© 2013 Quest Software, 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 Quest Software, Inc.

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

Quest Software World Headquarters
LEGAL Dept.
5 Polaris Way
Aliso Viejo, CA 92656

Web site: www.quest.com
Email: legal@quest.com
Phone: 949-754-8000

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

Disclaimer: The information in this document is provided in connection with Quest 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 Quest products. EXCEPT AS SET FORTH IN QUEST'S TERMS AND CONDITIONS AS SPECIFIED IN THE LICENSE AGREEMENT FOR THIS PRODUCT, QUEST 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 QUEST 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 QUEST HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Quest 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. Quest does not make any commitment to update the information contained in this document.

Trademarks

Quest, Quest Software, the Quest Software logo, Aelita, AppAssure, Benchmark Factory, Big Brother, DataFactory, DeployDirector, ERDisk, Foglight, Funnel Web, IWatch, Imceda, InLook, IntelliProfile, Internet Weather Report, InTrust, IT Dad, JClass, Jint, JProbe, LeccoTech, LiteSpeed, LiveReorg, NBSpool, NetBase, Npulse, PerformaSure, PL/Vision, Quest Central, RAPS, SharePlex, Sitraka, SmartAlarm, Spotlight, SQL LiteSpeed, SQL Navigator, SQLab, SQL Watch, Stat, Stat!, StealthCollect, Tag and Follow, Toad, T.O.A.D., Toad World, Vintela, Virtual DBA, Xaffire, and XRT are trademarks and registered trademarks of Quest Software, 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

Foglight® Performance Analysis for DB2 LUW 7.0 contains some third party components (listed below). Copies of their licenses may be found on our website at http://www.quest.com/legal/third-party-licenses.aspx.

<table>
<thead>
<tr>
<th>Component</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUESoft XmlParser 1.x</td>
<td>Mozilla Public License (MPL) 1.1</td>
</tr>
<tr>
<td>GigaBASE 3.6.1</td>
<td>MIT License</td>
</tr>
<tr>
<td>JEDI JCL/JVCL 1</td>
<td>Mozilla Public License (MPL) 1.1</td>
</tr>
<tr>
<td>kbmMemTable 4.07</td>
<td><a href="http://www.components4developers.com">www.components4developers.com</a></td>
</tr>
<tr>
<td>OTL 4.0.5</td>
<td>FreeType 1</td>
</tr>
<tr>
<td>Regex alpha3.8</td>
<td>Regex 1.0</td>
</tr>
<tr>
<td>VirtualTreeview Component 4.4.3</td>
<td>Mozilla Public License (MPL) 1.1</td>
</tr>
<tr>
<td>Xerces 2.7.1</td>
<td>Apache 2.0</td>
</tr>
</tbody>
</table>

Agent Installation Guide
March 2013
# Table of Contents

## About the Foglight Performance Analysis Agent

- Installation Prerequisites.................................................................................................................................................. 2
- General ............................................................................................................................................................................. 2
  - DB2 Host ................................................................................................................................................................. 3
  - Monitored Instance .................................................................................................................................................. 3
  - Middle-tier Host ....................................................................................................................................................... 4
  - Performance Repository Host ................................................................................................................................. 4
  - Performance Repository Instance ........................................................................................................................... 5
- Supported Platforms and Additional Information.............................................................................................................. 6
- Getting Support and the Latest Software Downloads.............................................................................................. 6
- Foglight Performance Analysis Users .............................................................................................................................. 7
  - Monitor Switches ..................................................................................................................................................... 7

## Architecture Overview

- Key Components .............................................................................................................................................................. 8
- Architecture Options ................................................................................................................................................ 9

## Performance Repository

- Performance Repository Benefits ........................................................................................................................................ 10
- Repository Placement .................................................................................................................................................. 11
- Multi-tier vs. Single-tier Architecture ........................................................................................................................... 11
  - Single-tier Topology ............................................................................................................................................... 12
  - Multi-tier Topology ................................................................................................................................................. 13
- The quest_launcher Component .................................................................................................................................... 14
  - Verifying the Connection to the Agent Services ................................................................................................. 14
  - Starting and Stopping the quest_launcher ........................................................................................................... 16
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preface</td>
<td>17</td>
</tr>
<tr>
<td>Introduction screen</td>
<td>17</td>
</tr>
<tr>
<td>Agent Architecture Screen</td>
<td>19</td>
</tr>
<tr>
<td>Multi-tier</td>
<td>19</td>
</tr>
<tr>
<td>Middleware</td>
<td>20</td>
</tr>
<tr>
<td>DB2 Collector</td>
<td>20</td>
</tr>
<tr>
<td>Single Tier</td>
<td>20</td>
</tr>
<tr>
<td>Middle-tier Port Selection Screen</td>
<td>20</td>
</tr>
<tr>
<td>Agent Communication Port</td>
<td>21</td>
</tr>
<tr>
<td>Minimal/Demo Installation</td>
<td>21</td>
</tr>
<tr>
<td>Middleware Component Settings Screen</td>
<td>23</td>
</tr>
<tr>
<td>Installation Directory</td>
<td>23</td>
</tr>
<tr>
<td>Default Directory</td>
<td>23</td>
</tr>
<tr>
<td>User Specified</td>
<td>23</td>
</tr>
<tr>
<td>Firewall Setting</td>
<td>23</td>
</tr>
<tr>
<td>Middleware Installation Completed</td>
<td>26</td>
</tr>
<tr>
<td>Foglight Performance Analysis for DB2 LUW Agent Port Selection Screen</td>
<td>26</td>
</tr>
<tr>
<td>Agent Communication Port</td>
<td>26</td>
</tr>
<tr>
<td>Minimal/Demo Installation</td>
<td>27</td>
</tr>
<tr>
<td>DB2 Collector Component Settings Screen</td>
<td>28</td>
</tr>
<tr>
<td>Installation Directory</td>
<td>28</td>
</tr>
<tr>
<td>Default Directory</td>
<td>28</td>
</tr>
<tr>
<td>User Specified</td>
<td>29</td>
</tr>
<tr>
<td>Firewall Settings</td>
<td>29</td>
</tr>
<tr>
<td>Middle-tier Specification</td>
<td>30</td>
</tr>
<tr>
<td>Middle-tier Host</td>
<td>31</td>
</tr>
<tr>
<td>Middle-tier Communication Port</td>
<td>31</td>
</tr>
<tr>
<td>Single-tier Foglight Performance Analysis for DB2 LUW Agent Port Selection Screen</td>
<td>32</td>
</tr>
<tr>
<td>Agent Communication Port</td>
<td>32</td>
</tr>
<tr>
<td>Minimal/Demo Installation</td>
<td>33</td>
</tr>
<tr>
<td>Agent Components Settings Screen</td>
<td>34</td>
</tr>
<tr>
<td>Installation Directory</td>
<td>34</td>
</tr>
<tr>
<td>Default Directory</td>
<td>35</td>
</tr>
<tr>
<td>User Specified</td>
<td>35</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Firewall Settings</td>
<td>35</td>
</tr>
<tr>
<td>Monitored Instance Settings</td>
<td>37</td>
</tr>
<tr>
<td>DB2 Connection Parameters</td>
<td>37</td>
</tr>
<tr>
<td>OS IP Configuration Settings</td>
<td>37</td>
</tr>
<tr>
<td>Specify a Valid DB2PATH on Host</td>
<td>37</td>
</tr>
<tr>
<td>Performance Repository Installation</td>
<td>39</td>
</tr>
<tr>
<td>Performance Repository Screen</td>
<td>40</td>
</tr>
<tr>
<td>Repository Component Configuration</td>
<td>40</td>
</tr>
<tr>
<td>DB2 Host Details Screen</td>
<td>41</td>
</tr>
<tr>
<td>Monitored DB2 Instance Screen</td>
<td>42</td>
</tr>
<tr>
<td>Repository Instance Screen</td>
<td>43</td>
</tr>
<tr>
<td>Repository Instance Object Installation Screen</td>
<td>45</td>
</tr>
<tr>
<td>Repository Configuration Screen</td>
<td>47</td>
</tr>
<tr>
<td>Installation Completed</td>
<td>47</td>
</tr>
<tr>
<td>Configuring the Agent to Start at System Boot (UNIX)</td>
<td>48</td>
</tr>
<tr>
<td>Agent Uninstallation</td>
<td>49</td>
</tr>
<tr>
<td>Uninstall Wizard Introduction Screen</td>
<td>49</td>
</tr>
<tr>
<td>Introduction Screen</td>
<td>49</td>
</tr>
<tr>
<td>DB2 Host Details</td>
<td>49</td>
</tr>
<tr>
<td>Host</td>
<td>50</td>
</tr>
<tr>
<td>Agent Communication Port</td>
<td>50</td>
</tr>
<tr>
<td>Monitored Instance Selection</td>
<td>51</td>
</tr>
<tr>
<td>Middleware Host Details</td>
<td>51</td>
</tr>
<tr>
<td>Skip Middleware Uninstall</td>
<td>51</td>
</tr>
<tr>
<td>Middle-tier Host</td>
<td>52</td>
</tr>
<tr>
<td>Middle-tier Communication Port</td>
<td>52</td>
</tr>
<tr>
<td>Uninstall Completed Screen</td>
<td>52</td>
</tr>
<tr>
<td>Cluster Support</td>
<td>53</td>
</tr>
<tr>
<td>Installing on Clustered DB2 Instance</td>
<td>53</td>
</tr>
<tr>
<td>Active/Passive Cluster Architecture</td>
<td>53</td>
</tr>
<tr>
<td>Configuration of StealthCollect in a Cluster</td>
<td>54</td>
</tr>
<tr>
<td>Configuring the Cluster Management Software</td>
<td>55</td>
</tr>
<tr>
<td>Cluster Agent Failover Configuration</td>
<td>55</td>
</tr>
</tbody>
</table>
Foglight® Performance Analysis for DB2 LUW has a server-based Agent (StealthCollect™) that monitors databases and workloads of all scales: from small environments to intensive databases hosting thousands of concurrent sessions. The Agent samples and collects (multiple times per second) performance data from the DB2 memory and from the operating system APIs.

The collected metrics are made available as data, either as a present activity stream or as historical activity.

By directly accessing the DB2 Memory and the operating system APIs, the Foglight Performance Analysis Agent gathers session data samples from the DB2 in a non-intrusive manner, without
The Foglight Performance Analysis for DB2 LUW Agent Installation Guide.

incurring the overhead of using queries against the DB2 snapshots and without affecting the currently running DB2 processes. The raw samples are combined into high-level performance data. The data and statistics are made available in a number of easily navigable formats for efficient analysis, troubleshooting, and tuning of both historical and current session activities.

The Foglight Performance Analysis Agent technology can operate non-intrusively 24 hours a day, seven days a week and collect every bit of the database, thereby enabling users to find out what happened on a particular day at a particular time (for example, two days ago at 2:00 P.M.).

