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# **Amazon Relational Database Service**

**Getting Started Guide**  
**API Version 2013-05-15**



## Amazon Relational Database Service: Getting Started Guide

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# Get Started with Amazon RDS

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Amazon Relational Database Service (Amazon RDS) is a web service that makes it easier to set up, operate, and scale a relational database in the cloud. It provides cost-efficient, resizable capacity for an industry-standard relational database and manages common database administration tasks. You can get started with Amazon RDS by following the tasks shown in the following diagram. You'll primarily use the AWS Management Console, a point-and-click web-based interface.



This guide walks you through creating and connecting to your first Amazon RDS DB Instance.

# Sign Up for Amazon RDS

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To use Amazon RDS, you need an AWS account. If you don't already have one, you'll be prompted to create one when you sign up for Amazon RDS.

## To sign up for Amazon RDS

1. Go to <http://aws.amazon.com/rds> and click **Sign Up for Amazon RDS**.
2. Follow the on-screen instructions.

Once you've signed up for Amazon RDS, you'll be able to begin the process of creating your own DB Instance. Jump to [Authorize Access: Create a DB Security Group \(p. 3\)](#).

# Authorize Access: Create a DB Security Group

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Your first task is to set up a DB Security Group that controls what IP addresses or EC2 instances have access to your DB Instance. You will use this security group when you create a DB Instance. Once created, you can reuse this security group or create new security groups for specific DB Instances.

## Creating a DB Security Group

To create a DB Security group for this example, you enter CIDR (Classless Inter-Domain Routing) notation to specify either a single IP address or a range of IP addresses that you will allow to connect to your DB Instance. Since these IP addresses will be allowed access, it is important that you grant access to the correct IP addresses.

### To create a new DB Security Group

1. In the left column of the AWS Management Console, click **DB Security Groups**.
2. In the **My DB Security Groups** page, click the **Create DB Security Group** button.

**Create DB Security Group** Cancel X

**Name:** sg-DBsecgrp2

**Description:** Security group for PDX

**VPC ID:** NO VPC ▼

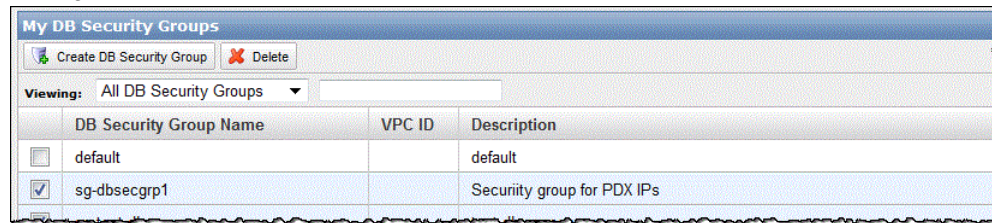
Cancel Yes, Create

3. In the **Create DB Security Group** dialog box, type the name of the security group and a brief description. If you are using a Virtual Private Cloud (VPC), enter the ID of the VPC instance. Click

## Amazon Relational Database Service Getting Started Guide

### Creating a DB Security Group

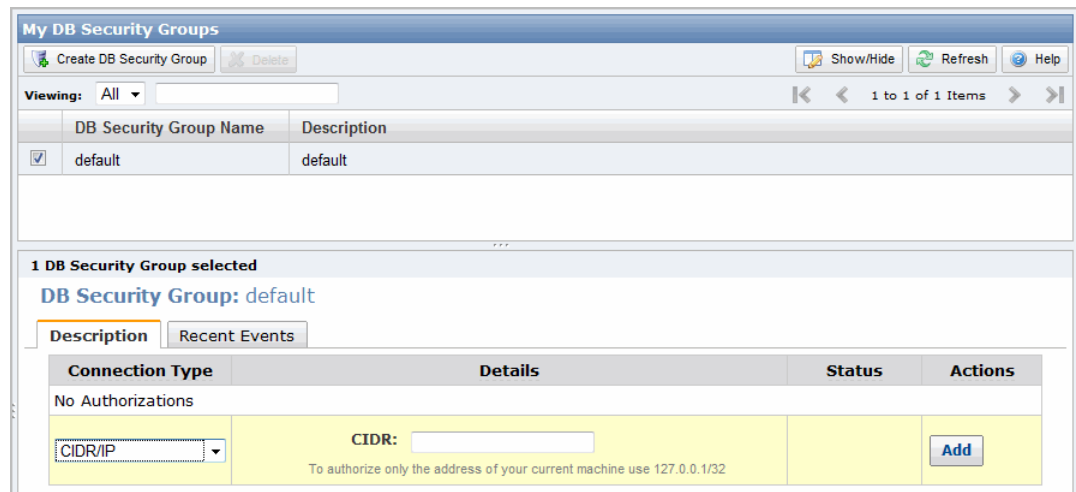
**Yes, Create** to close the dialog box and show the **My DB Security Groups** page of the AWS Management Console.



- On the **My DB Security Groups** page, the DB Security Group you created is selected. On the **Description** tab at the bottom of the window, select *CIDR/IP* from the **Connection Type** drop-down list. Type your CIDR range into the **CIDR** text box, and click the **Add** button.

#### Note

The IP address you enter should be the public-facing address or range of addresses of the computers that will be accessing the DB Instance. If you are behind a firewall, the IP addresses could be a limited set of addresses that the firewall exposes. To help you determine your current IP address, the CIDR range for your current IP address appears on the page just below the **CIDR** text box. Due to how firewalls work, this value may not be the publicly visible IP address you need to provide in the CIDR textbox. For information about the IP addresses you should include in the security group, consult with your network administrator.



You will use the name of the DB Security Group in the next step when you launch your DB Instance. Jump to [Launch a DB Instance \(p. 5\)](#).

# Launch a DB Instance

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Now that you have signed up for Amazon RDS and created a DB Security Group, you're ready to launch a DB Instance using the AWS Management Console.

## Important

The DB Instance you're about to launch will be live (and not running in a sandbox). You will incur the standard Amazon RDS usage fees for the instance until you terminate it. The total charges will be minimal if you complete the exercise described here in one sitting and terminate your DB Instance when you are finished. For more information about Amazon RDS usage rates, go to the [Amazon RDS product page](#).

The quickest way to create a new DB Instance is by using the AWS Console. Once you select the DB Engine you want to use, the process for creating the DB Instance is specific to the DB Engine.

