Double-Take®

Version 8.0.1

# Double-Take Reporting Service User's Guide

## Notices

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Check your service agreement to determine which updates and new releases you may be eligible for.

If you need maintenance renewal, an upgrade license key, or other sales assistance, contact your reseller/distributor or a Double-Take Software sales representative.

If you need technical assistance, you can contact CustomerCare. All basic configurations outlined in the online documentation will be supported through CustomerCare. Your technical support center is dependent on the reseller or distributor you purchased your product from and is identified on your service agreement. If you do not have access to this agreement, contact CustomerCare and they will direct you to the correct service provider. To contact CustomerCare, you will need your serial number and license key.

Assistance and support for advanced configurations may be referred to a Pre-Sales Systems Engineer or to Professional Services.

Man pages are installed and available on Double-Take Linux servers. These documents are bound by the same Double-Take Software license agreement as the software installation.

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# Double-Take Reporting Service overview

The Double-Take Reporting Service is a centralized reporting and analysis tool that allows you to create detailed, custom reports of all Double-Take servers in your environment. It can be used to show the overall effectiveness of Double-Take protection over time and to analyze trends in a data protection scheme. After you install and configure Double-Take Reporting Service, it monitors and collects data from the Double-Take servers you specify. It sends the collected data to a SQL database that you create and maintain.

If you want to use Double-Take Reporting Service, you will need to complete the following steps, in order.

1. Create your SQL database according to the requirements. See *Double-Take Reporting Service requirements* on page 5 for details on requirements for your environment and your SQL documentation for detailed instructions on configuring SQL server and databases.
2. Install Double-Take Reporting Service.
3. Using the Double-Take Console from another machine, add the server where you installed Double-Take Reporting Service to your console. See *Adding a Double-Take Reporting Service server to the Double-Take Console* on page 6.
4. Using the Double-Take Console, configure the Double-Take Reporting Service server. See *Configuring the Double-Take Reporting Service server* on page 7.

Once your configuration is complete, Double-Take data will be collected and you can use standard SQL queries and tools to create your own customized reports. See your SQL documentation for detailed instructions on creating queries and reports. For a complete list of the data stored in the Double-Take Reporting Service tables, see *Double-Take Reporting Service tables* on page 11.

# Double-Take Reporting Service requirements

To use Double-Take Reporting Service, your environment must meet the following requirements.

- The reporting service must be installed on a Windows operating system.
- The reporting service cannot be installed on a Double-Take source or target server.
- You will need the Double-Take Console installed on a Windows machine in order to configure Double-Take Reporting Service. The console can be on your Double-Take source or target server, or it can be on a Double-Take client-only machine. The reporting service can be run with a Double-Take client-only installation.
- You must have an existing server running SQL Server 2005 or later.
- The reporting service can be run on the SQL server or a different server.
- A new SQL database needs to be created, however no tables should be created because Double-Take Reporting Service will automatically create the tables it needs.
- The newly created SQL database needs established security credentials. The database user role membership must initially include db_owner and public to allow Double-Take Reporting Service to create the tables it needs. Once the tables have been created, the database user role membership can be changed, if desired, to db_datareader, db_datawriter, and public.

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  You need to use Management Studio to set your security credentials. Under **Security**, **Logins**, right-click on the SQL user (the SQL user, not a Windows user) and open the properties. In the Login Properties window, select **User Mapping** to see a list of databases and role memberships for the selected database. Select **Map** for the database and select the database roles. See your SQL documentation for complete details.