Related Topics

“Architecture Overview” on page 8

Installation Prerequisites

The following actions must be carried out prior to installing the Foglight Performance Analysis agent.

Note For single-tier installations, all prerequisites apply to the DB2 Host.

General

- Verify that your DB2 version is supported. For details, see Supported Platforms and Additional Information.
- Verify that your operating system is supported. For details, see section “Supported Platforms and Additional Information” on page 6.
- Select the agent architecture that best matches your business needs. For more information see section “Multi-tier vs. Single-tier Architecture” on page 11.
- The Foglight Performance Analysis Agent requires a dedicated TCP/IP communication port for internal and external network communication.
  
  Verify that the agent communication port you intend to use is not already in use by another program.
  - Quest recommends using the default port 3566.
  - It is recommended that multiple Foglight Performance Analysis for DB2 LUW Agents, installed on the same host, share the same communication port.
**DB2 Host**

- For AIX platform, grant read permission for everyone on the /dev/kmem file (on AIX version 6.x and higher, grant read permission for everyone on the /dev/pmem file as well).
- Ensure that the logged-on Windows domain user account (running the Agent Installation Wizard) has Write privileges to the target Agent installation directory. For installation on Windows hosts, the logged-in domain user should also have local Windows Administrator privileges.
- For a multi-tier installation, verify that the target installation directory has at least 300 MB of free disk space. Each single-tier installation requires additional disk space of at least 2 GB on top of these 300 MB.
- Depending on your network naming policy, identify the DB2 host’s name or IP address.

**Monitored Instance**

During the installation it will be necessary to provide credentials of a DB2 user. Verify that this user is a member of the SYSADMIN group.

**Monitor Switches**

The Foglight Performance Analysis for DB2 LUW Agent Collector component requires that the BUFFERPOOL, LOCK, and SORT system monitor switches be turned on in the database manager configuration to completely collect the target metrics set. These switches may cause additional overhead on the database manager.

- The relevant monitor switches can be turned on or off by updating the database manager configuration.
- For additional information, search for System Monitor Switches on IBM's DB2 InfoCenter website, or review the information in the DB2 System Monitor Guide and Reference Redbook.

**Operating System Metrics (on AIX only)**

The Foglight Performance Analysis Agent Collector component requires read permissions to the /dev/kmem, /dev/pmem files on AIX systems in order to retrieve operating system metrics. If the Collector component cannot read this file, the Foglight Performance Analysis Client will display zero values for these metrics.
Middle-tier Host

- Ensure that the user account (running the Agent Installation Wizard) has Write privileges in the target Agent installation directory. For installation on Windows hosts, the logged-in domain user should also have local Windows Administrator privileges.
- Depending on your network policy, identify the middle-tier host’s name or IP address.
- Verify that the target installation directory has at least 4 GB of free disk space for each DB2 instance monitored by this middleware (for example: for a single instance reserve 4 GB or for two instances reserve 8 GB).
- Ensure that the client logged-on Windows domain user account (from which the installation is initiated) has local Administrator privileges on the middle-tier host and Write privileges to the installation directory.
- Ensure that the Client meets the following requirements:
  - DB2 version 9.5 or higher
  - At least 4 GB of free disk space
- Ensure that the host name or IP address of the middle-tier host is known.

Note: It is recommended to reserve additional space beyond initial planning to allow future growth.

Important: Installing a Middleware that services more than 15 monitored instances on a Windows-based host requires using different Windows users. Ensure that the users running the Middleware have full control over the Performance Analysis Agent installation directory and that you are not using the default system account.

Performance Repository Host

The Performance Repository enables advanced product features such as long-term history retention and change tracking.

- Decide whether you would like the Foglight Performance Analysis for DB2 LUW Agent to use the Performance Repository.
- If a Performance Repository has not been installed, decide where to install the repository. The repository is an additional DB2 database.
- Ensure that the directory for the Performance Repository data tablespaces exists.
- Ensure that the directory for the Performance Repository index tablespaces exists.
• Ensure that the directory for the Performance Repository lob tablespaces exists.

**Note** To avoid performance impact on your production environment, the repository should be installed on a different host than the monitored DB2 host.

**Note** Additional 500 MB of free space is required for each additional Agent employing the performance Repository.

### Performance Repository Instance

The Performance Repository requires a dedicated database for its usage, which will also be used by the installation wizard for creating the repository schema. This database can be shared between multiple Foglight Performance Analysis Agents.

To be able to use the performance repository, ensure that the following conditions are met:

• The user is a DBADM user for the Repository database
• The Performance Repository database has a free space of at least 2GB for the repository tablespaces and 500 MB for the log files.
• Up to three tablespaces are specified to hold Data, Index and large object (LOB) data. These tablespaces must already exist in the specified database.

**Important** The LOB tablespace must be declared as a LONG tablespace (namely: having a page size of at least 8K, an extent size of at least 128K, and a prefetch size of at least 64K). The Data and Index tablespaces must have a page size of at least 4K, an extent size of at least 64K, and a prefetch size of at least 32K).

**Important** The repository tablespaces should be set up on the coordinator node (usually: partition 0)

_To create the required tablespaces:_

1. Create the bufferpools, using the following commands:
   ```sql
   CREATE BUFFERPOOL (BUFFER_POOL_DATA_NAME) IMMEDIATE PAGESIZE 4K
   CREATE BUFFERPOOL (BUFFER_POOL_INDEX_NAME) IMMEDIATE PAGESIZE 4K
   CREATE BUFFERPOOL (BUFFER_POOL_LOB_NAME) IMMEDIATE PAGESIZE 8K
   ```

2. Create the tablespaces, using the commands below:
a CREATE REGULAR TABLESPACE (TABLESPACE_DATA_NAME) PAGESIZE 4K
   EXTENTSIZE 64K PREFETCHSIZE 32K BUFFERPOOL ${BUFFER_POOL_DATA_NAME}

b CREATE REGULAR TABLESPACE (TABLESPACE_INDEX_NAME) PAGESIZE 4K
   EXTENTSIZE 64K PREFETCHSIZE 32K BUFFERPOOL ${BUFFER_POOL_INDEX_NAME}

c CREATE LARGE TABLESPACE (TABLESPACE_LOB_NAME) PAGESIZE 8K 128K
   EXTENTSIZE PREFETCHSIZE 64K BUFFERPOOL ${BUFFER_POOL_LOB_NAME}

**Important** The commands mentioned in step a, step b and step c will create database manage tablespaces, while allowing the system to make all decisions regarding the tablespace size and growth (the default setting).

**Related Topics**

“Supported Platforms and Additional Information” on page 6

“About the Foglight Performance Analysis Agent” on page 1

**Supported Platforms and Additional Information**

For the latest information about supported platforms and versions, refer to the most updated release notes on Quest Software website.

**Getting Support and the Latest Software Downloads**

Quest Support is available to customers who have a trial version of a Quest product or who have purchased a commercial version and have a valid maintenance contract. Quest Support provides around the clock coverage with SupportLink, our web self-service.

Visit SupportLink at [http://support.quest.com](http://support.quest.com)

Registered Quest SupportLink users can consult the following link to view and download the latest support patch updates (log in to the support first):


From SupportLink, you can do the following:

- Quickly find thousands of solutions (Knowledgebase articles/documents).
- Download patches and upgrades.
- Seek help from a Support engineer.
Log and update your case, and check its status.

Foglight Performance Analysis Users

Foglight Performance Analysis has the following types of users:

- **OS User**:
  - Installation OS user—the OS user that runs the installation. This OS user must have WRITE privileges to the target agent installation directory.
  - Collector OS user—when installing on UNIX platform, this OS user must be the OS user that runs the `db2sysc` process.

- **DB User**:
  - Monitored Instance DB User—during the installation, this DB user must be defined as a member of the SYSADMIN or SYSCTRL groups.
  - Repository DB User—required if the Foglight Performance Analysis repository is configured for this monitored instance. This DB user should be defined as the owner of the monitored schema.
  
- **Performance Analysis Agent User**—by default, Performance Analysis agent users are defined with `quest` as both password and username.

  Any customers who modified their default password will have to enter their log-in details when connecting to the Foglight Performance Analysis agent communication port.

Monitor Switches

The Foglight Performance Analysis Agent Collector component requires that the BUFFERPOOL, LOCK, and SORT system monitor switches be turned on in the database manager configuration to completely collect the target metrics set. These switches may cause additional overhead on the database manager.

The relevant monitor switches can be turned on or off by updating the database manager configuration.

For additional information, search for System Monitor Switches on IBM's DB2 InfoCenter website, or review the information in the DB2 System Monitor Guide and Reference Redbook.
Architecture Overview

Foglight Performance Analysis for DB2 LUW consists of a Server agent and a Client component. The Client component queries the Foglight Performance Analysis Agent for DB2 LUW performance data and presents it to the user in an intuitive manner.

Key Components

The Server agent component consists of the following key components, each performing an operational function of the product:

- **quest_launcher**—the component responsible for: starting, connecting to, and stopping processes. This component also manages authentication.

- **Collector**: the component responsible for reading performance data directly from DB2 memory. The Collector uses a cutting edge, non-intrusive technology for accessing directly the DB2 instance memory, thereby producing highly accurate granular data. This data allows maximum in-depth analysis with minimum overhead. The Collector traces instance and sessions activity by rapidly (up to 20 times per second) sampling the DB2 instance's memory.

  **Deployment**: the Collector is always installed on the same host as the monitored DB2 instance.

- **Middleware**: the component responsible for the aggregation and storage of performance data to satisfy both short-term and long-term queries. Short-term performance data is stored and managed in an internal database, allocated on raw operating system files. The Middleware handles all data processing, IntelliProfile™ baselines processing and Client communications. The Middleware's key elements are as follows:

  - **Online Processor**—translates the DB2 memory samples into dynamic instance state snapshots for accumulation and diagnosis.

  - **Historical Processor**—applies OLAP algorithms to create a short-term database to answer short-term (up to three months) historical queries. The database uses standard operating system files.

  - **IntelliProfile**—the Performance Analysis' artificial intelligence engine that generates normative baseline projections for exception-monitoring evaluation of current and historical behavior.

  **Deployment**: the Middleware can be installed on any host, but it is highly recommended to use a host other than that of the monitored DB2 instance.
• **Long-term Performance Repository**: a DB2 performance warehouse instance, which contains the long-term performance data collected, aggregated and controlled by the Middleware.

When the long-term Repository option is enabled, the Repository Manager continually loads, aggregates and transfers the historical data into the long-term Performance Repository.

The Performance Repository enables a set of advanced features including:

• Long-term historical data retention (for an indefinite period)
• A powerful Change Tracking mechanism that captures all the database related and execution plan changes

**Deployment**: the Repository can be deployed on any network host, but it is highly recommended to use a host other than that of the monitored DB2 instance in order to have optimum scalability and performance and reduce overhead on the monitored DB2 instance.

