

JASPERSOFT PROFESSIONAL FOR AWS GUIDE

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http://www.jaspersoft.com

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CHAPTER 1 INSTALLATION AND CONFIGURATION

1.1 Prerequisites



This chapter assumes you have basic knowledge of JasperReports Server. You can find Jaspersoft's documentation on the Community Site: <u>http://community.jaspersoft.com/documentation</u>.

1.1.1 Amazon Web Services Account

Before you can use Jaspersoft on Amazon Web Services, you need an AWS account.

- 1. Go to Amazon Marketplace: https://aws.amazon.com/marketplace/ref=csl ec2 dash
- 2. Select **I am a new user** to set up an account. You must accept the terms of service available to read here: <u>http://aws.amazon.com/terms/</u>

Note that if you have a personal amazon.com account stored in your browser, AWS uses that account. You need to sign out from Amazon, or preferably use a different browser, to set up an AWS account not associated with your personal account.

If you already have an Amazon Marketplace account, you need to accept our agreement before you can use the product.

3. Subscribe to our Marketplace AMI by clicking the Accept button on our page.

1.1.2 Required Permissions

Depending on how you use Jaspersoft Professional for AWS, there are two permission sets you might need.

1.1.2.1 Using Our CloudFormation (CF) Templates

Using our CF templates typically requires some admin permissions. AWS permissions required to launch a new JasperReports Server instance include:

- CloudFormation create stack and events
- Create and run EC2 instances
- Create EC2 security groups
- Create IAM resources
- Grant access to RDS, Redshift, and EC2

AWS permissions required to launch the template to create a new JasperReports Server role include:

- Create IAM resources
- Grant access to RDS, Redshift, and EC2

AWS permissions required to launch the template to create a new JasperReports Server user include:

- Create IAM resources
- Grant access to RDS, Redshift, and EC2

1.1.2.2 Connecting to the Data Source

To connect to the data source, you need access to RDS and/or Redshift, permissions to create and modify the database security groups in each, as well as permissions to create and modify EC2 security groups.

1.2 Launching

Before you begin this process, make sure you have a valid key pair. If you do not have one, follow the instructions on the AWS documentation site: <u>http://docs.aws.amazon.com/gettingstarted/latest/wah/getting-started-create-key-pair.html</u>.

1.2.1 Creating a JasperReports Server Instance

A stack is a collection of AWS resources you create and delete as a single unit. Our CloudFormation template will create the following:

- IAM role with permissions on RDS and Redshift
- EC2 instance with JasperReports Server installed and configured and using this role in order to have appropriate credentials.

To create a new JasperReports Server instance:

1. Navigate to the URL for your region:

Region	URL
US East (N. Virginia)	http://www.jaspersoft.com/jrs-launch-instance?region=us-east-1
US West (Oregon)	http://www.jaspersoft.com/jrs-launch-instance?region=us-west-2
US West (N. California)	http://www.jaspersoft.com/jrs-launch-instance?region=us-west-1
EU (Ireland)	http://www.jaspersoft.com/jrs-launch-instance?region=eu-west-1
Asia Pacific (Singapore)	http://www.jaspersoft.com/jrs-launch-instance?region=ap-southeast-1
Asia Pacific (Tokyo)	http://www.jaspersoft.com/jrs-launch-instance?region=ap-northeast-1
Asia Pacific (Sydney)	http://www.jaspersoft.com/jrs-launch-instance?region=ap-southeast-2
South America (São Paulo)	http://www.jaspersoft.com/jrs-launch-instance?region=sa-east-1

The Create Stack - Select Template dialog appears.

Create Stack	Cascal
	Cancel
SELECT TEMPLATE SPECIFY PARAMETERS ADD TAGS REVIEW AWS CloudFormation gives you an easier way to create a collection of related	AWS resources
(a stack) by describing your requirements in a template. To create a stack, fil	II in the name
started quickly, or one of your own templates stored in S3 or on your local ha	rd drive.
Stack Name:	
JRSDocUser	
Stack Template Source:	
💿 Use a sample template	
🛇 Upload a Template File	
Provide a Template URL	
https://s3.amazonaws.com/jrs_install/create_insta	
Show Advanced Options	
	Continue Ъ
stack - Select Template Window	

- 2. In the Create Stack Select Template dialog:
 - a. Give your CloudFormation stack a unique name.
 - b. By default, AWS provides a stack template source URL. Do not change this selection.
- 3. Click Continue. The Create Stack Specify Parameters window appears.

	Create Stack			Cancel 🗵
	SELECT TEMPLATE SPECIFY P	ARAMETERS ADD TAGS	REVIEW	
	Specify Parameters Below are the parameters as and proceed with the defaul	ssociated with your Clo It parameters or make	oudFormation template. You may re customizations as needed below.	view
	KeyName	default		
	Name of an existing EC2	KeyPair to enable SSH	access to the instances	
	InstanceType	m1.medium		
	WebServer EC2 instance h1.4xlarge)	type (m1.medium, m1.	large, m1.xlarge, m2.xlarge, c1.xla	rge,
	✓ I acknowledge that this	s template may crea	te IAM resources	
	< Back		Cont	tinue ▶
			<i></i>	
Igure 1-2 Create S	tack - Specify Pa	arameters V	Indow	

- 4. In the Create Stack Specify Parameters window:
 - a. Enter an existing key pair name.
 - b. The **Instance Type** defaults to medium, which is the smallest supported EC2 instance type. You can choose from any of the supported instance types:
 - m1.medium
 - m1.large
 - m1.xlarge
 - m2.xlarge
 - m2.2xlarge
 - m2.4xlarge
 - m3.xlarge
 - c1.xlarge

If you want to change the instance type, copy and paste from the description to the **Instance Type** field. For more information about EC2 instance types, see the AWS documentation: <u>http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/instance-types.html</u>

- c. Check the box to acknowledge that the template can create IAM (Identity and Access Management) resources. Checking the box is mandatory for creating this stack.
- 5. Click **Continue**. The **Create Stack Add Tags** window appears.