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- Your SQL server authentication must be set to SQL Server and Windows Authentication mode.
- The following networking requirements apply. See your SQL documentation for details on these settings.
  - Your SQL server must have TCP/IP enabled.
  - The SQL server must be set to listen on all IP addresses.
  - All IP addresses on the SQL server must be using the same port, however the addresses do not have to be using the default port. If you are not using the default port, you must change the following configuration file to specify the port you are using.
    1. Remove the read-only attribute from C:\Program Files\Vision Solutions\Double-Take\Reporting Service\reporting-service.properties.
    2. Modify the following line, changing 1433 to the SQL port you are using.

       visionsolutions.managementservice.dbport=1433
    3. Reapply the read-only attribute to the file.
    4. Stop and restart the Double-Take Reporting Service.
    5. Verify that the database configuration in the Double-Take Console successfully connects.
- If you are using a firewall on your SQL server, make sure it does not block SQL or Double-Take Reporting Service traffic.

# Adding a Double-Take Reporting Service server to the Double-Take Console

You will need the Double-Take Console installed on a Windows machine in order to configure Double-Take Reporting Service. The console can be on your Double-Take source or target server, or it can be on a Double-Take client-only machine. The reporting service can be run with a Double-Take client-only installation.

See the Double-Take Console online help for complete details on the console.

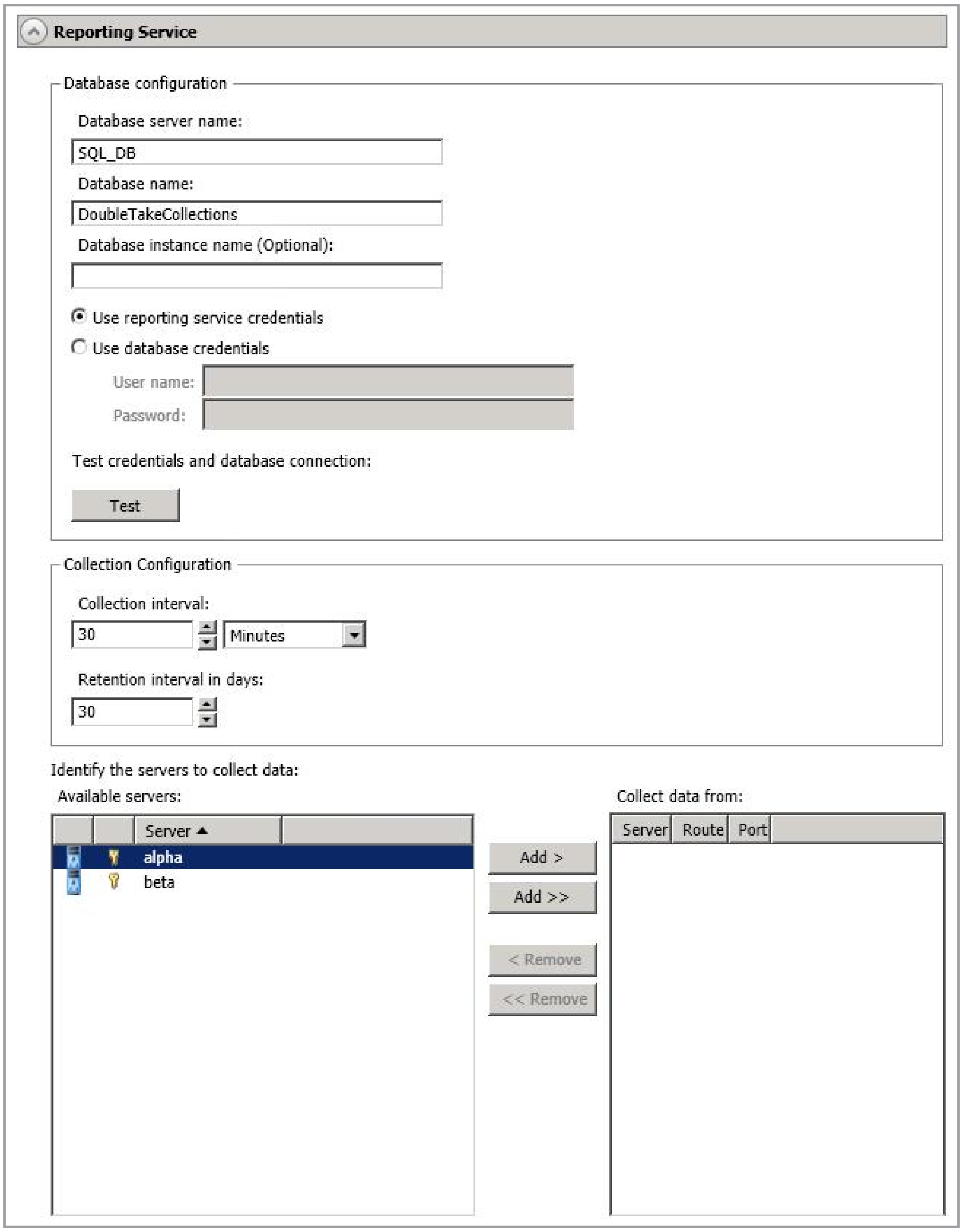
1. You have two methods to get to the **Add Servers** page in the console.
   - Click **Get Started** from the toolbar, select **Add servers**, and then click **Next**.
   - Click **Servers** from the toolbar and click **Add Servers** from the second toolbar on the **Servers** page.
2. On the **Manual Entry** tab, specify the server information.
   - **Server**—This is the name or IP address of the Double-Take Reporting Service server.
   - **User name**—Specify a user that is a member of the **Double-Take Admin** security group on the server.
   - **Password**—Specify the password associated with the **User name** you entered.
   - **Domain**—If you are working in a domain environment, specify the **Domain**.
3. After you have specified the server information, click **Add**.
4. Click **OK** to add the server to your console.

