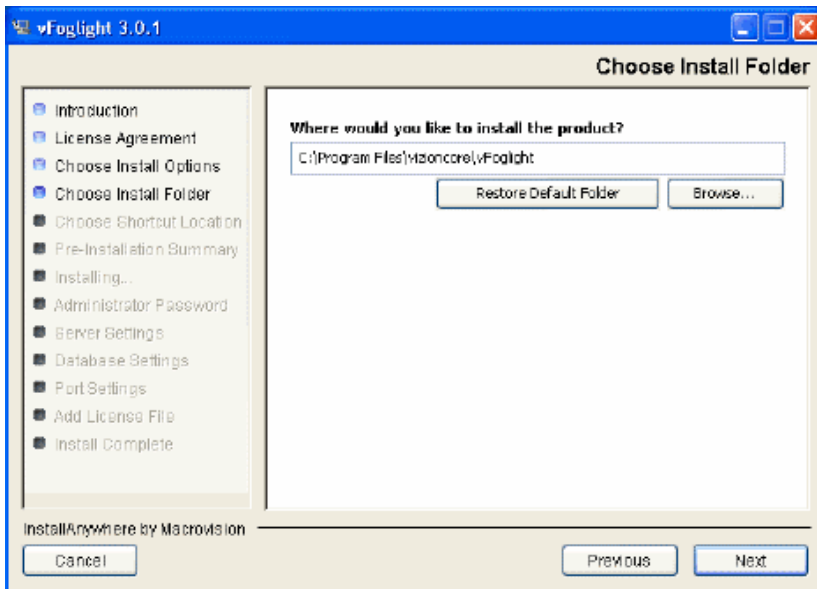
- 1 Choose the **Typical Install** option.



- 2 Click **Next**.

Step 4: Installing vFoglight 3.0.1

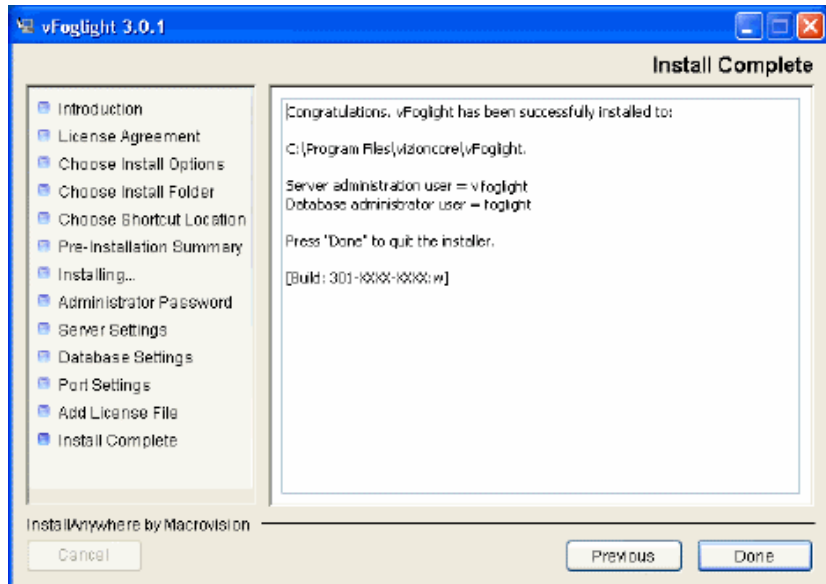
- 1 Choose the location where you want to install vFoglight. You can accept the default location *C:\Vizioncore\vFoglight* or click the **Browse** button to navigate to another location.



- 2 Click **Next**.

Step 5: Install Complete

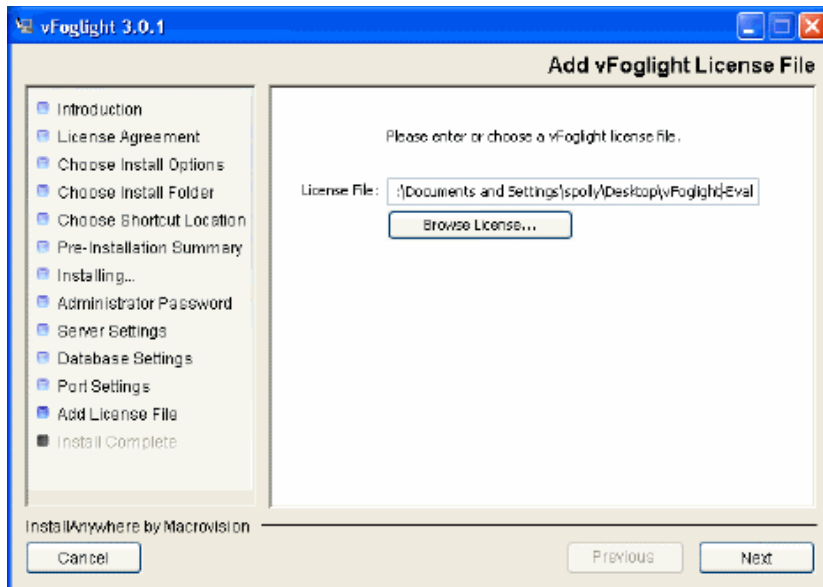
- 1 Click **Done** to complete the installation process.



Step 6: Add vFoglight License File

- 1 Specify the path to the vFoglight license file in the **License File** field, or browse to a license file by clicking **Browse License**.
Alternatively, you can provide a license file to the vFoglight Management Server after the installation is complete. To do so, leave the **License File** field blank and proceed to [step 2](#).
- 2 Click **Next**.

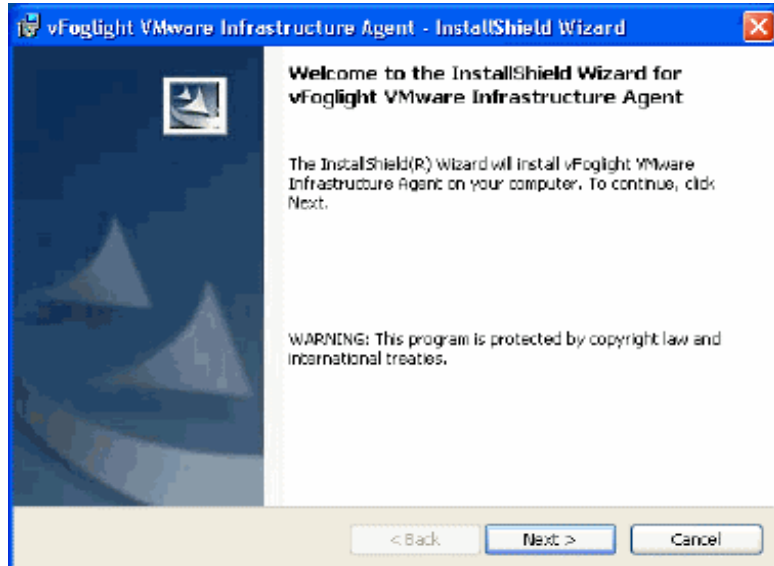
Note If you left the **License File** field blank, an Invalid License dialog appears. Click **Skip** in this dialog if you would like to add a license file after installing vFoglight.



The Typical Installation procedure now takes you through the installation of the vFoglight VMware Infrastructure Agent components.

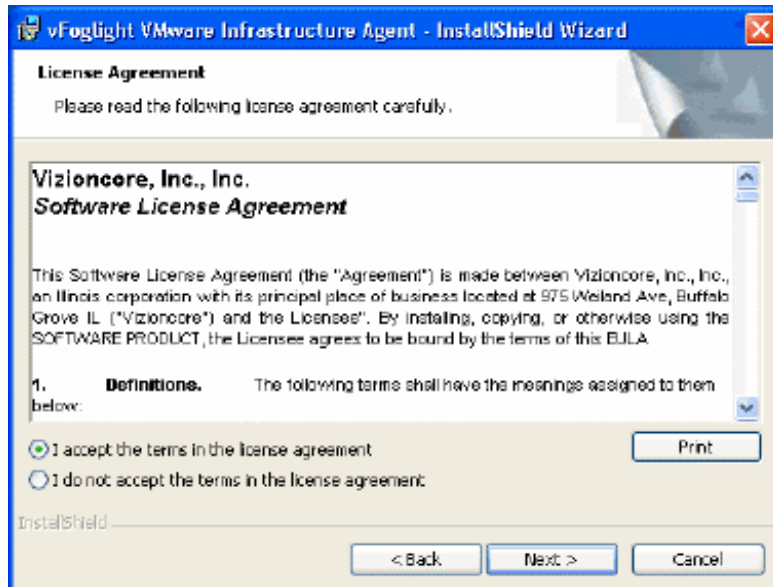
Step 7: InstallShield Wizard Welcome Screen

The Welcome screen for the VMware Infrastructure Agent InstallShield Wizard explains the purpose of the InstallShield Wizard. Click **Next** after reading the contents of this screen.