## To launch a DB Instance

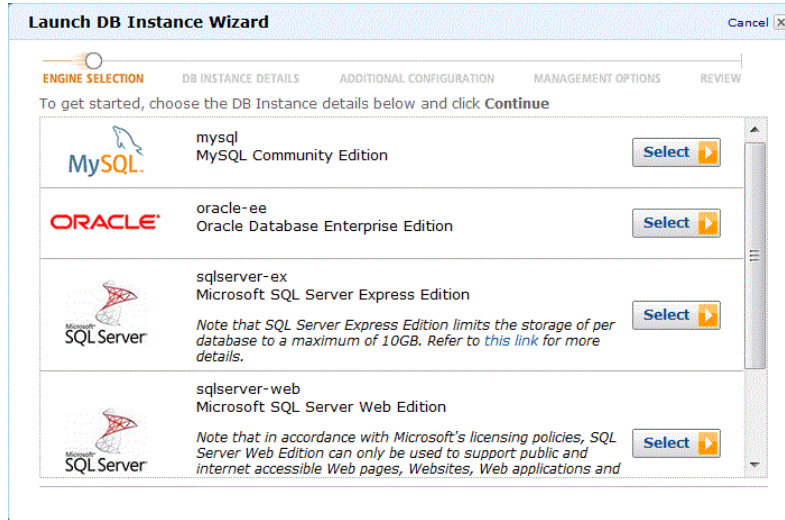
1. Sign in to the AWS Management Console and open the Amazon RDS console at <https://console.aws.amazon.com/rds/>.
2. In the left column of the AWS Console, select the region in which you want to create the DB Instance. This should be the same region as the region in which you created your DB Security Group in the previous step.
3. Click **Launch DB Instance** to start the Launch DB Instance Wizard.

The wizard opens on the **Engine Selection** page.



## Amazon Relational Database Service Getting Started Guide

### Launching a MySQL DB Instance



- Click the **Select** button for the DB Engine that you want to install in the DB Instance you are launching.

#### Note

To use the suggested values in this tutorial for a SQL Server DB Engine, select Microsoft SQL Server Express Edition.

- To continue, select the link that corresponds to the DB Engine you chose:
  - [Launching a MySQL DB Instance \(p. 6\)](#)
  - [Launching an Oracle DB Instance \(p. 11\)](#)
  - [Launching a Microsoft SQL Server DB Instance \(p. 16\)](#)

## Launching a MySQL DB Instance

### To launch a MySQL DB Instance

Once you have selected MySQL as your DB Engine, the wizard displays the **DB Instance Details** page for MySQL. The most important parameters you set here are for the DB Instance Class in the **DB Instance Class** drop-down list and the **Allocated Storage** text box. The DB Instance class defines the CPU and memory capacity of your DB Instance, which can impact processing speed and responsiveness. The allocated storage value determines how much storage is allocated for this DB Instance. Note that these two values are used to calculate the cost of your DB Instance.

# Amazon Relational Database Service Getting Started Guide

## Launching a MySQL DB Instance

**Launch DB Instance Wizard**

ENGINE SELECTION **DB INSTANCE DETAILS** ADDITIONAL CONFIGURATION MANAGEMENT OPTIONS REVIEW

To get started, choose a DB engine below and click **Continue**

**DB Engine:** mysql

**License Model:** General Public License

**DB Engine Version:** MySQL 5.5.27 (default)

**DB Instance Class:** - Select One -

**Multi-AZ Deployment:** - Select One -

**Auto Minor Version Upgrade:** ☒ Yes ☐ No

Provide the details for your RDS Database Instance.

**Allocated Storage:\***  GB (Minimum: 5 GB, Maximum: 1024 GB) Higher allocated storage [may improve](#) IOPS performance.

**Use Provisioned IOPS:** ☐

**DB Instance Identifier:\***  (e.g. mydbinstance)

**Master Username:\***  (e.g. awsuser)

**Master Password:\***  (e.g. mypassword)

[< Back](#) [Continue >](#)

1. On the **DB Instance Details** page, specify your DB Instance information as shown in the following table, then click **Continue**.

For this parameter...	...Do this:
<b>License Model</b>	Select the default, <b>General-Public-License</b> , to use the general license agreement for MySQL.
<b>DB Engine Version</b>	Select <b>5.5.20</b> to use the default version of MySQL. Note that RDS supports additional versions of MySQL.
<b>DB Instance Class</b>	Select <b>db.m1.small</b> to select a configuration that equates to 1.7 GB memory, 1 ECU (1 virtual core with 1 ECU), 64-bit platform, and moderate I/O capacity. for more information about the capacity for all the DB Instance class options, see <a href="#">Amazon Relational Database Service Features</a> .
<b>Multi-AZ Deployment</b>	Select <b>No</b> to not request that your database be made available in multiple availability zones. For more information about multiple availability zones, see the RDS <a href="#">documentation</a> .
<b>Auto Minor Version Upgrade</b>	Select <b>Yes</b> to enable your DB Instance to receive minor DB Engine version upgrades automatically when they become available.
<b>Allocated Storage</b>	Type <b>5</b> to allocate 5 GB of storage for your database. In some cases, allocating a higher amount of storage for your DB Instance than the size of your database can improve I/O performance. For more information about storage allocation, see <a href="#">Amazon Relational Database Service Features</a> .

# Amazon Relational Database Service Getting Started Guide

## Launching a MySQL DB Instance

For this parameter...	...Do this:
<b>Use Provisioned IOPS</b>	Leave the check box unselected. This option turns on Provisioned IOPS (I/O operations per second), a high-performance storage option in RDS that is optimized for I/O-intensive, transactional (OLTP) database workloads. For more information about high performance storage, see <a href="#">Provisioned IOPS</a> .
<b>DB Instance Identifier</b>	Type a name for the DB Instance that is unique for your account in the region you selected. You may chose to add some intelligence to the name such as including the region and DB Engine you selected, for example <b>west2-mysql-instance1</b> .
<b>Master User Name</b>	Type a name using alphanumeric characters that you will use as the master user name to log on to your DB Instance with all database privileges.
<b>Master User Password</b>	Type a password that contains from 8 to 16 printable ASCII characters (excluding /, ", and @) for your master user password.

- On the **Additional Configuration** page, you provide additional information that RDS needs to launch the DB Instance for MySQL. Specify your DB Instance information as shown in the following table, then click Continue.

Launch DB Instance Wizard

Cancel

ENGINE SELECTION

DB INSTANCE DETAILS

ADDITIONAL CONFIGURATION

MANAGEMENT OPTIONS

REVIEW

Provide the optional additional configuration details below.

**Database Name:**  (e.g. mydb)

Note: if no database name is specified then no initial mysql database will be created on the DB Instance.

**Database Port:**

**Choose a VPC:**  Only VPCs with a DB Subnet Group(s) are allowed

**Availability Zone:**

**Option Group:**

If you have custom DB Parameter Groups or DB Security Groups you would like to associate with this DB Instance, select them below, otherwise proceed with default settings.