# Configuring the Double-Take Reporting Service server

1. Make sure you have inserted your Reporting Service server into your console. See the console help for details on adding a server to the console.
2. From the **Servers** page, double-click your Reporting Service server to open the server's details.
3. From the **View Collector Details** page, click the **Edit server properties** link.
4. The Reporting Service properties identify the SQL database configuration, the data collection configuration, and the Double-Take servers you are collecting from.
    - **Database server name**—Specify the name of the SQL server that contains your SQL database that will store the collected Double-Take data.
    - **Database name**—Specify the name of the SQL database that will store the collected Double-Take data.
    - **Database instance name**—If necessary, specify the database instance name of the SQL database that you specified.
    - **Use reporting service credentials**—Select this option if you want to use the credentials the Double-Take Reporting Service is running as.
    - **Use database credentials**—Select this option if you want to specify SQL database credentials.
    - **Test**—This button will test the specified credentials and check to see if the tables exist in the specified database. If they do not exist, they will be created. The database user role membership must be db_owner and public to create the tables. If the tables already exist, they will be updated to the correct version, if necessary. Once the test (and therefore the table creation or verification) is complete, the database user role membership can be changed, if desired, to db_datareader, db_datawriter, and public.
    - **Collection interval**—Specify the amount of time to wait between data collections.
    - **Retention interval in days**—Specify how long to retain the collected data. Data older than the specified number of days will be deleted from the database.
    - **Identify the servers to collect data**—Only the servers in your console session will be listed. Highlight the servers you want to collect data from and click **Add >**. If you want to add all of the servers click **Add >>**. If the server you want to collect data from is not listed, you need to add it from the **Servers** page.

      If desired, specify the **Route** and **Port** to use for communication to the server you are collecting data from.

      If you need to remove a server from the **Collect data from** list, click **< Remove**. If you want to remove all of the servers, click **<< Remove**.




5. When you have finished your Reporting Service server configuration, click **OK** to return to the **Servers** page.

# Viewing Double-Take Reporting Service server details

The **View Collector Details** page allows you to view details about a Double-Take Reporting Service server.

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**Server name**

The name or IP address of the server. If you have specified a reserved IP address, it will be displayed in parenthesis.

**Roles**

The role of this server in your Double-Take environment. In some cases, a server can have more than one role.