Step 8: License Agreement

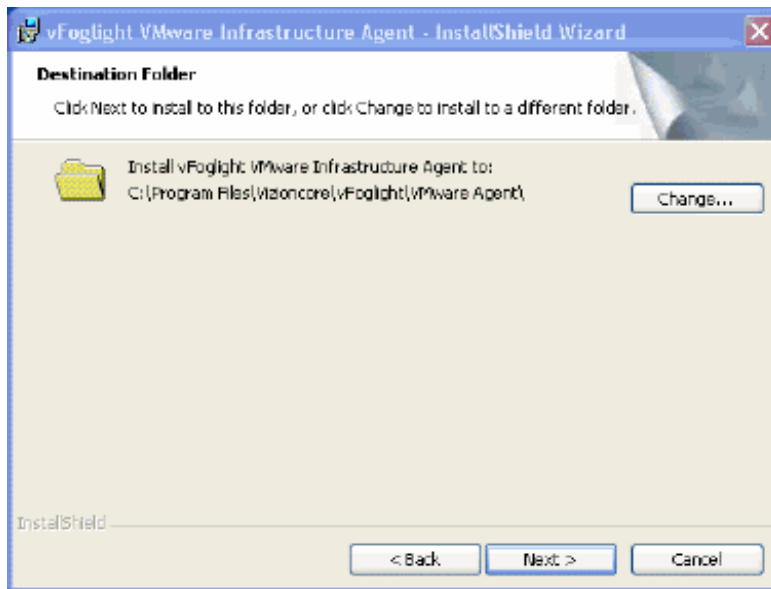
- 1 Read through the VMware Infrastructure Agent License Agreement statement, and accept or decline the terms.



- 2 If you selected **I accept the terms in the License Agreement**, click **Next**.

Step 9: Destination Folder

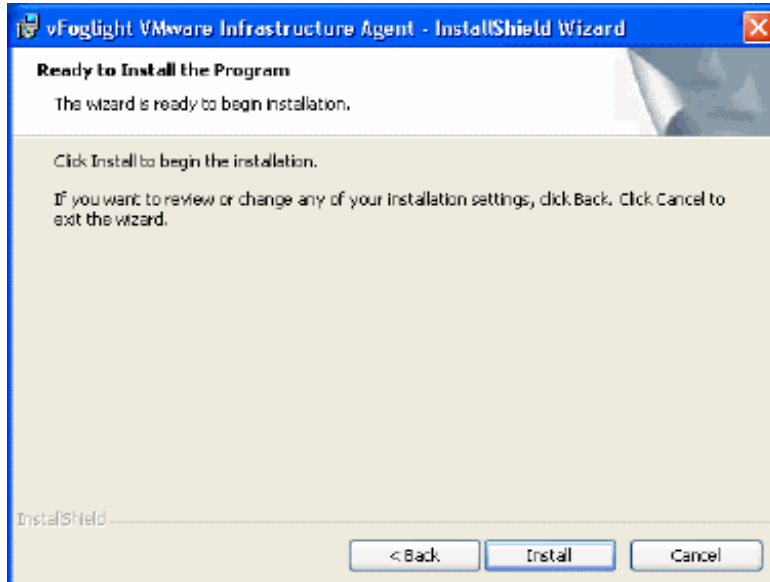
- 1 Choose the location where you want to install the VMware Infrastructure Agent components. You can accept the default location *C:\Program Files\Visioncore\VFoglight\VMware Agent* or click on the **Change** button to navigate to another location.



- 2 Click **Next**.

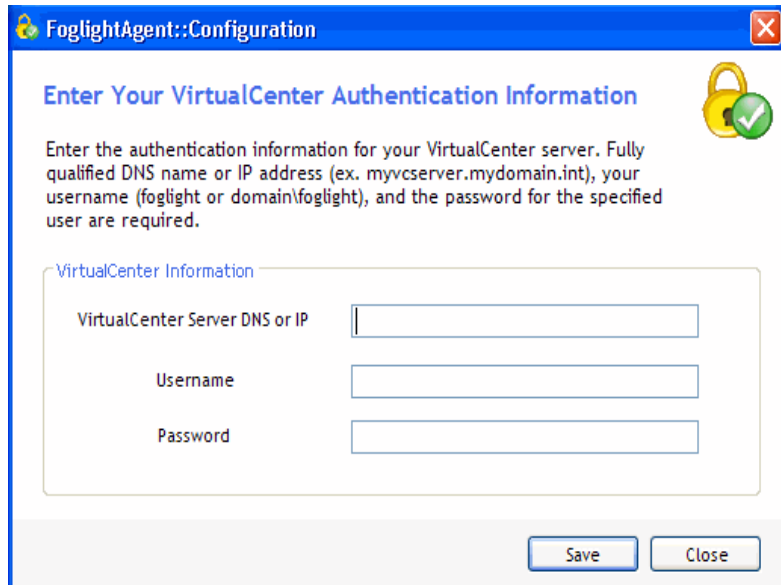
Step 10: VMware Infrastructure Agent Install Screen

The Agent Install screen is displayed. Click **Install**.



Step 11: VirtualCenter Authentication

- 1 On the VirtualCenter Authentication Information screen, enter the VirtualCenter Server name or IP Address.
- 2 Enter VirtualCenter Server Username and Password credentials that will provide you with access to the VMware Virtual Infrastructure Client.

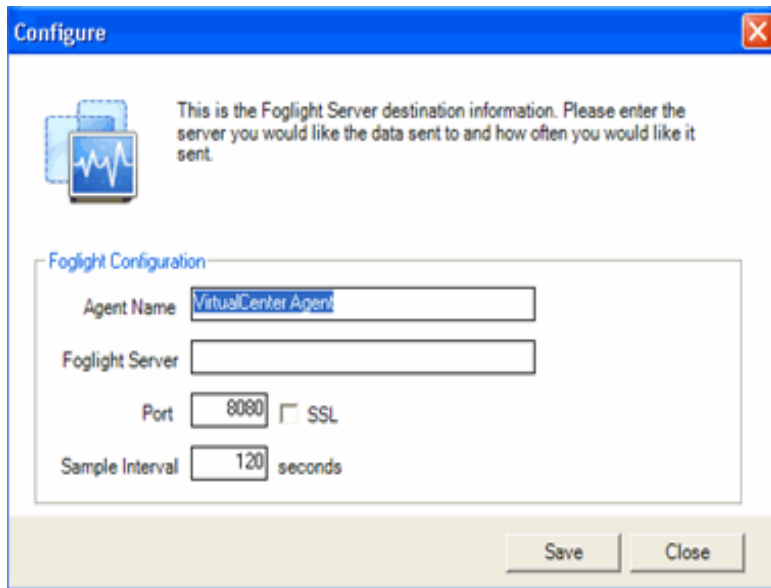


The screenshot shows a Windows-style dialog box titled "FoglightAgent::Configuration". Inside, there's a section titled "Enter Your VirtualCenter Authentication Information" with a lock icon and a green checkmark. Below this, a text box explains: "Enter the authentication information for your VirtualCenter server. Fully qualified DNS name or IP address (ex. myvcserver.mydomain.int), your username (foglight or domain/foglight), and the password for the specified user are required." Underneath, a box labeled "VirtualCenter Information" contains three input fields: "VirtualCenter Server DNS or IP", "Username", and "Password". At the bottom right are "Save" and "Close" buttons.

- 3 Click Save to have your entries validated.
- 4 On the **Credentials Entered are Valid!** dialog, click **OK**.

