

Single Server Installation and Configuration of Parallels RAS Reporting Service with SQL Server 2022 and Microsoft SSRS 2022

- Parallels Remote Application Server 18.0
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In this article, we are going to review the setup process of Parallels Remote Application Server Reporting Service, which requires Microsoft SQL Server Reporting Services (SSRS) and uses SQL Server Express Edition installed on one separate host.

Pre-requisites

1. Create a dedicated Active Directory account that will be used to view the reports called *rasreportingview*
2. Make sure that the account which will be used for Microsoft SQL Server and Reporting Services installation is a domain account and has local administrative permissions on the RAS Reporting server. If required, add the account to the local Administrators group manually or using Group Policies.
3. The same domain account from step 2 can be used for both SQL Server and SSRS deployment and configuration (make sure you assign an SQL Administrator role).
4. Microsoft .NET Framework 3.5 and 4.5 (or higher) are installed on the RAS Reporting server.

Microsoft SQL Server Installation and Configuration

Installation

If you are planning to use SQL Server 2022 Express Edition, make sure you install the latest version. The installer can be downloaded at <https://www.microsoft.com/en-us/download/details.aspx?id=104781>.

To install Microsoft SQL Server:

1. Launch the installer and select **Download Media**:

2. In the "Which package would you like to download" section, select **Express Core**:

3. Specify the download folder and click **Download** to save the *SQLEXPx64.msi* file.
4. Run the **SQLEXPx64.msi** installer.
5. Select a temporary folder to save installer binaries:

6. In the **SQL Server Installation Center**, click on **New SQL Server stand-alone installation or add features to an existing installation**.
7. On the **License Terms** page, accept the license terms:

8. On the **Microsoft Update** page, if required, select **Use Microsoft Update to check for updates**:

9. On the **Install Rules** page, click **Next**

10. On the **Azure Extension for SQL Server** page, uncheck Azure Extension for SQL Server.

11. On the **Feature Selection** page, select only Database Engine Services.

12. On the **Instance Configuration** page, under **Named instance**, either leave the default SQLEXPRESS or enter the custom name (in upper case). Here, **RASREPORTING** will be used:

12. On the **Server Configuration** page, specify accounts, which will be running SQL Server services - services should be set to start automatically. We will use default accounts:

13. On the **Database Engine Configuration** page, add

1.
 - ◇ AD Administrator
 - ◇ NT Authority\System
 - ◇ Domain account that will be used for viewing reports
(e.g., **rasreportingview** used in RAS Reporting by default)

14. Click **Next**.

15. On the **Complete** page, click **Close** once the installation is finished.

SQL Server Remote access Configuration

To enable remote connections to the SQL Server instance, you need to enable TCP/IP and set port 1433 for all IP addresses:

1. Open **Start > SQL Server 2022 Configuration Manager** and go to **SQL Server Network Configuration > Protocols** for <Instance-name> (e.g. **Protocols for RASREPORTING**):

2. Right-click on **TCP/IP**, choose **Properties**, and set the **Enabled** option to **Yes**:

3. Select the **IP Addresses** tab. In the **IPAll** section, set **TCP Dynamic Ports** to blank and **TCP Port** to **1433**:

4. Restart the SQL Server instance by right-clicking it and choosing **Restart**.

Note: Remote connections are enabled by default in SQL Server 2022. To verify this setting, check the **Allow remote connections to this server** option as described in the SQL Server Configuration Using Management Studio section below.

SQL Server Management Studio Installation

Download the latest **SQL Server Management Studio** (SSMS) at <https://learn.microsoft.com/en-us/sql/ssms/download-sql-server-management-studio-ssms?view=sql-server-ver16#download->

1. **Run as Administrator** the SSMS-Setup-ENU.exe installer.

2. On the Welcome page of the installation wizard, click **Install**. The installation is automatic and require **Restart** in the end.