- **Engine Role**—Source or target server
- **Image Repository Role**—A target for a DR protection job or a source for a DR recovery job
- **Reporting Service**—Double-Take Reporting Service server

**Status**

There are many different **Status** messages that keep you informed of the server activity. Most of the status messages are informational and do not require any administrator interaction. If you see error messages, check the rest of the server details.

**Activity**

There are many different **Activity** messages that keep you informed of the server activity. Most of the activity messages are informational and do not require any administrator interaction. If you see error messages, check the rest of the server details.

**Connected via**

The IP address and port the server is using for communcations. You will also see the Double-Take protocol being used to communicate with server. The protocol will be XML web services protocol (for servers running Double-Take version 5.2 or later) or Legacy protocol (for servers running version 5.1 or earlier).

**Version**

The product version information

**Access**

The security level granted to the specified user

**User name**

The user account used to access the server

**Database server**

The name of the server that contains your SQL database that storing your collected Double-Take data

**Database name**

The name of the SQL database that is storing your collected Double-Take data

**Database instance**

The optional database instance name

**Database status**

The status of the database configuration

**Collection interval**

The amount of time Double-Take Reporting Service waits between data collections

**Retention interval**

The length of time to retain collected data. Data older than the specified number of days will be deleted from the database

**Server**

The server Double-Take Reporting Service is collecting Double-Take data from

**Route**

The route the reporting service is using to communicate with the server data is being collected from

**Port**

The port the reporting service is using to communicate with the server data is being collected from

**User**

The user the reporting service is using to authenticate with the server data is being collected from

**Status**

The status of the collection of data from the server

# Double-Take Reporting Service tables

The following data is available in the Double-Take Reporting Service tables. Each time data is collected, it is written to a new row in the table. You can link data together using time stamps and unique IDs to see how data and states change over time.

## *Server table*

The following data is available in the Server table.

**ServerGUID**

The unique ID Double-Take assigns to the server

**Timestamp**

The date and time the server data was collected

**Name**

The name of the server

**Status**

The status of the server

## *Job table*

The following data is available in the Job table.

**JobId**

The unique ID that Double-Take assigns to the job

**Timestamp**

The date and time the job data was collected

**SourceUniqueID**

The unique ID Double-Take assigns to the job's source server

**TargetUniqueID**

The unique ID Double-Take assigns to the job's target server

**SourceHostUri**

The source's URI (uniform resource identifier)

**TargetHostUri**

The target's URI (uniform resource identifier)

**Name**

The name that Double-Take assigned to the job. You may have modified the job name.

**Workload**

The type of workload the job is using

**Type**

The job type. This value equates to the **Job Type** column in the top right pane on the **Jobs** page. See the managing and controlling jobs topic for any job type for additional details.

**CreatorUserName**

The name of the user that created the job

**Health**

The high level health, or state, of the job. This value equates to the colored icons seen in the first column in the top right pane on the **Jobs** page. See the managing and controlling jobs topic for any job type for additional details.

**HighLevelState**

The overall state of the job. This value equates to the **Activity** column in the top right pane on the **Jobs** page. See the managing and controlling jobs topic for any job type for additional details.

**LowLevelState**

The low level state of the job. This value equates to the **Additional Information** field in the bottom right pane on the **Jobs** page. See the managing and controlling jobs topic for any job type for additional details.

**TargetState**

The state of the data on the target. This value equates to the **Target data state** field in the bottom right pane on the **Jobs** page. See the managing and controlling jobs topic for any job type for additional details.

**CanEdit**

Indicates if the job can currently be edited

**CanDelete**

Indicates if the job can currently be deleted

**CanStart**

Indicates if the job can currently be started

**CanStop**

Indicates if the job can currently be stopped

**CanPause**

Indicates if the job can currently be paused

**CanFailover**

Indicates if the job can currently be failed over

**CanFailback**

Indicates if the job can currently be failed back

**CanRestore**

Indicates if the job can currently be restored

**CanReverse**

Indicates if the job can currently be reversed

**CanUndoFailover**

Indicates if a failed over job can currently be undone

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### *Connection table*

The following data is available in the Connection table.

