



Data Collection Installation & Configuration

Introduction

ServerAssist collects a large amount of data relating to the operation of an individual server, including alerts raised in response to monitored incidents, details of events logged by the operating system and performance data, as both the raw, underlying data and high level summaries of that raw data.

The Data Collection component of a Management Server gathers this data from each monitored server and merges it into a central, combined data store. Once the data has been collected, it can be analysed in a number of ways, and it is perfectly feasible to post-process the collected data in any way necessary to support specific custom requirements.

- Incident type & resolution time
The quantity and frequency of each type of incident can be evaluated, providing a useful indication of the nature of the most common issues on the network.
- Event archiving & analysis
A central store of all events across all servers enables queries to be run to satisfy both formal and ad-hoc system auditing requirements and to aid in the investigation of issues involving multiple servers, where simultaneous events on disparate machines can be correlated.
- Capacity planning & trend analysis
Over time, a large amount of historic performance data will be built up, and given the summarised nature of this data, it is practical to retain it for long periods, supporting both analysis of previous system activity patterns and extrapolation of those patterns to provide a prediction of future resource usage.

This document will walk you through the steps necessary to get Data Collection running on your network. It should take approximately 45 minutes to complete all the steps, at which point you will be able to see live reports using data collected from your servers.

Assumptions

These instructions assume that you have administrative access to a computer running Windows Server 2003 (Standard or Enterprise Edition) or later, and that you are familiar with performing software installations and common system administration tasks on that platform.

All software installation should be performed on a single machine. ServerAssist does support hosting the Management Server, SQL Server database and SQL Server Reporting Services on different machines, but a detailed description of such a distributed configuration is beyond the scope of this document.

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125 S. Wacker Drive Suite 300 Chicago IL 60606-4424 United States
(312) 893-5480 info@serverassist.com www.serverassist.com

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Base Configuration

The computer onto which SQL Server Express will be installed must be running Internet Information Services (IIS) and the .Net Framework v2.0. IIS is installed from within Add/Remove Programs, and the .Net Framework v2.0 is available via Windows Update.

Download Software

Download the main ServerAssist installation package. You may also be interested in the ServerAssist Resource Kit, but it is not required.

1. Download the ServerAssist Professional package from www.serverassist.com/downloads/evaluationsoftware

Download SQL Server 2005 Express, to provide the data storage and report processing capabilities.

1. Download Microsoft SQL Server 2005 Express Edition with Advanced Services from www.microsoft.com/express/sql/download
2. If you want to create your own reports, download Microsoft SQL Server 2005 Express Edition Toolkit from the same location.

Install ServerAssist

Install ServerAssist

1. Run the ServerAssist Professional installation package, and choose 'Install ServerAssist'.
2. Follow the steps to install the main ServerAssist software.

Install SQL Server 2005 Express

Install SQL Server 2005 Express, to provide the data storage and report processing capabilities.

1. Double-click the file SQLEXPRESS_ADV.EXE, and click 'Run' in the security warning dialog.
2. Accept the licence agreement and click 'Next'.
3. Click 'Install' to install the prerequisites.
4. When the prerequisites are installed, click 'Next'.
5. Click 'Next' to begin the installation. A System Configuration Check will be performed. Ensure that your system meets all the requirements, and click 'Next'.
6. In the Registration Information dialog, uncheck 'Hide advanced configuration options', and click 'Next'.
7. In the Feature Selection dialog, select 'Entire feature will be installed on local hard drive' for Reporting Services and Client Components, and click

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- 'Next'. If the Reporting Services feature is not shown, cancel the installation, ensure that IIS is installed, and then restart the installation.
8. In the Instance Name dialog, select 'Named Instance', and rename the instance to 'ServerAssist'.
 9. In the Service Account dialog, simply click 'Next'.
 10. In the Authentication Mode dialog, simply click 'Next'.
 11. In the Collation Settings dialog, simply click 'Next'.
 12. In the ConfigurationOptions dialog, simply click 'Next'.
 13. In the Report Server Installation Options dialog, simply click 'Next'.
 14. In the Error and Usage Report Settings dialog, simply click 'Next'.
 15. Click Install to begin the installation. The installation may take some time to complete.
 16. Once the installation is complete, click 'Next', and then click 'Finish'.

Create the ServerAssist Database and Reports

Create the database used to store the collected data, and install the sample reports

1. Run the ServerAssist Reporting installation package, and follow the prompts. This package will create a database called 'ServerAssist'.

Configure SQL Server 2005 Express

Configure SQL Server to allow SQL Server authenticated connections, and create a user in the ServerAssist database.

1. Click Start → Microsoft SQL Server 2005 → SQL Server Management Studio Express.
2. When prompted connect to the <computername>\SERVERASSIST server, using Windows Authentication.
3. Right-click on the top-level node in the left-hand Object Explorer tree, and select 'Properties'.
4. Select 'Security', and in the 'Server authentication' section, select 'SQL Server and Windows Authentication mode', and click OK.
5. Using the Windows Services manager, stop and restart the SQL Server (SERVERASSIST) service.

Create a user who is authorised to read and store data

1. Click Start → Microsoft SQL Server 2005 → SQL Server Management Studio Express.
2. When prompted connect to the <computername>\SERVERASSIST server, using Windows Authentication.
3. In the Object Explorer tree, expand 'Security'. Right-click on the 'Logins' node, and select 'New Login...'
4. In the Login – New dialog, enter a login name of 'DataManagement', select 'SQL Server authentication', and enter a password for the login.