	Create Stack		Cancel 🗵	
	SELECT TEMPLATE SPECIFY PARAMETERS	ADD TAGS REVIEW	A top oppide of	
	a key/value pair and will flow to reso keys to each stack along with an op Tagging a Stack in the CloudFormat	burces inside your stack. You can add up tional value for each key. For more infor ion User Guide.	a tag consists of to 10 unique mation, go to	
	Key (127 characters maximum)	Value (255 characters maximum)	Remove	
	Add another Tag. (Maximum of 10)			
	< Back		Continue ▶	
Figure 1-3 Create Sta	ack - Add Tags Win	dow		

- 6. In the Create Stack Add Tags window add any tags you want to simplify administration of your infrastructure. A tag consists of a key/value pair and will flow to resources inside your stack. You can add up to 10 unique keys to each instance, along with an optional value for each key.
- 7. Click Continue. The Create Stack Review window appears.

V V SELECT TEMPLATE SPECIPY PARAMETERS ADD TAGS Please review the information below, then click Continue to create the stack. Stack Information Edit Stack Stack Name: JRSDocUser Stack Name: JRSDocUser Stack Name: /create_instance_for_jrs.install Template: /create_instance_for_jrs.template IAM true Acknowledgement: true Parameters Edit Parameters KeyName default InstanceType m1.medium Notification: none Creation Timeout: none Creation Timeout: none Rollback on Failure: true	Create Stack		Cancel 🗙
Stack Information Edit Stack Stack Name: JRSDocUser Stack Description: https://s3.amazonaws.com/jrs_install Template: /create_instance_for_jrs.template IAM true Acknowledgement: true Parameters Edit Parameters KeyName default InstanceType m1.medium Notification: none Creation Timeout: none Rollback on Failure: true	SELECT TEMPLATE SPECIFY P Please review the information	ARAMETERS ADD TAGS REVIEW on below, then click Continue to create the stack.	
Template: https://s3.amazonaws.com/jrs_install /create_instance_for_jrs.template IAM Acknowledgement: true Parameters Edit Parameters KeyName default InstanceType m1.medium Notification: none Creation Timeout: none Rollback on Failure: true	Stack Information Stack Name: Stack Description:	JRSDocUser	Edit Stack
Acknowledgement: true Parameters Edit Parameters KeyName default InstanceType m1.medium Notification: none Creation Timeout: none Rollback on Failure: true	Template:	https://s3.amazonaws.com/jrs_install /create_instance_for_jrs.template	
KeyName default InstanceType m1.medium Notification Edit Notification Notification: none Creation Timeout: none Rollback on Failure: true	Acknowledgement: Parameters	true Edit P.	arameters
Notification Edit Notification Notification: none Creation Timeout: none Rollback on Failure: true	KeyName InstanceType	default m1.medium	
Rollback on Failure: true	Notification Notification:	Edit N	otification
	Rollback on Failure:	true	
< Back Continue	< Back		Continue <mark>D</mark>

Double-check your information and parameters.

8. Click Continue.

1

A message apears telling you that that your stack has been created. On the Services web page, your stack probably says "CREATE_IN_PROGRESS". It generally takes two to four minutes for the status to change to "CREATE_COMPLETE".

	reate Stack	Update Stack 2 De	ete Stack Viewing: Active	•				Show/Hide 🛛 👌 Refres
	Name	1	Created	Internal I	Status		Description	
V	JRSDocUse	r	2013-01-17 10	5:16:38 UTC-8	CREAT	E_IN_PROGRESS		
	JRS4QATes	it3	2013-01-17 10:57:50 UTC-8			CREATE_COMPLETE		
	JRSUser		2013-01-08 09	9:33:51 UTC-8	CREAT	E_COMPLETE	CloudFormation Templat	e Which create I
	Status:	on): User	REATE_IN_PROGRESS					
		ion): User	Initiated					
	Status (Reas Created:	2013	-01-17 16:16:38 UTC	-8				
	Status (Reas Created: Description:	2013	-01-17 16:16:38 UTC	2-8				

It can still take another few minutes for the JasperReports Server URL to become available after the stack shows create_complete. If you get a message saying "Unable to Connect", try again in a few minutes.

9. Select your new instance once its status is create_complete, and then click the **Outputs** tab.

Your URLs for Getting Started and for logging in to Jaspersoft appear.

Description	Outputs	Resources	S Events	Template	Parame	ters	Tags	
Stack Outpu	Its							and the second s
Output values m	ay have been s	pecified by the	template author and	d will be available	e when stac	k creation	n is complete.	
Key			Value			Descrip	tion	
InstanceName			i-f393d883		1	Jasperso	oft JasperRep	orts Server Pro for AWS Instance
GettingStarted	JURL		http://ec2-23-20 1.amazonaws.com	-23-201.compu n	ute- I	initial In	stance Welco	ome Page URL
JaspersoftLogi	nURL		http://ec2-23-20 1.amazonaws.com	-23-201.compu n/jasperserver-	pro I	initial Ja	sperReports \$	Server Login Page URL
Login			superuser		1	Master u	user name	
Password			superuser		I	initial ma	aster user pa	ssword
4			III					

1.2.2 Creating a JasperReports Server Instance from the EC2 Console

If you have a complex network topology, special volume requirements, or if your instance needs to be in VPC, you might need to create your instance from the EC2 Console.

Before you can create a JasperReports Server instance from the EC2 console, you need to create a CloudFormation role.