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**ManagedConnectionId**

The incremental counter used to number connections. The number is incremented when a connection is created. The counter is reset if there are no existing jobs and the Double-Take service is restarted.

**JobId**

The unique job ID associated with this connection

**Timestamp**

The date and time the connection data was collected

**SourceUniqueID**

The unique ID Double-Take assigns to the job's source server

**TargetUniqueID**

The unique ID Double-Take assigns to the job's target server

**BandwidthCollar**

The bandwidth limiting that has been set or the keyword **Unlimited** if no bandwidth limit has been set

**CompressionEnabled**

Indicates if data is being compressed before it is sent to the target

**CompressionLevel**

The level of compression

**DiskQueueBytes**

The amount of disk space being used to queue data on the source

**InitialMirrorComplete**

Indicates if the initial mirror has been completed

**MirrorBytesRemaining**

The total number of mirror bytes that are remaining to be sent from the source to the target.

**MirrorBytesSent**

The total number of mirror bytes that have been transmitted to the target

**MirrorBytesSkipped**

The total number of bytes that have been skipped when performing a difference. These bytes are skipped because the data is not different on the source and target.

**MirrorBytesTransmitted**

The total number of compressed mirror bytes that have been transmitted to the target. If compression is disabled, this will be the same as MirorBytesSent. .

**MirrorOpsQueued**

The total number of mirror operations in the queue

**MirrorPermillage**

The percentage of the mirror that has been completed

**MirrorState**

The state of mirroring. This value equates to the **Mirror Status** column in the top right pane on the **Jobs** page. See the managing and controlling jobs topic for any job type for additional details.

**PeerMemoryLow**

Indicates if the target is running low on memory based on the **Amount of system memory to use** setting on the target server's queue properties. See the console online help for details on Double-Take queue settings.

**ReplicationBytesQueued**

The total number of replication bytes in the source queue

**ReplicationBytesSent**

The total number of replication bytes that have been transmitted to the target

**ReplicationBytesTransmitted**

The total number of compressed replication bytes that have been transmitted to the target. If compression is disabled, this will be the same as ReplicationBytesSent. .

**ReplicationOpsQueued**

The total number of replication operations in the queue

**ReplicationState**

The state of replication. This value equates to the **Replication Status** column in the top right pane on the **Jobs** page. See the managing and controlling jobs topic for any job type for additional details.

**Restoring**

Identifies if the connection is actively restoring

**SourceAvailable**

Identifies if the target was able to communicate with the source server

**SourceEngineAvailable**

Identifies if the target was able to communicate with Double-Take on the source

**SourceMachineName**

The name of the server associated with this connection

**StartTime**

The date and time the connection was initiated

**TargetAvailable**

Identifies if the source was able to communicate with the target server

**TargetEngineAvailable**

Identifies if the source was able to communicate with Double-Take on the target

**TargetRoute**

The IP address identifying the route to the target

**TargetMachineName**

The name of the target server associated with this connection

**TargetQueueBytes**

The number of bytes queued on the target

**TargetState**

The state of the target

**TotalBytesSent**

The total number of mirror and replication bytes that have been transmitted to the target

**TotalBytesTransmitted**

The total number of compressed mirror and replication bytes that have been transmitted to the target. If compression is disabled, this will be the same as TotalBytesSent. .

**TotalOpsQueued**

The total number of mirror and replication operations that are in the source queue

**TransmissionMode**

Indicates if data is actively being transmitted to the target

**SourceClusterResourceState**

The state of the Double-Take Source Connection resource, if it is being used by a cluster-aware job on a Double-Take source cluster