AWS plug-in

Qlik Sense®
2.2

Contents

1   Introduction

This guide describes the Amazon Web Services (AWS) plug-in for the Qlik Deployment Console (QDC).

This document is derived from the online help for Qlik Sense. It is intended for those who want to read parts of the help offline or print pages easily, and does not include any additional information compared with the online help.

A plug-in is a ZIP file that contains all DLL files needed to deploy Qlik Sense sites in a specific cloud computing environment.

A plug-in typically includes functionality for:

- Configuring the cloud computing environment and fetching status information from it
- Setting and getting the name and a description
- Verifying the version of the environment
- Getting data from the environment
- Creating and deleting sites and nodes
- Uploading files
- Getting network information and handling certificates for communication
- Setting the Qlik Sense license
- Scaling sites and nodes
- Handling errors and logging
- Handling upgrades

> *Plug-ins are developed outside of the Qlik Deployment Console (QDC).*

1.1   AWS plug-in conventions

The following conventions are used in the description of the Amazon Web Services (AWS) plug-in.

Style coding

- Menu commands and dialog options are written in **bold**.
- Filenames and paths are written in *Italics*.
- Sample code is written in `Lucida Console`.

Environment variables

The paths used in the description of the AWS plug-in may use environment variables. The variables and the equivalent paths in the Microsoft Windows operating system are listed below.

Environment variable	Microsoft Windows
%LocalAppData%	*C:\Users\<username>\AppData\Local*
%ProgramData%	*C:\ProgramData*
%ProgramFiles%	*C:\Program Files*
%UserProfile%	*C:\Users\<username>*

1.2   Additional documentation

Besides this document, the following documentation is available for the Amazon Web Services (AWS) plug-in:

- Qlik Deployment Console (QDC): Describes how to deploy and manage Qlik Sense sites in cloud computing environments using the Qlik Deployment Console (QDC).
- Plan Qlik Sense deployments: Describes Qlik Sense and provides reference information on the architecture, security, logging, and licensing.

2   AWS plug-in requirements

This section lists the requirements that must be fulfilled to successfully use the Amazon Web Services (AWS) plug-in.

2.1   Qlik Deployment Console

The Qlik Deployment Console (QDC) must be installed on the target machine and the following items must be available and configured in the QDC:

- Qlik Sense setup file

- Qlik Sense license object

- AWS service user object

    See: *AWS object types (page 15)*

2.2   Amazon Web Services account

An AWS account is needed.

☞   [Amazon Web Services](#)

> 💡 *It is recommended to configure the AWS account so that only certain allowed IP addresses can access it.*

Platform support

The AWS plug-in supports the EC2-VPC platform for launching of Qlik Sense sites and nodes.

> ⚠ *The AWS plug-in does not support the EC2-Classic platform.*

Security group rules

Every instance is launched in a security group, which acts as a firewall and controls the traffic for one or more instances. Instances within the same security group have unrestricted network access to each other. Instances reject network access attempts from instances in other security groups.

The rules listed in the following table must be added to the security group for the AWS account.

Type	Protocol	Port range	Source
HTTP	TCP	80	0.0.0.0/0
HTTPS	TCP	443	0.0.0.0/0

Type	Protocol	Port range	Source
RDP	TCP	3389	<IP address>
Custom TCP rule	TCP	4242	0.0.0.0/0
Custom TCP rule	TCP	4244	0.0.0.0/0
Custom TCP rule	TCP	4444	0.0.0.0/0
Custom TCP rule	TCP	5050	0.0.0.0/0
Custom TCP rule	TCP	5051	0.0.0.0/0
Custom TCP rule	TCP	5985	<IP address>

Qlik Sense setup files stored in the S3 bucket

The AWS plug-in uses Amazon Simple Storage Service (S3) to cache the Qlik Sense setup files, so that they do not have to be loaded for each new site or node.

The setup files are stored in S3 under *<S3_BucketName>\<QDC_ServerName>\CachedFiles*, where *<S3_BucketName>* is the S3 folder that is used when creating an AWS-based site or a node.

See: *Instance information (page 9)*

If the Qlik Sense setup files are not used for 30 days, they are removed from the S3 folder.

3   Using the AWS plug-in

This section describes how to use the Amazon Web Services (AWS) plug-in in the Qlik Deployment Console (QDC).

3.1   Creating sites

This procedure is used to create a new central node.

Proceed as follows to create a Qlik Sense site based on the Amazon Web Services (AWS) plug-in:

1. Select **Sites** in the left panel.

2. Click **Create new site** to create a new site.

3. Select the **AWS environment** plug-in.

4. Fill in the fields in the **Site configuration** section.

   To return to the **Sites** view, click **<**.