To create a CloudFormation role:

- 1. Sign in with your AWS account.
- 2. Navigate to: http://www.jaspersoft.com/jrs-create-role.

The Create Stack - Select Template dialog appears.

Create Stack	Cancel 🗵
SELECTEMPLATE SPECIFY PARAMETERS ADD TAGS REVIEW AWS CloudFormation gives you an easier way to create a collection of related AWS (a stack) by describing your requirements in a template. To create a stack, fill in th for your stack and select a template. You may chose one of the sample templates I started quickly, or one of your own templates stored in S3 or on your local hard driv	resources e name to get /e.
Stack Name:	
JRSDocUser	
Stack Template Source:	
© Use a sample template	
🔘 Upload a Template File	
Provide a Template URL	
https://s3.amazonaws.com/jrs_install/create_insta	
Show Advanced Options	
Cor	ntinue ▶
Create Stack - Select Template Window	

- 3. In the Create Stack Select Template dialog:
 - a. Give your CloudFormation stack a unique name.
 - b. By default, AWS provides a stack template source URL. Do not change this selection.
- 4. Click Continue. The Create Stack Specify Parameters window appears.

Create Stack	Cancel 🗵
O	
Template Description:Creates an IAM Role with access to Amazon RDS and Amazon Redshift for use with a Jaspersoft for AWS EC2 instance	
☑ I acknowledge that this template may create IAM resources	
< Back	ie 🚺
Create-Stack - Specify Parameters Window	

5. In the **Create Stack - Specify Parameters** window check the box to acknowledge that the template can create IAM (Identity and Access Management) resources.

Checking the box is mandatory.

6. Click **Continue**. The **Create Stack - Add Tags** window appears.

		Create Stack		Cancel 🗙
		SELECT TEMPLATE SPECIFY PARAMETER Add tags to your stack to simplify t a key/value pair and will flow to res keys to each stack along with an o Tagaging a Stack in the CloudForma	s ADD TAGS REVIEW the administration of your infrastructure. A tag consists of sources inside your stack. You can add up to 10 unique ptional value for each key. For more information, go to tion less cuite.	
		Key (127 characters maximum)	Value (255 characters maximum)	Remove
		Add another Tag. (Maximum of 10)		×
		< Back		Continue ▶
gure 1-9	Create Sta	ack - Add Tags Win	dow	

- 7. In the Create Stack Add Tags window add any tags you want to simplify administration of your infrastructure. A tag consists of a key/value pair and will flow to resources inside your stack. You can add up to 10 unique keys to each stack along with an optional value for each key.
- 8. Click Continue. The Create Stack Review window appears.

¥	× • • • • • • • • • • • • • • • • • • •
SELECT TEMPLATE SPECIFY P	ARAMETERS ADD TAGS REVIEW
Please review the information	n below, then click Continue to create the stack.
Stack Information	Edit Sta
Stack Name:	EC2 Instance
Stack Description:	Creates an IAM Role with access to Amazon RDS and Amazon Redshift for use with a Jaspersoft for AWS EC2 instance
Template:	https://s3.amazonaws.com/jrs-install-us-east-1/jrs- create-role-5.0.3.template
IAM Acknowledgement:	true
Estimated Cost:	Cost
Notification	Edit Notificati
Notification:	none
Creation Timeout:	none
Rollback on Failure:	true
< Pack	Continue

Double-check your information and parameters.

9. Click **Continue**. A window appears to say your stack is being created.

Your stack is being created. You can select the stack and, using the tabs shown below, you can see the current state and track the progress of the stack creation. When your stack is created, it will have a status of CREATE_COMPLETE. The Events tab will show you what is currently being created and will also contain any error messages if there are problems creating your stack. Istack selected Istack selected Stack selected Events Time Type 2011-02-16 09:21 PST AVS::AutoScaling::AutoScalingGroup 2011-02-16 09:20 PST AVS::AutoScaling::LaunchConfiguration 2011-02-16 Configuration	Create Stack		Cancel 🗙
1 Stack selected Stack: USEast1 Description Outputs Resources Events Time Type 2011-02-16 09:21 PST AWS::Stack 2011-02-16 09:21 PST AWS::AutoScaling::AutoScalingGroup 2011-02-16 09:20 PST AWS::AutoScaling::AutoScalingGroup 2011-02-16 09:20 PST AWS::AutoScaling::LaunchConfiguration 2011-02-16 09:21 PST AWS::AutoScaling::LaunchConfiguration	Your stack is being created. You o can see the current state and tra created, it will have a status of CI currently being created and will al creating your stack.	can select the stack and, using the tabs shown below ck the progress of the stack creation. When your sta REATE_COMPLETE. The Events tab will show you wha so contain any error messages if there are problems	v, you ack is at is
Stack: USEast1 Description Outputs Resources Events Template Parameters Stack Events Time Type Parameters Parameters 2011-02-16 09:21 PST AWS::Stack 2011-02-16 09:20 PST AWS::AutoScaling::AutoScalingGroup 2011-02-16 09:20 PST AWS::AutoScaling::AutoScalingGroup 2011-02-16 2011-02-16 09:20 PST AWS::AutoScaling::LaunchConfiguration 2011-02-16 09:20 PST AWS::AutoScaling::LaunchConfiguration	1 Stack selected		
Time Type 2011-02-16 09:21 PST AWS::Stack 2011-02-16 09:20 PST AWS::AutoScaling::AutoScalingGroup 2011-02-16 09:20 PST AWS::AutoScaling::LaunchConfiguration 2011-02-16 0 AWS::AutoScaling::LaunchConfiguration	Stack: USEast1 Description Outputs Resources Stack Events	s Events Template Parameters	
2011-02-16 09:21 PST AWS::Stack 2011-02-16 09:21 PST AWS::AutoScaling::AutoScalingGroup 2011-02-16 09:20 PST AWS::AutoScaling::LaunchConfiguration 2011-02-16 0 AWS::AutoScaling::LaunchConfiguration	Time	Туре	
2011-02-16 09:21 PST AWS::AutoScaling::AutoScalingGroup 2011-02-16 09:20 PST AWS::AutoScaling::AutoScalingGroup 2011-02-16 09:20 PST AWS::AutoScaling::LaunchConfiguration 2011-02-16 09:20 PST AWS::AutoScaling::LaunchConfiguration	2011-02-16 09:21 PST	AWS::Stack	
2011-02-16 09:20 PST AWS::AutoScaling::AutoScalingGroup 2011-02-16 09:20 PST AWS::AutoScaling::LaunchConfiguration 2011-02-16 0 AWS::AutoScaling::LaunchConfiguration	2011-02-16 09:21 PST	AWS::AutoScaling::AutoScalingGroup	
2011-02-16 09:20 PST AWS::AutoScaling::LaunchConfiguration	2011-02-16 09:20 PST	AWS::AutoScaling::AutoScalingGroup	
2011-02-16	2011-02-16 09:20 PST	AWS::AutoScaling::LaunchConfiguration	
	2011-02-16.0		
	reated" Message		