**DB Parameter Group:**

**DB Security Groups:**

< Back

Continue

For this parameter...	...Do this:
<b>Database Name</b>	Type a name for your database of up to 8 alpha-numeric characters. If you do not provide a name, Amazon RDS will not create a database on the DB Instance you are creating.

# Amazon Relational Database Service Getting Started Guide

## Launching a MySQL DB Instance

For this parameter...	...Do this:
<b>Database Port</b>	Leave the default value of 3306 unless you have a specific port you want to access the database through. MySQL installations default to port 3306.
<b>Choose a VPC</b>	Leave the default value of <b>Not in VPC</b> unless you are creating this DB Instance in a Virtual Private Cloud with a DB Subnet Group.
<b>Availability Zone</b>	Leave the default of <b>No Preference</b> unless you want to specify a particular Availability Zone. If you selected <b>Yes</b> for the Multi-AZ Deployment parameter on the previous page, you will not have any options here.
<b>Option Group</b>	Select the default value of <b>default:mysql-5-5</b> since this option group is used with the MySQL version you selected on the previous page, in this case version 5.5.20.
<b>DB Parameter Group</b>	Leave the default value of <b>default:mysql5.5</b> unless you created your own DB Parameter group.
<b>DB Security Groups</b>	Select the security group that you created in the Authorize Access step of this guide.

- On the **Management Options** page, you can specify backup and maintenance options for your DB Instance. For this example, accept the default values, and then click **Continue**. Note that setting the **Backup Retention Period** to zero disables automatic backups.

**Launch DB Instance Wizard** [Cancel]

ENGINE SELECTION DB INSTANCE DETAILS ADDITIONAL CONFIGURATION **MANAGEMENT OPTIONS** REVIEW

The number of days for which automated backups are retained. Setting this parameter to a positive number enables backups. Setting this parameter to 0 disables automated backups. Please note that automated backups are currently supported for InnoDB storage engine only. If you are using MyISAM, refer to details [here](#).

**Backup Retention Period:** 1 days

The daily time range during which automated backups are created if automated backups are enabled

**Backup Window:** ☒ No Preference ☐ Select Window

The weekly time range (in UTC) during which system maintenance can occur.

**Maintenance Window:** ☒ No Preference ☐ Select Window

< Back Continue

In addition, Federated Storage Engine is currently not supported by Amazon RDS for MySQL.

### Note

The Point-In-Time-Restore and Snapshot Restore features of Amazon RDS for MySQL require a crash recoverable storage engine and are supported for the InnoDB storage engine only. While MySQL supports multiple storage engines with varying capabilities, not all of them are optimized for crash recovery and data durability. For example, the MyISAM storage engine does not support reliable crash recovery and may result in lost or corrupt data when MySQL is restarted after a crash, preventing Point-In-Time-Restore or Snapshot restore from working as intended.

## Amazon Relational Database Service Getting Started Guide

### Launching a MySQL DB Instance

If you would like to convert existing MyISAM tables to InnoDB tables, you can use the alter table command (e.g., alter table TABLE\_NAME engine=innodb;). Note that MyISAM and InnoDB have different strengths and weaknesses, so you should fully evaluate the impact of making this switch on your applications before doing so.

4. On the **Review** page, review the options for your DB Instance:

If you need to correct any options, click **Back** to return to previous pages and make corrections. You can also modify a DB Instance from the AWS Console after you have launched a DB Instance.

If all your options are entered correctly, click the **Launch DB Instance** button to launch your new DB Instance.

The screenshot shows the 'Launch DB Instance Wizard' in the AWS Management Console, specifically the 'REVIEW' step. The wizard has five steps: ENGINE SELECTION, DB INSTANCE DETAILS, ADDITIONAL CONFIGURATION, MANAGEMENT OPTIONS, and REVIEW. The REVIEW step is active, showing a summary of the configuration. At the bottom, there are 'Back' and 'Launch DB Instance' buttons.

**Launch DB Instance Wizard** Cancel X

ENGINE SELECTION DB INSTANCE DETAILS ADDITIONAL CONFIGURATION MANAGEMENT OPTIONS **REVIEW**

Please review the information below, then click **Launch DB Instance**.

**Engine:** mysql  
**Engine Version:** MySQL 5.5.27  
**License Model:** general-public-license  
**Auto Minor Ver. Upgrade:** Yes  
**DB Instance Class:** db.m1.small  
**Multi-AZ Deployment:** No  
**Allocated Storage:** 5  
**Provisioned IOPS:** default  
**DB Instance Identifier:** mySQLDB  
**Master User Name:** sgawsuser  
**Master User Password:** \*\*\*\*\*

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**Database Name:** DBTest  
**Database Port:** 3306  
**Availability Zone:** No Preference  
**Option Group:** default:mysql-5-5  
**DB Parameter Group:** default:mysql5.5  
**DB Security Group(s):** sg-test-dbgrou  
**DB Subnet Group:**

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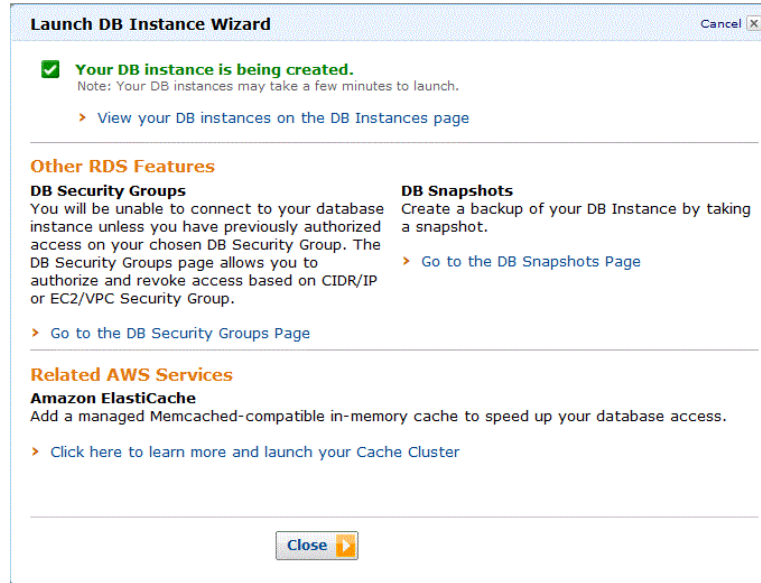
**Backup Retention Period:** 1  
**Backup Window:** No Preference  
**Maintenance Window:** No Preference

[< Back](#) [Launch DB Instance >](#)

5. On the dialog box that indicates that your DB Instance is being created, click the **Close** button.

## Amazon Relational Database Service Getting Started Guide

### Launching an Oracle DB Instance



- On the AWS Management Console, the new DB Instance appears in the list of DB Instances. The DB Instance will have a status of **creating** until the DB Instance is created and ready for use. Depending on the DB Instance class and store allocated, it could take several minutes for the new instance to be created.

