Double-Take®

Version 7.0

Reporting Service User's Guide

Notices

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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. See *Installing Double-Take Reporting Service* on page 6.
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 7.
4. Using the Double-Take Console, configure the Double-Take Reporting Service server. See *Configuring the Double-Take Reporting Service server* on page 8.

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 12.

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.

> 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.

- Your SQL server authentication must be set to SQL Server and Windows Authentication mode.
- Your SQL server must have TCP/IP enabled and all IP addresses on the SQL server must be using the same port. Additionally, the SQL server must be set to listen on all IP addresses. See your SQL documentation for details on these settings.
- If you are using a firewall on your SQL server, make sure it does not block SQL or Double-Take Reporting Service traffic.

Installing Double-Take Reporting Service

Make sure you have reviewed the Double-Take Reporting Service requirements. See *Double-Take Reporting Service requirements* on page 5.

1. Close any open applications.
2. Launch the Double-Take Reporting Service .exe installation file.

   If you are installing on Server Core, copy the .exe file to the Server Core machine using a UNC share, and then launch the installation program from the Server Core machine. The installation screens will display on the Server Core machine.

3. At the Welcome page, click **Next** to continue.
4. Review and accept the Vision Solutions license agreement to continue with the installation program. Click **Next** to continue.
5. If desired, specify where the Double-Take Reporting Service files will be installed by clicking **Change**, specifying a location, and then clicking **OK**.
6. Click **Next** to continue.
7. If the server where you are installing has Windows Firewall enabled, you will be given the opportunity to open and reassign any firewall ports for Double-Take Reporting Service use.
   - **Open only the ports that are not in use**—This option will open any firewall ports that are not in use. The ports that are opened will be assigned to Double-Take Reporting Service.
   - **Open all ports, reassigning the ports in use to Double-Take Reporting Service**—This option will open all of the necessary firewall ports, reassigning any to Double-Take Reporting Service as needed.
   - **Do not configure the Windows Firewall at this time**—This option will not modify any firewall ports. If you select this option, you will have manually modify your firewall settings for Double-Take Reporting Service processing.
8. The Double-Take security information screen appears next. Review this information and click **Next** to continue with the installation.
9. If you are satisfied with the selections you have made and are ready to begin copying the files, click **Install**.
10. After the files have completed copying, click **Finish** to exit the installation program.

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.