**Note**  The Performance Repository can be configured during the regular installation process or later by rerunning the wizard after completing the Agent installation.

For details, see section “Performance Repository” on page 10.

**Architecture Options**

Foglight Performance Analysis Agent can be installed using either single or multi-tier architecture. The configuration chosen affects both the product installation and the hardware requirements.

For further information see “Multi-tier vs. Single-tier Architecture” on page 11.

**Related Topics**

“About the Foglight Performance Analysis Agent” on page 1

“Multi-tier vs. Single-tier Architecture” on page 11
Performance Repository

The Performance Repository is a dedicated database installed into an additional DB2 instance. The Repository serves as a data warehouse for long-term performance data, collected by the Collector component and aggregated by the Middleware component, as explained in “Architecture Overview” on page 8.

Performance Repository Benefits

- Stores unlimited amounts of data that would otherwise be discarded after a short time period (up to 90 days).
- Offloads data from the short-term storage area and enables the middle-tier to perform more efficiently, while still allowing ready access to long-term historical data.
- Enables the change tracking mechanism, which captures all database-related and execution plan changes.
- Enables the Change Tracking feature.

A single performance repository is capable of handling several monitored DB2 instances. Such a repository can reside on any host that is accessible from the middle-tier host and the various Foglight Performance Analysis Agent Clients.

The Repository is required to enable advanced product features such as:

- Long-term Historical Data Retention: allow Foglight Performance Analysis for DB2 LUW to store unlimited amount of history (limited only by Repository space availability).
- Change Tracking: automatic detection of system, instance and DB2 changes that impact application and database performance.

The Repository is designed to serve multiple Agent installations, monitoring multiple DB2 instances. As such, it has the ability to scale for large amounts of data, given optimal environmental factors.

The Repository is controlled and maintained by the Foglight Performance Analysis Middleware component.
Repository Placement

For performance considerations, Quest recommends that the Performance Repository be placed on a host other than the monitored DB2 host.

Placing the Performance Repository on a host other than the middle-tier host improves the agent’s scalability and is highly recommended for environments in which the same middle-tier host serves more than 10 monitored DB2 instances.

Related Topics

“Architecture Overview” on page 8
“Multi-tier vs. Single-tier Architecture” on page 11

Multi-tier vs. Single-tier Architecture

The Foglight Performance Analysis for DB2 LUW Agent can be installed using a single or multi-tiered architecture. The configuration chosen affects both the product installation and the hardware requirements.

In a single-tier installation, all processes, except for the repository database, run on the DB2 host. In a multi-tier installation only the Collector runs on the DB2 host while all other processes run on the middle-tier host. The multi-tier installation is the preferred architecture, as it offloads the processing load from the DB2 host to the middle-tier host. As a result, the production system is left as sterile as and unaffected as possible.

Note  Regardless of the chosen Server architecture, Quest Software recommends placing the Performance Repository on a host other than that of the monitored DB2 instance.

The following sections describe the single-tier and multi-tier installations.

“Single-tier Topology” on page 12
“Multi-tier Topology” on page 13
Single-tier Topology

The single-tier topology is easier to deploy, but can impose additional overhead on the host and the DB2 instance.

Select this configuration under any of the following circumstances:

- You are monitoring a non-critical environment (for example, test or non-production environments)
- Your production host can handle additional resource demands
- No additional middle-tier host is available
In a multi-tier installation, the middle-tier layer is installed on a host other than that of the DB2 instance, providing for optimal performance. The middle-tier and DB2 host platforms are independent of one another. For example, a middle tier can be running on AIX 5 while a monitored DB2 instance runs on Windows 2003.

The advantages of such a configuration include the following:

- The CPU and I/O load on the DB2 host are reduced and moved onto the middle-tier. The middle-tier computer capacity should be adjusted according to the number of instances it is designed to serve.
- A site monitoring several instances can employ a single middle-tier host to serve as Middleware for all monitored DB2 instances. Choosing this configuration lightens the administrative and maintenance burdens, as the Middleware is installed only once. The
Repository can reside on the middle-tier host or on another host in the network, depending on the configuration and business needs.

Related Topics
“About the Foglight Performance Analysis Agent” on page 1

The quest_launcher Component

The quest_launcher is the Foglight Performance Analysis agent component used for connecting to the Foglight Performance Analysis agent (StealthCollect) processes on the Oracle Host or on the middle-tier Host. This component runs as a service on Windows servers and as a daemon on UNIX servers.

If the quest_launcher is not running on the Oracle Host, Foglight Performance Analysis will not be able to display the instance activity and will display an error message when trying to connect to the Foglight Performance Analysis agent. This error might also occur if a firewall prevents communication between Foglight Performance Analysis and the Host.

Verifying the Connection to the Agent Services

Verifying that the connection to the agent services is operative (for example, that no firewall inhibits client-agent communication), is carried out by running the following command from the client PC command line:

```
quest_launcher.exe -command -status -host <host> -port <port>
```

- If the output is unsuccessful (the agent is down), the following message appears:
  
  ERROR: ERR_CONNECTION_REFUSED - Connect to launcher daemon failed

- If the output is successful, it would look as in the following sample:

<table>
<thead>
<tr>
<th>Product</th>
<th>Version</th>
<th>Process</th>
<th>Instance</th>
<th>Status</th>
<th>PID</th>
</tr>
</thead>
<tbody>
<tr>
<td>AgentManager</td>
<td>2.0</td>
<td>guard</td>
<td>common</td>
<td>RUNNING</td>
<td>214926</td>
</tr>
<tr>
<td>AgentManager</td>
<td>2.0</td>
<td>installer</td>
<td>common</td>
<td>READY</td>
<td></td>
</tr>
<tr>
<td>AgentManager</td>
<td>2.0</td>
<td>guardcmd</td>
<td>common</td>
<td>READY</td>
<td></td>
</tr>
</tbody>
</table>
To verify the agent status on a Unix/Linux platforms, run the quest_launcher from the client as follows:

```shell
quest_launcher.exe -command -host <host> -port <port> -user quest -pass quest -status
```

- If the output is unsuccessful (the agent is down), the following message appears:
  
  ```
  ERROR: ERR_CONNECTION_REFUSED - Connect to launcher daemon failed
  ```

- If the output is successful, the result looks as in the following sample:

<table>
<thead>
<tr>
<th>Product</th>
<th>Version</th>
<th>Process</th>
<th>Instance</th>
<th>Status</th>
<th>PID</th>
</tr>
</thead>
<tbody>
<tr>
<td>StealthCollect</td>
<td>7.0</td>
<td>quest_sc_collector</td>
<td>morphesus-ORA817</td>
<td>RUNNING</td>
<td>31516</td>
</tr>
<tr>
<td>StealthCollect</td>
<td>7.0</td>
<td>quest_sc_mw</td>
<td>morphesus-ORA817</td>
<td>RUNNING</td>
<td>58406</td>
</tr>
<tr>
<td>StealthCollect</td>
<td>7.0</td>
<td>quest_sc_rep</td>
<td>morphesus-ORA817</td>
<td>RUNNING</td>
<td>215068</td>
</tr>
<tr>
<td>StealthCollect</td>
<td>7.0</td>
<td>quest_sc_os_monitor</td>
<td>common</td>
<td>READY</td>
<td></td>
</tr>
<tr>
<td>StealthCollect</td>
<td>7.0</td>
<td>quest_sc_os_admin</td>
<td>common</td>
<td>READY</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product</th>
<th>Ver.</th>
<th>Process</th>
<th>Instance</th>
<th>Status</th>
<th>PID</th>
</tr>
</thead>
<tbody>
<tr>
<td>AgentManager</td>
<td>2.0</td>
<td>guard</td>
<td>common</td>
<td>RUNNING (NOCONF)</td>
<td>2384</td>
</tr>
<tr>
<td>AgentManager</td>
<td>2.0</td>
<td>installer-0</td>
<td>common</td>
<td>READY</td>
<td>192</td>
</tr>
<tr>
<td>AgentManager</td>
<td>2.0</td>
<td>installer</td>
<td>common</td>
<td>READY</td>
<td></td>
</tr>
<tr>
<td>AgentManager</td>
<td>2.0</td>
<td>guardcmd</td>
<td>common</td>
<td>READY</td>
<td></td>
</tr>
<tr>
<td>SC_DB2</td>
<td>7.0</td>
<td>quest_sc_os_monitor</td>
<td>common</td>
<td>READY</td>
<td></td>
</tr>
<tr>
<td>SC_DB2</td>
<td>7.0</td>
<td>quest_sc_os_admin</td>
<td>common</td>
<td>READY</td>
<td></td>
</tr>
</tbody>
</table>
Starting and Stopping the quest_launcher

To start the Quest launcher:

- **UNIX** - run the command: `<Agent installation directory>/bin/quest_launcher_daemon start`
- **Windows**:
  a. Open the Services window as follows: click **Start > Run**, in the Open field enter `services.msc`, and then click **OK**.
  b. Navigate to the quest_launcher service, also known as QAM Launcher <port>.
  c. Right-click the service name and select **Start**.

To stop the Quest launcher:

- **UNIX** - run the command: `<Agent installation directory>/bin/quest_launcher_daemon stop`
- **Windows**:
  a. Open the Services window as follows: click **Start > Run**, enter `services.msc`, and then click **OK**.
  b. Navigate to the quest_launcher service, also known as QAM Launcher <port>.
  c. Right-click the service name and select **Stop**.
Agent Installation Wizard

The Agent Installation Wizard section details the steps required for using the installation wizard to set up and administer the Foglight Performance Analysis for DB2 LUW Agent. This section includes the following topics:

- Preface
- Introduction screen - allows selecting one of the following options:
  - Installing Agent Components
  - Uninstalling an Existing Agent
  - Configuring a Performance Repository for an Existing Agent

Preface

The agent installation wizard installs and administers the Foglight Performance Analysis Agent components, as well as the repository database objects for a specific DB2 instance.

This screen is a gateway to the major operations:

- Install (described in this topic)
- Uninstall
- Configure Repository

This wizard should run locally only on the host where the components are to be installed; use a remote database connection to remotely create the Performance Repository database objects.

To ensure a smooth and successful installation, verify that the system meets the Installation Prerequisites.

Introduction screen

Use the Introduction screen to select one of the following options:

“Installing Agent Components” on page 18
“Uninstalling an Existing Agent” on page 18
Installing Agent Components

In a multi-tier environment, first install the Middleware component on the middle-tier host and only then install the Collector component on the monitored DB2 host.

In a single-tier environment the Middleware and Collector are installed (in the above order) but as part of a single procedure.

**Note**

The Middleware should only be installed once per host.
All subsequent collector installations can point to the already installed middleware.

Uninstalling an Existing Agent

Remove an existing agent installation from this Server.