DB Instance	VPC ID	Multi-AZ	Class	Status	Storage	IOPS	Security Groups	Engine
mysqlsvrdb		No	db.t1.micro	creating	20 GiB		default	sqlserver-

Once your DB instance changes to the **available** state, you can connect to it. For more information, see [Connect to Your DB Instance \(p. 21\)](#).

## Launching an Oracle DB Instance

### To launch an Oracle DB Instance

Once you have selected Oracle as your DB Engine, the wizard displays the **DB Instance Details** page for Oracle. The most important parameters you set here are for the DB Instance Class in the **DB Instance Class** drop-down list and the **Allocated Storage** textbox. The DB Instance class defines the CPU and memory capacity of your DB Instance, which can impact processing speed and responsiveness. The allocated storage value determines how much storage is allocated for this DB Instance. Note that these two values are used to calculate the cost of your DB Instance.

# Amazon Relational Database Service Getting Started Guide

## Launching an Oracle DB Instance

**Launch DB Instance Wizard**

ENGINE SELECTION **DB INSTANCE DETAILS** ADDITIONAL CONFIGURATION MANAGEMENT OPTIONS REVIEW

To get started, choose a DB engine below and click **Continue**

**DB Engine:** oracle-ee

**License Model:** Bring Your Own License

**DB Engine Version:** Oracle 11.2.0.2.v5 (default)

**DB Instance Class:** - Select One -

**Multi-AZ Deployment:** - Select One -

**Auto Minor Version Upgrade:** ☒ Yes ☐ No

Provide the details for your RDS Database Instance.

**Allocated Storage:\***  GB (Minimum: 10 GB, Maximum: 1024 GB) Higher allocated storage [may improve](#) IOPS performance.

**Use Provisioned IOPS:** ☐

**DB Instance Identifier:\***  (e.g. mydbinstance)

**Master Username:\***  (e.g. awsuser)

**Master Password:\***  (e.g. mypassword)

[< Back](#) [Continue >](#)

1. On the **DB Instance Details** page, specify your DB Instance information as shown in the following table, then click **Continue**.

For this parameter...	...Do this:
<b>License Model</b>	Keep the default, <b>Bring Your Own License</b> , to provide your own license for using Oracle.
<b>DB Engine Version</b>	Select <b>11.2.0.2.v3</b> to use the default version of Oracle.
<b>DB Instance Class</b>	Select <b>db.m1.small</b> to select a configuration that equates to 1.7 GB memory, 1 ECU (1 virtual core with 1 ECU), 64-bit platform, and moderate I/O capacity. For more information about the capacity for all the DB Instance class options, see <a href="#">Amazon Relational Database Service Features</a> .
<b>Multi-AZ Deployment</b>	Select <b>No</b> to not request that your database be made available in multiple availability zones. For more information about multiple availability zones, see the <a href="#">RDS documentation</a> .
<b>Auto Minor Version Upgrade</b>	Select <b>Yes</b> to enable your DB Instance to receive minor DB Engine version upgrades automatically when they become available.
<b>Allocated Storage</b>	Type <b>10</b> to allocate 10 GB of storage for your database. In some cases, allocating a higher amount of storage for your DB Instance than the size of your database can improve I/O performance. For more information about storage allocation, see <a href="#">Amazon Relational Database Service Features</a> .



**Amazon Relational Database Service Getting Started  
Guide  
Launching an Oracle DB Instance**

For this parameter...	...Do this:
<b>Use Provisioned IOPS</b>	Leave the check box unselected. This option turns on Provisioned IOPS (I/O operations per second), a high-performance storage option in RDS that is optimized for I/O-intensive, transactional (OLTP) database workloads. For more information about high performance storage, see <a href="#">Provisioned IOPS</a> .
<b>DB Instance Identifier</b>	Type a name for the DB Instance that is unique for your account in the region you selected. You may choose to add some intelligence to the name such as including the region and DB Engine you selected, for example <b>west2-oracle1</b> .
<b>Master User Name</b>	Type a name that you will use as the master user name to log on to your DB Instance with all database privileges.
<b>Master User Password</b>	Type a password that contains from 8 to 30 printable ASCII characters (excluding /, ", and @) for your master user password.

- On the **Additional Configuration** page, you provide additional information that RDS needs to launch the DB Instance for Oracle. Specify your DB Instance information as shown in the following table, then click **Continue**.

**Launch DB Instance Wizard** Cancel X

ENGINE SELECTION DB INSTANCE DETAILS **ADDITIONAL CONFIGURATION** MANAGEMENT OPTIONS REVIEW

Provide the optional additional configuration details below.

**Database Name:**  (e.g. mydb)

**Database Port:**

**Choose a VPC:**  Only VPCs with a DB Subnet Group(s) are allowed

**Availability Zone:**

**Character Set Name:**  Default is AL32UTF8

**Option Group:**

If you have custom DB Parameter Groups or DB Security Groups you would like to associate with this DB Instance, select them below, otherwise proceed with default settings.

**Parameter Group:**

**Security Group:**   
mgc-rds-sg  
sg-dbsecgrp1  
sg-test-dbggroup

[< Back](#) [Continue >](#)

For this parameter...	...Do this:
<b>Database Name</b>	Type a name for your database that begins with a letter and contains up to 8 alpha-numeric characters. If you do not provide a name, Amazon RDS will not create a database on the DB Instance you are creating.
<b>Database Port</b>	Leave the default value of 1521 unless you have a specific port you want to access the database through. Oracle installations default to port 1521.



**Amazon Relational Database Service Getting Started  
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For this parameter...	...Do this:
<b>Choose a VPC</b>	Leave the default value of <b>Not in VPC</b> unless you are creating this DB Instance in a Virtual Private Cloud with a DB Subnet Group.
<b>Availability Zone</b>	Leave the default of <b>No Preference</b> unless you want to specify a particular Availability Zone. If you selected <b>Yes</b> for the Multi-AZ Deployment parameter on the previous page, you will not have any options here.
<b>Character Set Name</b>	Select the default value of <b>AL32UTF8</b> for the Unicode 5.0 UTF-8 Universal character set. Note that you cannot change the character set after the DB Instance is created.
<b>Option Group</b>	Select the default value of <b>default:oracle-ee-11-2</b> unless you have created an option group you want to use instead.
<b>DB Parameter Group</b>	Leave the default value of <b>default:oracle-ee-11.2</b> unless you have created your own DB Parameter group you want to use.
<b>DB Security Groups</b>	Select the security group you created in the Authorize Access step of this guide.