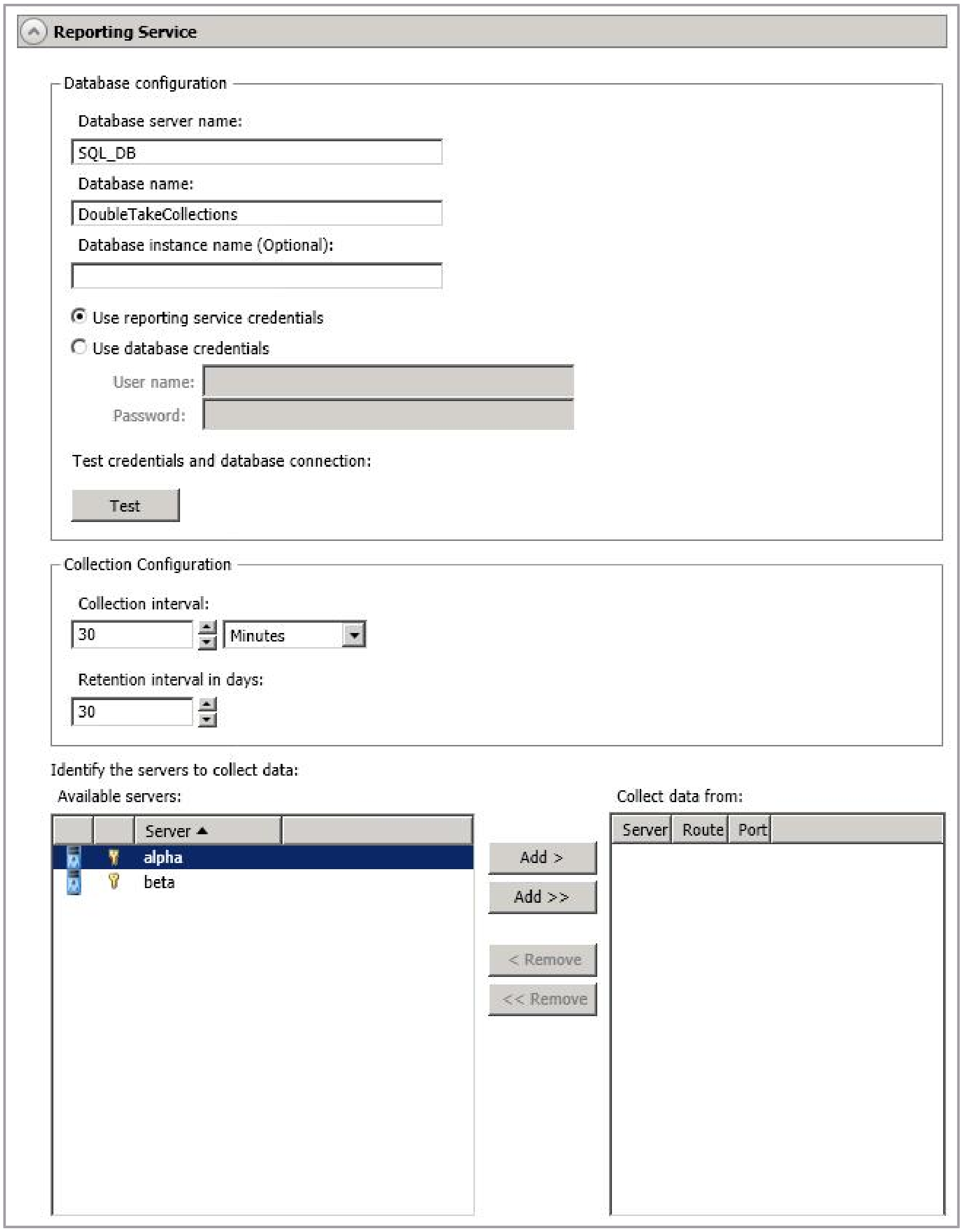
1. You have two methods to get to the **Add Servers** page in the console.
   - Click **Get Started** from the toolbar, select **Add servers**, and then click **Next**.
   - Click **Manage Servers** from the toolbar and click **Add Servers** from the second toolbar on the **Manage Servers** page.
2. 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.
3. You can expand the **More Options** section if you want to specify the Domain. The associate option is not applicable to reporting service.
4. After you have specified the server information, click **Add**.
5. 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 **Manage 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 **Manage Servers** page.

     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 **Manage 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.

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.

- **EngineRole**—Source or target server
- **ProxyRole**—A Linux appliance for a full server to ESX appliance job
- **ProxiedRole**—A Linux source server for a full server to ESX appliance job
- **ControllerRole**—Controller appliance for an agentless vSphere job
- **ReplicationApplianceRole**—Replication appliance for an agentless vSphere 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 **Manage 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 **Manage 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 **Manage 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 **Manage 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 **Manage 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

Connection table

The following data is available in the Connection table.

ManagedConnectionId

The incremental counter used to number connections. The number is incremented when a connection is created. It is also incremented by internal actions, such as an auto-disconnect and auto-reconnect. The lowest available number (as connections are created, stopped, deleted, and so on) will always be used. The counter is reset to one each time 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

This field is not applicable to agentless vSphere jobs.

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 or checksum mirror. These bytes are skipped because the data is not different on the source and target.

This field is not applicable to agentless vSphere jobs.

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 **Manage 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

This field is not applicable to agentless vSphere jobs.

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 mirroring. This value equates to the **Replication Status** column in the top right pane on the **Manage 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