10. Click **Close**. The **CloudFormation Stacks** page appears. Your new stack will say CREATE_IN_PROGRESS until it is finished being created and CREATE_COMPLETE once it is ready to be used.

Name	Created	Status	Description				
JRSRoleforDoc	2013-02-21 16:30:07 UTC-8	CREATE_IN_PROGRESS	Creates an IAM Role				
Stack: JRSRoleforDo	с.						
Description Outputs	Resources Events Template	Parameters Tags					
Stack Name:	JRSRoleforDoc						
Stack ID:	arn:aws:cloudformation:us-east-1:544542564254:stack/JRSRoleforDoc/028ed340-7c87-11e2- bc29-506cfad4a431						
Status:	CREATE_IN_PROGRESS						
Status (Reason):	User Initiated						
Created:	2013-02-21 16:30:07 UTC-8						
Description:	Creates an IAM Role with access to Amazon R for AWS EC2 instance	DS and Amazon Redshift for use with a Jasp	ersoft				

11. Click the **Outputs** tab.

г

Description	Outputs	Resources	Events	Template	Parameters	Tags		
Stack Outputs	Grack Outputs							
Output values may h	nutput values may have been specified by the template author and will be available when stack creation is complete.							
Key	Value		Value	lue Desc		cription		
RoleName			EC2Instance-JRSInstanceRole- 15XNTV15XZUWV			created to allow	access from JasperServer instance to RDS	

You see the RoleName for the stack you created. Note it carefully, because you need it in the next procedure.

To create a JasperReports Server instance from the EC2 console:

- 1. Navigate to: http://aws.amazon.com/console/.
- 2. Sign in with your AWS account.
- Go to Services > EC2.
 The Resources screen appears.
- 4. On the left, click **Images > AMIs**.
 - Make sure that the **All Images** option is selected.
- $5. \quad \mbox{Enter Jaspersoft BI Professional for AWS in the Search box.}$
- 6. Select the AMI Jaspersoft BI Professional for AWS and click the Launch button.

The Request Instances wizard opens.

Request Instances W	Vizard		Cancel 🗙
CHOOSE AN AMI INSTANCE Provide the details for yo	Ce DETAILS CREATE KEY PAIR CONFIGURE FI our instance(s). You may also decide whether	REWALL REVIEW	l" or
"spot" instances. Number of Instances:	1 Instance Type:	T1 Micro (11.micro, 613 MiB)	•
Launch Instances	s	in Not supported for this instance type	
Commonly large fixed co Launch into:	Second State Control of the Hour With State Costs into much smaller variable costs. Second State Costs in the State Co	ence -	
< Back	Continue	D	
quest Instan	ces Wizard		

7. Use the drop-down to choose an **Instance Type**.

		may also decide whet	ner you want to	launch your insta	inces as "on-de	mand" or
spot instances. Number of Instances:	1	Instance Type:	T1 Micro (t1.n	nicro, 613 MiB)		
Launch as an EBS-Opti	Туре			CPU Units	CPU Cores	Memory
Launch Instance	T1 Micro (t1.micro)	🚖 Free tier eligible		Up to 2 ECUs	1 Core	613 MiB
C Launch Instances let you commonly large fixed c Launch into: C Request Spot Ins	M1 Small (m1.smal)		1 ECU	1 Core	1.7 GiB
	M1 Medium (m1.me	edium)	2 ECUs	1 Core	3.7 GiB	
	M1 Large (m1.larg	=)		4 ECUs	2 Cores	7.5 GiB
	M1 Extra Large (m	1.xlarge)		8 ECUs	4 Cores	15 GiB
	M3 Extra Large (m	3.xlarge)		13 ECUs	4 Cores	15 GiB
	M3 Double Extra Large (m3.2xlarge)			26 ECUs	8 Cores	30 GiB
	M2 High-Memory Extra Large (m2.xlarge)			6.5 ECUs	2 Cores	17.1 GiB
	M2 High-Memory D	ouble Extra Large (m2	13 ECUs	4 Cores	34.2 GiB	
	M2 High-Memory Q	uadruple Extra Large	m2.4xlarge)	26 ECUs	8 Cores	68.4 GiB
	C1 High-CPU Medi	ım (c1.medium)	5 ECUs	2 Cores	1.7 GiB	
	C1 High-CPU Extra	Large (c1.xlarge)		20 ECUs	8 Cores	7 GiB
	High Storage Eight	Extra Large (hs1.8xla	35 ECUs	16 Cores	117 GiB	

Supported instance types are:

- Standard Medium (m1.medium)
- Standard Large (m1.large)
- Standard XL (m1.xlarge)
- High-Memory XL (m2.xlarge)
- High-Memory 2XL (m2.2xlarge)
- High-Memory 4XL (m2.4xlarge)
- High-CPU XL (c1.xlarge)

If you choose an unsupported instance type, you receive an error message. Just click the drop-down again and choose one of the supported options.