- On the **Management Options** page, you can specify backup and maintenance options for your DB Instance. For this example, accept the default values, and then click **Continue**. Note that setting the **Backup Retention Period** to zero disables automatic backups.

**Launch DB Instance Wizard** Cancel

ENGINE SELECTION DB INSTANCE DETAILS ADDITIONAL CONFIGURATION **MANAGEMENT OPTIONS** REVIEW

The number of days for which automated backups are retained. Setting this parameter to a positive number enables backups. Setting this parameter to 0 disables automated backups.

**Backup Retention Period:** 1 days

The daily time range during which automated backups are created if automated backups are enabled

**Backup Window:** ☒ No Preference ☐ Select Window

The weekly time range (in UTC) during which system maintenance can occur.

**Maintenance Window:** ☒ No Preference ☐ Select Window

[< Back](#) [Continue >](#)

- On the **Review** page, review the options for your DB Instance.

If you need to correct any options, click **Back** to return to previous panels and make corrections. You can also modify a DB Instance from the AWS Console after you have launched a DB Instance. If all your options are entered correctly, click the **Launch DB Instance** button to launch your new DB Instance.

## Amazon Relational Database Service Getting Started Guide

### Launching an Oracle DB Instance

The screenshot shows the 'Launch DB Instance Wizard' in the 'REVIEW' step. The wizard has five tabs: ENGINE SELECTION, DB INSTANCE DETAILS, ADDITIONAL CONFIGURATION, MANAGEMENT OPTIONS, and REVIEW. The REVIEW tab is active, showing a summary of the configuration. The text reads: 'Please review the information below, then click Launch DB Instance.' The configuration details are as follows:

- Engine:** oracle-ee
- Engine Version:** Oracle 11.2.0.2.v5
- License Model:** bring-your-own-license
- Auto Minor Ver. Upgrade:** Yes
- DB Instance Class:** db.m1.small
- Multi-AZ Deployment:** No
- Allocated Storage:** 10
- Provisioned IOPS:** default
- DB Instance Identifier:** myOrDB
- Master User Name:** sgawsuser
- Master User Password:** \*\*\*\*\*

---

- Database Name:** OrDB1
- Database Port:** 1521
- Availability Zone:** No Preference
- Character Set Name:** AL32UTF8
- Option Group:** default:oracle-ee-11-2
- DB Parameter Group:** default:oracle-ee-11.2
- DB Security Group(s):** default
- DB Subnet Group:**

---

- Backup Retention Period:** 1
- Backup Window:** No Preference
- Maintenance Window:** No Preference

At the bottom, there is a '< Back' button and a 'Launch DB Instance >' button.

5. On the dialog box that indicates that your DB Instance is being created, click the **Close** button.

The screenshot shows the 'Launch DB Instance Wizard' after successful creation. It displays a green checkmark and the message: 'Your DB instance is being created.' Below this, a note states: 'Note: Your DB instances may take a few minutes to launch.' There is a link: '> View your DB instances on the DB Instances page'.

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**Other RDS Features**

- DB Security Groups**  
You will be unable to connect to your database instance unless you have previously authorized access on your chosen DB Security Group. The DB Security Groups page allows you to authorize and revoke access based on CIDR/IP or EC2/VPC Security Group.  
> Go to the DB Security Groups Page
- DB Snapshots**  
Create a backup of your DB Instance by taking a snapshot.  
> Go to the DB Snapshots Page

---

**Related AWS Services**

- Amazon ElastiCache**  
Add a managed Memcached-compatible in-memory cache to speed up your database access.  
> Click here to learn more and launch your Cache Cluster

At the bottom, there is a 'Close >' button.

6. On the AWS Management Console, the new DB Instance appears in the list of DB Instances. The DB Instance will have a status of **creating** until the DB Instance is created and ready for use. Depending on the DB Instance class and store allocated, it could take several minutes for the new instance to be created.

# Amazon Relational Database Service Getting Started Guide

## Launching a Microsoft SQL Server DB Instance

Amazon RDS : My DB Instances								
Launch DB Instance Instance Actions								
Viewing: Not In Available								
DB Instance	VPC ID	Multi-AZ	Class	Status	Storage	IOPS	Security Groups	Engine
myordb		No	db.m1.small	creating	10 GiB		default	oracle-ee

Once your DB instance changes to the **available** state, you can connect to it. Jump to [Connect to Your DB Instance](#) (p. 21).

## Launching a Microsoft SQL Server DB Instance

### To launch a Microsoft SQL Server DB Instance

Once you have selected SQL Server as your DB Engine, the wizard displays the **DB Instance Details** page for Microsoft SQL Server. The most important parameters you set here are for the DB Instance Class in the **DB Instance Class** drop-down list and the **Allocated Storage** textbox. The DB Instance class defines the CPU and memory capacity of your DB Instance, which can impact processing speed and responsiveness. The allocated storage value determines how much storage is allocated for this DB Instance. Note that these two values are used to calculate the cost of your DB Instance.

**Launch DB Instance Wizard** Cancel

ENGINE SELECTION DB INSTANCE DETAILS ADDITIONAL CONFIGURATION MANAGEMENT OPTIONS REVIEW

To get started, choose a DB engine below and click **Continue**

DB Engine: sqlserver-ex

License Model: License Included

DB Engine Version: SQL Server 2008 R2 10.50.2789.0.v1 (default)

DB Instance Class: - Select One -

Multi-AZ Deployment: - Select One -

Auto Minor Version Upgrade: ☒ Yes ☐ No

Provide the details for your RDS Database Instance.

Scaling storage after launching a DB Instance is currently not supported for SQL Server. You may want to provision storage based on anticipated future storage growth.

Allocated Storage:\* GB (Minimum: 20 GB, Maximum: 1024 GB) Higher allocated storage may improve IOPS performance.

Use Provisioned IOPS: ☐

DB Instance Identifier:\* (e.g. mydbinstance)

Master Username:\* (e.g. awsuser)

Master Password:\* (e.g. mypassword)

< Back Continue

1. On the **DB Instance Details** page, specify your DB Instance information as shown in the following table, then click **Continue**.

For this parameter...	...Do this:
License Model	Keep the default, <b>License Included</b> , to use the general license agreement for Microsoft SQL Server.
DB Engine Version	Select <b>SQL Server 2008 R2 10.50.2789.0.v1 (default)</b> to use the default version of SQL Server.