Configuring a Performance Repository for an Existing Agent

This option allows configuring an existing agent to use a Performance Repository. A repository database will be created if it does not yet exist. This option is applicable only when choosing not to configure the Performance Repository during the initial agent installation.

Related Topics

“About the Foglight Performance Analysis Agent” on page 1
“Installation Prerequisites” on page 2
“Architecture Overview” on page 8
“Multi-tier vs. Single-tier Architecture” on page 11
Troubleshooting

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>The current logged-in OS user has no permission to write in the current running directory. Please enable the WRITE permission on the current directory and restart the installation.</td>
<td>Ensure the current logged-in OS user has WRITE privileges on the current directory or move the installation file to another directory and restart the installation.</td>
</tr>
</tbody>
</table>

Agent Architecture Screen

The Agent Architecture screen allows determining the agent architecture that will be employed. The default selection is the Quest recommendation of a multi-tier deployment.

If you have not yet decided the architecture type, please read through the Architecture Overview section in this document.

**Note**  After the agent has been installed, its architecture cannot be changed.

Multi-tier

This configuration option installs the Foglight Performance Analysis Agent components on two different hosts. The DB2 Collector component is installed on the DB2 host, while the Middleware component (data storage and management) is installed on a separate middle-tier host.

This option is recommended, as it reduces the load on the DB2 host by offloading agent resource consumption to a middle-tier host, resulting in a highly scalable solution.

A single Middleware installation can serve multiple DB2 Collectors. A common site practice is to have a single middle-tier host serving multiple or even all of the DB2 instances.

**Note**  This option requires installing first the Middleware component on the middle-tier host before installing the DB2 Collector component on the DB2 host. If the Middleware component has already been installed (even if was installed for a different DB2 instance), skip the Middleware installation and just configure the Collector component to use the previously installed Middleware when prompted to.
Middleware

Choosing this option will install the Middleware component on this host. The Middleware component is primarily responsible for the agent’s data storage and management operations.

The middleware component should be installed once per middle-tier host. Any subsequent Collector component installation can and should point to the existing middleware installation.

To proceed with this option, go to the Middle-tier Port Selection Screen screen.

DB2 Collector

Choosing this option installs the DB2 Collector component on the host where the monitored DB2 instance resides. Proceeding with the installation requires providing the details of an existing Middleware component.

Single Tier

This option installs the entire Foglight Performance Analysis Agent components on the host where the monitored DB2 instance resides.

This architecture is recommended only for demonstration purposes, test environments or where the DB2 host has excess capacity.

Related Topics

“Multi-tier vs. Single-tier Architecture” on page 11
“Architecture Overview” on page 8

Middle-tier Port Selection Screen

The agent’s Middleware component requires a dedicated TCP/IP communication port for communicating with the Collector component and the Foglight Performance Analysis Client.

Use the Middle-tier Port Selection screen to specify an available TCP/IP communication port on the middle-tier host.
Agent Communication Port

The agent communication port is used for communicating between the Foglight Performance Analysis Agent processes. The available port range is from 1024 to 65536. Quest recommends that all Foglight Performance Analysis Agents on this host use the same port (3566, if available).

Ensure that this port is not being used by another program and is not blocked by a firewall.

Note
If the password for the default Foglight Performance Analysis agent logon account has been changed since the agent was installed, the Agent Login dialog box appears, requiring to specify the login username and password. Enter the user-defined username and password and click OK.

Minimal/Demo Installation

The minimal/demo installation creates a minimal historical data collection model, which requires only 600 MB of disk space for each monitored DB2 instance. This option is not recommended for non-demo environments.

A standard installation requires 2 GB for each monitored DB2 instance.

Note
After the agent is installed, additional disk space may be allocated to the historical collection, to accommodate future needs.

Troubleshooting

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>The installation wizard has identified a corrupted agent installation on the following host using the specified port. Please select a different port.</td>
<td>The installation wizard has identified a corrupted agent installation on the selected port. Possible solutions: • Specify a different port to trigger a fresh installation. • Uninstall the existing agent and re-initiate the Middleware installation process.</td>
</tr>
<tr>
<td>Error</td>
<td>Workaround</td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Connection to existing framework on the specified host caused an error.</td>
<td>The installation wizard identified a corrupted Agent installation on the selected port.</td>
</tr>
<tr>
<td></td>
<td>Possible solutions:</td>
</tr>
<tr>
<td></td>
<td>• Specify a different port to trigger a fresh installation.</td>
</tr>
<tr>
<td></td>
<td>• Uninstall the existing agent and re-initiate the Middleware installation process.</td>
</tr>
<tr>
<td>The specified port <code>&lt;port&gt;</code> is invalid. Please ensure that the port number is between 1024 and 65536.</td>
<td>Specify an available port in the range: 1024–65536</td>
</tr>
<tr>
<td>There is insufficient free space in <code>&lt;host&gt; &lt;directory&gt;</code>. The installation requires <code>&lt;amount&gt;</code> of free space, while only <code>&lt;available value&gt;</code> is available. Please free at least <code>&lt;required space&gt;</code> of space.</td>
<td>The specified installation directory lacks sufficient free space.</td>
</tr>
<tr>
<td></td>
<td>Possible solutions:</td>
</tr>
<tr>
<td></td>
<td>• Free sufficient disk space in the installation directory.</td>
</tr>
<tr>
<td></td>
<td>• Specify a different port to trigger a fresh installation and select a different installation directory with sufficient available disk space (not recommended).</td>
</tr>
</tbody>
</table>
Middleware Component Settings Screen

Use the **Middleware Component Settings** screen to specify the installation directory on the middle-tier host to which the Middleware component will be installed. Ensure that the specified installation directory has sufficient free disk space.

The host may be protected by a firewall, depending on the customer environment. If such a protection does exist, ensure checking the Yes button under the question *is <hostname> protected by a firewall?*, at the bottom of the screen.

**Installation Directory**

Specify the installation directory on the middle-tier host. This directory contains the agent executable files and the short-term historical data files (storing up to 90 days of history). The directory requires at least 2GB of free disk space for every monitored DB2 instance.

The installation directory should have sufficient extra disk space capacity to allow for potential future growth.

---

**Note**  The OS user running the installer must have write privileges on the installation directory.

---

**Default Directory**

Choosing this option will install the Middleware component in the Quest specified default directory.

**User Specified**

To specify any location other than the default for the installation directory, choose this option and enter the directory of choice. The Middleware component will then be installed on this host in the specified directory.

**Firewall Setting**

The firewall setting affects the way in which the agent communicates through the port that was specified in the previous Middle-tier Port Selection screen.
Selecting this option will change the connection protocol, allowing every Client to carry out a permanent connection to the specified communication port. All network traffic from all Client connections is multiplexed on this communication port.

By default, every agent connection attempt is established by performing an initial connection handshake to the specified port. During this process, a random port is decided upon. The initial handshake is then followed by a permanent connection, using the newly created random port. This protocol is efficient, but cannot function in a firewall-protected environment.

- Select Yes if the host is protected by a firewall, causing the Foglight Performance Analysis agent to use only the specified port for incoming communication. In such a case, ensure that this port is not blocked by the firewall.
- Select No if the host is not protected by a firewall. In such a case, the communication port is used for the initial handshake process, and additional ports are used upon subsequent user connections.

**Note**

Ensure that the Middleware communication port specified in the Middle Port Selection screen is open for bidirectional access in the firewall.

**Related Topics**

“Installation Prerequisites” on page 2

**Troubleshooting**

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
</table>
| There is insufficient free space in `<host> <directory>`. The installation requires `<amount>` of free space, while only `<available value>` is available. Please free at least `<required space>` of space. | The specified installation directory lacks sufficient free space. Possible solutions:  
- Free sufficient disk space in the installation directory. 
- Specify a different port to trigger a fresh installation and select a different installation directory with sufficient available disk space (not recommended). |
<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failed to access directory <code>&lt;directory&gt;</code>. Please verify that the specified directory exists and that the current logged-in OS user has read/write permission on it.</td>
<td>The logged-in user account is not authorized to read/write in the installation directory. Possible solutions: • Grant read/write permissions on the installation directory to the installation user • Select a different installation directory with read/write permissions</td>
</tr>
<tr>
<td>The Foglight Performance Analysis for DB2 LUW Agent binaries are corrupted. Please obtain a new installer and restart the installation.</td>
<td>Obtain a newer installer and run the installation again.</td>
</tr>
<tr>
<td>An internal issue has occurred. Please retry the last operation to continue the installation process. If this attempt also fails, please contact Quest Support.</td>
<td>This is a general error message. It can appear in this window when the installer encounters problems while configuring Firewall Setting. • Read, carefully, the Firewall Setting section and ensure making the proper configurations. • If choosing to enable the firewall setting, ensure that the chosen communication port is not blocked by the firewall. • Please contact Quest Support.</td>
</tr>
</tbody>
</table>
Middleware Installation Completed

The Middleware component has been successfully installed.

Completing the Foglight Performance Analysis for DB2 LUW Agent installation requires installing the DB2 Collector component by running the Installation Wizard on the DB2 host.

When installing the DB2 Collector component:

- Select *multi-tier* and choose DB2 Collector component when prompted for the agent architecture.
- Specify this middle-tier host when prompted.
- When prompted, enter the middle-tier’s communication port that was specified during the Middleware installation.

**Note**  The Middleware component is designed to serve multiple DB2 Collectors and can scale up easily to support large environments. For further information, see “Multi-tier vs. Single-tier Architecture” on page 11.

Related Topic

“Multi-tier vs. Single-tier Architecture” on page 11

Foglight Performance Analysis for DB2 LUW Agent Port Selection Screen

To function properly, a Foglight Performance Analysis Agent that is configured to work in a multi-tier environment requires a permanent connection between all tiers. Such a connection uses a dedicated TCP/IP communication port.

Use the **Foglight Performance Analysis for DB2 LUW Agent Port Selection** screen to specify the TCP/IP communication port to be used for communication with the Foglight Performance Analysis Agent processes on the DB2 host, as well as to specify the historical data collection type.

Agent Communication Port

The agent communication port is used for communicating with the Foglight Performance Analysis Agent processes. The available port range is from 1024 to 65536.
Quest recommends that all Foglight Performance Analysis Agents on this host use the same port (3566, if available). Ensure that this port is not being used by another program and is not blocked by a firewall.

**Minimal/Demo Installation**

The minimal/demo installation creates a minimal historical data collection model, which requires only 600 MB of disk space for each monitored DB2 instance. This option is not recommended. A standard installation requires 2 GB for each monitored DB2 instance.

**Note** After the agent is installed, additional disk space may be allocated to the historical collection, to accommodate future needs.