Step 12: vFoglight Server Destination

- 1 On the vFoglight Server Destination Information screen, enter the agent name as you want it to be displayed in vFoglight.
- 2 Enter the vFoglight Server name or IP address. This is the name or IP of the vFoglight Management Server.
- 3 Enter the port number of the port that the vFoglight Server uses for HTTP traffic. The default is 8080.
- 4 If this port requires SSL, check the SSL check box.
- 5 Enter a Sample Interval time in seconds. If you enter a lower interval, you could encounter performance problems while gaining little or nothing in terms of the quality of your data. If you enter an interval that is too high, you may not receive data often enough for it to be of much value.



The screenshot shows a 'Configure' dialog box with a blue title bar and a close button (X) in the top right corner. Inside the dialog, there is a small icon of a computer monitor with a pulse line. To the right of the icon, the text reads: 'This is the Foglight Server destination information. Please enter the server you would like the data sent to and how often you would like it sent.'

Below this text is a section titled 'Foglight Configuration' which contains several input fields and a checkbox:

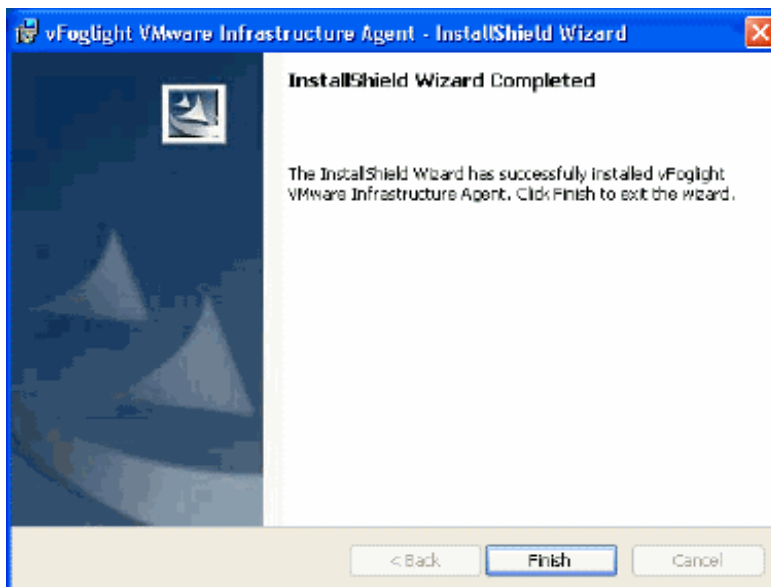
- 'Agent Name' with a text box containing 'VirtualCenter Agent'.
- 'Foglight Server' with an empty text box.
- 'Port' with a text box containing '8080' and an unchecked 'SSL' checkbox.
- 'Sample Interval' with a text box containing '120' followed by the word 'seconds'.

At the bottom right of the dialog, there are two buttons: 'Save' and 'Close'.

- 6 Click **Save** to have your entries validated.

Step 13: InstallShield Wizard Completed

Click Finished to complete the VMware Infrastructure Agent components installation.



The services of the agent components start automatically after the installation is complete.

Next Steps

If you did not install a license in Step 6, follow the instructions in “[Managing a License After Installation](#)” on page 27 to provide a license file to the vFoglight Management Server after installation.

If you need to import and initialize your database, refer to the procedures in “[Migrating Data from an Existing Database](#)” on page 70.

Start the vFoglight Management Server by following the instructions in “[Starting and Stopping the vFoglight Management Server](#)” on page 71.

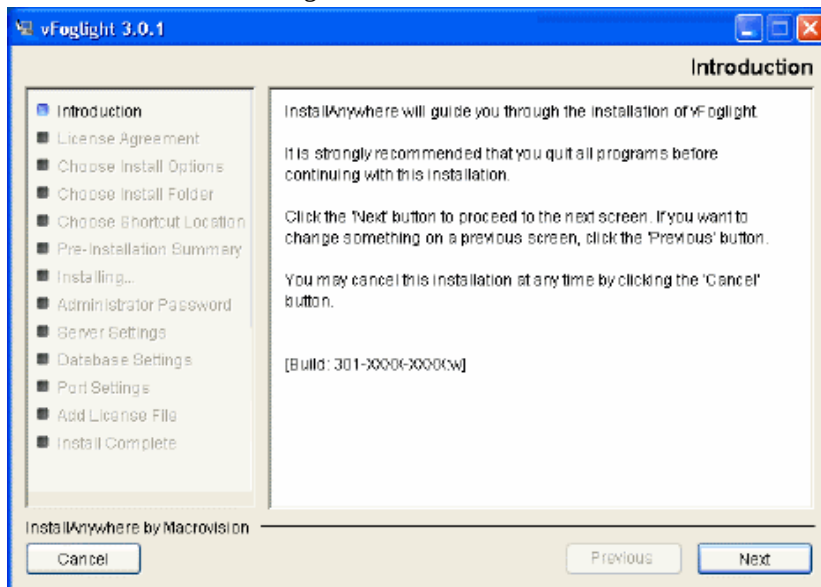
To log into the vFoglight Console, refer to “[Logging in to the vFoglight Browser Interface](#)” on page 73.

Installing the vFoglight Management Server - Custom Install Option

Start the installation process by initiating the executable included on the vFoglight install media. Each installation screen includes a **Previous** button, allowing you to go back and adjust the information you have entered.

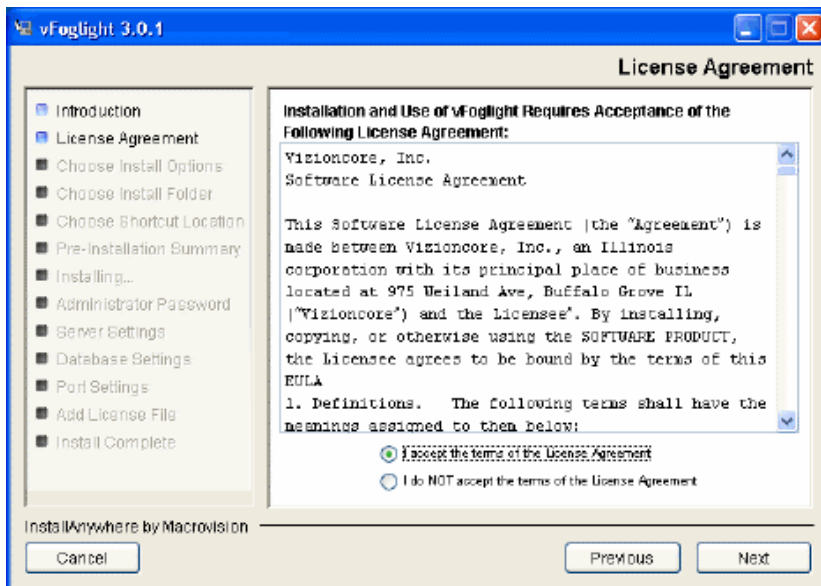
Step 1: Introduction

The Introduction screen provides an overview of the mechanics of the installation interface. Click **Next** after reading the contents of this screen.



Step 2: License Agreement

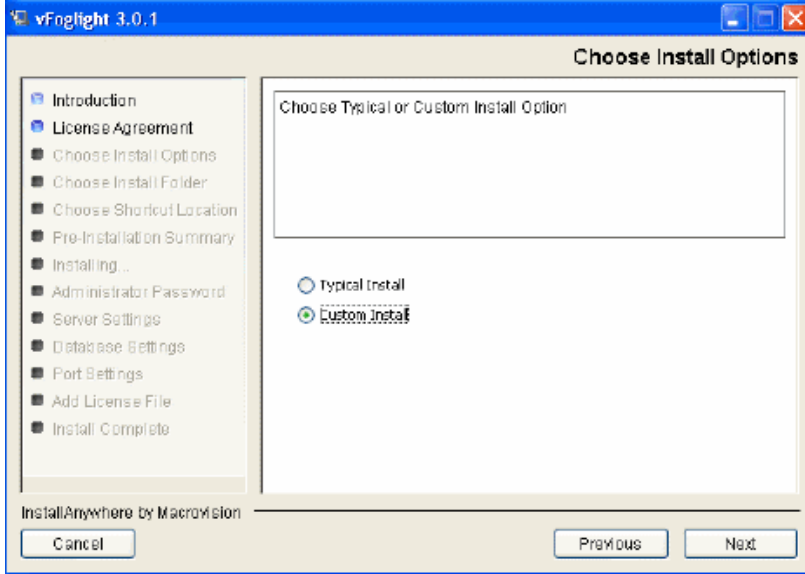
- 1 Read through the License Agreement statement, and accept or decline the terms of the license agreement.