5. Review and, if needed, edit the fields in the remaining sections.

   See: *Credentials (page 8)*

   See: *Instance information (page 9)*

   See: *Subnet selection (page 10)*

6. If needed, add additional nodes to the site:

   a. Click **Add node** to add a new node.

   b. Review and, if needed, edit the fields in the **Node configuration** section.

   c. Review and, if needed, edit the fields in the remaining sections.

      See: *Credentials (page 8)*

      See: *Instance information (page 9)*

      See: *Subnet selection (page 10)*

7. Click **Deploy site** to implement any changes.

   The deployment is initiated. For details on the progress of a specific node, select the node and check the **Deployment progress** section in the **Properties** area.

Credentials

Proceed as follows to fill in the fields.

Credentials	Select a credentials object in the drop-down list.
	The security credentials are used to authenticate and authorize calls to the AWS.
	If the list is empty, you need to add an object.
	See: *AWS credentials object type (page 15)*
Service user	Select a service user object in the drop-down list.
	The service user is:
	• Created on the machine that is cloned in AWS • Configured to be RootAdmin in Qlik Sense on the cloned machine
	If the list is empty, you need to add an object.
	See: *AWS service user object type (page 15)*
Region endpoint	Select a region endpoint in the drop-down list.
	The regional endpoint is used to reduce data latency in AWS applications and requests. An endpoint is a URL that is the entry point for a web service.

Instance information

Proceed as follows to fill in the fields.

Image	Select an image in the drop-down list.
	An image contains a software configuration, including an operating system, that defines the operating environment for the Qlik Sense site.
Instance type	Select an instance type in the drop-down list.
	An instance is a virtual server that can run applications.
	The instance type must fulfill the system requirements for Qlik Sense instances. For example, the **c1.medium** and **m1.medium** instance types fulfill the requirements, whereas the **t1.micro** instance type does not. For information on the system requirements, see the Qlik Deployment Console (QDC).
Key pair	Select a key pair in the drop-down list.
	AWS instances use a public/private key pair to log in rather than a password. The public key half of the pair is embedded in the instance and allows you to use the private key to log in securely without a password.

Security group	Select a security group in the drop-down list.
	Every instance is launched in a security group, which acts as a firewall and controls the traffic for one or more instances. Instances within the same security group have unrestricted network access to each other. Instances reject network access attempts from instances in other security groups.
S3 folder	Select an S3 folder in the drop-down list.
	Amazon Simple Storage Service (S3) provides a web services interface that can be used to store and retrieve data on the web.

Subnet selection

Proceed as follows to fill in the fields.

Subnet	Select a subnet (on which to host the Qlik Sense site) in the drop-down list.
	Subnets are used to divide a network into two or more networks. This means that a subnet is a logically visible subdivision of an IP network.

See also:

3.2   Adding new nodes

Proceed as follows to add a new node in a Qlik Sense site based on the Amazon Web Services (AWS) plug-in:

> *This procedure is used to add new nodes in an existing Qlik Sense site.*

1.   Select **Sites** in the left panel.

2.   Select a Qlik Sense site.

3.   Click **Add node** to add a new node.

     To return to the **Sites** view, click **<**.

4.   Review and, if needed, edit the fields in the **Node configuration** section.

5.   Review and, if needed, edit the fields in the remaining sections.

6. If you want to add another node, return to step 3.

7. If you want to clone a node, select a node and then click **Clone**:

    a. Review and, if needed, edit the fields in the **Node configuration** section.

    b. Review and, if needed, edit the fields in the remaining sections.

       See: *Credentials (page 11)*

       See: *Instance information (page 11)*

       See: *Subnet selection (page 12)*

8. Click **Deploy site** to implement any changes.

   The deployment is initiated. For details on the progress of a specific node, select the node and check the **Deployment progress** section in the **Properties** area.

Credentials

Proceed as follows to fill in the fields.

Credentials	Select a credentials object in the drop-down list. The security credentials are used to authenticate and authorize calls to the AWS. If the list is empty, you need to add an object. See: *AWS credentials object type (page 15)*
Service user	Select a service user object in the drop-down list. The service user is: - Created on the machine that is cloned in AWS - Configured to be RootAdmin in Qlik Sense on the cloned machine If the list is empty, you need to add an object. See: *AWS service user object type (page 15)*
Region endpoint	Select a region endpoint in the drop-down list. The regional endpoint is used to reduce data latency in AWS applications and requests. An endpoint is a URL that is the entry point for a web service.