**Troubleshooting**

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>The installation wizard has identified a corrupted agent installation on host: &lt;host&gt; using port &lt;port&gt; Please select a different port.</td>
<td>The installation wizard has identified a corrupted agent installation on the selected port. Possible solutions: • Specify a different port to trigger a fresh installation. • Uninstall the existing agent and re-initiate the installation process.</td>
</tr>
<tr>
<td>The specified agent version is obsolete. Please contact Quest Support.</td>
<td>Contact Quest Support.</td>
</tr>
<tr>
<td>There is insufficient free space in Host &lt;host&gt; &lt;directory&gt;. The installation requires &lt;amount&gt; of free space, while only &lt;available value&gt; is available. Please free at least &lt;required space&gt; of space.</td>
<td>The specified installation directory lacks sufficient free space. Possible solutions: • Free sufficient disk space in the installation directory. • Specify a different port to trigger a fresh installation and select a different installation directory with sufficient available disk space (not recommended).</td>
</tr>
</tbody>
</table>
DB2 Collector Component Settings Screen

Use the **DB2 Collector Component Settings** screen to specify the installation directory on the DB2 host to which the Collector component is to be installed. Ensure that the specified installation directory has sufficient free disk space.

The host may be protected by a firewall, depending on the customer environment. If such a protection does exist, ensure selecting the *Yes* button under the question *is <hostname> protected by a firewall?*, at the bottom of the screen.

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>The specified port &lt;port&gt; is invalid. Please ensure that the port number is between 1024 and 65536.</td>
<td>Specify an available port in the range: 1024–65536.</td>
</tr>
<tr>
<td>Port &lt;port&gt; is being used by another program. Please select a different port.</td>
<td>Specify an available port in the range: 1024–65536.</td>
</tr>
</tbody>
</table>

**Note**
This step does not occur if an agent already exists on the chosen installation port

**Installation Directory**

Specify the installation directory on the DB2 host. This directory, which will contain the Collector executable files, requires at least 300 MB of free disk space.

**Note**
The Windows domain user account running the installer must have write privileges on the installation directory.

**Default Directory**

The components installed on this host will be installed in the default directory.
User Specified
To specify your own installation directory location, choose this option and enter your directory of choice. The Collector component will then be installed on this host in the specified directory.

Firewall Settings
Select this option if the DB2 host is protected by a firewall, and determine the relevant connection protocol.

Selecting this option will change the connection protocol, allowing every Client to carry out a permanent connection to the specified communication port. All network traffic from all Client connections is multiplexed on this communication port.

By default, every agent connection attempt is established by performing an initial connection handshake to the specified port. During this process, a random port is decided upon. The initial handshake is then followed by a permanent connection, using the newly created random port. This protocol is efficient, but cannot function in a firewall-protected environment.

Select this option if the middle-tier host is protected by a firewall.

- Select Yes if the host is protected by a firewall, causing the Foglight Performance Analysis Agent to use only the specified port for incoming communication. In such a case, ensure that this port is not blocked by the firewall.
- Select No if the host is not protected by a firewall. In such a case, the communication port is used for the initial handshake process, and additional ports are used upon subsequent user connections.

Note: Ensure that the Collector communication port specified in the Foglight Performance Analysis for DB2 LUW Agent Port Selection screen is open for bi-directional access in the firewall.

Related Topics
“Installation Prerequisites” on page 2
“Multi-tier vs. Single-tier Architecture” on page 11
Troubleshooting

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Foglight Performance Analysis for DB2 LUW Agent binaries are corrupted. Please obtain a new installer and restart the installation.</td>
<td>Obtain a newer installer and run the installation again.</td>
</tr>
</tbody>
</table>
| Failed to install the Foglight Performance Analysis for DB2 LUW Agent. Please validate that the current, logged-in OS user account has WRITE privileges on <directory>. | The logged-in user account is not authorized to write in the installation directory. Possible solutions:  
  • Grant read/write permissions on the installation directory to the installation user.  
  • Select a different installation directory with write permissions. |
| An internal issue has occurred. Please retry the last operation to continue the installation process. If this attempt also fails, please contact Quest Support. | This is a general error message, which can appear in this window when the installer encounters problems while configuring Firewall Setting.  
  • Read carefully the Firewall Settings section of this page and ensure making the proper configurations.  
  • If choosing to enable the firewall setting, ensure that the chosen communication port is not blocked by the firewall.  
  • Contact Quest Support. |

Middle-tier Specification

The Middleware component is responsible for maintaining, aggregating, and administering the data received from the DB2 Collector component.

The multi-tier architecture installation flow requires that the Middleware component be installed prior to installing the Collector component and the Performance repository configuration (optional).

Use the Middle-tier Specification screen to provide the location of the Middleware component that was previously installed, by specifying the middle-tier host name and its communication port.
The Collector and Middleware components functional relationship is not alterable without loss of data. After the agent installation is completed, replacing the Middleware component for this monitored DB2 instance requires uninstalling the agent, thereby losing historical data.

If the Middleware component has not yet been installed, install it on the middle-tier host now, and then continue this installation.

**Note** You are not required to exit this installation while installing the Middleware component.

### Middle-tier Host

Specify the host on which the Middleware component was installed.

### Middle-tier Communication Port

Specify the middle-tier’s communication port that was provided during the Middleware component’s installation.

### Related Topics

“Multi-tier vs. Single-tier Architecture” on page 11

### Troubleshooting

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
</table>
| The installer failed to connect to the Middleware component on the middle-tier host <host> using port <port>. Please validate that the Middleware was installed correctly. | The installation cannot connect to the Middleware component on the middle-tier host using port <Port>. Possible solutions:  
  - Verify that a firewall is not blocking the communication between the middle-tier host and the DB2 host and that the communication port is not being used by another program usage.  
  - Reinstall the Middleware component on the middle-tier host |
The agent communication port is used for communicating between and with the Foglight Performance Analysis for DB2 LUW Agent processes. The available port range is from 1024 to 65536. Quest recommends that all Foglight Performance Analysis Agents on this host use the same port (3566, if available).

Ensure that this port is not being used by another program and is not blocked by a firewall.

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>The agent component on the middle-tier host failed to connect to the DB2 host. Please verify connectivity between the middle-tier host and the DB2 host using port &lt;port&gt;.</td>
<td>The installation cannot connect from the middle-tier host to the DB2 host using port &lt;Port&gt;. Verify that a firewall is not blocking the communication between the middle-tier host and the DB2 host and that the communication port is not being used by another program.</td>
</tr>
<tr>
<td>The specified port &lt;port&gt; is invalid. Please ensure that the port number is between 1024 and 65536.</td>
<td>Specify an available port in the range: 1024–65536.</td>
</tr>
</tbody>
</table>

**Single-tier Foglight Performance Analysis for DB2 LUW Agent Port Selection Screen**

The agent requires a dedicated TCP/IP communication port for internal and Foglight Performance Analysis Client communication.

Use the **Single-tier Foglight Performance Analysis for DB2 LUW Agent Port Selection** screen to specify the TCP/IP communication port to be used for communication between the Foglight Performance Analysis Agent processes on the DB2 host, as well as to specify the historical data collection type.

**Agent Communication Port**

The agent component on the middle-tier host failed to connect to the DB2 host. Please verify connectivity between the middle-tier host and the DB2 host using port <port>.

Ensure that this port is not being used by another program and is not blocked by a firewall.

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>The agent component on the middle-tier host failed to connect to the DB2 host. Please verify connectivity between the middle-tier host and the DB2 host using port &lt;port&gt;.</td>
<td>The installation cannot connect from the middle-tier host to the DB2 host using port &lt;Port&gt;. Verify that a firewall is not blocking the communication between the middle-tier host and the DB2 host and that the communication port is not being used by another program.</td>
</tr>
<tr>
<td>The specified port &lt;port&gt; is invalid. Please ensure that the port number is between 1024 and 65536.</td>
<td>Specify an available port in the range: 1024–65536.</td>
</tr>
</tbody>
</table>

**Note** If the password for the default Foglight Performance Analysis for DB2 LUW agent logon account has been changed since the agent was installed, the Agent Login dialog box appears, requiring to specify the login username and password. Enter the user-defined username and password and click **OK**.
**Minimal/Demo Installation**

The minimal/demo installation creates a minimal historical data collection model that requires only 600 MB of disk space for each instance. This option is not recommended for non-demo environment.

A standard installation requires 2 GB for each instance.

---

**Note** After the agent is installed, additional disk space may be allocated to the historical collection, to accommodate future needs.

---

**Troubleshooting**

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
</table>
| The installation wizard has identified a corrupted agent installation on host: <host> using port <port> | The installation wizard has identified a corrupted agent installation on the selected port. Possible solutions:  
- Specify a different port to trigger a fresh installation.  
- Uninstall the existing agent and re-initiate the installation process. |
| Please select a different port.                                       |                                                                                             |
| The specified agent version is obsolete. Please contact Quest Support. | Contact Quest Support.                                                                     |
| There is insufficient free space in Host <host> <directory>.          | The specified installation directory lacks sufficient free space.                           |
| The installation requires <amount> of free space, while only <available value> is available. | Possible solutions:  
- Free sufficient disk space in the installation directory.  
- Specify a different port to trigger a fresh installation and select a different installation directory with sufficient available disk space (not recommended). |
Error Components Settings Screen

Use the Agent Components Settings screen to specify the installation directory on the DB2 host to which the agent is to be installed. Ensure that the specified directory has sufficient free disk.

The host may be protected by a firewall, depending on the customer environment. If such a protection does exist, ensure checking the Yes button under the question is <hostname> protected by a firewall?, at the bottom of the screen.

Note This step does not occur if an agent already exists on the chosen installation port.

Installation Directory

Specify the installation directory on the DB2 host. This directory, which will contain the agent executable and the short-term historical files, requires at least 2 GB of free disk space.

Quest recommends allocating extra disk space to the installation directory, to ensure having sufficient free disk space to allow for potential future growth.

Note The Windows domain user account that runs the installer must have write privileges on the installation directory.
Default Directory
Choose this option to install the agent in the Quest specified default directory.

User Specified
To specify a user-defined location for the installation directory, choose this option and enter the directory of choice. The agent will then be installed on this host in the specified directory.

Firewall Settings
The firewall setting affects the way in which the agent communicates through the port specified in the previously displayed Port Selection screen.

Select this option if the middle-tier host is protected by a firewall.

Selecting this option will change the connection protocol, allowing every Client to carry out a permanent connection to the specified communication port. All network traffic from all Client connections is multiplexed on this communication port.

By default, every agent connection attempt is established by performing an initial connection handshake to the specified port. During this process, a random port is decided upon. The initial handshake is then followed by a permanent connection, using the newly created random port. This protocol is efficient, but cannot function in a firewall-protected environment.

Select this option if the middle-tier host is protected by a firewall.

- Select Yes if the host is protected by a firewall, causing the Foglight Performance Analysis for DB2 LUW Agent to use only the specified port for incoming communication. In such a case, ensure that this port is not blocked by the firewall.
- Select No if the host is not protected by a firewall. In such a case, the communication port is used for the initial handshake process, and additional ports are used upon subsequent user connections.

