



Analytics and Mobility

# Narrowcast Server Installation and Configuration Guide



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# MicroStrategy 2021

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# BOOK OVERVIEW AND ADDITIONAL RESOURCES

The MicroStrategy Narrowcast Server Installation and Configuration Guide provides comprehensive information on how to install and configure Narrowcast Server software.

To upgrade MicroStrategy Narrowcast Server, see the *Narrowcast Server Upgrade Guide*.

The chapters of the Narrowcast Server Installation and Configuration Guide follow the recommended progression of steps to install and configure Narrowcast Server. See [Chapter 1, Installation Prerequisites](#) for important installation prerequisites before you begin installing Narrowcast Server.

The last chapter, [Chapter 5, ODBCs, DSNs, and Database Connectivity](#), contains the following additional reference information, which you may require depending on your specific needs.

Detailed steps for all functionality in the MicroStrategy system is available in the Help.

# INSTALLATION PREREQUISITES

To upgrade MicroStrategy Narrowcast Server, see the *Narrowcast Server Upgrade Guide*.

The information in the *MicroStrategy Readme* file represents the latest certification and support information that was available at the time the product was released. To access the MicroStrategy Readme files, from the Windows **Start** menu, point to **Programs**, then **MicroStrategy Documentation**, and then select **Readme**.

Before installing Narrowcast Server, review the sections in this chapter to ensure that you have the appropriate network, hardware, software, and database requirements and configurations set up.

## Network requirements

Narrowcast Server uses your network environment to deliver email messages and provide Subscription Portal web pages, so the network environment must be configured and connected. To perform remote administration, Narrowcast Administrator users require a compatible security configuration in place.

Network prerequisites include:

- Windows domain and accounts with Administrative privileges
- Connection to an email server to send email messages
- Web (HTTP) connection to use the Subscription Portal
- SMS (SMPP) requirements to send all phone messages

Details for each of these requirements are below.

### Windows domain and account requirements

Narrowcast Server and Narrowcast Administrator rely on Windows accounts to control access to system development and administration tasks.

- **Windows accounts:** To install Narrowcast Server, you must log in to Windows with an account that has administrator privileges and permissions on every computer that you might use as a Narrowcast Server component within a given system. You must also provide an account with the same privileges and permissions to the Narrowcast Server setup program for the Narrowcast Server service account. Before creating a new system, you must log in to the machine with an account that also has similar privileges and permissions.
- **Computer registration:** Each computer that you use in your Narrowcast Server system, including any machines used to run Narrowcast Administrator, must belong to the same Windows domain, or to another domain that trusts the domain used for Windows accounts.

When installing Narrowcast Server, you will be asked to enter an account that will be used to run certain Narrowcast Server services. This account must meet the following requirements:

- Has a password that will not expire. Do not use your own network account for which the password might expire (causing your system to stop working). Your network administrator should be able to provide a special account for this purpose.
- Has the Windows privilege "Access this computer from network." This privilege should be assigned to the Administrators group by default.

## Email (SMTP) requirements

For Narrowcast Server to send email messages, it must be able to connect to and interact with receiving email servers. Typically, SMTP email messages are sent on TCP port 25. Thus, to transmit to email servers, any machine that will be used as an execution engine must be able to connect through firewalls and other security systems using port 25. For email transmission testing and troubleshooting information, see *Testing SMTP connectivity* in the *Narrowcast Server System Administrator Guide*.

- **Smart hosts:** You can select to use a smart host as a message forwarding or transfer agent for Narrowcast Server. This technique can be used to increase both system throughput and system security. To use a smart host, you must know the name and target port of the server, and ensure that Narrowcast Server can connect to it over the network. Narrowcast Server has its own SMTP transmission capabilities, so use of a smart host is not required.
- **Reverse DNS Lookup:** Some email servers perform a reverse DNS lookup when other email servers attempt to send email messages to them. If your Narrowcast Server system might be used to send messages to such email servers, you must use a valid Internet domain in the From and Reply-to address settings of your email (SMTP) and wireless (SMTP) information transmitters. You must also register each execution engine as a mail server for that domain. Otherwise, your messages might be rejected by these remote email servers.

## Web (HTTP) requirements

The Subscription Portal is a page that allows users to view and modify their Narrowcast Server Subscriptions.

Web browsers running on client machines must be able to connect to and interact with your Subscription Portal servers for subscribers to use the Subscription Portal. Typically, browser (HTTP) requests are sent on TCP port 80, so any machine that will be used as a Subscription Portal client must be able to connect through firewalls and other security systems to your Subscription Portal web server using port 80.

## SMS (SMPP) requirements

SMSs (short message services) commonly use the peer-to-peer protocol SMPP. The information transmitter provided with Narrowcast Server is designed to connect to an SMSC (short message service center) using SMPP.

## System hardware requirements

The number of machines you can install Narrowcast Server on depends on which edition of Narrowcast Server you have:

- Enterprise Edition: Narrowcast Server components can be installed on one machine or distributed across several machines in a clustered configuration.
- Standard Edition: Supports the use of only one machine in a Narrowcast Server system.

You can install and configure Narrowcast Administrator on as many machines as you require for system development, testing, and administration purposes.

 Narrowcast Server is licensed based on CPU number and clock speed. Thus, Narrowcast Server can only be installed on machines with a clock speed that is less than or equal to the licensed clock speed. If you try to install the product on a machine that is faster than your license allows, installation fails. For example, if you are licensed only for 750 MHz clock speeds, you cannot install the software on a 1 GHz machine.

 Hardware requirements are listed in the readme. To view the readme, select the readme corresponding to your software version at <https://microstrategyhelp.atlassian.net/wiki>.

### Minimum hardware requirements

The following minimum hardware requirements are recommended for installing all Narrowcast Server components on one machine:

Hardware	Minimum Requirements
Processor	600 MHz Pentium or equivalent

Hardware	Minimum Requirements
Memory	512 MB RAM
Storage	1 GB free disk space

Each Narrowcast Server component has its own additional hardware requirements.

### Narrowcast Administrator hardware requirements

The following minimum hardware requirements are recommended for installing the Narrowcast Administrator component on a single machine:

Hardware	Minimum Requirements
Processor	266 MHz Pentium II
Memory	128 MB RAM
Storage	500 MP free disk space

### Delivery Engine hardware requirements

The Enterprise Edition of Narrowcast Server Delivery Engine can be installed on one machine or it can be distributed across several machines for increased performance and failover protection. Each machine in the cluster must have a complete Delivery Engine installed, regardless of whether or not every component will be used on it. This section lists the minimum requirements for a single-machine configuration and for each component in a distributed configuration. The components include the processor, amount of RAM, and amount of storage available on the machine.

 A minimum of 512 MB of virtual memory is recommended on any machine that is used as part of the Delivery Engine, regardless of the minimum amount of physical memory indicated.

### Single Delivery Engine component in a distributed system

The following minimum hardware requirements are recommended for a Delivery Engine configuration in which separate servers are used for the Delivery Engine and Subscription Portal, but all Delivery Engine components reside on a single machine:

Hardware	Minimum Requirements
Processor	300 MHz Pentium or equivalent
Memory	256 MB RAM
Storage	1 GB free disk space

### Single Delivery Engine component in a distributed system

The following minimum hardware requirements are recommended when a single Delivery Engine component such as Distribution Manager, Execution Engine, Narrowcast Administrator, or MicroStrategy Logging Server is used on a specific machine in a distributed configuration:

Hardware	Minimum Requirements
Processor	266 MHz Pentium II
Memory	128 MB RAM
Storage	500 MB free disk space

## Subscription Portal hardware requirements

The Enterprise Edition of Subscription Portal can be installed on one machine or it can be distributed across several machines for increased performance and failover protection. This section lists the minimum requirements for a single-machine configuration as well as for each component in a distributed configuration.

### Single-machine Subscription Portal configuration

The following minimum hardware requirements are recommended for a Subscription Portal configuration in which separate servers are used for the Delivery Engine and Subscription Portal, but all Subscription Portal components reside on a single machine:

Hardware	Minimum Requirements
Processor	300 MHz Pentium or equivalent
Memory	256 MB RAM
Storage	500 MB free disk space

### Single Subscription Portal component in a distributed system

The following minimum hardware requirements are recommended for installing a single Subscription Portal component, such as the Subscription Portal, in a distributed system:

Hardware	Minimum Requirements
Processor	300 MHz Pentium or equivalent
Memory	128 MB RAM
Storage	250 MB free disk space

## Hardware requirements for other software products

The minimum hardware requirements in this chapter are for configurations in which Narrowcast Server or its components are the only software running on a machine, aside from the other required software products discussed in [System software requirements, page 15](#).

Aside from the software described above, other software products also consume memory, CPU processing power, network bandwidth, and disk space, and thereby reduce the resources available to Narrowcast Server. For example, MicroStrategy Intelligence Server and MicroStrategy Web can each consume significant portions of the total available system memory and CPU cycles. Therefore, the minimum hardware requirements provided should be increased for machines that also run other server or client software.