- 8. Choose whether you are using EC2 or VPC.
 - a. If you are using EC2, select your Availability Zone.
 - b. If you are using VPC, select your Subnet.
- 9. Click **Continue**.

The Advanced Instance Options window appears.

Number of In	tances: 1 Availability Zone: No Preference	
Advanced T	nstance Ontions	
Here you can (house a specific kernel or RAM disk to use with your instances. You can also choose to enable CloudW	atch
Detailed Monit	oring or enter data that will be available from your instances once they launch.	
Kernel ID:	Use Default 👻 RAM Disk ID: Use Default 👻	
Monitoring:	Enable CloudWatch detailed monitoring for this instance (additional charges will apply)	
User Data:		
as text		
🔍 as file	(Use shift+enter to insert a newline)	
Termination Protection:	Prevention against accidental termination. Shutdown Behavior: Stop -	
IAM Role: 🕝	EC2Instance-JRSInstanceProfile-1S8D1N0ICLM44	
	None DataPipelincDefaulResourceRole DataPipelincDefaulResourceRole DataPipelincDefaulResourceRole dev-apps-amar-vb-0210-JRSInstanceProfile-MLQ.JMMK800ZIW dev-apps-amar-vb-0212-JRSInstanceProfile-JRZOVBJEK267N dev-apps-test-JRSInstanceProfile-JRZOVBJEK267N dev-apps-test-SRSInstanceProfile-JRZOVBJEK267N dev-apps-test-SRSINAttorNVBE	
< Back	JRS-instance1 IRS4qaDocReview-JRSInstanceProfile-1PBWXTN350GBY ≡	
13, Amazon Web S	JRSInstance-VRSInstanceProfile-IRFFWTZ7L3F JRSInstanceMultToFat20130129-JRSInstanceProfile-IKSGERUHIGYH JRSRobe-VRSinstanceProfile-TKVTAN4SUKAA JRSRobe-VRSinstanceProfile-FRFVG4R4253H JS-BLfor-AWS-JRSInstanceProfile-FRFVG4R4253H JS-BLfor-AWS-JRSInstanceProfile-FR49SCWDHVQR MultDifestKreakRobe-RSInstanceProfile-H49SCWDHVQR MobiDemoRole NORDSAccess	Fe

10. Click the IAM Role drop-down, and choose the role you created in the previous procedure.

11. Click Continue.

The Storage Device Configuration window appears.

Request I	nstances Wi	zard				Cancel 💌
CHOOSE AN AM) DETAILS CREATE K	EY PAIR	CONFIGURE FIREWALL	REVIEW	
Number of	Instances:	1				
Availability	Zone:	No Preference				
Storage I	Device Conf	iguration				
Your instance will be launched with the following storage device settings. Edit these settings to add EBS volumes, instance store volumes, or edit the settings of the root volume.						
Туре	Device	Snapshot ID	Size	Volume Type IOPS	Delete on Termination	
Root	/dev/sda1	snap-a3950de3	8	standard	true	
Ephemeral	/dev/sdb	instance store v	olume: e	ephemeral0		Remove
Ephemeral	/dev/sdb	instance store v	olume: e	ephemeral0		Remove
Ephemeral 0 EBS Volu	/dev/sdb Imes 1 Ep	instance store v hemeral	olume: e	ephemeral0		Remove
Ephemeral	/dev/sdb Imes 1 Ep	instance store v hemeral	olume: e	phemeral0		Remove
Ephemeral 0 EBS Volu	/dev/sdb umes 1 Ep	instance store v hemeral	olume: e	phemeral0		Remove
Ephemeral 0 EBS Volu	/dev/sdb umes 1 Ep	instance store v	olume: e	phemeral0		Remove

12. If you want to make any changes, click the **Edit** button. You can add or make changes to EBS and instance store volumes or edit the settings of your root volume.

13. Click Continue.

Add any tags you want to simplify administration of your infrastructure.

A tag consists of a key/value pair and will flow to resources inside your stack. You can add up to 10 unique keys to each instance, along with an optional value for each key.

14. Click Continue.

The Create Key Pair window appears.

Request Instances Wizard		Cancel 🗙				
CHOOSE AN AMI INSTANCE DETAILS CR Public/private key pairs allow you to sec	CONFIGURE FIREWALL REVIE urely connect to your instance after it launches.	H W For Windows Server instances, a Key				
Pair is required to set and deliver a secu your instance. To create a key pair, enter a name and your computer. Note: You only need to g	ire encrypted password. For Linux server instan click Create & Download Your Key Pair. You wi jenerate a key pair once - not each time you wa	ces, a key pair allows you to SSH into Il be prompted to save the private key to int to deploy an Amazon EC2 instance.				
© Choose from your existing Ke	y Pairs					
Create a new Key Pair	Create a new Key Pair					
1. Enter a name for your key pair:*	(e.g., jdoekey)					
2. Click to create your key pair:*	Reate & Download your Key Pair					
	Save this file in a place that you will remember. You can use this key pair to launch other instances in the future or visit the Key Pairs page to create or manage existing ones.					
© Proceed without a Key Pair						
< Back	Continue					
rooto Koy Poir						

15. In the Create Key Pair window you can:

- Choose from your existing key pairs.
- Create a new key pair.
- Choose to proceed without a key pair.