Note  
Ensure that the agent communication port specified in the Port selection screen is open for bi-directional access in the firewall.

Related Topics
“Installation Prerequisites” on page 2.
## Troubleshooting

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Foglight Performance Analysis for DB2 LUW Agent binaries are corrupted. Please obtain a new installer and restart the installation.</td>
<td>Obtain a newer installer and run the installation again.</td>
</tr>
</tbody>
</table>
| Failed to install the Foglight Performance Analysis for DB2 LUW Agent. Please validate that the current, logged-in OS user account has WRITE privileges on <directory>. | The logged-in user account is not authorized to write in the installation directory. Possible solutions:  
  • Grant read/write permissions on the installation directory to the installation user.  
  • Select a different installation directory with write permissions. |
| There is insufficient free space in <host> <directory>. The installation requires <amount> of free space, while only <available value> is available. Please free at least <required space> of space. | The specified installation directory lacks sufficient free space. Possible solutions:  
  • Free sufficient disk space in the installation directory.  
  • Specify a different port to trigger a fresh installation and select a different installation directory with sufficient available disk space (not recommended). |
| Failed to access directory <directory>. Please verify that the specified directory exists and that the current logged-in OS user has read/write permission on it. | The logged-in user account is not authorized to read/write in the installation directory. Possible solutions:  
  • Grant read/write permissions on the installation directory to the installation user.  
  • Select a different installation directory with read/write permissions. |
Monitored Instance Settings

The wizard has successfully installed the Foglight Performance Analysis for DB2 LUW Agent executable files and is now ready to configure the agent to monitor the DB2 instance.

Use the Monitored Instance Settings screen to specify the DB2 instance-related details.

The Foglight Performance Analysis Agent for DB2 LUW will monitor the DB2 instance based on the connection details specified in this screen.

DB2 Connection Parameters

Specify the following values regarding the DB2 instance to be monitored. Ensure that this DB2 instance is running.

- DB2 Instance
- DB2 Instance Port
- DB2 Username
- DB2 Password

**Important** Ensure specifying the DB2 communication port and not the port used for communication with the DB2 LUW Agent.

In you are unsure about the preferred port selection method, consult the organization’s database administrator.

OS IP Configuration Settings

If the Host uses a virtual name/IP address, select this check box and specify the address.

Specify a Valid DB2PATH on Host

The installer will try to automatically detect the DB2PATH on the host. If unsuccessful, you will be prompted to enter the path.

Related Topics

“Installation Prerequisites” on page 2
## Troubleshooting

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failed to connect to the monitored instance.</td>
<td>The connection to the DB2 instance failed. Possible solution:</td>
</tr>
<tr>
<td>Possible reasons:</td>
<td>• For multi-tier installations, validate that the supplied details allow the middle-tier Host to connect to the monitored instance.</td>
</tr>
<tr>
<td>• Invalid username or password.</td>
<td></td>
</tr>
<tr>
<td>• The DB2 instance is down.</td>
<td></td>
</tr>
<tr>
<td>There are not enough privileges for user &lt;user&gt; on instance &lt;instance&gt;.</td>
<td>Verify that the account used for connecting to the DB2 instance is a member of the SYSADMIN group.</td>
</tr>
<tr>
<td>The specified username or password is invalid.</td>
<td>Specify the valid user name and the password and click Next to continue.</td>
</tr>
<tr>
<td>The database operation failed.</td>
<td>The connection to the DB2 instance failed. Follow the displayed DB2 error to address the root problem and try again.</td>
</tr>
<tr>
<td>Connection Details:</td>
<td>Possible solutions:</td>
</tr>
<tr>
<td>Host: &lt;host&gt;</td>
<td>• For multi-tier installations, validate that the supplied details allow the middle-tier Host to connect to the monitored instance.</td>
</tr>
<tr>
<td>Instance: &lt;instance&gt;</td>
<td>• Verify that the DB2 instance is up and running. Ensure that this instance contains at least one active database.</td>
</tr>
<tr>
<td>DB2 Instance Port: &lt;port&gt;</td>
<td>• Verify that the DB2 Instance Port that you selected is valid.</td>
</tr>
<tr>
<td>User: &lt;user&gt;</td>
<td></td>
</tr>
<tr>
<td>Generated the following exception: &lt;Connection Error&gt;</td>
<td>The specified installation directory lacks sufficient free space. Free sufficient disk space in the installation directory.</td>
</tr>
<tr>
<td>There is insufficient free space in &lt;host&gt; &lt;directory&gt;.</td>
<td></td>
</tr>
<tr>
<td>The installation requires &lt;amount&gt; of free space, while only &lt;available value&gt; is available.</td>
<td></td>
</tr>
<tr>
<td>Please free at least &lt;required space&gt; of space.</td>
<td></td>
</tr>
</tbody>
</table>
Performance Repository Installation

The following section details how to install the performance repository and to configure the Foglight Performance Analysis for DB2 LUW to work with a Performance repository. This process involves entering the requested parameters in the screens described in the following sections:

- “Performance Repository Screen” on page 40
- “Repository Component Configuration” on page 40
- “DB2 Host Details Screen” on page 41
- “Monitored DB2 Instance Screen” on page 42
- “Repository Instance Screen” on page 43
- “Repository Instance Object Installation Screen” on page 45
- “Repository Configuration Screen” on page 47
Performance Repository Screen

The Performance Repository is a dedicated database installed into an additional DB2 instance. This database serves as a data warehouse for long-term performance data, which is collected by the Collector component and aggregated by the Middleware component, as explained in section “Architecture Overview” on page 8.

The repository is required to enable advanced product features, such as:

• **Long-term Historical Data Retention**: allow Foglight Performance Analysis for DB2 LUW to store unlimited amount of history (limited only by repository space availability).

• **Change Tracking**: automatic detection of system, instance and SQL changes that affect application and database performance.

The repository is designed to serve multiple agent installations that monitor multiple DB2 instances. As such, it can scale for large amounts of data, given optimal environmental factors.

The repository is controlled and maintained by the Performance Analysis Middleware component.

Repository Component Configuration

The repository installation configures the Performance Repository option for a single monitored DB2 instance, as follows:

• If the Performance Repository database has not yet been installed, the wizard creates the Performance Repository database in a DB2 instance that will be specified at a later stage. The initial objects installation requires 2GB of disk space, which are allocated for data retention upon installation, as well as 500MB of disk space that is dedicated for the log file usage.

• If a Performance Repository has already been installed, the wizard configures the agent to use the existing repository. Each agent configured to use an existing repository database requires an additional 500MB of disk space that are used by the data collection.

During the initial agent installation a prompt appears, asking whether to configure the agent to use a Performance Repository.

**Note**  The repository objects are installed at the end of the Agent installation process. This screen determines only the requested repository configuration.

**Related Topics**

“Repository Configuration Screen” on page 47
The first step of configuring the Foglight Performance Analysis for DB2 LUW Agent to work with a Performance repository is to designate a specific Monitored DB2 host that has existing agent installations. After configuring such a host, the existing installations would be configured to use the Performance Repository.

Use the **DB2 Host Details** screen to specify the agent communication port and the host details of the monitored DB2 host.

### Host name

Use this field to specify the DB2 host name. The wizard will detect the Foglight Performance Analysis for DB2 LUW running on the specified host.

**Note**  
The host name should be the name of the Monitored DB2 host and not the name of the Performance Repository host.

### Agent Communication Port

The agent communication port is used for communicating with the Foglight Performance Analysis for DB2 LUW processes on this DB2 host.

**Note**  
If the password for the default Foglight Performance Analysis for DB2 LUW agent logon account has been changed since the agent was installed, the Agent Login dialog box appears, requiring to specify the login username and password. Enter the user-defined username and password and click **OK**.

**Note**  
Ensure specifying a communication port used by an existing agent installation.
Troubleshooting

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
</table>
| The installer has failed to connect to agent on <host> using port <port>. Error: <error> | • On Windows: Verify that the Quest Launcher <port> service is up and running on the DB2 Host  
  • On UNIX/Linux: Verify that the process quest_launcher <port> is running on the DB2 host. |
| The specified port <port> is invalid. Please ensure that the port number is between 1024 and 65536. | Specify an available port in the range: 1024–65536. |

Monitored DB2 Instance Screen

Use the Monitored DB2 Instance screen to select the monitored DB2 instance whose Foglight Performance Analysis for DB2 LUW Agent you want to configure to use the repository.

If a repository manager is already configured, you will be prompted to specify whether to override this configuration.

Monitored Instance

Select the DB2 instance name whose Foglight Performance Analysis for DB2 LUW Agent you want to configure to work with a Performance Repository.

Install on the Monitored DB2 Instance

If selecting this option, the wizard will install the repository database on the monitored DB2 instance. This option is not recommended, especially for production environments, due to the following considerations:

• The database will be of reduced size and scalability
• Additional overhead is imposed on the monitored DB2 instance

Related Topics

“Repository Configuration Screen” on page 47
Troubleshooting

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failed to retrieve agent setup information.</td>
<td>• On Windows: Verify that the Quest Launcher &lt;port&gt; service is up and running on the DB2 Host</td>
</tr>
<tr>
<td>Connection Details:</td>
<td>• On AIX: Verify that the process quest_launcher &lt;port&gt; is running on the DB2 host.</td>
</tr>
<tr>
<td>Host: &lt;host&gt;</td>
<td></td>
</tr>
<tr>
<td>Instance:&lt;instance&gt;</td>
<td></td>
</tr>
<tr>
<td>Agent Port: &lt;port&gt;</td>
<td></td>
</tr>
<tr>
<td>Please verify that the agent is up and retry.</td>
<td></td>
</tr>
</tbody>
</table>

Repository Instance Screen

Use the Repository Instance screen to specify the Performance Repository instance details.

The agent will be configured to use the specified DB2 instance as its performance repository. A single repository instance is capable of serving multiple monitored instances.

If the specified database already serves as the Repository database, it will be reused.

Ensure that the specified instance is active and accessible from the middle-tier host.

Use a Dedicated Repository Instance

Choosing this option will install or reuse the repository database on a dedicated repository instance (Quests’ recommendation for production environments). The selected instance can scale up to efficiently serve several monitored DB2 instances.

DB2 Connection Parameters

Specify the following values regarding the DB2 instance to be monitored. Ensure that this DB2 instance is running.

- DB2 Host
- DB2 Instance Port
- DB2 Username
- DB2 Password
- Database
The database to install Performance Repository schema

Specify the name of the database where the Performance Repository schema is to be installed.

**Note**  Foglight Performance Analysis for DB2 LUW does not support installing a repository schema on a partitioned instance. If such an installation is needed, please contact Quest Support.