 If Narrowcast Server system performance is a concern, it is not advisable to install other software products, including Intelligence Server, on any Narrowcast Server system machines.

Use the following guidelines to estimate the minimum hardware requirements for a machine that will host several software products:

- **Processor:** Take the sum of the minimum processor requirement values for each server and client software product that will be running concurrently. The resulting value should approximate the minimum processor requirement for your machine.
- **Memory:** Subtract 64 MB from the minimum memory requirement for each piece of software that will be running concurrently. Take the sum of these values, and then add 64 MB to the result to allow for operating system requirements. The resulting value should approximate the minimum memory requirement for your machine.
- **Storage:** Because most software products share numerous files, it is difficult to estimate the total free disk space requirements for a machine before all products that will coexist on that machine have been installed.

It is generally advisable to have between 256 MB and 1 GB of minimum free disk space on server machines after all software products have been installed, to ensure that adequate space for temporary files, log files and data files is available.

Refer to the *MicroStrategy Readmes* for detailed information about minimum hardware requirements and recommendations for other MicroStrategy server and client products.

## System software requirements

Narrowcast Server has specific requirements for additional software, shown in the following table, that must be installed on Narrowcast Server machines before the product can be used. If the proper software products and versions are not installed, Narrowcast Server may demonstrate unpredictable or unstable behavior.

Software	Minimum Requirements
Operating system	Microsoft Windows 10 Microsoft Windows 2008 R2 SP1 Microsoft Windows 2012 Microsoft Windows 2012 R2 Microsoft Windows 2016 Microsoft Windows 2019
ODBC software	ODBC drivers suitable for connecting to the Object Repository and Subscription Book Repository databases. See the Platform Certifications dossier in the MicroStrategy readme for the latest supported ODBC drivers.
Web server	Microsoft Internet Information Services 7.5, 7.0, 6.0.
Web browser	Microsoft Internet Explorer 7.x, 8.x, 9.x.

## Certification updates

The MicroStrategy [Readme](#) contains certification, support, and recommendation information for all required system software. This includes type, version, and language information for operating systems, Web browsers, databases, and ODBC drivers. The information in the readme represents the latest information that was available at the time the product was released.

## Database requirements

Narrowcast Server stores its persistent information in two repositories, an Object Repository and a Subscription Book Repository:

- The Object Repository contains:
  - The administration objects that define the Narrowcast Server system configuration (execution engines, distribution managers, and so on).
  - The application objects that define the application (services, Narrowcast documents, and so on).
- The Subscription Book Repository stores the information related to subscriptions, such as users, addresses, and personalization information.

These repositories each require a suitable database and a data source name (DSN) for connection, although the same database and DSN can be used for both repositories. (If you use the Portal Repository in addition to the two repositories above, it is recommended that you use a single database to keep administration simple.)

This section lists the requirements for database permissions, connectivity, DSNs, and table name prefixes. It also lists the requirements for specific databases.

## Database permissions

Narrowcast Administrator requires that the database login used for each repository database has CREATE TABLE, DROP TABLE, UPDATE, DELETE, and INSERT permissions on that database.

In addition to the above permissions, the following permissions are also required:

- For Oracle and DB2 databases: CREATE INDEX
- For DB2 databases used for the Subscription Book Repository: DROP/CREATE TRIGGERS
- For Oracle database used for the Subscription Book Repository: DROP/CREATE SEQUENCE

 For the latest information on supported databases for Narrowcast Server repositories, refer to the *Certified and Supported Configurations* page of the *MicroStrategy Readme* file.

## Database connectivity

### ODBC

Open database connectivity (ODBC) is required on all Narrowcast Server machines to connect to the Object, Subscription Book, and Portal repositories.

 For the latest information on recommended ODBC drivers for your database, refer to the *Narrowcast Server* section of the *MicroStrategy Readme*.

### JDBC

The SequeLink Server service, installed by the SequeLink Connectivity Software, provides JDBC connectivity through available ODBC drivers, so that in many installations the same drivers can be used for both ODBC and JDBC.

## Data source names

Data source names (DSNs) provide all of the information needed by ODBC-compliant applications and servers to connect to databases, with the exception of a valid database login and password. Narrowcast Server requires at least one DSN to connect to a database to create and populate the Object Repository, Subscription Book Repository, and Portal Repository. Because these three repositories can coexist in the same database (and it is recommended that they do), it is often easiest to use a single DSN for all three, and collocate them. If required, a distinct DSN can be used for each repository.

 Separating the Object Repository, Subscription Book Repository, and Portal Repository is not recommended as it can unnecessarily complicate system administration.

In a clustered environment, all Narrowcast Server machines must have DSNs with the same names and definitions. Not every component needs a connection to (and hence a DSN for) each repository. The repository connection requirements for each component are shown in the following table:

Component	Object Repository	Subscription Book Repository	Portal Repository
Narrowcast Administrator	Requires connection	Requires connection	Requires connection
Distribution Manager	Requires connection	Requires connection	
Execution Engine	Requires connection	Requires connection	
SequeLink	Requires connection	Requires connection	Requires connection

Component	Object Repository	Subscription Book Repository	Portal Repository
Subscription Portal			
Logging Server			Requires connection

For more information on creating data source names, see [Chapter 5, ODBCs, DSNs, and Database Connectivity](#).

## Prefixes for repository table names

When creating object repositories and subscription book repositories, you can specify a prefix for the names of the repository tables. For repositories in DB2 or Oracle you can use a prefix consisting of the name of the owner of the tables (the database login used to create them) followed by a simple prefix string. For example, if your database login is "ncadmin" and your table name prefix is "TEST", you can use a repository prefix such as "ncadmin.TEST".

 Narrowcast Server does not support prefixes that include the table owner name for repositories in Microsoft SQL Server, so you cannot use this capability with repositories in Microsoft SQL Server.

## Repository and DSN requirements for DB2

### Repositories in DB2

Both the Object Repository and Subscription Book Repository use double-byte VARGRAPHIC columns when hosted on DB2. This data type is not enabled in DB2 databases by default. When the database is created, it must be configured to use the UTF-8 code set.

-  This setting cannot be changed on a database that already exists; it can only be specified when the database is being created.
- 

## To check your database configuration for the UTF-8 code set

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- 1 Right-click the database in the DB2 Control Center, and select **Configure**.
- 2 On the Environment tab, the **Database Code Set** parameter must be set to UTF-8.

If you do not have access to DB2 Control Center, create a table with the `VARGRAPHIC` data type and run a test to confirm that the table has been successfully created. The following SQL statement can be used to perform such a test:

```
CREATE TABLE TEMPVAR (VAR_COL VARGRAPHIC(127))
```

To create a database that uses UTF-8, you can use the Create Database Smartguide in DB2 Control Center. Change the code set to UTF-8.

-  Narrowcast Server does not support DB2 databases that have been partitioned. If only partitioned databases are available, create a new, unpartitioned database to use DB2 to store your Narrowcast Server repositories.

## Data source names for DB2

All machines connecting to the database must have their DSNs configured properly.

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## To configure DSNs for DB2

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- 1 On the ODBC control panel, select the DSN.
- 2 Click **Configure**.
- 3 At the prompt to connect, click **No**.

- 4 Click **Advanced**.
- 5 On the Data Type tab, select the **IBM GRAPHIC Support** parameter.
- 6 Select the **Report Graphic data types** check box.
- 7 Clear the **Report length in bytes** check box.

## Repository Requirements for Oracle

If an Oracle database is configured to use the UTF-8 character set, Narrowcast Server must use a different set of repository creation scripts than it would use for an Oracle database that is not configured to use that character set. When you create either the Object Repository or the Subscription Book Repository on an Oracle database, you are asked to specify whether the selected database is configured to use the UTF-8 character set.

 If you specify that your database does not use the UTF-8 character set when in fact it does, Narrowcast Administrator generates errors when you attempt to save objects with long names or descriptions that use many multi-byte characters.

Narrowcast Server achieves slightly better performance as well as better use of database storage space if you can limit your system to a single-byte character set. This might be possible if all of your users' names and addresses, object names, and site and channel names can be represented by one single-byte character set. Otherwise, the strings that Narrowcast Server must store can only be represented using multi-byte character sets.

 The use of UTF-8 encoding is strongly recommended over the use of other multi-byte character sets.

## System-wide planning and configuration

Narrowcast Server contains two subsystems: the Delivery Engine and the Subscription Portal. Each of these subsystems contains multiple components that can be installed on the same machine or on multiple machines to increase throughput, provide failover, or meet corporate security requirements. For more information on system-wide planning and security considerations, see *Clustering* in the *Narrowcast Server System Administrator Guide*.

# INSTALLATION PROCEDURES

This chapter helps you install Narrowcast Server using the MicroStrategy Setup Wizard, which provides steps to guide you through the installation process.

## Installing Narrowcast Server

To install MicroStrategy products, you must log in to your machine using a domain account with Windows administrative privileges for the domain or target machine. The domain must include your database servers.

To exit the installation process at any time, click **Cancel**.