- 2 If you selected **I accept the terms of the License Agreement**, click **Next**.

Step 3: Select Installation

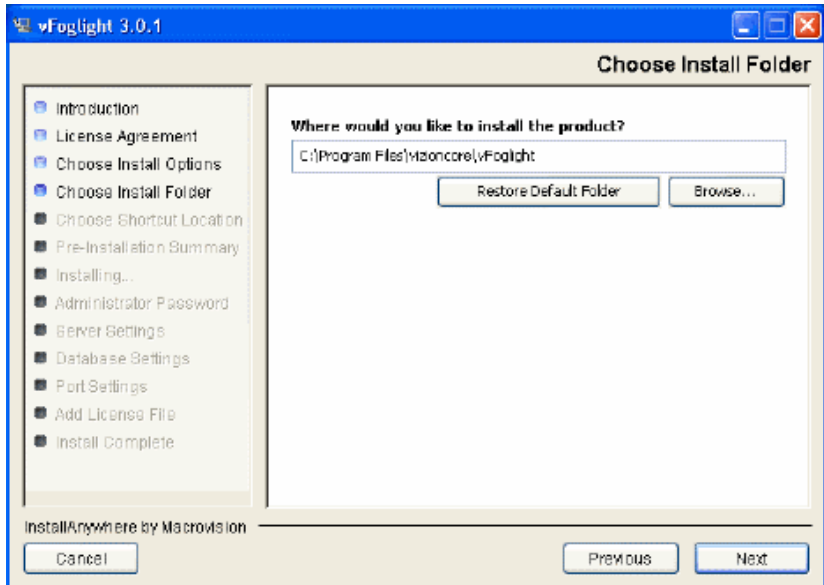
- 1 Choose the **Custom Install** option.



- 2 Click **Next**.

Step 4: Choose Install Folder

- 1 Choose the location where you want to install vFoglight. You can accept the default location `C:\Vizioncore\vFoglight` or click the **Browse** button to navigate to another location.



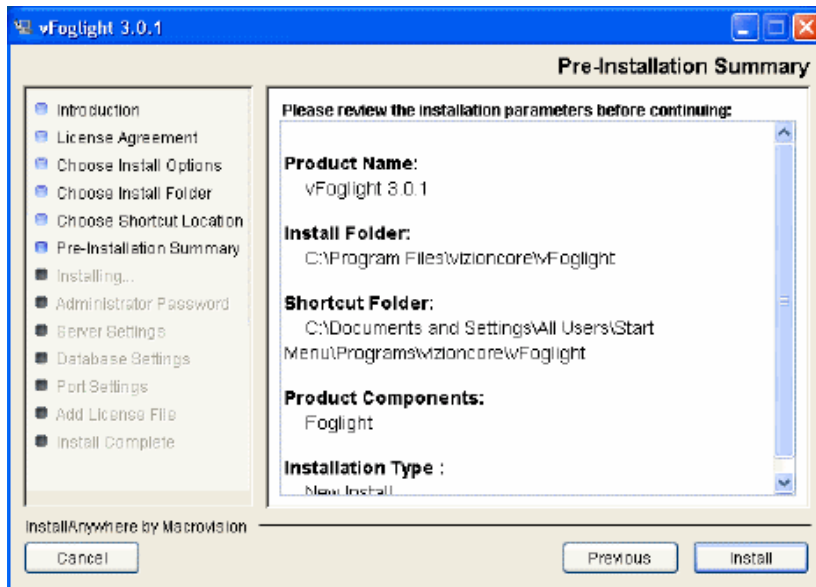
- 2 Click **Next**.

Step 5: Pre-Installation Summary

- 1 Review the installation information.
- 2 If you are satisfied with the parameters of your installation, click **Install**.

To make changes to the installation parameters click **Previous**.

Note As shown below, the installation type (New Install) is displayed on this screen. If you wanted to upgrade an existing installation of the vFoglight Management Server to version v.3.0.1, click **Previous** until you return to the Choose Install Folder screen.



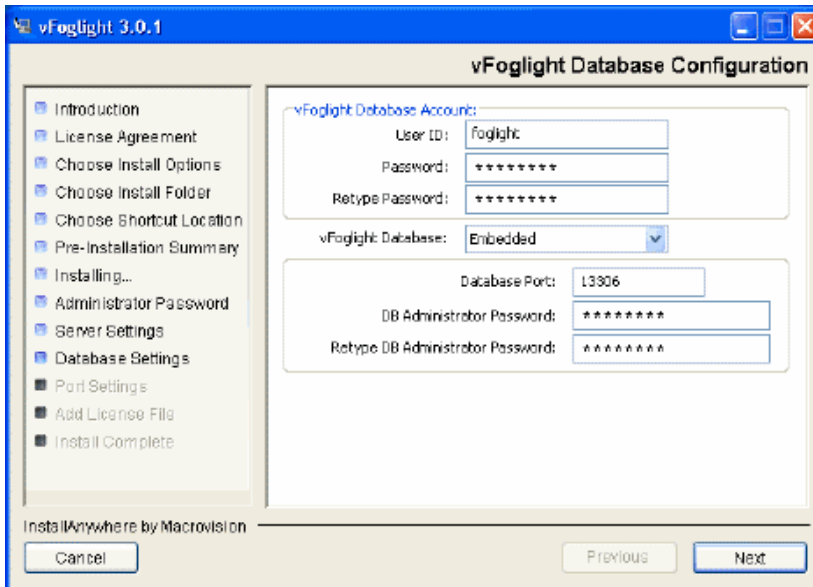
Step 6: Installing vFoglight 3.0.1

vFoglight installs files into the specified directory.



Step 7: vFoglight Database Configuration

- 1 In the vFoglight Database Account **User ID** field accept the default user ID (*foglight*) or enter an alternate one. This is the name for the vFoglight user that you are creating. The vFoglight uses this account to store data in the database.
- 2 In the vFoglight Database Account **Password** field accept the default password (*foglight*) or enter an alternate one.
- 3 In the vFoglight Database Account **Retype Password** field, accept the default (*foglight*) or, if you have provided an alternate password , retype the password for verification.
- 4 From the **vFoglight Database** drop-down list, choose **Embedded**.



Embedded Database Installation

- 1 Accept the default port (13306) or enter an alternate **Database Port**.
- 2 In the **DB Administrator Password** field, accept the default password provided (*foglight*) or enter an alternate one.
- 3 In the **Retype DB Administrator Password** field, accept the default (*foglight*) or, if you have provided an alternate password , retype the password for verification.
- 4 Click **Next**. A progress box appears as the embedded database is installed.

Step 8: vFoglight Ports Configuration

- 1 Configure the server ports. The **vFoglight Ports Configuration** screen displays default ports which you can assign.

If you want to revert to the default values, click **Defaults**.

- 2 Click **Next**.

Note If there are any port assignment conflicts, an error message dialog box appears. You can either click **Review Ports** if you want to return to the vFoglight Ports Configuration screen to configure the conflicting port(s), or choose **Ignore and Continue** to continue with the installation without resolving the port conflicts. Choose one of these options to continue.

vFoglight 3.0.1

vFoglight Ports Configuration

Please enter the vFoglight port assignments.