Install on the Monitored DB2 Instance

If this option is selected, the wizard will install the repository database on the monitored DB2 instance. This option is not recommended, especially for production environments, due to the following considerations:

- The database will be of reduced size and scalability
- Additional overhead is imposed on the monitored DB2 instance

Related Topics

“Repository Configuration Screen” on page 47

Troubleshooting

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>The specified username <code>&lt;user&gt;</code> or password is invalid.</td>
<td>Specify a valid DB2 user name and password and click Next to continue.</td>
</tr>
</tbody>
</table>
Repository Instance Object Installation Screen

Use the Repository Instance Object Installation screen to specify the performance repository database.

As detailed in the installation prerequisites, using the performance repository database requires meeting the following conditions:

- The user is a DBADM user for the Repository database
- The Performance Repository database has a free space of 2GB for the data file and 500 MB for the log file.
- Up to three tablespaces are specified to hold regular (data), index and large object (LOB) data. These tablespaces must already exist in the specified database, and the LOB tablespace must be declared as a LONG tablespace.

Available storage for each tablespace appears in the combo-box selection. The list of tablespaces can be refreshed by clicking Refresh.

Choose tablespace for data

- Specify the tablespace to be used for data storage.

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>The database operation failed. Connection Details: Host: &lt;host&gt; Instance: &lt;instance&gt; DB2 Instance Port: &lt;port&gt; User: &lt;user&gt; Generated the following exception: &lt;Connection Error&gt;</td>
<td>The connection to the DB2 instance failed. Follow the displayed DB2 error to address the root problem and try again. Possible solutions: • For multi-tier installations, validate that the supplied details allow the middle-tier Host to connect to the monitored instance. • Verify that the DB2 instance is up and running. • If you selected 'Custom' and received a General Network Error, verify that you have specified a port for DB2 communication with the repository instance. Note The common and recommended port selection method is the Dynamic Port.</td>
</tr>
</tbody>
</table>

User <user> is not a member of the SYSADMIN group. Provide a user which is a member of the SYSADMIN group.
Choose tablespace for indexes

• Specify the tablespace to be used for index storage.
• Click Refresh to refresh the list of tablespaces.

Choose tablespace for LOB data

• Specify the tablespace to be used for large object storage.
• Click Refresh to refresh the list of tablespaces.

Related Topics

“Repository Configuration Screen” on page 47.

Troubleshooting

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>The database <code>&lt;Database&gt;</code> already exists and can not be used by the Long Term Repository. Please select a different database.</td>
<td>Specify a different database that will contain the repository objects.</td>
</tr>
<tr>
<td>The specified username <code>&lt;user&gt;</code> or password is invalid.</td>
<td>Specify a valid DB2 user name and password and click Next to continue.</td>
</tr>
<tr>
<td>The database operation failed. Connection Details:</td>
<td>The connection to the DB2 instance failed. Follow the displayed DB2 error to address the root problem and try again. Possible solutions:</td>
</tr>
<tr>
<td>Host: <code>&lt;host&gt;</code> Instance: <code>&lt;instance&gt;</code> User: <code>&lt;user&gt;</code></td>
<td>• For multi-tier installations, validate that the supplied details allow the middle-tier Host to connect to the monitored instance.</td>
</tr>
<tr>
<td>Generated the following exception: <code>&lt;Connection Error&gt;</code></td>
<td>• Verify that the DB2 instance is up and running.</td>
</tr>
</tbody>
</table>
Repository Configuration Screen

If an existing repository is detected, you are prompted to choose whether to override the existing configuration. You will then be given a choice whether to configure the repository on a different instance or keep the current repository configuration.

You have successfully configured the Foglight Performance Analysis for DB2 LUW Agent to work with the Performance Repository. You can now install the Foglight Performance Analysis for DB2 LUW Client, and connect to this installation by using the Monitored DB2 host and the agent communication port provided during the Collector component installation.

Installation Completed

The Foglight Performance Analysis for DB2 LUW Agent has been successfully installed.

Please follow the instructions displayed on the screen to complete the installation.

Some post-installation tasks may be required to enable full product functionality. For details, see Configuring the Agent to Start at System Boot (UNIX).
Configuring the Agent to Start at System Boot (UNIX)

This section applies only to UNIX platforms. These settings are not necessary for Windows installations.

To ensure 24X7 historical recording, the Foglight Performance Analysis for DB2 LUW Agent must be automatically started at system boot. This is accomplished by configuring the quest launcher process to start when the system boots and causes all Foglight Performance Analysis for DB2 LUW Agent components to start on the designated Host.

**Important** Quest Launcher is a service designed to start, connect to, and stop processes and also manage user authentication.

The following sequence does not grant the Foglight Performance Analysis for DB2 LUW Agent any additional privileges. A privileged account is needed only for Agent registration within the system startup files. The Agent continues to execute under the OS account under which it has been installed.

**Caution** If you select not to configure the Agent to start on system boot, you must manually start the Agent upon any system boot, via the Quest Launcher.

To automatically start the Agent, perform the following steps:

1. Log on to the DB2 Instance host using the root account, or any other account with Write privileges on the DB2 Instance host.
2. Enter the following command:
   ```
   cd <installation directory>/bin
   
   where **installation directory** is the directory where the product has been installed.
   ```
3. Enter the following command:
   ```
   quest_launcher_install install
   
   This configures the Quest Agent Manager launcher service to start at system boot.
   ```
4. If you are running a multi-tier configuration, repeat step 1 through step 3 for the middle-tier Host.
Agent Uninstallation

The agent’s uninstallation process is carried out in several steps, as the agent should be uninstalled from several locations, such as the DB2 host and the communication port used by the agent. The following sections describe the steps needed for the uninstallation.

Uninstall Wizard Introduction Screen

The uninstallation wizard removes a Foglight Performance Analysis for DB2 LUW Agent installation for a specific instance.

This wizard should run on the Monitored DB2 instance. The Performance Repository can be uninstalled remotely.

Click Next to continue.

Note The Middleware component will be automatically removed along with the DB2 Collector component when the last Collector component attached to it has been uninstalled.

Related Topics

“Architecture Overview” on page 8.
“Agent Installation Wizard” on page 17

Introduction Screen

The Introduction screen begins the uninstallation procedure, which removes a Foglight Performance Analysis for DB2 LUW Agent installation that was configured for a specific instance.

DB2 Host Details

The DB2 Host Details screen is used for specifying the monitored DB2 host details and the agent communication port to be uninstalled.
Host
Specify the DB2 host that contains the agent targeted for uninstallation. The wizard will detect the Foglight Performance Analysis for DB2 LUW Agents running on the specified host.

Agent Communication Port
The agent communication port is used for communicating with the Foglight Performance Analysis for DB2 LUW Agent processes on this DB2 host. Specify the agent communication port that you want to uninstall.

Note
If the password for the default Foglight Performance Analysis for DB2 LUW agent logon account has been changed since the agent was installed, the Agent Login dialog box appears, requiring to specify the login username and password. Enter the user-defined username and password and click OK.

Related Topics
“Monitored Instance Selection” on page 51.

Troubleshooting

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>The installer has failed to connect to agent on &lt;host&gt; using port &lt;port&gt;. Error: &lt;error&gt;</td>
<td>Verify that the Quest Launcher &lt;port&gt; service is up and running on the DB2 Host.</td>
</tr>
<tr>
<td>The agent installed on the specified Host is a Middleware component. Please specify an agent on a monitored DB2 instance Host.</td>
<td>Run the installer on the monitored Host and specify the Foglight Performance Analysis for DB2 LUW agent port when required.</td>
</tr>
<tr>
<td>The specified port &lt;port&gt; is invalid. Please ensure that the port number is between 1024 and 65536.</td>
<td>Specify an available port in the range: 1024–65536.</td>
</tr>
</tbody>
</table>
Monitored Instance Selection

The **Monitored Instance Selection** screen displays all of the DB2 instances monitored by the agent installed on the specified server.

Use this screen to select an instance whose agent you want to uninstall.

**Troubleshooting**

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
</table>
| Failed to retrieve agent setup information. | • On Windows: Verify that the *Quest Launcher* `<port>` service is up and running on the DB2 Host  
   • On AIX: Verify that the process *quest_launcher* `<port>` is running on the DB2 host. |
| The Foglight Performance Analysis for DB2 LUW Agent is down and failed to start automatically. Please start the agent and continue with the uninstall process. | Connect to the agent using Foglight Performance Analysis for DB2 LUW before specifying the monitored instance.  
   (This error is unlikely, but if it occurs, connecting to the GUI and clicking *Next* may resolve it.) |

Middleware Host Details

The **Middleware Host Details** screen appears if the middleware component of the uninstalled instance cannot be identified.

Use this screen to provide the location of the Middleware component by specifying the middle-tier hostname and its communication port.

**Skip Middleware Uninstall**

Select this option if you do not want to uninstall the Middleware associated this instance.
Middle-tier Host
Specify the host on which the Middleware component is installed.

Middle-tier Communication Port
The middle-tier communication port is used for communicating with the Middleware component. Specify the port through which communication is carried out with the Middleware components.

Troubleshooting

<table>
<thead>
<tr>
<th>Error</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>The specified Middleware component does not serve the instance <code>&lt;instance&gt;</code> on host <code>&lt;host&gt;</code>. Please specify another Middleware or skip the Middleware uninstall.</td>
<td>Specify a Middleware that serves the specified monitored instance or skip the Middleware uninstall procedure.</td>
</tr>
<tr>
<td>The specified port <code>&lt;port&gt;</code> is invalid. Please ensure that the port number is between 1024 and 65536.</td>
<td>Specify an available port in the range: 1024–65536.</td>
</tr>
</tbody>
</table>

Uninstall Completed Screen
The Uninstallation procedure has been completed successfully.
The installer will remove the Quest Launcher service if this service is no longer used by any other Foglight Performance Analysis for DB2 LUW Agent installations.
Cluster Support

The Foglight Performance Analysis for DB2 LUW Agent is supported to run on clustered DB2 instance. The installation of the agent on cluster environment is easy and straightforward and is carried out by the same agent installer.

Related Topics

“Active/Passive Cluster Architecture” on page 53

Installing on Clustered DB2 Instance

The Foglight Performance Analysis for DB2 LUW Agent can be installed on a DB2 instance that resides on a clustered environment.

To install on an Active/Passive cluster environment:

1. Specify the DB2 virtual cluster name to be used for connecting to the DB2 instance.
2. Install on the shared drive.

Active/Passive Cluster Architecture

Active/Passive cluster is a common cluster form where a group of two or more servers (generally called nodes):

- Expose themselves as a single virtual server
- Are accessible through a virtual network name
- Share a common storage subsystem (shared drive)
- Provide failover capabilities

The cluster environment can be represented as follows:
In the above example:

- **Node 1, Node 2** – the physical (actual) names of the cluster member nodes (hosts).
- **DB2 Instance** – the monitored instance.
- **Shared Drive** – the drive containing the DB2 physical files.