### Prerequisites

Before using the Setup Wizard, review and complete the following required prerequisites:

- To install Narrowcast Server, you must log on to the machine on which you intend to install using a network account that has administrative privileges on every machine in the Narrowcast Server system.
- The version of the vbscript.dll found on the machine must be at least 5.6.0.7426 or later.
- Various components of Narrowcast Server require a directory to store temporary files. To ensure that the temporary path is defined when Narrowcast Server runs under the system account, the MicroStrategy Setup Wizard checks for the existence of system environment variables TMP and TEMP, and if necessary, creates them based on the user environment variables.
- Narrowcast Server installation requires MDAC 2.61 (sp1), which is not included in the MicroStrategy installer. This is a SequeLink ODBC Socket Server requirement. Download and install the MDAC installer from [www.microsoft.com](http://www.microsoft.com) before installing Narrowcast Server.

## To begin installation

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- 1 Log on to the machine where you are installing Narrowcast Server.
- 2 Exit all Windows applications before starting the installation process.
- 3 You can access the Setup Wizard in the following ways:

- **From the disk:** Insert the disk into the disk drive and wait for the MicroStrategy Main Menu page to display automatically.

If the MicroStrategy Main Menu page does not open, locate and run `Setup.exe`.

- **From the download site:** Download the files from the MicroStrategy download site. Locate and run the `Setup.exe` file.

 Note the following:

- Contact your MicroStrategy sales representative to determine the location and login credentials for the MicroStrategy download site.
  - You may need to extract the downloaded files to locate the `Setup.exe` file. When extracting the files, ensure that the extraction software maintains the folder structure of the compressed files. Most extraction software maintains the folder structure by default, but if you use WinRAR, ensure that you select the **Extract full paths** option.
- 4 Click **Install Software**. The MicroStrategy Software page opens.
  - 5 Click **Install MicroStrategy Platform**.
  - 6 If this is the first time that you are running this install, you are prompted to choose the language for the wizard. Select the appropriate language from the drop-down list and click **OK**.

The Setup Wizard opens and guides you through the rest of the installation process. The sections below describe the actions you must take for each page in the wizard. After you enter the required information on an installation page, click **Next** to proceed to the next page of the Setup Wizard.

If any Windows services are running for previously installed MicroStrategy products, you are prompted to stop them. Click **Yes** to proceed. If you click **No**, you cannot install any MicroStrategy products until you stop all MicroStrategy services.

## Welcome

Read the information on the Welcome page and proceed to the next page of the wizard, then click **Next**.

If you opened the Setup Wizard using the Microsoft Control Panel using the Add/Remove Programs option, the wizard opens the Welcome page in maintenance mode. For details to modify, repair, or remove all or part of your MicroStrategy installation, see the *MicroStrategy Installation and Configuration Guide*.

## License Agreement

Read the license agreement, and accept or decline the agreement by clicking the appropriate button. If you choose to decline, you cannot install MicroStrategy products.

Click **Print** to print a copy of the license agreement for your records.

## Customer Information

Enter the following customer information:

- User name
- Company name

- License key

Licensed users can contact MicroStrategy Technical Support to obtain a license key.

## Setup Type

Select a setup type:

- **Typical:** With this setup, all products selected for installation are installed in the same location. The system assigns the common files to the `C:\Program Files\Common Files\MicroStrategy` folder.
- **Advanced:** With this setup, you can specify a different installation location for all products selected for installation. You can also select the installation location for the MicroStrategy common files.

## Choose Destination Location

Type the location or click **Browse** to select a location where the MicroStrategy products are to be installed.

 Note the following:

- With both Typical and Advanced setup types, you can choose the directory for a product only if that product is not already installed on the server machine. Otherwise, the product can only be installed in the same directory in which it already exists. In that case, this page is not displayed.
- While this setting determines the default root directory for the MicroStrategy products you install, you can change the destination of a product later if you choose an Advanced setup in the previous page.

## Select Components

The Select Components page displays a list of MicroStrategy products. The details about each MicroStrategy product you select are displayed in the Description pane. The hard disk space required to install the selected product is displayed below the list of products.

Select the check box next to the MicroStrategy product to include that product in the installation. Alternatively, you can clear a check box to uninstall or exclude a MicroStrategy product from the installation. The installation pages you see after this step depend on the products you choose to install.

### Narrowcast Server components

If you expand Narrowcast Server, you can choose to install individual subcomponents of Narrowcast Server. For Narrowcast Server, the following subcomponents are available:

- MicroStrategy Narrowcast Administrator
- MicroStrategy Delivery Engine
- MicroStrategy Subscription Portal
- MicroStrategy Tutorial - Delivery (a sample project)
- SequeLink Connectivity Software

For details on Narrowcast Server subcomponents, see the *Narrowcast Server Getting Started Guide*.

### Tutorial - Delivery components

If you expand MicroStrategy Tutorial - Delivery, you can choose individual components of the MicroStrategy sample Tutorial project to install. These components are:

- MicroStrategy Tutorial - Delivery Installation

- MicroStrategy Tutorial - Delivery Configuration

Both must be selected to run the Tutorial - Delivery sample project and the services and reports within it.

### Select Components page

- Narrowcast Administrator does not include any individual components.
- If you select Narrowcast Server or any of its components, including Tutorial - Delivery, you must also select Narrowcast Administrator.
- For evaluation users, the MicroStrategy Tutorial - Delivery is automatically installed; it does not appear as a subcomponent on this page.
- If you have previous version of Narrowcast Server on your machine and have not uninstalled them, you are prompted to overwrite them.
- If you are prompted to stop your web server, click **Yes**. If you click **No**, you cannot continue with the installation until you stop your web server.
- If you are installing Narrowcast Server on a machine where MicroStrategy Web is installed or where Narrowcast Server has previously been installed, when you click **Next** on the Select Components page, a prompt appears asking whether you want to preserve your existing MicroStrategy Web and/or Narrowcast Server configuration settings.

This is necessary because the Narrowcast Server Subscription Portal and MicroStrategy Web store configuration information in property files maintained on the local machine. One or more such property files are installed, accessed, and updated by the different Subscription Portal and Web components to store required configuration information.

- If you have already configured a Subscription Portal or Web delivery on this machine and want to preserve the existing configuration, click **Yes**. In this case, you can use the virtual directory name from the

earlier install. The product then configures the virtual directory for use with the new install.

- If you are installing for the first time or are installing on a machine where previous product installations have been uninstalled, click **No** to create a new configuration. In this case, you must choose a virtual directory name that does not exist.



Answering this question correctly is important. If you choose an answer that is inappropriate for your situation, your system might not work properly.

## MicroStrategy Subscription Portal setting

This page is displayed only if you choose to install MicroStrategy Subscription Portal and only if you do not have a previous version of Subscription Portal installed.

Type the name of the Microsoft Internet Information Server (IIS) virtual directory to be created for the MicroStrategy Subscription Portal. This name should be the address location of the MicroStrategy Subscription Portal.



The virtual directory name must be unique. Each MicroStrategy product must have a different virtual directory name.

## Select Program Folder

This page displays the list of existing program folders in your Windows Start menu. A program folder is the folder that you access a software program from. You can type a different name for the folder that will store the MicroStrategy products you are installing, or you can accept the default. It is recommended that you accept the default program folder name.

## MicroStrategy Narrowcast Server setting

It is recommended that you create a Narrowcast Server service account by leaving the check box cleared. To create the Narrowcast Server service

account, enter the following information:

- **Login:** Type a Windows login (in the format Domain\User) with administrative privileges for every machine in the Narrowcast Server system cluster. For more information on service account requirements, see Windows domain and account requirements [Chapter 1, Installation Prerequisites](#).
- **Password:** Type a valid password for the Windows login entered in the Login field above.
- **Confirmation:** Retype the password to confirm that it is correct.

 Note the following:

- During installation, if the Narrowcast services are set to use the local system account, and you want to enable non-administrative NT users to access Narrowcast Server functionality, you need to configure the Identity settings of the DCOM servers manually after the installation is completed.
- You must have Administrative privileges on the Narrowcast Server machine to be able to configure the Narrowcast Server machines in a clustered environment.
- DCOM configuration must be correct for the system to run successfully. An error in the DCOM configuration may render the system unusable.

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## To configure the DCOM servers

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- 1 Click **Start** and select **Run**.
- 2 Type `dcomcnfg` and click **OK**.
- 3 Select the DCOM servers to configure. You need to configure the MCDMPProxy and MCPProxy servers.
- 4 Click **Properties**. The Properties dialog box opens.

- 5 On the Identity tab, select **This user** and type the required data in the **User**, **Password**, and **Confirm Password** fields.
- 6 Click **OK**.
- 7 Restart the system.

 If you want to revert to the regular Administrative mode, set the DCOM identity for the servers to the user that is launching Narrowcast Server.