Cluster Multi-cast Port:	45566
HTTP Port:	8080
HTTPS Port:	8443
APLS Port:	8009
JNDI RM Port:	1058
JNDI JNP Port:	1059
JRMPI Invoker Port:	4444
Corba ORB Port:	3528
Corba ORB SSL Port:	3529
RM-INT-ORB Port:	1101

Defaults

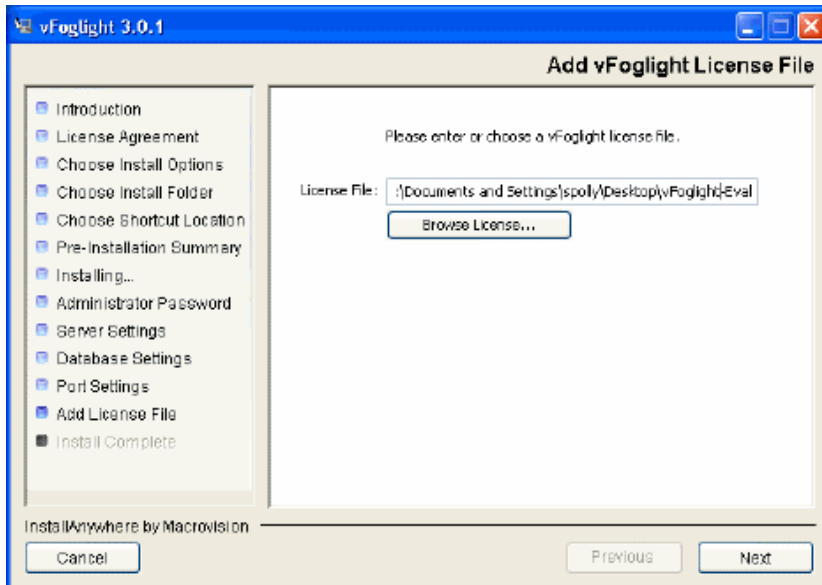
InstallAnywhere by Macrovision

Cancel Previous Next

Step 9: Add vFoglight License File

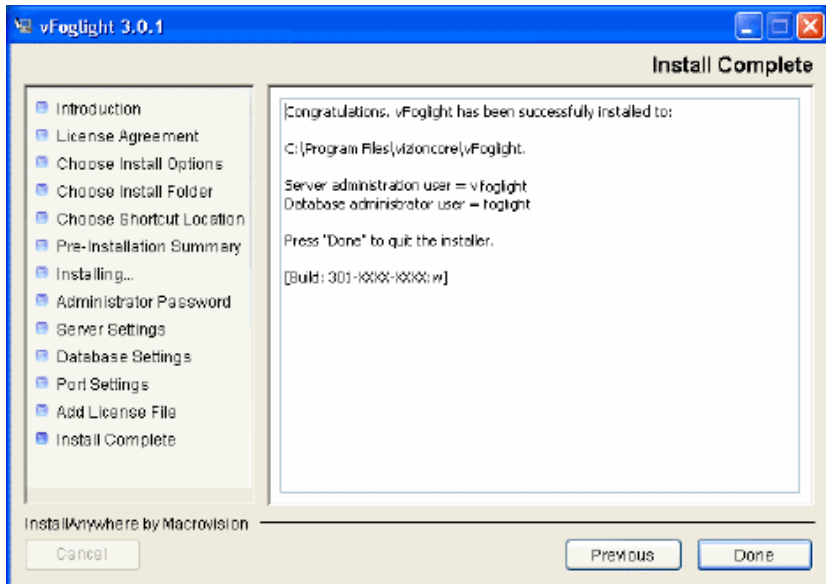
- 1 Specify the path to the vFoglight license file in the **License File** field, or browse to a license file by clicking **Browse License**.
Alternatively, you can provide a license file to the vFoglight Management Server after the installation is complete. To do so, leave the **License File** field blank and proceed to [step 2](#).
- 2 Click **Next**.

Note If you left the **License File** field blank, an Invalid License dialog appears. Click **Skip** in this dialog if you would like to add a license file after installing vFoglight.



Step 10: Install Complete

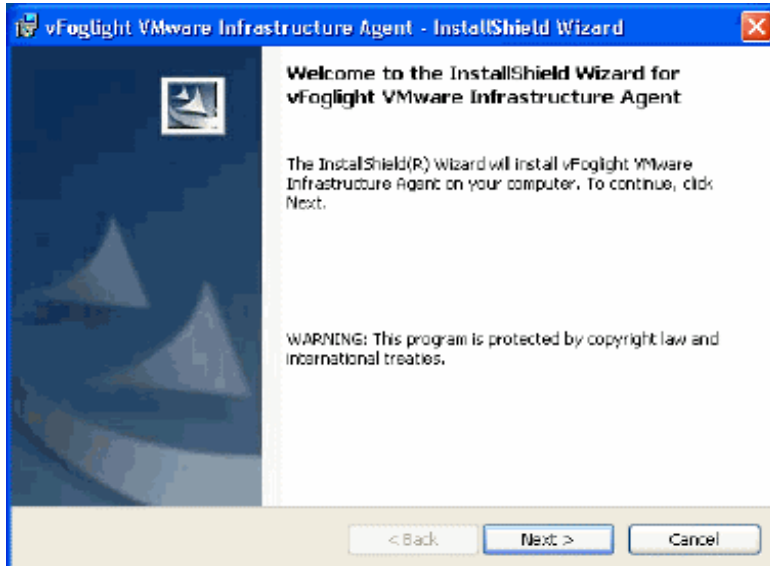
Click **Next** to complete the installation process.



The Custom Installation procedure now takes you through the installation of the vFoglight VMware Infrastructure Agent components.

Step 11: InstallShield Wizard Welcome Screen

The Welcome screen for the VMware Infrastructure Agent InstallShield Wizard explains the purpose of the InstallShield Wizard. Click **Next** after reading the contents of this screen.



Step 12: License Agreement

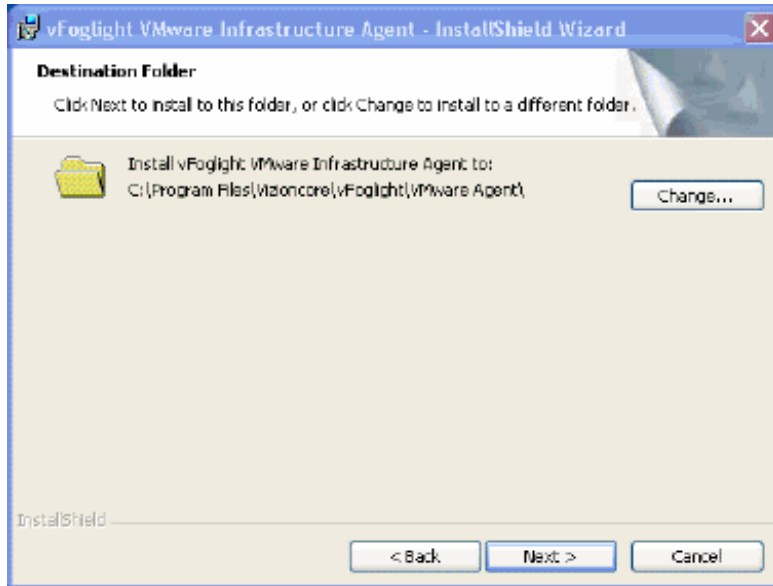
- 1 Read through the VMware Infrastructure Agent License Agreement statement, and accept or decline the terms.



- 2 If you selected **I accept the terms in the License Agreement**, click **Next**.

Step 13: Destination Folder

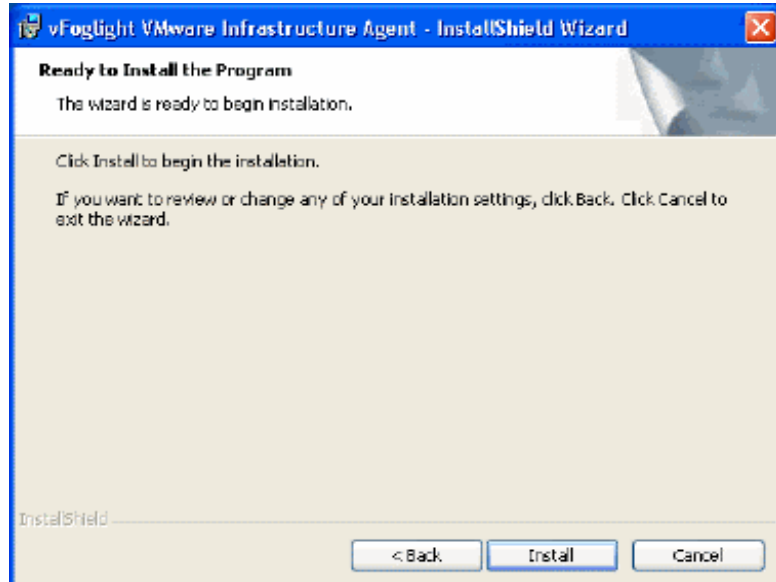
- 1 Choose the location where you want to install the VMware Infrastructure Agent components. You can accept the default location *C:\Program Files\Vizioncore\vFoglight\VMware Agent* or click on the **Change** button to navigate to another location.