**Related Topics**

“Cluster Agent Failover Configuration” on page 55.

**Configuration of StealthCollect in a Cluster**

The configuration of StealthCollect should be carried out on the shared drive.
A shared drive lets a group of two or more servers (generally called nodes) share a common storage subsystem. These servers should expose themselves as a single virtual server and be accessible through a virtual network name.

Related Topics
“Cluster Agent Failover Configuration” on page 55.

Configuring the Cluster Management Software

To provide failover capacity, the Foglight Performance Analysis for DB2 LUW Agent service must be configured in the cluster management software.

The service must be configured as part of the same group as the DB2 instance.

Note  Ensure that the group will not fail as a result of a QAM service failure.

Cluster Agent Failover Configuration

Depending on the platform, failover configuration can be carried out using either of the methods detailed in the sections below:

- “Performing Additional UNIX/Linux Configuration” on page 55
- “Performing Additional Windows Configuration” on page 56

Performing Additional UNIX/Linux Configuration

1 Add the following command to the script that runs when a node fails:
   ```bash
   su -l <PA Agent installer user> -c "<PA Agent installation directory>/agents/bin/quest_launcher_daemon stop"
   ```

2 Add the following command to the script that runs when a node starts:
   ```bash
   su -l <PA Agent installer user> -c "<PA Agent installation directory>/agents/bin/quest_launcher_daemon start"
   ```

   The `questLauncherDaemon` script can be found in the following directory:
   ```bash
   <installation directory>/agents/bin.
   ```
Performing Additional Windows Configuration

The manual configuration procedure consists of the following steps:

1. Create an artificial QAM Launcher service on the passive nodes:
   a. Copy the `quest_launcher.exe` file from the active node's `<install_dir>\agents\bin` to a directory of your choice on the passive node.
   b. To register the QAM launcher as a service, run the following command from a command prompt:
      ```
      quest Launcher.exe <port> +<installation directory> -register
      ```

2. Add the QAM Launcher service to the DB2 cluster group, as follows:
   a. Open the Cluster Administrator by selecting All Programs > Administrative Tools > Cluster Administrator.
   b. From within Cluster Administrator, right-click the relevant group. In the displayed pop-up menu, select New > Resource.
   c. In the displayed New Resource dialog box, enter a name of your choice in the Name field and select Generic Service from the Resource type list.
The participating nodes should already appear as **Possible owners**: 
Select the shared drive as the **Resource dependency**.
Enter the Service name as QuestLauncher<port>, noting that the service name should be exactly as written without using spaces (you can verify the name in the service name field for the newly created service):
No Registry Replication is required
Return to Cluster Administrator and right-click the newly created service. From the pop-up menu select **Bring Online** to complete the process:
Related Topic

“Active/Passive Cluster Architecture” on page 53.
Index

A
About Foglight Performance Analysis for DB2 LUW Agent 1
Accessing
DB2 Memory 1
Documentation 11
Active/Passive Windows
Active/Passive Windows Cluster Architecture 53
Installing on Clustered DB2 Instance 53
Active/Passive Windows Cluster
Architecture
Cluster Configuration Screen 53
Description 53
Administrator 2
Agent
completing 53
down 26
failover 53
Agent Architecture Screen 19
Agent Communication Port
DB2 Host Port Selection Screen 26
Middle-tier Port Selection Screen 20
Port Selection 32
Agent Components Settings Screen 34
Agent’s Middleware 20
Agent’s scalability 17
improves 17
Architecture Overview 8
About the Foglight Performance Analysis Agent 1
Agent Architecture Screen 19
Uninstall Wizard Introduction Screen 49
Automatic Failover Configuration 53
B
Bi-directional
Agent Components Settings Screen 34
open
Agent Components Settings Screen 34
C
Change Tracking 26
Cluster Configuration
Cluster Configuration Screen 53
Cluster Configuration Settings 53
Clustered DB2 Instance
Installing on Clustered DB2 Instance 53
Collected,aggregated 8
Collector
Agent Architecture Screen 19
Agent Components Settings Screen 34
Architecture Overview 8
during 47
install 30
Middle-tier Port Selection Screen 20
Middle-tier Specification Screen 30
Multi-tier vs. Single-tier Architecture 11
Performance Repository Screen 26
Repository Configuration Screen 47
Uninstall Wizard Introduction Screen 49
Complete 53
Agent 53
Connect
DB2
  Installing on Clustered DB2 Instance 53
GUI 51
Middleware
  Middle-tier Specification Screen 30
connect
DB2
  middle-tier specification screen 30
  performance repository DB2 43
Connection Details
  Monitored Instance Selection Screen 51
  Monitored Instance Settings 37
  Repository Instance Object Installation Screen 45
  Repository Instance Screen 43
Connection Error
  Monitored Instance Settings 37
  Repository Instance Object Installation Screen 45
  Repository Instance Screen 43
Contact Quest Support 20
Create 26
  Performance Repository 26

D
Database 45
DB2
  connection parameters 43
  monitoring
    Agent Components Settings Screen 34
DB2 collector
  install 26
DB2 host
  running
    monitored instance selection screen 51
DB2 Instance
  Active/Passive Windows Cluster Architecture 53
DB2 instance
  monitored DB2 instance screen 42
DB2 memory
  accessing 1
Dedicated Repository Instance 43
Defined 37
defined
  DB2
    monitored instance settings 37
Documentation
  access 11
  Multi-tier vs. Single-tier Architecture 11
Domain/User
  Monitored Instance Settings 37
  Repository Instance Object Installation Screen
    Repository Instance Object Installation Screen 45
  Repository Instance Screen 43
Dynamic Port 37
  Repository Instance Screen 43

E
Enter
  login username 37
Enter username
  Repository Instance Screen 43
Error Code 32
Existing Components
  Middleware 19
  Performance Repository 45

F
Failover
  Agent 53
Foglight Performance Analysis Agent
  installing
    Middle-tier port selection screen 20
  removal 49
Foglight Performance Analysis agent components
  quest_launcher 8
Foglight Performance Analysis Agent failover 53
Foglight Performance Analysis Client 47
  installing 47
Foglight Performance Analysis for DB2 LUW
installing 2

Foglight Performance Analysis for DB2 LUW Agent
About 1
installed 37
Installing
   Agent Architecture Screen 19
installing
   agent components settings screen 34
   port selection screen 26

Further Information
Acquiring
   Performance Repository Screen 26

G
Grant read/write 34
GUI 51
   connecting 51

I
I/O 11
Identify 2
Improves 17
   agent's scalability 17

Install
Collector 30
DB2 Collector
   Middleware Installation Completed 26

Foglight Performance Analysis for DB2 LUW Agent
   Agent Architecture Screen 19
   Agent Components Settings Screen 34
   Middle-tier Port Selection Screen 20
   Monitored Instance Settings 37

Foglight Performance Analysis for DB2 LUW Agent
Client 47
Middleware
   Agent Architecture Screen 19
   Middle-tier Specification Screen 30
Performance Analysis
   Installation Prerequisites 2

Performance Repository 42
   Installation Prerequisites 2
   Repository Instance Screen 43

Installation Completed 47
Installation Directory
   Agent Components Settings Screen 34

Installation Prerequisites
   Agent Components Settings Screen 34
   Monitored Instance Settings 37
   Prior to Installing the Foglight Performance Analysis
   for DB2 LUW Agent 2

Installation Wizard 26
   running 26
Installing 53
IntelliProfile 8
Introduction Screen
   Uninstall Wizard Introduction Screen 49
Invalid username
   Monitored Instance Settings 37
IP 2

L
Login 43
Login username
   Enter
   Monitored Instance Settings 37

Long Term Performance Repository 8
Long Term Repository 45
Long-term Historical Data Retention 26

M
manual agent failover configuration
   Active/Passive Windows cluster architecture 53
   cluster configuration screen 53
Middle-tier Communication Port
   Middle-tier Specification Screen 30
   Middleware Host Details Screen 51
Middle-tier Host
   Installation Prerequisites 2
   Middle-tier Specification Screen 30
 Middleware Host Details Screen 51
 Middle-tier Port Selection Screen 20
 Middle-tier Specification Screen 30
 middle-tier specification screen 30
 Middleware
 connect 30
 existing 19
 Install
   Agent Architecture Screen 19
   Middle-tier Specification Screen 30
 like 43
 Middle-tier Specification Screen 30
 replace 30
 Specify 51
 Upgrade
   Middle-tier Specification Screen 30
 Middleware Host Details Screen 51
 Middleware Installation Completed 26
 Middleware uninstall 51
 skip 51
 Minimal/Demo Installation
   DB2 Host Port Selection Screen 26
   Middle-tier Port Selection Screen 20
   Port Selection 32
 Monitored DB2
   Repository Configuration Screen 47
   Uninstall Wizard Introduction Screen 49
 monitored DB2
 performance repository 43
 monitored DB2 instance 43
 monitored DB2 instance screen 42
 Monitored Instance
   Installation Prerequisites 2
 Monitored Instance Selection
   Monitored Instance Selection Screen 51
 Monitored Instance Settings 37
 Monitored Instance Settings screen 37
 Multi-tier Topology 11
   Multi-tier vs. Single-tier Architecture 11

 N
 Network Authentication
   Monitored Instance Settings 37

 O
 Offloading 19

 P
 Performance Analysis Middleware 26
 Performance Repository
   Creating 26
   existing 45
   Host 2
   Install
     Installation Prerequisites 2
     install 43
     Placing 17
 performance repository
   install
     monitored DB2 instance screen 42
 Performance Repository Benefits 17
 Performance Repository Instance 2
 Performance Repository Screen 26
 Placing 17
   Performance Repository 17
 Port 30
 Port Selection 34
 post-installation tasks 47
 Provide failover 53

 Q
 QAM Launcher
   remove 52

 R
 Removing
   Performance Analysis Agent 49
   QAM Launcher 52
Replace
Middleware 30
replacing
middle-tier specification screen 30
Repository Component Configuration 26
repository configuration screen 47
Repository Installation 17
repository instance object installation screen 45
Repository Instance Screen 43
repository instance screen 43
Running
Installation Wizard 26

S
Scalability
Repository Instance Screen 43
scalability
monitored DB2 instance screen 42
Shared Drive
Active/Passive Windows Cluster Architecture 53
Short-term historical 34
Single Tier 19
Single-tier
agent port selection screen 32
Single-tier Architecture 2
Middleware Installation Completed 26
Multi-tier vs. Single-tier Architecture 11
single-tier installation
agent architecture screen 19
middle-tier specification screen 30
Single-tier Topology 11
Skip
Middleware uninstall 51
skip middleware uninstall 51

U
uninstall completed screen 52
uninstall wizard introduction screen 49
uninstalling
middle-tier specification screen 30