## Start Copying Files

This page displays a summary of the choices you made throughout the wizard, including the following information about your installation:

- Products that will be installed or updated
- Target directories in which the products are installed
- Name of the Windows Start menu program folder
- Virtual directories for the Narrowcast Server Subscription Portal
- Service accounts for Narrowcast Server
- Location of the installation log file
- License details

Click **Install**. The process can take several minutes, depending on your computer's hardware configuration.

 You can print a copy of this information for your records by clicking **Print**.

The SequeLink ODBC Socket Server Manager and the SequeLink ODBC Socket Server Services are installed automatically along with the other products you chose to install.

When the installation process is complete, select **Yes** to view the ReadMe file or select **No** to go to the InstallShield Wizard Complete page.

## InstallShield Wizard Complete

If the option to restart your machine is displayed, select **Yes** to ensure that the installation process finishes correctly. You must restart the machine before using Narrowcast Server.

Click **Finish** to complete the installation. See [Chapter 3, Configuring Narrowcast Server](#) to configure your newly installed Narrowcast Server system.

## Installation verification

During the installation process, the Setup Wizard gathers and records information about your system and your installation selections. You can verify installation setup information through the installation log file (`install.log`), located by default in `C:\Program Files\Common Files\MicroStrategy`.

The installation log file includes the following information:

- Installation date
- Target directories
- Program folder name
- Operating system identification
- Hardware specifications
- Selected installation options
- Registry paths
- List of registered files

The installation log file can be particularly helpful if you encounter errors  during the installation process. For example, the log file can provide details

whether a registry key or path was not added or if a critical file was not registered successfully.

## Installing custom components

Some Narrowcast Server system configurations include the use of custom components or modules. These can include custom information source modules, document formatting modules, information transmission modules, and logging modules. When such custom modules are required for a system, they must be installed and registered on every machine that is used for Narrowcast Administrator or Narrowcast Server. If this is not done, the interfaces necessary to configure each module are not available in Narrowcast Administrator, and the functionality and procedures required for service execution are not available to Narrowcast Server.

For more information about creating, installing, registering, and using custom modules with Narrowcast Server, see the online *MicroStrategy Narrowcast Server SDK Guide*.

## Uninstalling Narrowcast Server

The Narrowcast Server uninstallation procedure performs the following actions:

- Unregisters and removes selected files, registry entries, and shortcuts logged in the `Uninst.isu` log file.
- Calls a custom DLL to handle unlogged items, such as registry entries and files.

Before uninstalling Narrowcast Server, note the following:

- You should make backups of files that have the extension "properties" located in the Subscription Portal and Common Files folders and subfolders. These files are modified when you configure your system.

When the uninstallation program deletes them, you lose the modifications.

- If you have configured services using the Subscription Portal Administration Wizard to support dynamic subscription or page-by-personalization, you should make backups of files that begin with "DYN" and have the extension ".xml", located in the Subscription Portal and Common Files folders. To locate and back up these files, you can use Windows Explorer or the command prompt window. Your system drive letter and folder structure may vary.
- You must uninstall all Narrowcast Server components (Delivery Engine and Subscription Portal) before you uninstall Narrowcast Administrator.
- If you uninstall and reinstall the product, your system is not restored to its original state. You must reconfigure the server configuration of your system, either by:
  - Choosing a new Sequelink machine using the System Configuration Wizard in Narrowcast Administrator; or
  - Restoring the files that you backed up before performing the uninstallation procedure.

Before uninstallation begins, the uninstall program performs the following actions:

- Checks for user privileges. If they are not valid, uninstallation stops.
- Checks for running components. If a component is found running, uninstallation stops.
- Stops all services that are part of the Narrowcast Server system.
- Deletes files created by the application, such as \*.log, \*.gid, \*.eml, and \*.tb.

## To uninstall Narrowcast Server

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- 1 Log in as a user with administrator privileges on the local machine, and close all installed MicroStrategy products.
- 2 From the **Start** menu, select **Settings**, and then **Control Panel**.
- 3 In the Control Panel, double-click the **Add/Remove Programs** icon. The Add/Remove Programs dialog box opens.
- 4 Select **MicroStrategy 9** and click **Change/Remove** (or Add/Remove in Windows NT). The MicroStrategy Setup/Maintenance program opens.
- 5 Select the appropriate option depending on what you have installed:
  - If you have installed Narrowcast Server and other MicroStrategy products, and only want to uninstall Narrowcast Server, select **Modify** and click **Next**.
  - If you want to remove all MicroStrategy components or if Narrowcast Server is the only component on this machine, select **Remove**. Click **Yes** to any prompts that appear, then click **Finish** to close the maintenance program.
- 6 You must stop Narrowcast Server services to perform this update. Click **Yes** if you want the Setup Wizard to stop them for you.
- 7 Select to accept the license agreement and click **Next**.
- 8 Verify your customer information and click **Next**.
- 9 Verify your setup type and click **Next**.
- 10 Clear the check box next to the product(s) that you want to uninstall, then click **Next**.
- 11 Click **Yes** or **No** to remove or keep your virtual directory.

 If your Narrowcast system is currently enabled for MicroStrategy Web subscriptions, it is recommended that you keep the virtual directory.

12 Verify the settings and click **Next** to begin removing files.

13 When the uninstall process is complete, click **Finish** to close the maintenance program.

After this process is complete, the program may display a message stating  that some components could not be completely removed and that the system needs to be rebooted. Restart the machine to achieve a clean uninstall.

# CONFIGURING NARROWCAST SERVER

This chapter provides configuration guidelines for setting up a Narrowcast Server system.

Narrowcast Server systems can be created using the System Configuration Wizard. When a new Narrowcast Server system is created, several tables are created in the specified Object Repository database. If the sample Tutorial - Delivery project is installed, several sample services are added to the Narrowcast Server system. Finally, the system is given a name so that it can be easily identified and recognized. Details on the configuration process are below.

A Narrowcast Server system name is used to identify a system once it has been registered. This name is displayed in Narrowcast Administrator as the root in the Location box and in the Folder List pane. When registering a system during system configuration, if an existing system is chosen, the system is presented using the system prefix. For this reason, it is important to record Narrowcast Server systems by both the system name and the system prefix specified when the Object Repository is created. This enables you to identify each system later when you register it using the System Configuration Wizard.

For steps to configure a Subscription Portal on a separate web server machine or in a cluster, see [Chapter 4, Configuring the Subscription Portal](#).

## Prerequisites

- Narrowcast Server must be installed. See [Chapter 2, Installation Procedures](#) for steps to install various Narrowcast product components.
- To control Microsoft Windows NT and Microsoft Windows 2000 services on a machine, your Windows account must have administrator privileges on that machine. Add your Windows account to the Administrators group on each Narrowcast Server machine using the Microsoft User Manager administrative tool. For more information on using Microsoft User

Manager, see *Accounts* in the *Narrowcast Server System Administrator Guide*.

## Configuration overview

Narrowcast Server contains several components that must be properly configured before a Narrowcast Server system can operate.

Configuration includes the following tasks:

- **Create an Object Repository:** The Object Repository is the core storage facility for Narrowcast Server objects. Narrowcast Server cannot store configuration parameters, application objects, or other information without an Object Repository.
- **Create a Subscription Book Repository:** The Subscription Book Repository is the location in which subscribers, addresses, subscriptions, and user preferences are stored. Narrowcast Server cannot execute services, and Narrowcast Administrator cannot be used to administer subscribers, without a configured Subscription Book Repository.
- **Define a cluster configuration:** A Narrowcast Server system can exist without any distribution managers, execution engines, or other machines being configured. Such systems can be used to store archives or backups of Narrowcast Server objects. A server is necessary to execute services and provide a Subscription Portal web interface. A clustered server system can provide better performance, scalability, and availability than a single server.
- **Configure information sources:** An application designer can create and execute services without the existence of an information source. However, dynamic service content can only be generated through the use of an information source.

- **Configure information transmitters:** Information transmitters provide the delivery capabilities of Narrowcast Server. Without them, messages cannot be sent.

## Configuration tools

Narrowcast Administrator makes the process of configuring your system fast and easy, by providing a configuration tool called the Narrowcast Server System Configuration Wizard. The System Configuration Wizard opens the first time you launch Narrowcast Administrator. Alternatively, you can access it from Narrowcast Administrator: from the **System** menu, select **Configure New System**.

If you installed the MicroStrategy Tutorial - Delivery sample project, the configuration process launches the first time that you open Narrowcast Administrator. This process walks you through how to configure the system so that the sample reports and documents can be delivered using the sample services that come with the Tutorial- Delivery project. You can later reconfigure your system in whatever way suits your user's needs, using the System Configuration Wizard. For details to configure the system to support the Tutorial - Delivery project, see the *Narrowcast Server Getting Started Guide*. The Tutorial configuration process configures a complete application that demonstrates Narrowcast Server functionality. Editing and reviewing the Tutorial - Delivery objects and resulting sample messages are a highly recommended way to learn about Narrowcast Server product functionality.

Both of these tools perform the same configuration tasks.

## Remote access

It is recommended that the Narrowcast Server system is remotely accessed only through Narrowcast Administrator. Remote access using Terminal Server is not supported or recommended.