**Amazon Relational Database Service Getting Started  
Guide  
Launching a Microsoft SQL Server DB Instance**

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For this parameter...	...Do this:
<b>DB Instance Class</b>	Select <code>db.t1.micro</code> to select a configuration that equates to 630 MB memory, up to 2 ECUs (for short, periodic bursts), 64-bit platform, and low I/O capacity. For more information about the capacity for all the DB Instance class options, see <a href="#">RDS Features</a> .
<b>Multi-AZ Deployment</b>	Select <code>No</code> to not request that your database be made available in multiple availability zones. For more information about multiple availability zones, see the <a href="#">RDS documentation</a> .
<b>Auto Minor Version Upgrade</b>	Select <code>Yes</code> to enable your DB Instance to receive minor DB Engine version upgrades automatically when they become available.
<b>Allocated Storage</b>	Type <code>20</code> to allocate 20 GB of storage for your database. In some cases, allocating a higher amount of storage for your DB Instance than the size of your database can improve I/O performance. For more information about storage allocation, see <a href="#">Amazon Relational Database Service Features</a> .
<b>Use Provisioned IOPS</b>	Leave the check box unselected. This option turns on Provisioned IOPS (I/O operations per second), a high-performance storage option in RDS that is optimized for I/O-intensive, transactional (OLTP) database workloads. For more information about high performance storage, see <a href="#">Provisioned IOPS</a> .
<b>DB Instance Identifier</b>	Type a name for the DB Instance of 15 alphanumeric characters or less that is unique for your account in the region you selected. You may chose to add some intelligence to the name such as including the region and DB Engine you selected, such as <code>west2-sqlsvr-1</code> .
<b>Master User Name</b>	Type a name that you will use as the master username to log on to your DB Instance with all database privileges.
<b>Master User Password</b>	Type a password that contains from 8 to 128 printable ASCII characters (excluding <code>/</code> , <code>"</code> , and <code>@</code> ) for your master user password.

- On the **Additional Configuration** page, you provide additional information that RDS needs to launch the DB Instance for Microsoft SQL Server. Specify your DB Instance information as shown in the following table, then click **Continue**.

# Amazon Relational Database Service Getting Started Guide

## Launching a Microsoft SQL Server DB Instance

**Launch DB Instance Wizard** Cancel

ENGINE SELECTION DB INSTANCE DETAILS **ADDITIONAL CONFIGURATION** MANAGEMENT OPTIONS REVIEW

Provide the optional additional configuration details below.

**Database Port:** 1433

**Choose a VPC:** Not in VPC Only VPCs with a DB Subnet Group(s) are allowed

**Availability Zone:** - No Preference -

**Option Group:** defaultsqlserver-web-10-50

If you have custom DB Parameter Groups or DB Security Groups you would like to associate with this DB Instance, select them below, otherwise proceed with default settings.

**Parameter Group:** defaultsqlserver-web-10.5

**Security Group:** default  
jeg-0831  
mgc-rds-sg  
sg-dbsecgrp1

< Back Continue >

For this parameter...	...Do this:
<b>Database Port</b>	Leave the default value of <b>1433</b> unless you have a specific port you want to access the database through. SQL Server installations default to port 1433.
<b>Availability Zone</b>	Leave the default of <b>No Preference</b> unless you want to specify a particular Availability Zone. If you selected <b>Yes</b> for the Multi-AZ Deployment parameter on the previous page, you will not have any options here.
<b>Choose a VPC</b>	Leave the default value of <b>Not in VPC</b> unless you are creating this DB Instance in a Virtual Private Cloud with a DB Subnet Group.
<b>DB Parameter Group</b>	Use the default value unless you have created your own DB Parameter group.
<b>DB Security Groups</b>	Select the security group you created in the Authorize Access step of this guide.

- On the **Management Options** page, you can specify backup and maintenance options for your DB Instance. For this example, accept the default values, and then click **Continue**. Note that setting the **Backup Retention Period** to zero disables automatic backups.

## Amazon Relational Database Service Getting Started Guide

### Launching a Microsoft SQL Server DB Instance

The screenshot shows the 'Launch DB Instance Wizard' window, specifically the 'MANAGEMENT OPTIONS' step. The progress bar at the top indicates the following steps: ENGINE SELECTION, DB INSTANCE DETAILS, ADDITIONAL CONFIGURATION, MANAGEMENT OPTIONS (current), and REVIEW. The main content area contains the following information:

- A note: "The number of days for which automated backups are retained. Setting this parameter to a positive number enables backups. Setting this parameter to 0 disables automated backups. Please note that automated backups are currently supported for InnoDB storage engine only. If you are using MyISAM, refer to details [here](#)."
- Backup Retention Period:** 1 days (selected from a dropdown menu).
- Backup Window:** ☒ No Preference ☐ Select Window. A note below states: "The daily time range during which automated backups are created if automated backups are enabled".
- Maintenance Window:** ☒ No Preference ☐ Select Window. A note below states: "The weekly time range (in UTC) during which system maintenance can occur."

At the bottom, there are two buttons: "< Back" and "Continue >".

4. On the **Review** page, review the options for your DB Instance. panel appears.

If you need to correct any options, click the **Back** to return to previous panels and make corrections. You can also modify a DB Instance from the AWS Console after you have launched a DB Instance. If all your options are entered correctly, click the **Launch DB Instance** button to launch your new DB Instance.

The screenshot shows the 'Launch DB Instance Wizard' window, specifically the 'REVIEW' step. The progress bar at the top indicates the following steps: ENGINE SELECTION, DB INSTANCE DETAILS, ADDITIONAL CONFIGURATION, MANAGEMENT OPTIONS, and REVIEW (current). The main content area contains the following information:

Please review the information below, then click **Launch DB Instance**.

- Engine:** sqlserver-ex
- Engine Version:** SQL Server 2008 R2 10.50.2789.0.v1
- License Model:** license-included
- Auto Minor Ver. Upgrade:** Yes
- DB Instance Class:** db.t1.micro
- Multi-AZ Deployment:** No
- Allocated Storage:** 20
- Provisioned IOPS:** default
- DB Instance Identifier:** SQLSvrDB
- Master User Name:** sgawsuser
- Master User Password:** \*\*\*\*\*

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- Database Port:** 1433
- Availability Zone:** No Preference
- Option Group:** default:sqlserver-ex-10-50
- DB Parameter Group:** default.sqlserver-ex-10.5
- DB Security Group(s):** default
- DB Subnet Group:**

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- Backup Retention Period:** 1
- Backup Window:** No Preference
- Maintenance Window:** No Preference