If you choose not to install a key pair on your instance, you will not be able to connect to the instance unless you know the password built in to the AMI.

16. Click Continue.

U

The Configure Firewall window appears.

CHOOSE AN AM INSTANCE DETAILS CREATE KEY PAIR CONFIGURE FREWALL REVIEW Security groups determine whether a network port is open or blocked on your instances. You may use an existing security group additional ports now or update your security group anytime using the Security Groups page. Image: Choose one or more of your existing Security Groups Image: Choose one or more of your existing Security Groups Image: Choose one or more of your existing Security Groups Image: Space one or more of your existing Security Groups Image: Space one or more of your existing Security Groups Image: Space one or more of your existing Security Groups Image: Space one or more of your existing Security Groups Image: Space one or more of your existing Security Groups Image: Space one or more of your existing Security Groups Image: Space one or more of your existing Security Groups Image: Space one or more of your existing Security Groups Image: Space one or more of your existing Security Groups Image: Space one or more of your existing Security Groups Image: Space one one one one or more of your existing Security Groups Image: Space one one one one one one one one one on
Security groups determine whether a network port is open or blocked on your instances. You may use an existing security group additional ports now or update your security group anytime using the Security Groups page.
© Create a new Security Group
< Back

17. Choose an existing security group or create a new security group.

We set up one AWS DB Security Group (using IP address) in each RDS region, per JasperReports Server instance. The security group allows connections from the specific JRS instance to the specified AWS database instance.

18. Click Continue. The Review window appears.

Request Instances Wi	zard		Cancel 🗙
· · · · · · · · · · · · · · · · · · ·	V V	0	
CHOOSE AN AMI INSTANCE	DETAILS CREATE KEY PAIR CONFIGURE FIREWALL	REVIEW	
Please review the informa	ation below, then click Launch.		
AMI:		Edit AMI	
		Edit Ant	
Number of Instances:	1		
Availability Zone:	No Preference		
Instance Type:	T1 Micro (t1.micro)	-	
Instance Class:	On Demand	Edit Instance Details	
EBS-Optimized:	NO		
Monitoring:	Disabled Termination Protection: Disabled		
Tenancy:	Default		
Kernel ID:	Use Default Shutdown Behavior: Stop		
RAM Disk ID:	Use Default		
Socondary ID			
Addresses:			
User Data:			
IAM Role:	EC2Instance-JRSInstanceProfile-1S8D1N0ICLM4	4 Edit Advanced Details	
Key Pair Name:	doc_key	Edit Key Pair	
Security Group(s):	sg-7309ec1a	Edit Firewall	
< Back	Launch		
buck			
Review			

Double-check your information and parameters.

19. Click Launch.

You will see a message telling you that your instance is now launching.

Launch Instance Wizard Cancel X
Launch Instance Wizard Cancel X Instance ID(s): i-59787129 Instances may take a few minutes to launch, depending on the software you are running. Note: Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances.
You can perform the following tasks while your instances are launching:
Create Status Check Alarms You can use status check alarms to be notified if these instances fail status checks (additional charges may apply).
 Create EBS Volumes (Additional charges may apply.) View your instances on the Instances page
Close
ure 1-21 Launching Message

Your instances may take a few minutes to launch, depending on the software you are running.

Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances.

20. Click Close.

U

1.2.3 Logging in to JasperReports Server

When logging in to JasperReports Server you must use the URL as shown in Figure 1-6.

The initial user is superuser and password is superuser. You must change the password in order to log in.

To log in to JasperReports Server the first time:

1. Click the GettingStartedURL link in your Outputs tab.

The **Welcome** page appears.

	JASPERSOFT Jaspersoft Business Intelligence Server
	<section-header><section-header><text><section-header><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></section-header></text></section-header></section-header>
	Copyright @2013 Jaspersoft Corporation. <u>Privacy Statement Legal Notices</u>
gure 1-22	Welcome to Your Jaspersoft BI Server

- 2. On the **Welcome** page:
 - a. Click the Get Support button to register to have access to Jaspersoft support.
 - b. Click the Explore Resources button to visit the Community site.
 - c. Click the **Get Started** button to watch a short video that shows you how to quickly connect to your AWS data sources.
 - d. Click the **Login** button.

The Welcome to Jaspersoft window appears.



Before you click the Login button on this page:



The initial password for superuser is superuser, but it is pre-configured to be expired. You much change the password before your first login.

- 1. Enter the User ID superuser and password superuser.
- 2. Click Change password.
- 3. Set the new password to any password you will remember.

	Login
	User ID:
	superuser
	Password:
	•••••
	Show locale & time zone Cancel password change New Password:
	•••••
	Confirm New Password:
	••••••
	Login
Figure 1-24 Change Password	

4. Now, click the **Login** button.

The $\ensuremath{\text{\text{Home}}}$ screen appears.

	ry view, manage, Create,	superuser help Log Out	U
Home			
	View Reports	Create Ad Hoc View	
	Create Report	Manage Server	
About JasperReports Server		Copyright © 2000-2017	Jaspersoft Corporation

If you use PostgreSQL as your database, note that not all PostgreSQL-supported functions will work with Redshift. See the Redshift documentation for details about supported functions.

1.3 AWS Settings Page

The AWS settings page enables you to change Security Group settings without restarting the server. This page is accesible only if logged in with the Jaspersoft role superuser.

To reach the AWS Settings page:

- Click Manage > Server Settings. The Log Settings page appears.
- 2. Click **AWS Settings** in the left-hand menu.

The **AWS Settings** page appears



From this page you can enable AWS Security Group changes for the following settings:

Security Group Name

1

- Security Group Description
- Security Group Ingress Public IP
- Suppress EC2 Credentials Warning

We set up one AWS DB Security Group (using IP address) in each RDS region, per JasperReports Server instance. The security group allows connections from the specific JRS instance to the specified AWS database instance.