## System configuration process

The Narrowcast Server System Configuration Wizard guides you through the process of configuring a new Narrowcast Server system. The System Configuration Wizard is the recommended means of changing the existing configuration settings of your Narrowcast Server system.

You can also configure the default Subscription Portal site regardless of whether Subscription Portal components are on the local machine or on other machines. For details on using the Subscription Portal, see *User Self Subscription* in the *Narrowcast Server Application Designer Guide*.

This section assumes that you have reviewed the configuration prerequisites and met all configuration requirements as described in [Subscription Portal configuration prerequisites, page 62](#) and [Configuration overview, page 40](#).



You can only configure Narrowcast Server system from a machine that has Narrowcast Administrator installed.

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### To configure the system using the System Configuration Wizard

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- 1 From the Windows **Start** menu, point to **Programs**, then **MicroStrategy Tools**, and select **Narrowcast Administrator**. Narrowcast Administrator opens.
- 2 From the **System** menu, select the name of the system you wish to edit and choose **Edit System Configuration**.
  - You can also create a different system by selecting **Configure New System** from the **System** menu.
- 3 Continue with the configuration using the information that follows. Each page of the System Configuration Wizard is described below.

## Welcome

The Welcome page provides an overview of the configuration process you will complete. Click **Next** to continue.

## System configuration

The System area guides you through the process of creating a new system or selecting an existing Narrowcast Server system (if you are configuring a remote Narrowcast Administrator). If you are creating a new system, you are asked to select an Object Repository database location and create tables and other objects in that location.

Click **Next** to proceed.

## Choose Data Source Name

This page displays the list of available data source names (DSNs). Select the DSN to connect to your Object Repository.

Click **DSN Administrator** to open the ODBC Data Source Administrator dialog box and create new DSNs or modify existing ones. See [Chapter 5, ODBC, DSNs, and Database Connectivity](#) for steps to create a new DSN.

Click **Next** to continue.

## Specify Connection Information

Type the login and password to connect to the database in which the Object Repository is located. If needed, enter a database name (optional).

- To connect to a database via ODBC, you must specify the login and password for the database. This information allows Narrowcast Server to use the selected data source name to connect to the database.
- If you are creating a new system using a Microsoft Access database, the use of this page depends on whether the Access database is configured to require authentication. If it does require authentication, enter a login

and password as with any other data source name. If it does not, these fields are optional and are not used.

- For Microsoft Access databases, you can use the database location to provide the file path location of the MDB (Microsoft database) file.
- If you are editing the Tutorial system, no login, password, or database information appears on this page. This is because the Microsoft Access database provided with the Tutorial does not require authentication.

Click **Next** to proceed.

## Choose System

This page appears only if an existing system is found. This page displays a drop-down list of all existing system prefixes, including an option to create a new system. Select one of the existing system prefixes or select **Create New System**.

 Narrowcast Server does not allow you to connect to a system if you do not have a Narrowcast Administrator account on that system. Narrowcast Administrator accounts are linked to Windows accounts, so if you log in to Windows with a different Windows account than the one you normally use, you might not be able to connect to your system. For information to create and manage your Narrowcast Administrators accounts, refer to *Managing Administrator Accounts* in the *Narrowcast Server System Administrator Guide*.

## Create New System

This page appears only if a new system is being defined. Type the system name and system prefix.

If you choose a prefix that is the same as one being used by an existing system, you have the option to destroy the existing system. This enables the prefix to be used for the new system, and also cleans up the machine

that was used for the old system so it can be reused. This also deletes all services and related objects that are part of the old system.

 A system prefix enables the use of multiple object repositories in the same database. Tables can then be created without conflicting with the names of existing object repository tables.

Click **Next** to proceed.

## Summary

The Summary page provides you with a list of all the settings and selections you specified throughout the wizard.

 The Summary page provides important system configuration information. This information is required to reconnect (register) this system if it is disconnected (unregistered) in Narrowcast Administrator. Record this information to register this system in the future.

Click **Next** to complete the Object Repository creation task and proceed with the next configuration piece.

## Subscription Book configuration

The Subscription Book configuration piece of the wizard guides you through creating a new Subscription Book Repository (SBR), which is a database that stores information about recipients. This information includes names, addresses, personalization settings, and subscription specifications.

You can think of the SBR as a data warehouse containing lookup tables for the recipient data. When a service is run, information about subscribers such as names, addresses, and personalization specifications are retrieved from the SBR. For details about the SBR, see the *Narrowcast Server System Administrator Guide*.

To configure an SBR site on a web server machine that was not used to configure a system with Narrowcast Server Administration, use the steps in [Subscription Portal configuration procedures, page 63](#).

## Choose Module

This page appears only if you have registered more than one Subscription Book Module (SBM). You can only add one SBM to a system. On this page, you can select which module you want to add to your Narrowcast Server system.

- If you select the Enterprise Subscription Book Module, which is the standard SBM that is provided by Narrowcast Server, the Choose Location page opens.
- If you select a custom Subscription Book Module, the Define Custom Module page opens.

For more information on custom Subscription Book Modules, see *Custom Subscription Book Module* in the *Narrowcast Server Application Designer Guide*.

## Define Custom Module

This page appears only if you selected a custom Subscription Book Module on the Choose Module page. From this page, click **Define** to define your custom Subscription Book Module. Defining a custom SBM involves configuring your subscription book, including such things as specifying a text file or other data needed by the SBM.

For more information on custom Subscription Book Modules, see *Custom Subscription Book Module* in the *Narrowcast Server Application Designer Guide*.

## Choose Location

Select the check box if you want to store the Object Repository (OR) and Subscription Book Repository (SBR) in the same location. If this option is selected, SBR configuration is completed automatically. If it is not selected, you must complete the remainder of the SBR configuration steps.

 It is recommended to use the same location to reduce administrative workload.

The next page to appear depends on what option you selected above.

Option Selected	Next Page
SBR and OR stored in different locations	Overview page (see <a href="#">Overview, page 47</a> )
SBR and OR in the same location, and a SBR already exists in the location	Choose Existing Table Options page (see <a href="#">Choose Existing Table Options, page 47</a> )
SBR and OR in the same location, with no existing SBR saved there	Summary page, unless there is an error creating the SBR; in that case, the Create Subscription Book page opens (see <a href="#">Summary, page 49</a> or <a href="#">Create New Subscription Book, page 49</a> )

## Overview

This page appears only if the Subscription Book Repository (SBR) is not stored in the same location as the Object Repository (OR). This page displays the overview of steps in this section.

Click **Next** to continue. The Choose Data Source Name page opens.

## Choose Existing Table Options

This page appears if a Subscription Book Repository (SBR) already exists in the location in which the System Configuration Wizard is trying to create a new one.

Select an option and click **Next** to continue. The next page depends on what option you selected.

Option Selected	Next Page
Use the existing SBR	Summary page (see <a href="#">Summary, page 49</a> )
Overwrite the existing SBR (This deletes all information contained in the SBR)	Summary page, unless there is an error creating the SBR; in that case, the Create Subscription Book page opens (see <a href="#">Summary, page 49</a> or <a href="#">Create New Subscription Book, page 49</a> )
Use a different location or prefix for your SBR	Choose Data Source Name page (see <a href="#">Choose Data Source Name, page 48</a> )

## Choose Data Source Name

This page displays the list of available data source names (DSNs). Click **DSN Administrator** to open the ODBC Data Source Administrator dialog box and create new DSNs or modify existing ones

See [Chapter 5, ODBC, DSNs, and Database Connectivity](#) for details to create a new DSN.

## Specify Connection Information

Type your login and password used to connect to the Subscription Book Repository. Type a database name (optional).

Click **Next** to proceed.

## Choose Subscription Book

This page appears only if existing Subscription Book Repository (SBR) tables are found at the selected location. Select one of the existing prefixes, or select **Create New Subscription Book Repository** from the drop-down list to create a new prefix.

## Create New Subscription Book

This page appears only if a new Subscription Book Repository (SBR) is being created. Enter the SBR prefix and click **Next** to continue.

### Summary

The Summary page displays a list of all the settings and selections you specified above.

 The Summary page provides important information about the Subscription Book Repository. This information is required to reconnect to this Subscription Book Repository in Narrowcast Administrator if needed. Record this information to reconnect to this Subscription Book Repository in the future.

Click **Next** to complete the Subscription Book Repository creation task and proceed with the next piece of the wizard.

## Clustering

Clustering is a way of using multiple machines to provide a scalable and robust processing environment for a Narrowcast Server system. A cluster consists of two or more machines, each machine running at least one system component. If you own Narrowcast Server Enterprise Edition, you can cluster Narrowcast Server machines.

The system components, at least one of which must be running on each clustered machine, are as follows:

- **MicroStrategy Logging Server (MLS):** Relays system error messages, statistics, and events from other system components to logging consumers. The Logging Consumer provided can be configured to record this information to log files, the Windows event viewer, or the Windows debug messaging interface.
- **Distribution Manager (DM):** One distribution manager serves as the primary services distribution manager, and any others serve as backup distribution managers. The primary distribution manager receives

service execution triggers, distributes service data and execution workload to the execution engines for processing, designates failover execution engines, and tracks the state of the other components in the system.