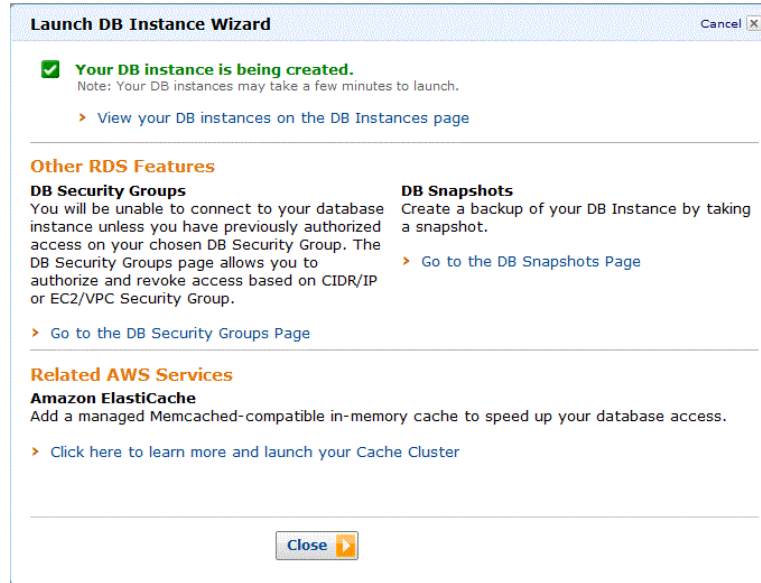
At the bottom, there are two buttons: "< Back" and "Launch DB Instance >".

5. On the dialog box that indicates that your DB Instance is being created, click the **Close** button.



## Amazon Relational Database Service Getting Started Guide

### Launching a Microsoft SQL Server DB Instance



- On the AWS Management Console, the new DB Instance appears in the list of DB Instances. The DB Instance will have a status of **creating** until the DB Instance is created and ready for use. Depending on the DB Instance class and store allocated, it could take several minutes for the new instance to be created.

DB Instance	VPC ID	Multi-AZ	Class	Status	Storage	IOPS	Security Groups	Engine
sqlsvrdb		No	db.t1.micro	creating	20 GiB		default	sqlserver

Once your DB instance changes to the **available** state, you can connect to it. For more information, see [Connect to Your DB Instance](#) (p. 21).

# Connect to Your DB Instance

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After you've authorized access to the DB Instance by creating a DB Security Group and your DB Instance is in the **available** state, you can connect to the DB Instance. The Amazon Relational Database Service takes care of the infrastructure management of your database instances. When a DB Instance is created, you can connect to it with any tools for the database engine that the instance supports.

## Note

You must install any third-party database tools that you want to use with your Amazon RDS DB Instances; Amazon RDS does not provide or install any third-party tools or libraries.

In the following example, you use the MySQL command line tools to connect to the DB Instance you just created. The procedure is similar if you are connecting to an Oracle or Microsoft SQL Server DB Instance. For more information about using other DB engines, see the following topics in the *Amazon Relational Database Service User Guide*:

- [Connecting to a DB Instance Running the Oracle Database Engine.](#)
- [Connecting to a DB Instance Running the Microsoft SQL Server Database Engine.](#)

## To connect to a DB Instance using the MySQL command line client

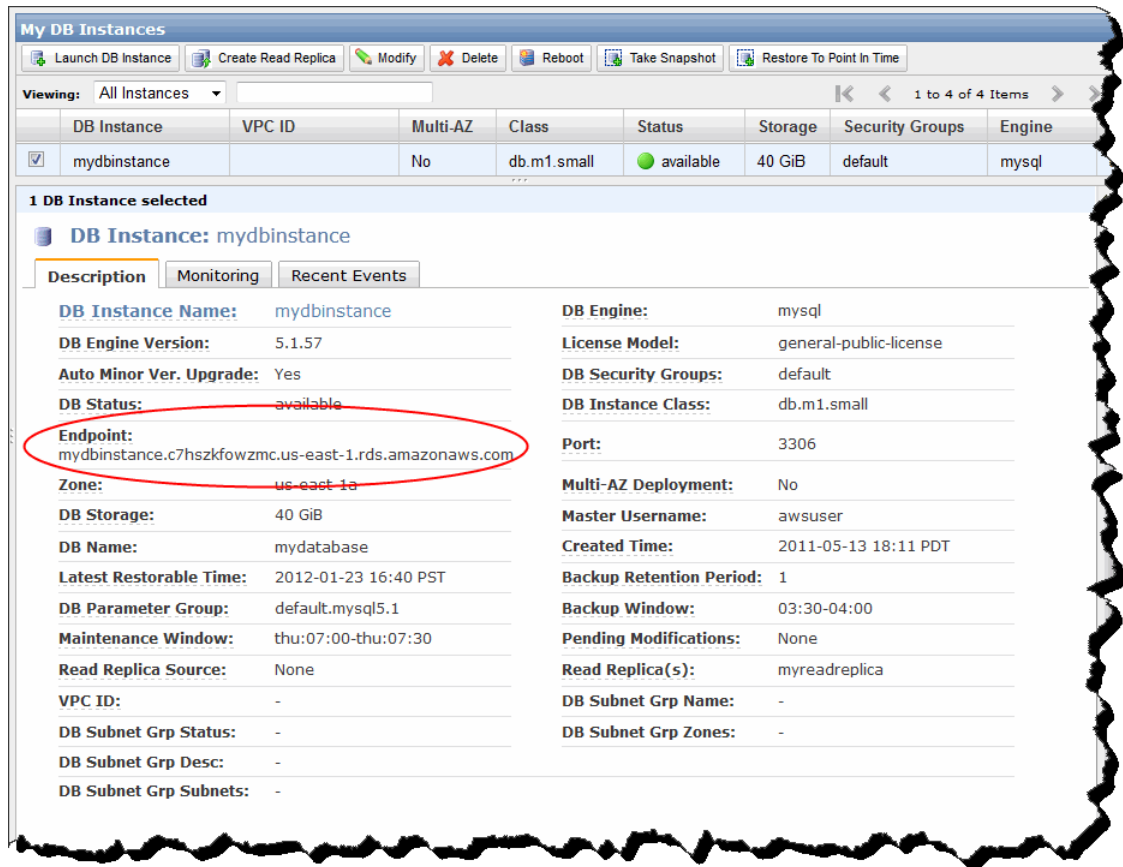
1. On the **My DB Instances** page of the AWS management Console, select the check box next to the DB Instance named "mydbinstance."
2. On the **Description** tab of the lower panel, note the endpoint of the DB Instance to use in the next step.

## Note

The endpoint for your DB Instance isn't available until your DB Instance is in the **available** state.