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5. Uncheck 'Enforce password policy', 'Enforce password expiration' and 'User must change password at next login'.
6. Select 'ServerAssist' from the 'Default database' dropdown.
7. Select 'User Mapping' on the left hand side of the dialog, check the box to the left of the ServerAssist database, and then check 'db_datareader', 'db_datawriter' and 'public' from the available role memberships below.
8. Click OK to add the user.

Configure ServerAssist Data Collection

Configure the Management Server to store data in the SQL Server 2005 Express database

1. Start the ServerAssist Management Console
2. Expand the computer node under the Management Servers node in Administration, expand the 'Data Collection' node, and right-click on the Database Server node, and select 'Properties'
3. Click the 'Configure' button to start the OLE DB Connection Wizard, and click 'Next'
4. In the Database Type dialog, select 'Microsoft SQL Server', and click 'Next'
5. In the Microsoft SQL Server dialog, type '(local)', for the computer name, and 'ServerAssist' for both the instance and database name, and click 'Next'
6. In the Authentication dialog, select 'The database requires an explicit logon' and enter 'DataManagement' in the User ID text box, and the password for the user in the Password text box. The password is the one selected when creating the SQL Server login previously.
7. Click 'Next, and then 'Finish'
8. Click 'Test' to ensure that a connection can be established to the SQL Server, and click OK

Configure the source computers from which data will be collected.

1. Run the ServerAssist Discover and Connect Wizard, and connect to the servers from which you want to collect data. Alternatively, add individual computers manually by running the Connect to Computer Wizard.
2. Expand the computer node under the Management Servers node, expand the 'Data Collection' node, right-click on the 'Source Computers' node, select New → Source computers... from the menu to start the New Source Computers Wizard, and click 'Next'.
3. In the Method dialog, select 'Copy settings from connected computers', and click 'Next'.
4. In the Connected Computers dialog, select 'Copy the connection settings from all connected computers', and click 'Next'
5. In the Integrated Authentication dialog, select 'Authenticate using the ServerAssist (primary) password', and click 'Next',
6. Click Finish to add the source computers.

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Start Collecting Data

Create a scheduled collection to collect alerts from all source computers.

1. Start the ServerAssist Management Console.
2. Expand the computer node under the Management Servers node in Administration, expand the 'Data Collection' node, right-click on the 'Scheduled Collections' node, select New → Scheduled collection from the menu to start the New Scheduled Collection Wizard, and click 'Next'.
3. In the Data dialog, check 'Alerts' and click 'Next'.
4. In the Schedule dialog, select 'Daily at (03:00)' and click 'Next'.
5. In the Source Computers dialog, select 'Collect data from all configured source computers', and click 'Next'.
6. In the Description dialog, simply click 'Next'.
7. Click Finish to create the scheduled collection.

Run the collection manually, to collect some data to see a “working” report.

1. Right-click on the scheduled collection in the right-hand pane, and select All Tasks → Start.
2. Refresh the collection periodically, noting how the status changes as data is collected, until the status is 'Idle' once more.
3. Double-click on the scheduled collection to bring up the Properties dialog, and select the History tab. Check that the collection was successful from each source computer.

Review the Collected Data

The sample reports provide an easy way to review the collected data.

1. Start Internet Explorer, and navigate to `http://localhost/reports$ServerAssist`
2. Click the 'ServerAssist Reporting' link.
3. Select the Alert Counts by Computer report.
4. Change the report options as necessary by altering the parameters at the top of the page.

Creating Custom Reports

The sample reports are intended to be used as a starting point for enterprise-specific reporting. SQL Server Reporting Services is a flexible and powerful tool that can meet a wide variety of reporting requirements.

Install the Microsoft SQL Server 2005 Express Edition Toolkit

1. Double-click the file SQLEXPRESS_TOOLKIT.EXE, and click 'Run' in the security warning dialog.
2. Accept the licence agreement and click 'Next'.
3. When the prerequisites are installed, click 'Next'.

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4. Click 'Next' to begin the installation.
5. A System Configuration Check will be performed. Ensure that your system meets all the requirements, and click 'Next'.
6. In the Registration Information dialog, simply click 'Next'.
7. In the Feature Selection dialog, select 'Entire feature will be installed on local hard drive' for Client Components, and click 'Next'.
8. In the Existing Components dialog, check 'Workstation components and development tools', and click 'Next'.
9. In the Error and Usage Report Settings dialog, simply click 'Next'.
10. Click Install to begin the installation. The installation may take some time to complete.
11. Once the installation is complete, click 'Next', and then click 'Finish'.

Install the ServerAssist sample reports

1. Run the Resource Kit installation.
2. Navigate to the installation folder (typically C:\Program Files\Aldebaran\ServerAssist), and then to the Resource Kit folder.
3. Extract the contents of 'SQL Server 2005 Reporting Services samples.zip'.

Edit one of the sample reports

4. Click Start → Microsoft Visual Studio 2005 → Microsoft Visual Studio 2005
5. Select File → Open → Project/Solution, navigate to the folder containing the extracted sample report files, and select the DataManagementReports.sln file.
6. You will see six reports in the Solution Explorer tree on the right-hand side.
7. Double-click one of the reports to open it in the editor.
8. Make the changes to the report that you need. A detailed tutorial on how to modify SQL Server Reporting Services reports is beyond the scope of this document.
9. Select File → Save All from the menu.

Upload the revised report to the reporting server.

1. Start Internet Explorer, and navigate to [http://localhost/reports\\$ServerAssist](http://localhost/reports$ServerAssist)
2. Click the 'ServerAssist Reporting' link
3. On the web page, click 'Upload File', click 'Browse' and navigate to the modified report file.
4. Select the file, check 'Overwrite item if it exists' and click OK on the web page to update the report.
5. Run the modified report to review your changes.

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