- Execution Engine (EE): Executes services and delivers the resulting messages. Each execution engine receives service segments from the distribution manager, retrieves the content and subscriber information for each segment, formats this content, and transmits the resulting messages through the appropriate communications channels.
- Subscription Portal site: Provides a website to which subscribers can connect and administer their addresses and subscriptions.
- SequeLink: Provides a universal client for ODBC and JDBC. This third-party component is embedded in Narrowcast Server.

For more information about these components, refer to the *Narrowcast Server System Administrator Guide*.

## Overview

This page displays the overview of steps in the wizard. Click **Next** to continue.

## Select Configuration Options

Specify how you want to configure your machines for clustering. Although Narrowcast Server requires at least one machine to send services, you can configure a system with no machines to provide a backup or development system. Select the required option from this page.

The next page depends on the option that you have selected.

Option Selected	Next Page
Do not configure or modify any machines at this time	Summary page (see <a href="#">Summary, page 53</a> )
Remove all machines from the Narrowcast Server system	Summary page (see <a href="#">Summary, page 53</a> )
Select and configure multiple machines for a clustered Narrowcast Server system	Specify Logging Server page (see <a href="#">Specify Logging Server, page 51</a> )
Select and configure a single machine for Narrowcast Server	Summary page (see <a href="#">Summary, page 53</a> )

## Specify Logging Server

Enter the IP address or machine name to be used as the Logging Server. Click **Browse** to locate and select a machine name. Only one Logging Server can be used per cluster.

The System Configuration Wizard validates that the machine you identify as the Logging Server is not used as a distribution manager, execution engine, or Logging Server by another system. If it is, you are warned that you must resolve this in one of the following ways:

- To destroy the existing system:
  - a Register the system by returning to the Choose System page, selecting the existing system prefix, and clicking **Next**.
  - b Click **Next** on the Summary page and exit the System Configuration Wizard.
  - c In Narrowcast Administrator, select your system name from the **System** menu and select **Destroy System**.
  - d Start the System Configuration Wizard again and create your new system.

- To modify the existing system:
  - a Return to the Choose System page and select the existing system prefix.
  - b Click **Next** to display the Specify Logging Server, Specify Distribution Managers, or Specify Execution Engines page and remove any distribution manager, execution engine, or Logging Server from the local machine.
  - c Return to the Choose System page and select the system you were originally configuring.
  - d Click **Next** to return to the Specify Logging Server page.

## Review Advanced Settings

The Review Advanced Settings page indicates how Logging Server and Logging Client components communicate with each other. This page also displays a summary of the Logging Client and Logging Server connection information, including machine names and port numbers. The Logging Servers and Logging Clients work together to log messages to a central location in a distributed environment. For more information on these tools, see the *Narrowcast Server System Administrator Guide*.

## Ports

- The Logging Client receiver port determines the port on which the Logging Client receives messages from the Narrowcast Server components.
- The Logging Server relay port determines the port on which the Logging Server receives messages from the Logging Client.
- The Logging Server consumer port determines the port that log message consumers use to gather messages from the Logging Server.

Click **Modify** if you want to modify Logging Client or Logging Server connection information.

## Summary

You can test whether the default settings work in your environment with the **Test Logging Server** feature on the Summary page.

## Specify Distribution Managers

Specify one or more machines to be used as service distribution managers. One machine is the primary distribution manager; all others serve as backup distribution managers.

This page displays a list of distribution managers (DM) and their ranking.

- Enter the machine name or IP address of a DM, or click **Browse** to locate a machine.
- Click **Add** to add the machine to the list of distribution managers.
- Click **Remove** to remove the selected distribution manager from the list.

Use the up and down arrows to rank the distribution managers. Rank numbers are used by the distribution managers during startup to help determine which machine is the primary distribution manager. Normally, the first distribution manager started becomes the primary distribution manager. A specific primary or backup machine is not guaranteed.

The System Configuration Wizard validates that none of the machines you identified as distribution managers are used as part of another system. If any are, you can resolve this in one of the following ways:

- To destroy the existing system:
  - a Register the system by returning to the Choose System page, selecting the existing system prefix, and clicking **Next**.

- b Click **Next** on the Summary page and exit the System Configuration Wizard.
  - c In Narrowcast Administrator, select your system name from the **System** menu and select **Destroy System**.
  - d Start the System Configuration Wizard again and create your new system.
- To modify the existing system:
    - a Return to the Choose System page and select the existing system prefix.
    - b Click **Next** to get to the Specify Logging Server, Specify Distribution Managers, or Specify Execution Engines page and remove any distribution manager, execution engine, or Logging Server from the local machine.
    - c Return to the Choose System page and select the system you were originally configuring.
    - d Click **Next** to return to the Specify Distribution Managers page.

## Specify Execution Engines

This page is where you specify one or more machines to be used as execution engines. This page displays a list of execution engines (EE) and their ranking.

- Enter the machine name or IP address of an EE, or click **Browse** to locate a machine.
- Click **Add** to add a machine to the list of execution engines.
- Click **Remove** to remove the selected execution engine from the list.

Use the up and down arrows to rank the execution engines. The primary distribution manager uses the rank numbers to decide which execution engine to use as a failover machine for another execution engine machine.

In general, the execution engine next in rank that is operational is used as the failover machine. The last execution engine generally fails over to an execution engine at the start of the ranking.

The System Configuration Wizard validates that none of the machines you identify as execution engines are used as part of another system. If any are, you can resolve this in one of the following ways:

- To destroy the existing system:
  - a Register the system by returning to the Choose System page, selecting the existing system prefix, and clicking **Next**.
  - b Click **Next** on the Summary page and exit the System Configuration Wizard.
  - c In the Narrowcast Administrator, select your system name from the **System** menu and select **Destroy System**.
  - d Start the System Configuration Wizard again and create your new system.
- To modify the existing system (Enterprise Edition must be installed):
  - a Return to the Choose System page and select the existing system prefix.
  - b Click **Next** to get to the Specify Logging Server, Specify Distribution Managers, or Specify Execution Engines page and remove any distribution manager, execution engine, or Logging Server from the local machine.
  - c Return to the Choose System page and select the system you were originally configuring.
  - d Click **Next** to return to the Specify Execution Engines page.

## Specify Subscription Portal

This page displays the machine names where the SequeLink services are running.

- Select the **Create a Subscription Portal site** check box to create a default Subscription Portal site.
- Enter or browse for the server machine names.

If you create a Subscription Portal site, the System Configuration Wizard verifies that you provided valid machine names or IP addresses by checking for the existence of the SequeLink Server services on the specified machines.

- If the machine names are valid, the wizard creates the default Subscription Portal site and configures the following data base aliases on the specified SequeLink machine:
  - Portal Repository: PR\_SystemName
  - Object Repository: OR\_SystemName
  - Subscription Book Repository: SBR\_SystemName

If the Subscription Portal is installed on the local machine, the wizard also adds a Subscription Portal link to the **Start** menu under **Programs**, then **MicroStrategy Tools**. This link can be used to access the new site when you complete the System Configuration Wizard.

- If site creation fails, a warning appears. Click **OK** to return to the Specify Subscription Portal page. To continue, either resolve the problem or clear the check box, and then click **Next**.

## Summary

The Summary page provides you with a list of all the machines you selected when you defined your cluster configuration. You can use this page to record this important information for future reference. Click **Test**

**Logging Server** to test the ability of the logging system to send log messages between components. Click **Next** to complete the clustering configuration task and proceed with the next piece of the wizard.

## Configure sources

The Configure Sources area of the System Configuration Wizard guides you through the task of identifying the projects your Narrowcast Server system will use and configuring Information Sources (IS) to connect to those projects.

### Specify projects

Narrowcast Server can deliver reports and enable subscriptions via MicroStrategy Web for one or more projects. This page displays the tree structure with two root-level nodes: Projects used by this system, and servers available on the network.

- Expand or double-click the **Projects used by this system** folder to view the list of projects that are already part of your system configuration. To remove a project from the system, select the project, and choose **Do not use this project**.
- Expand or double-click the list of **Servers Available on the Network** to select the server with the project you want to add to your system configuration. Select the Intelligence Server, and choose **Enable report delivery from Narrowcast Server**.

 To connect to an Intelligence Server, you must provide a valid login ID and password. You cannot use trusted security or LDAP authentication for this login.

- Click **Refresh Servers** to update the current list of servers on the network.
- Click **Add Server** to manually locate an Intelligence Server.

The list of servers that appear as being available on the network are identified with the help of MicroStrategy Listener. This Windows service runs on each  Intelligence Server machine. When the System Configuration Wizard searches the network for servers, Listener replies with the state of the Intelligence Server that is located on the same machine as Listener is.

When a project is enabled for report delivery from Narrowcast Server, the application designer can include grid and graph reports from that project in the content of services created in Narrowcast Administrator. The application designer can create dynamic subscription sets using subscription information available in the project.