## Amazon Relational Database Service Getting Started Guide



3. Open a command prompt and enter the following command; make sure to use the endpoint of the DB Instance you created.

```
PROMPT> mysql -h mydbinstance.c7hszkfowzmc.us-east-1.rds.amazonaws.com -P 3306 -u mymasteruser -p
```

You will see output similar to the following.

```
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 350
Server version: 5.1.50-log MySQL Community Server (GPL)

Type 'help;' or '\h' for help. Type '\c' to clear the buffer.

mysql>
```

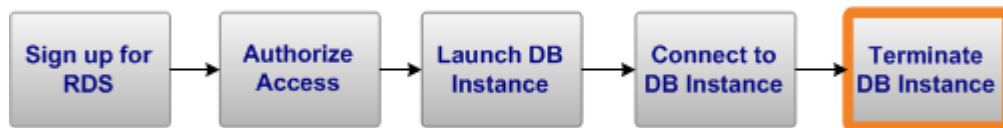
### Note

If you are having trouble connecting, you may be having a problem with your firewall configuration. Contact your network security administrator to verify that you can connect to an external port on 3306.

Once you're finished with your new DB Instance, make sure to terminate it to avoid incurring further usage charges.

# Terminate Your DB Instance

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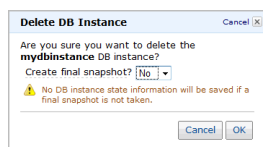


As soon as your DB Instance becomes available, you're billed for each hour or partial hour that you keep the DB Instance running (even if the DB Instance is idle). Once you've decided that you no longer need the DB Instance, you can terminate it.

## To terminate your DB Instance

1. In the [AWS Management Console](#), locate the DB Instance in your list of DB Instances on the **My DB Instances** page.
2. Select the check box next to the DB Instance, and then click **Delete** button at the top of the **My DB Instances** page.

The **Delete DB Instance** window appears.



3. Select **No** in the **Create final snapshot?** drop-down list.

If this weren't an exercise, you might create a final snapshot before you deleted the DB Instance so that you could restore the DB Instance later.

### Note

Creating a final snapshot incurs additional storage fees.

4. Click the **OK** button.  
Amazon RDS begins terminating the instance. As soon as the DB Instance status changes to **deleted**, you stop incurring charges for that DB Instance.

Congratulations! You successfully launched, authorized access to, connected to, and terminated a DB Instance. For more information about Amazon RDS and how to continue, see [Where Do I Go from Here? \(p. 26\)](#).

## Where Do I Go from Here?

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### Topics

- [AWS Account and Security Credentials](#) (p. 26)
- [Other Ways to Access Amazon RDS](#) (p. 26)
- [Amazon RDS Resources](#) (p. 27)

Amazon RDS is a rich service offering many things we haven't covered in this guide, such as controlling automatic backup and maintenance schedules, security features, and more. This section provides links to additional resources, which will help you deepen your understanding and use of Amazon RDS.

## AWS Account and Security Credentials

So far you signed up for the service, got an AWS account and security credentials, and then completed a short exercise covering the essential product functions. Now that you're finished with the exercise, we recommend that you check with an administrator or coworker in your organization to determine if he or she already has an AWS account and security credentials for you to use in future interactions with AWS.

If you're an account owner or administrator and want to know more about AWS Identity and Access Management, go to the product description at <http://aws.amazon.com/iam> or to the technical documentation at [Using IAM](#).

## Other Ways to Access Amazon RDS

This guide has shown you how to launch and terminate a DB Instance using the AWS Management Console. You can continue using Amazon RDS through the console, or try one of the other interfaces.

### Continue Using the Console

The AWS Management Console includes many other functions besides just launching and terminating DB Instances. To learn more about how to use Amazon RDS through the console, consult the online Help to assist you (just click the **Help** button in the console) or go to the [Amazon Relational Database Service User Guide](#).

## Use the Command Line Interface

For information on using Amazon RDS's Java-based command line interface, go to the [Amazon Relational Database Service User Guide](#). These command line tools are a fast way to execute all of the Amazon RDS functions without coding to the API or using a library.

## Use an Existing Library

If you prefer to use Amazon RDS through a programmatic interface, there are libraries and resources available for the following languages:

- [Java](#)
- [PHP](#)
- [Ruby](#)
- [Windows and .NET](#)

For libraries and sample code in all languages, go to the [Amazon RDS Sample Code & Libraries](#).

## Code Directly to the Web Service API

If you want to write code directly to the Amazon RDS web service APIs, go to the [Amazon Relational Database Service Developer Guide](#). The guide describes how to create and authenticate API requests, and how to use Amazon RDS through the APIs. For a complete description of all the API actions, go to the [Amazon Relational Database Service API Reference](#).

## Amazon RDS Resources

The table below lists related resources that you'll find useful as you work with this service.

Resource	Description
<a href="#">Amazon Relational Database Service User Guide</a>	The User Guide provides conceptual information about Amazon RDS and describes how to use Amazon RDS features using the AWS Management Console and command line tools.
<a href="#">Amazon Relational Database Service API Reference</a>	The API Reference contains a comprehensive description of all Amazon RDS Query APIs and data types.
<a href="#">Amazon Relational Database Service Command Line Interface Reference</a>	The Command Line Tools Reference contains a comprehensive description of all the command line tools and their options.
<a href="#">Amazon RDS Technical FAQ</a>	The FAQ covers the top 20 questions developers have asked about this product.
<a href="#">Release notes</a>	The release notes give a high-level overview of the current release. They specifically note any new features, corrections, and known issues.

**Amazon Relational Database Service Getting Started  
Guide  
Amazon RDS Resources**

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Resource	Description
<a href="#">AWS Developer Resource Center</a>	A central starting point to find documentation, code samples, release notes, and other information to help you build innovative applications with AWS.
<a href="#">Discussion Forums</a>	A community-based forum for developers to discuss technical questions related to Amazon Web Services.
<a href="#">AWS Support Center</a>	The home page for AWS Technical Support, including access to our Developer Forums, Technical FAQs, Service Status page, and Premium Support.
<a href="#">Amazon RDS product information</a>	The primary web page for information about Amazon RDS.
<a href="#">Contact Us</a>	A central contact point for inquiries concerning AWS billing, account, events, abuse etc.
<a href="#">Conditions of Use</a>	Detailed information about the copyright and trademark usage at Amazon.com and other topics.

## Please Provide Feedback

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Your input is important to help make our documentation helpful and easy to use. Please tell us about your experience getting started with Amazon RDS by completing our [Getting Started Survey](#).

Thank you.



## Document History

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This document history is associated with the 2013-05-15 release of RDS. This guide was last updated on 28 August 2013.

The following table describes the important changes since the last release of the *Amazon Relational Database Service Getting Started Guide*.

Amazon Relational Database Service is often referred to within this guide as "Amazon RDS" or simply "RDS"; all copyrights and legal protections still apply.

Change	Description	Date
Oracle and SQL Server support	Expanded information on launching and connecting to Oracle and SQL Server DB Instances. Expanded information on instance parameters. Changed sequence of actions, creating DB Security group before launching DB Instance so DB Security group can be used when creating DB Instance.	In this release.