Enable AWS Security Group Changes: This checkbox is generally left checked. When checked the JasperReports Server will use the instance credentials which it assumes from the IAM role to grant itself access to RDS and Redshift data services. For example, you stop your EC2 instance with JasperReports Server on Friday. You restart it on Monday, and the instance gets a new IP address. JasperReports Server then re-grants itself access to RDS. If you want to manage the security groups manually, un-check this box.

Security Group Name: When JasperReports Server creates security groups to support AWS data sources on this instance, it will use this name as the basis of the security group name. When the JasperReports Server instance is running on EC2, the EC2 instance ID will be appended. When running outside of EC2, you must make sure that name is unique between JasperReports

Server instances (*i.e.* each one should have its own name), so that the IP addresses are properly granted access to the appropriate database instances.

Security Group Description: This text will be used for the description field next to security group or groups in the AWS console.

Security Group Ingress Public IP: Most users on EC2 should leave the this field empty. JasperReports Server determines the IP address automatically. If you are running JasperReports Server outside of EC2, then you must determine your IP address manually and enter it in this field. It is also possible with complex EC2 topology involving Virtual Private Clouds (VPCs) that you need to provide your IP address manually.

Suppress EC2 Credentials Warning: If your JasperReports Server instance was created with no IAM role, when you go to the data source wizard to add a data source with EC2 credentials there will be a warning message saying there is no proper role set. Checking this box suppresses the warning and disables the option.

CHAPTER 2 AWS DATA SOURCE

JasperReports Server for Amazon Web Services includes a new data source type, the AWS Data Source.

There are two ways to add an AWS data source: either using AWS credentials or EC2 instance credentials. It is strongly recommended that you use EC2 Credentials.



This chapter assumes you have basic knowledge of JasperReports Server. You can find Jaspersoft's documentation on the Community Site: <u>http://community.jaspersoft.com/documentation</u>.

2.1 Adding an AWS Data Source Using EC2 Credentials

Using the default credentials requires that the role was properly set up and assigned when the instance was created.

To use the AWS Data Source with EC2 instance credentials:

1. From the main page, choose **Create > Data Source**.



The Set Data Source Type and Properties page appears.

Add Data Source												
	Set Data S	Source	Type and	d Properties								ſ
	First, select t	he type o	f data sourc	e vou wish to a	dd, then ente	er the require	d property v	alues.				
	-	Data Carr										
	Type: AWS	Data Sour	ce									-
	Name (require	ed):										
	Resource ID ((required):										
	Description:											
	beschpton											
	Time Zone:											
	Use database	e setting.										
	Save Location	1:										_
										Browse		
	AWS Settings											
	O Use EC2 in	nstance cre	edentials.									
	Use AWS	Credential	(Click here	to generate using	CloudFormati	ion, see Outputs	for keys after	r stack comple	tes).			
	AWS Acce	ess Key:										
	AWS Secr	et Key:										
	ARN:									 		
	(Optional)	Line for m	and a second t	M accord								
	(opional)	03610101	Jas account n	AM access.								
Submit Car	icel											
bout JasperReports Serv	er									Copyright ©	2000-2012 3	aspersoft Corporatio

- 2. At the top of the Set Data Source Type and Properties page:
 - a. In the **Type** drop-down, choose **AWS Data Source**. If an alert appears, click **Close**.
 - b. Name the data source. By default, Resource ID matches the name. You can change Resource ID if you want to.
- 3. Under AWS Settings choose Use EC2 instance credentials.

4. Under Select an AWS Data Source:

-	
	Select an AWS Data Source
	AWS Region:
	US West (Northern California) Region Find My AWS Data Sources
	Ê RDS
	qatest2
	🗇 Redshift
	User Name (required)
	leet
	Password:
	••••••
	Database Name (required):
	test
	Driver (required):
	com.mysql.jdbc.Driver
	Hint: org.postgresql.Driver
	URL (required):
	jdbc:mysql://qatest2.cnynmfn5l0be.us-west-1.rds.amazonaws.com:3306/test
	Hint: jdbc:postgresql://localhost:5432/mydb
	Iest Connection
Elauro 2.2	Salaat an AWS Data Source Section

- a. Select your AWS Region from the drop-down.
- b. Click the Find My AWS Data Sources button.
 - The AWS data source queries your environment and displays your available data sources.
- c. Choose your data source.
- d. Enter your user name, password, and database name.

The AWS data source queries your environment and adds the appropriate driver.

e. Click Test Connection.

Testing accomplishes the following:

- Creates a database security group
- Adds the internal IP of the EC2 instance to the security group to authorize ingress to RDS
- Provides the instance with credentials like "rds:CreateDBSecurityGroup" and "redshift:AuthorizeClusterSecurityGroupIngress"

If you want to control details of the security group name or specify the IP address manually because you have a complex VPC Topology, see **1.3**, "AWS Settings Page," on page 19.

If your connection is successful, a message appears at the top of the screen.

Sometimes the process takes a few minutes. In that case you will see an alert. Try the test again after one or two minutes.

5. Click Submit.

The new data source appears in the repository.

		Sort By: Name Modified Date			
Run Edit Open Copy Cut Past	te Delete				
O Name	Description	Туре	Created Date	Modified Date	
Foodmart		AWS Data Source	Today	Today	

Figure 2-4 Repository Containing the New Data Source

2.2 Adding an AWS Data Source Using AWS Credentials



It is strongly recommended that you use EC2 Credentials.