- 2 Click **Next**.

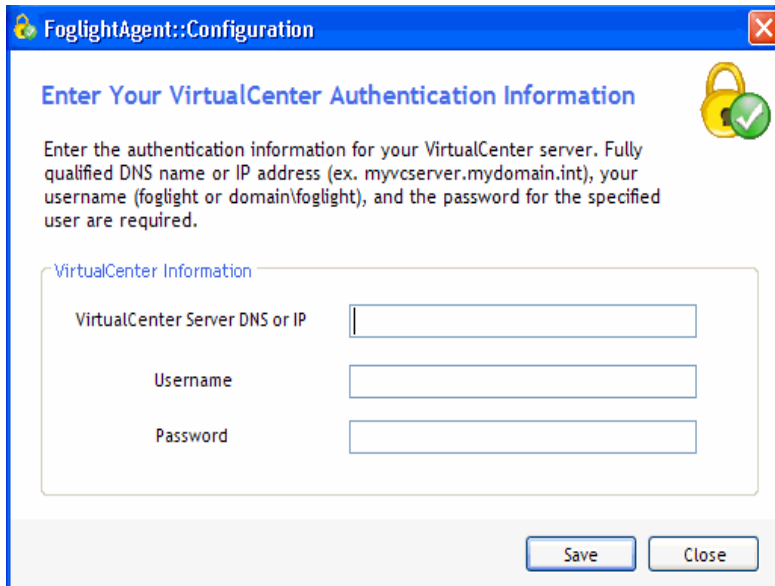
Step 14: VMware Infrastructure Agent Install Screen

The Agent Install screen is displayed. Click **Install**.



Step 15: VirtualCenter Authentication

- 1 On the VirtualCenter Authentication Information screen, enter the VirtualCenter Server name or IP Address.
- 2 Enter VirtualCenter Server Username and Password credentials that will provide you with access to the VMware Virtual Infrastructure Client.

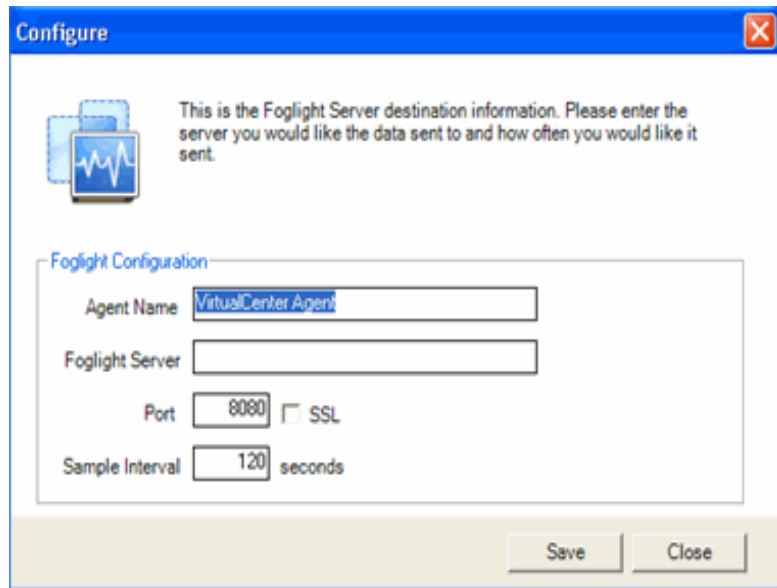


The screenshot shows a Windows-style dialog box titled "FoglightAgent::Configuration". Inside, the main heading is "Enter Your VirtualCenter Authentication Information", accompanied by a yellow padlock icon with a green checkmark. Below the heading, a paragraph of instructions reads: "Enter the authentication information for your VirtualCenter server. Fully qualified DNS name or IP address (ex. myvcserver.mydomain.int), your username (foglight or domain\foglight), and the password for the specified user are required." A section titled "VirtualCenter Information" contains three input fields: "VirtualCenter Server DNS or IP", "Username", and "Password". At the bottom right of the dialog are "Save" and "Close" buttons.

- 3 Click Save to have your entries validated.
- 4 On the **Credentials Entered are Valid!** dialog, click OK.

Step 16: vFoglightServer Destination

- 1 On the vFoglight Server Destination Information screen, enter the agent name as you want it to be displayed in vFoglight.
- 2 Enter the vFoglight Server name or IP address. This is the name or IP of the vFoglight Management Server.
- 3 Enter the port number of the port that the vFoglight Server uses for HTTP traffic. The default is 8080.
- 4 If this port requires SSL, check the SSL check box.
- 5 Enter a Sample Interval time in seconds. If you enter a lower interval, you could encounter performance problems while gaining little or nothing in terms of the quality of your data. If you enter an interval that is too high, you may not receive data often enough for it to be of much value.

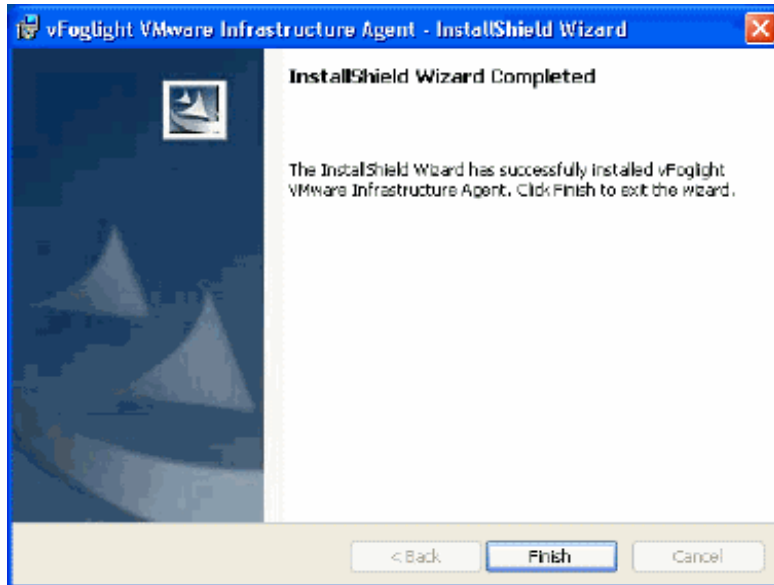


The screenshot shows a 'Configure' dialog box with a blue title bar and a red close button. Inside, there is a blue icon with a white waveform. To the right of the icon, the text reads: 'This is the Foglight Server destination information. Please enter the server you would like the data sent to and how often you would like it sent.' Below this, there is a section titled 'Foglight Configuration' containing several input fields: 'Agent Name' with the text 'VirtualCenter Agent', 'Foglight Server' (empty), 'Port' with the value '8080', an unchecked 'SSL' checkbox, and 'Sample Interval' with the value '120' followed by the text 'seconds'. At the bottom right, there are 'Save' and 'Close' buttons.

- 6 Click **Save** to have your entries validated.

Step 17: InstallShield Wizard Completed

Click Finished to complete the VMware Infrastructure Agent components installation process.



The services of the agent components start automatically after the installation is complete.

Next Steps

If you did not install a license in [Step 9: Add vFoglight License File](#), follow the instructions in “[Managing a License After Installation](#)” on page 27 to provide a license file to the vFoglight Management Server after installation.

If you need to import and initialize your database, refer to the procedures in “[Migrating Data from an Existing Database](#)” on page 70.

Start the vFoglight Management Server by following the instructions in “[Starting and Stopping the vFoglight Management Server](#)” on page 71.

To log into the vFoglight Console, refer to “[Logging in to the vFoglight Browser Interface](#)” on page 73.

Upgrading the vFoglight Management Server

Please consult the *vFoglight 3.0.1 Upgrade Field Guide* for detailed upgrade instructions.