When a project is enabled for report delivery from Narrowcast Server, the application designer can include grid and graph reports in service content and create dynamic subscriptions. In addition to this, MicroStrategy Web users can create delivery (email) subscriptions to reports and documents from the MicroStrategy Web interface. This feature must also be configured in MicroStrategy Web using Web Administrator before it is available to Web users.

For more information on working with grid and graph reports, refer to the *Narrowcast Server Application Designer Guide*.

## Information Transmitters

The Information Transmitters area of the System Configuration Wizard guides you through the task of setting up information transmitters for your system. An information transmitter receives completed, formatted message content from an execution engine, and performs the task of packaging the message content files into a standard encoding format (such as multi-part MIME, UUencoding, and so on) and delivering the packaged message to the recipient's address.

Each information transmitter has a different set of features and capabilities. By default, the System Configuration Wizard creates the following information transmitters automatically when it creates an Object Repository:

- **Email (SMTP):** Delivers email messages with rich HTML content to email clients. It uses SMTP for transmission.
- **Wireless (SMTP):** Delivers text messages to mobile devices such as cell phones and pagers. It uses SMTP for transmission.
- **SMS (SMPP):** Delivers text messages to cell phones. It uses SMPP for transmission, which requires an account with an SMSC.
- **File:** Saves files to networked computers and remote servers. It uses the Windows file system to deliver files to multiple network locations.
- **Print:** Prints multiple files to personalized network locations. It enables administrators and users to define, select, and schedule batch printing requests from Narrowcast Administrator, the Subscription Portal, and MicroStrategy Web.
- **Web (Portal):** Delivers documents and Excel workbooks to the Subscription Portal for later viewing by subscribers. It uses ODBC to transmit these files to the Subscription Book Repository.

The Web (Portal) information transmitter is not visible from the System  Configuration Wizard. This is because, in typical configurations, you do not need to configure the Web (Portal) information transmitter.

For more information about the usage of Information Transmitters while configuring a system, see *Information transmission modules (ITMs) and information transmitters (ITs)* in the *Narrowcast Server System Administrator Guide*.

## Configuration

This page lists the available information transmitters, some of which require additional configuration before they can be used. Check the Definition Status column to ensure that an information transmitter is working.

To configure an information transmitter, select the information transmitter, then click **Define**.

 You do not need to configure every information transmitter that is in the system; you can remove any by deleting them and the devices that use them from the Narrowcast Administrator object browser after you complete the configuration of your system.

For steps to configure the Information Transmitters in a system, see *Information Transmission Module Dialog Set* in the *Narrowcast System Administrators Guide*.

## Summary

The summary page indicates that you have successfully configured your Narrowcast Server system.

Once your system is configured, you are ready to begin using Narrowcast Server. There are several ways to begin exploring Narrowcast Server:

- If you installed the Tutorial - Delivery sample project, you can access its Home page and be guided through the product. You can edit and deliver sample Tutorial services within Narrowcast Administrator. For steps, see the *Narrowcast Server Getting Started Guide*.
- You can create a service using the Service Wizard. Use the Service Wizard to create functional services of your own and deliver your own email messages. For more information on the Service Wizard, see the *Narrowcast Server Application Designer Guide*.
- If you have installed the Subscription Portal, you can use the Subscription Portal default site to view published content or change user subscriptions and preferences. You can explore how this site works and execute other services within Narrowcast Administrator to publish content to this site.

# CONFIGURING THE SUBSCRIPTION PORTAL

This chapter provides installation and configuration guidelines for setting up a Subscription Portal on a separate web server machine or cluster. It only applies to Narrowcast Server Enterprise Edition.

## Subscription Portal configuration prerequisites

Before you can configure a Subscription Portal site, you must ensure the following:

- You must have Narrowcast Server Enterprise Edition.
- You must fulfill the [Chapter 1, Installation Prerequisites](#).
- You must install the Subscription Portal and SequeLink components of Narrowcast Server. All Narrowcast Server components are installed by default when you install Narrowcast Server, but you can select to install only these components on the machines you intend to use for the Subscription Portal to conserve space. These components do not need to reside on the same machine. This procedure is in [Chapter 2, Installation Procedures](#).
- You must configure a Narrowcast Server system. Other Narrowcast Server components such as distribution managers and execution engines do not need to be on the same machine. For details, see [Chapter 3, Configuring Narrowcast Server](#).
- You must ensure that the SequeLink Server service is running on a machine on your network. From the **Start** menu, select **Settings**, then **Control Panel**. Open **Services** and locate the SequeLink service. Ensure that it is started.
- The World Wide Web Publishing service must be running on the Subscription Portal machine. From the **Start** menu, select **Settings**, and then **Control Panel**. Open **Services** and locate the World Wide Web Publishing service. Ensure that it is started.

## Subscription Portal configuration procedures

To configure a Subscription Portal site on a web server machine that was not used to configure a system with Narrowcast Administrator, you perform the procedures below. The following is a high-level checklist of the procedures you must perform:

- 1 *Establish connections, page 63*: Define the connection from your Subscription Portal pages to SequeLink, and ultimately to the Portal Repository.
- 2 *Create a portal, page 64*: Create a virtual directory on your web server to serve Subscription Portal pages to subscribers.
- 3 (Optional) *Repeat for each web server, page 65*: Configure multiple web servers to provide the same content to subscribers. You can use this procedure to add additional web server machines to your Narrowcast Server system cluster, or to verify the configuration of existing Subscription Portal web servers.

### Establish connections

This procedure establishes the connection between the Subscription Portal pages on your web server and the Portal Repository.

---

#### To establish a connection

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- 1 Launch the Portal Administrator Wizard from the machine you wish to configure. To do this, from the **Start** menu, select **Programs**, then **MicroStrategy Tools**, then **Portal Administrator**.
- 2 Click **System Configuration** in the upper left corner of the page.
- 3 Click **Next**.
- 4 Create or select a database connection (also called a DB Alias) for the Portal Repository. If you selected the check box to configure the Subscription Portal during the configuration of your Narrowcast Server

system, a valid database connection for the Portal Repository might already be available for use. Select it, or if necessary, create a new one.

If you want to publish the same site contents on several different Subscription Portal machines in a cluster, ensure that you choose the same Portal Repository location on each Subscription Portal machine.

- 5 Click **Next**.
- 6 The Summary page reviews the steps you completed for your Portal. The Portal Administrator Wizard can now use this database to store configuration information for your Subscription Portal site.

## Create a portal

This procedure links a virtual directory on your web server to a specific site that is defined in your Portal Repository.

- 1 Click **Site Management** at the top of the page.
- 2 Click **Next**.
- 3 By default, the virtual directory that was created when you installed Subscription Portal is selected. To create a new virtual directory or choose a different directory, click **Click here**.

If you want to publish the same site contents on several different Subscription Portal machines in a cluster, ensure that you use the same virtual directory name on each Subscription Portal machine.

- 4 Click **Next**.
- 5 If you created the default Subscription Portal site when you configured your Narrowcast Server system, it will be selected by default.
  - To define a new site, click **Add a new site definition**.
  - To edit an existing site, click **Edit**.

- To select a site, click the button next to the site name, then click **Next**.

If you want to publish the same site contents on several different Subscription Portal machines in a cluster, ensure that you choose the same site on each Subscription Portal machine.

## Repeat for each web server

You can repeat the two procedures above on each Subscription Portal web server in a cluster, to configure multiple web servers that will provide the same content to subscribers.

# ODBCs, DSNs, AND DATABASE CONNECTIVITY

A data warehouse stores the data that users need to analyze, to track and respond to business trends and facilitate forecasting and planning efforts. ODBC (open database connectivity) is the standard method of communicating with database servers. Narrowcast Server uses ODBC to connect to and communicate with all database servers in the system.

An ODBC data source name (DSN) is the name for a pointer used by a client application to find and connect to a data source. Multiple DSNs can point to the same data source; one DSN can be used by different applications. This chapter shows you how to create DSNs, and explains how database connectivity works via ODBC.

## ODBCs and DSNs

An ODBC connection contains these pieces:

- A data source name (DSN) stores all of the necessary information for locating and logging into a database. A DSN generally includes such information as host computer name or IP address, instance name, and database name. The exact information included in a DSN varies depending on the type of database server.
- An ODBC driver is a type of software that translates information between the client application (Narrowcast Server) and the database server API. Database servers communicate through different APIs; for example, Oracle database servers use a different API (Oracle SQL\*Net).
- The ODBC driver manager coordinates communication between a client application and a database server. The client application tells the driver manager that it needs to connect using a particular connection string. The DSN found in this connection string provides the driver manager with the type of database server to which the application needs access. From this information, the driver manager decides what driver to use and initiates the communication.

## Creating new data source names

If a data source name (DSN) does not already exist for your empty Object Repository or Subscription Book Repository, you can add or create a new one.