To use the AWS Data Source wizard with AWS credentials:

1. From the main page, choose **Create > Data Source**.

		💋 JASPERSOFT	٠	Library	View,	Manage 🗸	Create
		Home					Ad Hoc View
							Report
							Dashboard
							Domain
						1	Data Source
igure 2-5	Create Menu						

The Set Data Source Type and Properties page appears.

Add Data Source				
au our our ce	Cat Data Course Ture and Dear			
	Set Data Source Type and Prop	Derues		
	First, select the type of data source you v	vish to add, then enter the required property values.		
	Type: AWS Data Source			
	Name (required):			
	Resource ID (required):			
	Description:			
	Time Zone:			
	Use database setting.			
	Save Location:		P	
			Browse	
	AWS Settings			
	O Use EC2 instance credentials.			
	Use AWS Credentials (Click here to gener	ate using CloudFormation, see Outputs for keys after stack complete	es).	
	AWS Access Key:			
	AWS Secret Key:			
	ARN:			
	(Online I) the factors around TAM around			
	(Optional) Use for cross-account LAM acces	5.		
Submit Can	el			
lbout JasperReports Serve			Copyright © 2000-201	2 Jaspersoft Corporation

- 2. At the top of the Set Data Source Type and Properties page:
 - a. In the Type drop-down, choose AWS Data Source. If an alert appears, click Close.
 - b. Name the data source. By default, Resource ID matches the name. You can change Resource ID if you want to.

3. Under AWS Settings:

- a. Select Use AWS Credentials.
- b. If you do not already have an AWS Access Key and AWS Secret Key, use the Click here link to generate them. The keys can be found on the Outputs tab for your Stack.

Description Outputs R	esources Events Template Pa	rameters Tags
Stack Outputs		🤁 Refresh
Output values may have been specifie	ed by the template author and will be available when	stack creation is complete.
Кеу	Value	Description
UserName	JRSUser-JasperServerUser- 1FBSDE3HPE6LA	User name which was created to allow access from JasperServer instance to \ensuremath{RDS}
AccessKey	AKIAITUUJXBBRAAQXHUQ	Access key for User
SecretKey	7ZietxaUq1dvaaC4qWARllIkyBfIo9CbgV	BE Secret key for User

- c. Enter your AWS Access Key, which will appear in plain text, and AWS Secret Key, which will be hidden.
- 4. Under Select an AWS Data Source:

	Select an AWS Data Source
	AWS Region:
	US West (Northern California) Region 💽 Find My AWS Data Sources
	E RDS
	qatest2
	B Redshift
	User Name (required):
	test
	Password:
	Database Name (required):
	baabaa kama (regarea). hat
	Driver (required):
	com.mysqi.jabc.Driver
	Hinti org, postgresql. Driver
	URL (required):
] Jooc:mysql:// qatest2.cnyhminsiube.us-west-1.ros.amazonaws.com:330b/test bit disuescherosid/larghe.com/d12/cm/d12/cm/d12/cm/d12/cm/d12/cm/d12/cm/d12/cm/d12/cm/d12/cm/d12/cm/d12/cm/d
	mine Juoe postgresser / jooka materia jooka mataanii jooka
	Test Connection
Figure 2-8	Select an AWS Data Source section

- a. Select your AWS Region from the drop-down.
- b. Click the **Find My AWS Data Sources** button.

The AWS data source will query your environment and pull in what you have available.

c. Choose your data source.

d. Enter your user name, password, and database name.

The AWS data source queries your environment and adds the appropriate driver.

e. Click Test Connection.

If your connection is successful, a message appears at the top of the screen.

Sometimes the process takes a few minutes. In that case you will see an alert. Try the test again after one or two minutes.

5. Click Submit.

_

The new data source appears in the repository.

	Re	pository		s	Sort By: Name Modified Date			
	R	Run Edit Open	Copy Cut Paste Delete					
	0	Name	Description	Туре	Created Date	Modified Date		
		Foodmart		AWS Data Source	Today	Today		
Figure 2-9		Repository containing the new data source						

GLOSSARY

Amazon Machine Image (AMI)

A supported and maintained Linux provided by Amazon Web Services for use on Amazon Elastic Compute Cloud (Amazon EC2). It is designed to provide a stable, secure, and high performance execution environment for applications running on Amazon EC2. It also includes several packages that enable easy integration with AWS, including launch configuration tools and many popular AWS libraries and tools. Amazon Web Services also provides ongoing security and maintenance updates to all instances running the Amazon AMI.

Amazon Web Services (AWS)

Cloud platform, used to provide and host a family of services, such as RDS, S3, EC2, DynamoDB.

AWS Console

The user interface Amazon has built around the available services offered. Within the AWS Console, there are sub-consoles for individual services (EC2, S3, RDS, CloudFront, DynamoDB, etc.)

AWS Marketplace

Storefront for commercial AMIs provided and managed by Amazon, which bills customer for usage and keeps a percentage of sales proceeds.

CloudFormation (CF)

AWS CloudFormation gives developers and systems administrators an easy way to create and manage a collection of related AWS resources, provisioning and updating them in an orderly and predictable fashion.

AWS Identity and Access Management (IAM)

AWS Identity and Access Management (IAM) enables you to create multiple users and manage the permissions for each of these users within your AWS Account. A user is an identity within your AWS account with unique security credentials that can be used to access AWS Services. IAM eliminates the need to share passwords or access keys, and makes it easy to enable or disable a user's access as appropriate.

Marketplace AMI

An AMI that is distributed through the AWS Marketplace.

Public AMI

AMI configured as public by any Amazon user, and listed in everyone's AWS EC2 console AMI area.

RDS

Amazon's Relational Database Service, which makes it easy to run MySQL, Oracle, or SQL Server database servers in the cloud. The servers are managed, upgraded, and backed up by Amazon.

Stack

A collection of AWS resources you create and delete as a single unit