Installed Directories

The following table describes the directories that are installed under your target installation folder. They may vary, depending on the product features that you select and the components installed for your platform.

Directory	Contents
<i>bin</i>	vFoglight executables for running the server and utilities.
<i>client</i>	Files used by client programs (such as the command line client) for remote access to vFoglight.
<i>config</i>	Configuration files and subdirectories. The files in the <i>config</i> directory contain settings that are most likely to require editing. Files at the next level are less likely to need changing. Files at the lowest level contain settings that are unlikely to need changing except in special circumstances.
<i>docs</i>	HTML and PDF versions of the product documentation.
<i>dtd</i>	Descriptors for configuration files that can be imported into vFoglight (for example, by installing a cartridge).
<i>jre</i>	Version of the JRE (1.5.0_11-b03) used by vFoglight.
<i>lib</i>	The vFoglight JARs.
<i>logs</i>	Default location of the log files generated by vFoglight when it runs. Generated at runtime.

Directory	Contents
<i>mysql</i>	The current embedded database version is 5.0.27. If the embedded database is selected during installation, then the database is created, populated, and used for vFoglight runtime. To startup the embedded database individually without running vFoglight, use these parameters [run shutdown]Db.[bat sh] in <install-dir>/bin
<i>perl</i>	Libraries needed to interpret the PERL scripts, version 5.8.8.
<i>scripts</i>	Supported and unsupported utility scripts to extend the scripting engine. <i>scripts/sql</i> contains SQL scripts to drop, create-schema or create/populate the database.
<i>server</i>	JARs and data files used by a particular vFoglight server variant (such as default).
<i>tools</i>	Various utilities such as the <i>foglight-federation-support.sar</i> file.

Additional directories created after the vFoglight Management Server is started:

Directory	Contents
<i>cartridge</i>	Installed cartridge files in their original form.
<i>support</i>	Where support bundled archive information is stored.
<i>tmp\cartridge.exploded</i>	Unzipped contents of installed cartridges. Unizpped at runtime.

vFoglight Settings

vFoglight can be run with the default settings. However, you can edit these settings if you need to change runtime parameters such as ports used by the vFoglight Service Manager. To do so, you can edit the file `<vfoglight_home>/config/foglight.config`, which contains central settings.

Editing the *foglight.config* File

The *foglight.config* file contains parameters for port settings, virtual memory, command line options, and server federation. You can edit the file using a text editor. Values within quotation marks can be edited.

Setting Memory Parameters for the Server

If you are running vFoglight Management Server by running *fms.exe*, you can configure the Java Virtual Machine's minimum and maximum parameters for the server in the `<vfoglight_home>/config/foglight.config` file.

If you are starting vFoglight using the `run.[bat|sh]` command, the JVM heap memory parameters set in the `<vfoglight_home>/config/foglight.config` file do not take effect. Use `-X` options to pass the memory parameters straight to the VM.

If your installation supports a large number (100s) of agents, Java heap memory sizes should be set to the same minimum and maximum values. For example, assigning 2 GB of memory can be set in the *foglight.config* file as follows:

```
# foglight.vm.option0 = "-Xms2048M";  
# foglight.vm.option1 = "-Xmx2048M";
```

You can set up to 100 VM options.

Setting the SQL Parser Properties

The following default system properties appear in the *foglight.config* file. The port setting can be changed during the install process, or by editing the *foglight.config* file.

```
# qp5app port and info
foglight.qp5app.max.connections = "10";
foglight.qp5app.port = "8448";
```

Configuring vFoglight to Access the Server Only Through The HTTPS Port

If you do not choose to install vFoglight in Secure Server mode, you can manually configure vFoglight Management Server to restrict the server to use only the https port by editing the `<vfoglight_home>\config\foglight.config` file. Set the following parameter:

```
foglight.console.httpsonly = "true";
```

You will have to reboot the server after setting the parameter.

Note You must have a signed, valid certificate if you want to use the https-only configuration. Vizioncore recommends that you obtain a valid certificate from a third party as outlined in the following procedure.

Importing a Network Security Certificate

Once you have set the vFoglight Management Server to use only https, you will need to generate a key pair (security certificate) into the vFoglight keystore. This allows the server to communicate through the https protocol. You need to delete the existing certificate shipped with vFoglight before generating a new key pair. Use the keytool utility shipped with vFoglight to create, import, and export certificates. This utility can be found in:

- `$FMS_HOME/jre/bin/keytool`

There are two keystores used by vFoglight:

- The built-in Tomcat keystore located at:
`$FMS_HOME/server/default/conf/tomcat.keystore` (default password: nitrogen)

- The vFoglight Management Server keystore located at:
\$FMS_HOME/jre/lib/security/cacerts (default password: changeit)

To import a certificate:

- 1 Change directories to the following path:
\$FMS_HOME/server/default/conf/
- 2 Delete the existing tomcat key from the tomcat.keystore directory using the following command:
\$FMS_HOME/jre/bin/keytool -keystore FMS_HOME/server/default/conf/tomcat.keystore -storepass nitrogen -delete -alias tomcat
- 3 Create a new key under the tomcat alias using the following command:
\$FMS_HOME/jre/bin/keytool -keystore FMS_HOME/server/default/conf/tomcat.keystore -storepass nitrogen -genkey -alias tomcat
- 4 Generate a Certificate Signing Request (CSR) using the following command:
\$FMS_HOME/jre/bin/keytool -keystore FMS_HOME/server/default/conf/tomcat.keystore -storepass nitrogen -certreq -alias tomcat -file <your_request_file.csr>

This file must be signed by Certification Authority (CA).
- 5 Once you have the certificate signed, import it back to the tomcat.keystore using the following command:
\$FMS_HOME/jre/bin/keytool -keystore FMS_HOME/server/default/conf/tomcat.keystore -storepass nitrogen -import -trustcacerts -alias tomcat -file <your_converted_certificate>

You are prompted to enter the keystore password.
- 6 Type nitrogen.

Setting Up an Encrypted Database Connection with SSL

The following procedure outlines how to set up a secure embedded MySQL database connection.

Note This procedure must be performed after installation but before you have started the vFoglight Management Server.

To set up an encrypted database connection with SSL:

- 1 Import a CA certificate into the vFoglight Management Server keystore (cacerts) as outlined in [“Importing a Network Security Certificate”](#) on page 64.
- 2 Update the MySQL configuration file (*my.ini*) with the new security certificate and key information by adding the following properties:

- `ssl-ca=<cacert.pem>`
- `ssl-cert=<server-cert.pem>`
- `ssl-key=<server-key.pem>`

- 3 Uncomment and set the `foglight.database.secureconn` attribute in the *foglight.config* file to true, as shown below.

```
#
```

```
# For Oracle, this option can be enabled once the database server is  
properly configured.
```

```
# However, for MySQL, DO NOT enable this option until the database server's  
CA certificate is properly imported into $fms_dir/jre/lib/security/cacerts.
```

```
foglight.database.secureconn = "true";
```

- 4 Start the vFoglight Management Server.

Setting Up an Encrypted LDAP Connection with SSL

Follow the directions below if you need to encrypt communication between the vFoglight Management Server and the LDAP server.

To encrypt communication between vFoglight Management Server and LDAP:

- 1 Acquire the LDAP server certificate in *.pem* format from the administrator.
- 2 Import the certificate into the vFoglight Management Server keystore (\$FMS_HOME/jre/lib/security/cacerts (default password: changeit)) with the following command:

```
$FMS_HOME/jre/bin/keytool -import -file <path_to_cert_file> -alias  
ldapsvrcert -keystore <path_to_cacerts>
```
- 3 Go to **Administration > Users & Security > Configure Directory Services**.
- 4 Click **Edit**.
- 5 Enter the LDAP server URL in the following format:
`ldaps://ldap_server_host_name:636`

Note The port number for LDAP over SSL is usually 636. Confirm the correct port number with your LDAP server administrator.

Uninstalling vFoglight

You can uninstall vFoglight using the uninstaller utility for your platform. The uninstaller can be found in `<vfoglight_home>/UninstallerData`.