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### To add a DSN

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- 1 From the Windows **Start** menu, select **Programs**, select **MicroStrategy Tools**, and select **Narrowcast Administrator**.
- 2 Open the System Configuration Wizard. To do this, from the **System** menu, select **Edit System Configuration**. The Welcome page opens.
  - When Narrowcast Server is opened for the first time, the System Configuration Wizard opens automatically.
- 3 Click **Next**. The Overview page opens.
- 4 Click **Next**. The Choose Data Source Name page opens.
- 5 Click **DSN Administrator**. The ODBC Data Source Administrator dialog box opens.
- 6 Select the **System DSN** tab and click **Add**.
- 7 Select the already installed ODBC driver or select the appropriate version of the MicroStrategy ODBC driver.

Only certain databases can contain Object or Subscription Book Repositories.

-  Only DSNs created to connect to these databases can be used to connect to the Object or Subscription Book Repository.

- 8 Click **Finish**.
- 9 Depending on which MicroStrategy ODBC driver was selected, you must enter specific server-related information in the ODBC Driver Setup dialog box. See [Creating DSNs for each ODBC driver, page 69](#) for ODBC driver vendor requirements.

Once server connection information is entered and your DSN is created, you are returned to the System Configuration Wizard.

- 10 Select the DSN from the **Data Source Name** drop-down list and click **Next**. If the DSN is not listed, ensure that the MicroStrategy ODBC driver used to create the DSN is one of the certified metadata repository vendors.
- 11 Enter your **Login ID** and **Password**.
- 12 Click **Next**. The System Configuration Wizard connects to the database.

## Creating DSNs for each ODBC driver

This section includes information for creating a DSN for each of the following ODBC drivers:

- Oracle 8: Oracle8 Client Software (Net8) must be installed prior to creating a DSN.
- Microsoft SQL Server

 The client software is not included in the MicroStrategy product suite installation. It must be obtained through the database vendor or another third party.

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## To create a DSN for Oracle

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- 1 Click **Start**, select **Settings**, and select **Control Panel**. Then double-click either **Data Sources (ODBC)** or **ODBC Data Sources**.
- 2 Click the **System DSN** tab.
- 3 Click **Add**. The Create New Data Source dialog box opens.
- 4 Select **MicroStrategy ODBC Driver for Oracle** and click **Finish**. The ODBC Oracle Driver Setup dialog box opens.
- 5 Type the following details:

- **Data Source Name (General tab):** Type a string that identifies this Oracle data source configuration in the system information. Examples include "Accounting" or "Oracle-Serv1".
  - **Server Name (General tab):** Type the client connection string designating the server and database to be accessed. The required information varies depending on the client driver you are using. The server name (Local Net Service Name) is created when you configure the Net8 Client Software.
  - **Default User Name (Advanced tab):** Type the default user name used to connect to your Oracle database. A default user name is required only if security is enabled on your database. Your ODBC application may override this value, or you may override this value in the Logon dialog box or connection string.
  - All other settings are default or optional. If you have any questions about settings for DSN creation, click **Help**.
- 6 Click **Test Connect** to ensure that the DSN connects properly to the database. If the DSN does not connect properly, verify that the required fields are properly completed.
  - 7 Once a connection is established, click **Apply** and then **OK** to exit the DSN setup.
  - 8 Click **OK** in the ODBC Data Source Administrator dialog box to exit.

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## To create a DSN for Microsoft SQL Server

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- 1 Click **Start**, select **Settings**, and select **Control Panel**. Then double-click either **Data Sources (ODBC)** or **ODBC Data Sources**.
- 2 Click the **System DSN** tab.
- 3 Click **Add**. The Create New Data Source dialog box opens.

- 4 Select **SQL Server** and click **Finish**. The Create a New Data Source to SQL Server wizard opens.
- 5 Enter the following details on the first page:
  - **Name:** Enter the data source name to be used by an ODBC application when it requests a connection to the data source. An example is Personnel. The data source name is displayed in the ODBC Data Source Administrator dialog box.
  - **Server:** Enter or select the name of a SQL Server on your network.
    - If you select a server name from the list, no further configuration is needed.
    - If you enter the name of a server that does not exist as an entry in the SQL Server Client Network Utility, you can create a server alias for the new name on the next page of the wizard. You can enter (local) in the Server field when you use the same computer as SQL Server. The user can then connect to the local copy of SQL Server, even when running a non-networked version of SQL Server.
- 6 Click **Next**. Select one of the following authentication options:
  - **With Windows authentication using the network login ID:** This option specifies that the SQL Server ODBC driver request a secure (or trusted) connection to a SQL Server running on Windows NT or Windows 2000. When selected, SQL Server uses integrated login security to establish connections using this data source, regardless of the current login security mode at the server. Any login ID or password supplied is ignored. The SQL Server system administrator must have associated your Windows login with a SQL Server login ID.
  - **With SQL Server authentication using a login ID and password entered by the user:** This option specifies that the SQL Server ODBC driver not request a secure (or trusted) connection to SQL

Server. When selected, SQL Server uses standard login security to establish connections using this data source. You must specify a SQL Server login ID and password for all connection requests.

For more information about server names for different types of networks, see the SQL Server installation documentation in SQL Server Books Online.

- 7 Select or clear the **Connect to SQL Server to obtain default settings for the additional configuration options** check box. When selected, the SQL Server driver obtains initial settings from the SQL Server for the options on the following pages of the wizard. The SQL Server driver connects to the SQL Server named in the Server field on the first page. When cleared, the driver uses standard defaults as the initial settings for the options on the following wizard pages.
- 8 Complete the following:
  - **Login ID:** This field specifies the login ID that the SQL Server driver uses when connecting to SQL Server if **With SQL Server authentication using a login ID and password entered by the user** is selected. This applies only to the connection made to determine the server default settings; it does not apply to subsequent connections made using the data source after it has been created.
  - **Password:** This field specifies the password the SQL Server uses when connecting to SQL Server if **With SQL Server authentication using a login ID and password entered by the user** is selected. This applies only to the connection made to determine the server default settings; it does not apply to subsequent connections made using the new data source.

Both the **Login ID** and **Password** fields are disabled if **With Windows authentication using the network login ID** is selected, or if **Connect to SQL Server to obtain default settings for the additional configuration options** is not selected.

- 9 Click **Next**. Complete the following:

- **Change the default database to:** This field specifies the name of the default database for any connection made using this data source. When cleared, connections use the default database defined for the login ID on the server. When completed, the database entered in the field overrides the default database defined for the login ID. If the **Attach database file name** field has the name of a primary file, the database described by the primary file is attached as a database using the database name specified in the **Change the default database to** field.
- Using the default database for the login ID is more efficient than specifying a default database in the ODBC data source.

10 All other settings are default or optional. For details on any settings in the DSN creation, click **Help**.

11 Click **Next**.

12 Click **Finish**.

13 To test the DSN connection, click **Test Data Source**. If the connection is successful, click **OK**. If the connection is not successful, return to DSN configuration and ensure that all entries are correct.

14 Click **OK** on the ODBC Microsoft SQL Server Setup window to return to the ODBC Data Source Administrator.

15 Click **OK** on the ODBC Data Source Administrator to exit.

## Database connectivity via ODBC

When a data source name is defined, a default database or database context is specified. To connect to a different database in Narrowcast Server and override this default, you can specify a different database name in the Specify Connection Information page of the System Configuration Wizard. This causes Narrowcast Server to connect to the database chosen

during configuration instead of the default specified in the data source name.

To understand how this works, consider the following. When a SQL statement is executed via an ODBC connection, the information required to identify the tables in the statement can come from two sources: (1) the default values specified in the data source name, or (2) the statement itself.

When specifying a database table, information similar to the following is used by most RDBMS systems to uniquely identify a table:

- Server
- Instance (Some databases, such as SQL Server, support multiple instances of the same RDBMS running simultaneously on a single machine.)
- Database
- Tablespace (For example, Oracle and DB2 support this feature.)
- Owner
- Table

The data source typically specifies the server, the instance, and the database. Since this information is contained in the data source, SQL queries often specify only table names by using expressions such as the following:

```
SELECT * FROM table
```

where table is the name of a table in a database.

However, if an ODBC connection is made with a given database context (the default database specified in the data source name), and a query is run with the structure shown above, the query fails if the table specified is in a different database. This occurs because the full identification of the table has not been provided. The RDBMS looks for a table with the name table in

the wrong database location. When the RDBMS fails to find such a table, it returns an error.

In addition, if the owner of the table has not made the table visible to other users, the query fails. The RDBMS engine searches for a table named `table` and owned by the connected user, rather than owned by the table creator. For example, an Oracle database administrator might create table synonyms so that database users with different logins (other than the one that owns the table) can "see" that table.

The information required to uniquely identify a table and the syntax required to provide this information in a SQL statement varies somewhat from one RDBMS to another. For example, in SQL Server, the following syntax is used:

```
Server.database.owner.table
```

If the `Server`, `database`, or `owner` values are left out, the defaults for the ODBC connection are used. An example of such an exclusion would be:

```
database.table
```

With this construction, the RDBMS uses the connected login as the owner when searching for tables in the default database.