Microsoft SQL Server Reporting Services Installation and Configuration

Installation

SQL Server Reporting Services 2022 is a separate component available at <https://www.microsoft.com/en-us/download/details.aspx?id=104502>

To install SSRS:

1. Download the **SQLServerReportingServices.msi** installer and **run it as administrator**.
2. Click **Install Reporting Services**

3. If you install SSRS and SQL Server on the same machine, you could pick **Express** (1GB maximum memory used by the database engine. 10GB maximum database size. 1MB maximum buffer cache. CPU the lesser of one (1) socket or four (4) cores).

4. Click **Next**:

5. Accept the license terms on the **Review the license terms** page and click **Next**:

6. On the **Install Database Engine** page, click **Next**.

6. On **Specify an install location** page, leave all by default and click **Install**:

7. On the **Setup completed** page, click **Configure report server**.

Configuration

1. Locate and launch **Report Server Configuration Manager**.
2. Click on the **Connect** button:

3. Once connected, in the left pane, click on **Web Service URL** and set the following:

- Virtual Directory: Make sure that the directory name is "ReportServer_RASREPORTING". If you used a different name for the SQL Server instance, you should use that name instead of the "RASREPORTING" part.
- Make sure the TCP port is set to **8085** and click **Apply**:

4. Go to **Web Portal URL** and set Virtual Directory to **Reports_RASREPORTING**. If you used a different name for the SQL Server instance, you should see that name instead of the "RASREPORTING" part. Then click **Apply**.

5. Click on **Database** to set up a database on the SQL host, click **Change Database**.
6. Choose **Create a new report server database** and click **Next**.

6. In the **Server Name** field, specify the SQL Server name using the Hostname\InstanceName format (case sensitive). Click **Next**.

7. On the **Database** step title the database (default ReportServer in this case)

8. Choose the preferred **Authentication Type** (In this case, **Service Credentials** are chosen). Click **Next**.

9. On wizard completion, click **Apply** and then click **Close**.
10. To verify that SSRS is installed correctly, please open the URL in Step 4

Parallels RAS Reporting Service Installation and Configuration

Installation

Download the latest version of Parallels Remote Application Server Reporting Service here:

<https://www.parallels.com/products/ras/download/links/> .

1. Launch the installer on the server running SQL Server Reporting Services, and for database location select
- **Localhost**

Note: At the time of this writing, the SQL Server instance name is case-sensitive.

2. On the **Viewing Reports User** pane specify the domain account that will be used to view reports in the RAS Console.

3. Specify the folder where RAS Reporting should be installed. Click **Next** and then click **Install**.

4. Close the wizard once the installation is completed.

Configuration

Open the Parallels Remote Application Server Console and navigate to **Administration > Reporting**:

1. Click **Enable RAS Reporting**.
2. Specify the server with RAS Reporting installed and the port that will be used by Parallels RAS to connect to Parallels RAS Reporting Service (default port - 30008)
3. Specify the domain user credentials and click on the **Test Connection** button. Once succeeded, click **OK** and **Apply** in the bottom-right to save the configuration changes.
4. It is required to add the TCP port 8085 to the firewall exception list for incoming traffic on the host running SQL Server and Reporting services.

Now switch to the **Reporting** pane and make sure that you can see the list of available reports in the middle pane.

At this point, Parallels RAS will begin collecting the data and display it in reports similar to the following example:

Note:

1. When installed, Parallels Reporting Service will start collecting data about newly established sessions. Pre-existing sessions will not be included in reports.
2. Parallels Reporting Service commits the session information to the database after the user (session owner) is logged off. If you don't see the information about a particular user in a report, make sure the user is logged off, not just disconnected.
3. Parallels Reporting Service keeps its logs on the RAS Reporting server at the following locations:

%PROGRAMDATA%\Parallels\RASLogs\RAS Reporting\ReportingSetup.log

%PROGRAMDATA%\Parallels\RASLogs\RAS Reporting\reporting.log

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