Running the vFoglight Management Server

This chapter contains the following sections:

Before You Begin	70
Migrating Data from an Existing Database	70
Initializing the Database	71
Starting and Stopping the vFoglight Management Server	71
Logging in to the vFoglight Browser Interface	73
Running the vFoglight Management Server FAQ	74

Before You Begin

The instructions in this chapter assume that you have already installed vFoglight. If you have not, see “[Installing vFoglight](#)” on page 29 for installation instructions.

Migrating Data from an Existing Database

The contents of the MySQL database can be copied to another MySQL instance via an export/import cycle. The following procedure performs a full export of the database. This procedure can be run against a database currently in use by a server.

To export and import a MySQL database:

- 1 Run the following command from the MySQL command shell:

```
mysqldump -u<username> -p<password> -h<hostname> -P<port> --databases  
<database name> > backup.sql
```

The -h parameter can be omitted if the database is on the same host.

- 2 Import the database using the following syntax:

```
mysql -<username> -p<password> -P<port> < backup.sql
```

The import process recreates the tables in the database. Therefore, any data that was in the destination environment prior to the import will be lost.

Caution The vFoglight servers must be stopped during the import process.

Note When moving a database between environments, care should be taken to ensure that the vFoglight schema version is lower or equal to the vFoglight server in the destination environment as an upgrade to a new schema is possible (run `foglight_db_upgrade.bat` or start server with `-Dfoglight.database.upgrade=true`).

Initializing the Database

If you are using the embedded database, the initialization is performed when you start vFoglight.

Starting and Stopping the vFoglight Management Server

The following sections describe how to start and stop the vFoglight Management Server.

To start the vFoglight Service Manager from the command line:

- Execute the following command:
`<vfoglight_home>\bin\fms.exe`

To start the vFoglight Service Manager on Windows:

- Depending on where you installed the startup icon, choose **Start > Programs > Vizioncore > vFoglight > Start vFoglight** or double-click the **Start vFoglight** icon on the desktop.

When the server has successfully started, the following message appears in the command window:

```
vFoglight Management Server startup completed.
```

Starting the vFoglight Management Server as a Windows Service

After the installation is completed, you can install the vFoglight Management Server as a Windows service either from the **Start** menu or the command line.

Note The procedures below assume that you have installed the program shortcuts in the default location.

Using the Start Menu Options

To install or remove the vFoglight Service Manager service from the Start menu:

- Choose **Start > Programs > Vizioncore > vFoglight > Windows Service > Install Service for vFoglight** (or **Remove Service for vFoglight**).

To start or stop the vFoglight Service Manager service from the Start menu:

- Choose **Start > Programs > Vizioncore> vFoglight > Windows Service > Start Service for vFoglight** (or **Stop Service for vFoglight**).

Using the Command Line

From the command line, type the following to install the vFoglight Management Server as a Windows service:

```
fms.exe -i
```

Additional Commands:

Command	Represents	Description
-s	start	Start the vFoglight Management Server (this is assumed if no command is specified)
-q	stop	Stop the vFoglight Management Server
-b	start-service	Start the vFoglight Management Server Windows service
-r	remove-service	Stop and remove the vFoglight Management Server Windows service
-n	name	Provide a unique name for this instance of the vFoglight Management Server service
-j	jvm-argument	Set an option to be passed directly to the Java™ VM (can be used to set more than one VM option)
-v	version	Display the version number for this program and exit
-h	help	Show this information and exit

Stopping the Server

To stop the vFoglight Management Server:

Do one of the following:

- Type **Ctrl-C** in the command window from which the vFoglight Service Manager started.
- In the command line, type:
`fms.exe -q`
- Depending on where you installed the startup icon, choose **Start > Programs > Vizioncore> vFoglight > Stop vFoglight** or double-click the **Stop vFoglight** icon on the desktop.

When the server has stopped successfully, the **Start vFoglight** command window closes.

Logging in to the vFoglight Browser Interface

Note The vFoglight Management Server must be running before you can log in to the vFoglight Browser Interface.

To log in to vFoglight:

- 1 Depending on where you installed the program icons, choose **Start > Programs >Vizioncore> vFoglight > vFoglightConsole**.
- 2 Enter a valid username and password and click **Login**.

To log in to vFoglight using a web browser:

- Open a web browser and type the following:
`http://<hostname>:<port>/console/admin/main.action`
where <hostname> is the name of the machine where the vFoglight Management Server is installed and <port> is the http port specified during installation (the default is 8080).

Running the vFoglight Management Server FAQ

When I try to start the vFoglight Management Server using Remote Desktop, an error appears. How can I resolve this error?

There are two options to resolve this problem.

- Use VMWARE Console to start the server.
- Change the JVM options by reducing the memory requirements of the vFoglight Management Server so you can start it using Remote Desktop. To do so, use one of the following methods:
 - On the command line, enter the following:
`fms.exe -j -XX:MaxPermSize=96m`
 - Edit the `foglight.config` file found in `<vfoglight_home>\config` and modify the following parameter:
`foglight.vm.option0 = "-XX:MaxPermSize=96m";`

After you have used one of these methods, restart the server.

If I close the vFoglight Management Server by clicking the X button on the command window, an error appears when I start up the server again. How do I restart the server?

It is recommended that you do not use this method to stop the vFoglight Management Server. However, if you do use this method, follow the workaround listed below.

- 1 If you are using a managed database (for example, a copy of MySQL that is started by vFoglight), stop the database manually before restarting the vFoglight Management Server.
- 2 Remove the stale `.pid` file that is located in the `/state` directory. The logs or the console output inform you which `.pid` file to remove when you restart the server.

Appendix A: Switching from an Embedded to an External Database

You may find a performance improvement in vFoglight if you use an external database.

This appendix contains the following section:

[Converting to an External Database](#)..... 76

Converting to an External Database

This section describes how to migrate and reconfigure an embedded database used with the vFoglight Management Server to an external database.

- 1 Stop the vFoglight Management Server.
- 2 Start the embedded database manually:

```
<vfoglight_home>/bin/runDb.sh
```
- 3 Export the database content:

```
<vfoglight_home>/mysql/bin/mysqldump -uroot --port=13306 --  
databases foglight > <fms_home>/foglight.dump
```
- 4 Shut down the database:

```
<vfoglight_home>/bin/shutdownDb.sh
```
- 5 Connect to the external MySQL instance via MySQL:

```
<vfoglight_home>/mysql/bin/mysql -h [mysql host] -P [mysql  
port] -u root -p
```
- 6 Create the vFoglight database instance by running:

```
mysql> source  
<vfoglight_home>\scripts\sql\mysql_create_db.sql
```
- 7 Re-import the data dump:

```
mysql> source <vfoglight_home>/foglight.dump
```
- 8 Configure the vFoglight Management Server to use this new database by opening the following file:

```
<vfoglight_home>/config/foglight.config
```
- 9 Update the following values in the above file:

```
foglight.database.host = "[mysql host]";  
foglight.database.port = "[mysql port]";  
foglight.database.embedded = "false";
```

A**administration**

- administrator default account 30
- default user name and password 30

Agents 26**B****bin directory** 61**C****cartridge**

- documentation 8

cartridge directory 62**client directory** 61**config directory** 61**core** 7**D****database**

- initializing 71

documentation 7

- cartridge 8

documentation directory 61**dtd directory** 61**I****installation**

- recommendations 28
- requirements 30

installed directories

- bin 61
- cartridge 62
- client 61
- config 61
- docs 61
- dtd 61
- jre 61
- lib 61, 62

logs 61**mysql** 62**scripts** 62**server** 62**support** 62**J****JAR files directory** 61**JRE directory** 61**L****lib directory** 61, 62**licensing** 27**log files directory** 61**logging in**

- to the Administration Console 73

M**Management Server** 25**mysql files directory** 62**P****password, administrator** 30**perl files directory** 62**R****recommendations**

- for installing vFoglight 28

running vCharter Pro 69**S****scripts directory** 62**server**

- starting 71
- stopping 72

server directory 62**starting the server** 71**stopping the server** 72

support 9
support directory 62

T

technical support 9
text conventions 8

U

uninstalling
 vCharter Pro 67
user account
 administrator 30

V

vCharter Pro
 uninstalling 67
Vizioncore Software 9

W

Windows
 service, from the command line 72
 service, installing vCharter Pro as a 71