Instance information

Proceed as follows to fill in the fields.

Image	Select an image in the drop-down list.
	An image contains a software configuration, including an operating system, that defines the operating environment for the Qlik Sense site.
Instance type	Select an instance type in the drop-down list.
	An instance is a virtual server that can run applications.
	The instance type must fulfill the system requirements for Qlik Sense instances. For example, the **c1.medium** and **m1.medium** instance types fulfill the requirements, whereas the **t1.micro** instance type does not. For information on the system requirements, see the Qlik Deployment Console (QDC).
Key pair	Select a key pair in the drop-down list.
	AWS instances use a public/private key pair to log in rather than a password. The public key half of the pair is embedded in the instance and allows you to use the private key to log in securely without a password.
Security group	Select a security group in the drop-down list.
	Every instance is launched in a security group, which acts as a firewall and controls the traffic for one or more instances. Instances within the same security group have unrestricted network access to each other. Instances reject network access attempts from instances in other security groups.
S3 folder	Select an S3 folder in the drop-down list.
	Amazon Simple Storage Service (S3) provides a web services interface that can be used to store and retrieve data on the web.

Subnet selection

Proceed as follows to fill in the fields.

Subnet	Select a subnet (on which to host the Qlik Sense site) in the drop-down list.
	Subnets are used to divide a network into two or more networks. This means that a subnet is a logically visible subdivision of an IP network.

3.3   Configuration

To display the node configuration, select a node in the Site details view. The **Configuration** section is displayed in the **Properties** area.

Use ▶ and ▼ to show and hide information.

If the selected node is a central node, the first fields are as follows:

Site name	The name of the site.
License	The name of the Qlik Sense license object used.

If the selected node is not a central node, the first fields are as follows:

Node name	The name of the node.
Node type	The type of node: • Complete: A complete node that includes all Qlik Sense services. • Proxy: A node that is used to manage Qlik Sense authentication, session handling, and load balancing. • Engine: A node that provides the analytical power of Qlik Sense. • Proxy & Engine: A node that is a combination of the Proxy and Engine types listed above. • Scheduler: A node that is used to manage scheduled reloads of Qlik Sense apps and other types of reload triggering.

The rest of the fields are common to all nodes based on the Amazon Web Services (AWS) plug-in.

Credentials	The security credentials are used to authenticate and authorize calls to the AWS.
Service user	The service user is: • Created on the machine that is cloned in AWS • Configured to be RootAdmin in Qlik Sense on the cloned machine
Region endpoint	The regional endpoint is used to reduce data latency in AWS applications and requests. An endpoint is a URL that is the entry point for a web service.
Image	An image contains a software configuration, including an operating system, that defines the operating environment for the Qlik Sense site.
Instance type	An instance is a virtual server that can run applications.
Key pair	AWS instances use a public/private key pair to log in rather than a password. The public key half of the pair is embedded in the instance and allows you to use the private key to log in securely without a password.
Security group	Every instance is launched in a security group, which acts as a firewall and controls the traffic for one or more instances. Instances within the same security group have unrestricted network access to each other. Instances reject network access attempts from instances in other security groups.

S3 folder	Amazon Simple Storage Service (S3) provides a web services interface that can be used to store and retrieve data on the web.
Subnet	Subnets are used to divide a network into two or more networks. This means that a subnet is a logically visible subdivision of an IP network.

4   AWS object types

An object is used to hold a certain type of information related to a specific plug-in or cloud computing environment.

This section provides information on the object types that are provided by the Amazon Web Services (AWS) plug-in.

4.1   AWS credentials object type

The Amazon Web Services (AWS) plug-in provides the AWS credentials object type in the Qlik Deployment Console (QDC). The object type is used to hold AWS access keys.

The AWS access keys are used to sign programmatic requests to the AWS and consist of an access key and a secret access key.

Proceed as follows to fill in the fields for an AWS credentials object.

Name	Enter a name for the credentials object.
Key	Enter the AWS access key.
Secret key	Enter the AWS secret access key.

4.2   AWS service user object type

The Amazon Web Services (AWS) plug-in provides the AWS service user object type in the Qlik Deployment Console (QDC). The object type is used to hold service users.

The service user is:

- Created on the machine that is cloned in AWS
- Configured to be RootAdmin in Qlik Sense on the cloned machine

Proceed as follows to fill in the fields for an AWS service user object.

User name	Enter a name for the service user.
Password	Enter a password for the service user.