

# Atlassian Standard Infrastructure (ASI) on the AWS Cloud

## Quick Start Reference Deployment

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This Quick Start was created by Atlassian in collaboration with Amazon Web Services (AWS).

[Quick Starts](#) are automated reference deployments that use AWS CloudFormation templates to deploy key technologies on AWS, following AWS best practices.

## Overview

This Quick Start sets up the Atlassian Standard Infrastructure (ASI)—a highly available, secure virtual private cloud (VPC) that is specifically customized to host Atlassian Data Center products. The ASI contains all the components required for the deployment and integration of multiple Atlassian Data Center products within the same VPC.

The [Jira](#), [Confluence](#), and [Bitbucket](#) Quick Starts all require the ASI.

## Costs and Licenses

You are responsible for the cost of the AWS services used while running this Quick Start reference deployment. There is no additional cost for using the Quick Start.

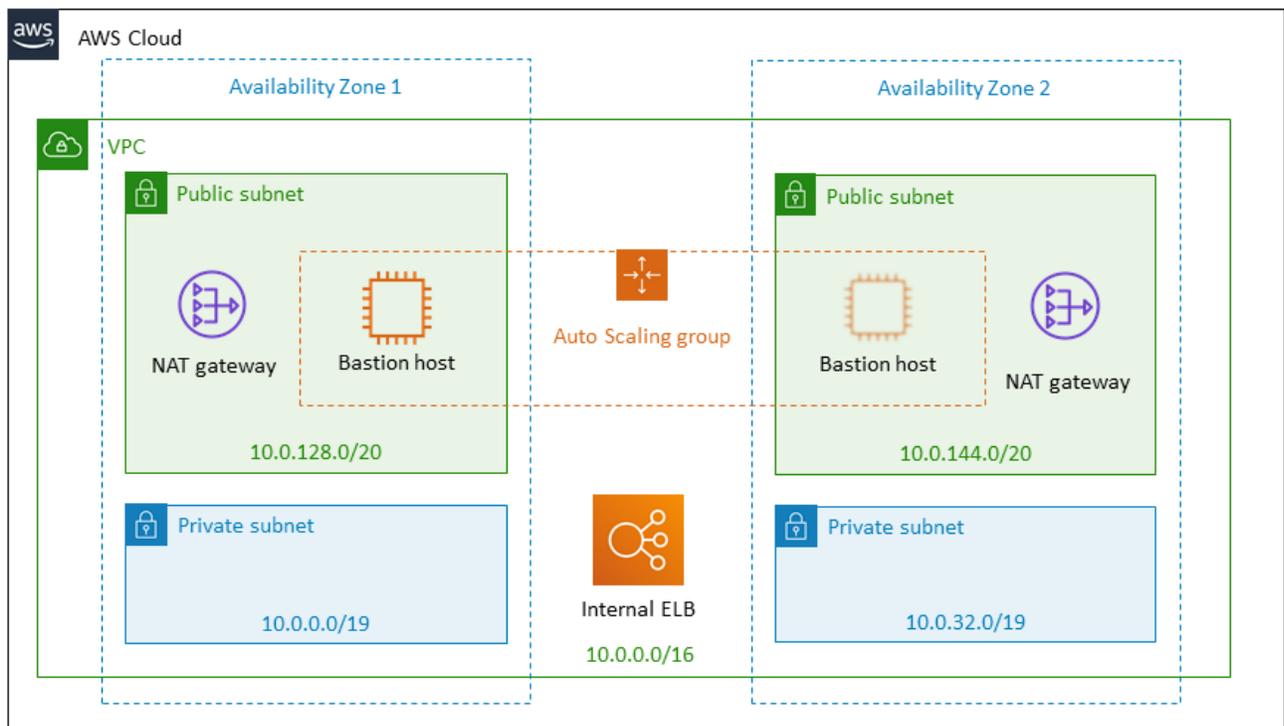
The AWS CloudFormation template for this Quick Start includes configuration parameters that you can customize. Some of these settings, such as instance type, will affect the cost of deployment. For cost estimates, see the pricing pages for each AWS service you will be using. Prices are subject to change.

**Tip** After you deploy the Quick Start, we recommend that you enable the [AWS Cost and Usage Report](#) to track costs associated with the Quick Start. This report delivers billing metrics to an S3 bucket in your account. It provides cost estimates based on usage throughout each month, and finalizes the data at the end of the month. For more information about the report, see the [AWS documentation](#).

The ASI doesn't require a license. See the Quick Starts for [Jira](#), [Bitbucket Data Center](#), and [Confluence Data Center](#) for licensing requirements for those products.

## Architecture

Deploying this Quick Start with **default parameters** builds the following basic environment in the AWS Cloud.



**Figure 1: Quick Start architecture for ASI**

This Quick Start includes an AWS CloudFormation template that builds out the following AWS infrastructure components, which are required by all Atlassian Data Center products:

- A highly available architecture that spans two Availability Zones.
- A VPC configured with public and private subnets according to AWS best practices, to provide you with your own virtual network on AWS.
- In the public subnets, managed NAT gateways to allow outbound internet access for updates and packages.\*
- In the public subnets, a Linux bastion host in an Auto Scaling group to allow inbound Secure Shell (SSH) access to Amazon Elastic Compute Cloud (Amazon EC2) instances in the public and private subnets. This bastion host enables secure access to hosted Atlassian products without exposing them to the internet. (This deployment uses the [Quick Start for Linux bastion hosts](#) to provision this component.)

After the Quick Start sets up this foundational stack, it [exports the stack's output values](#) to expose these components to other stacks. The Quick Starts for [Jira](#), [Confluence](#), and [Bitbucket](#) use the exported values to discover these underlying components, so you can easily provision Atlassian products on this infrastructure. For example, Figure 2 shows the Quick Start architecture for Jira, which is built on the ASI.

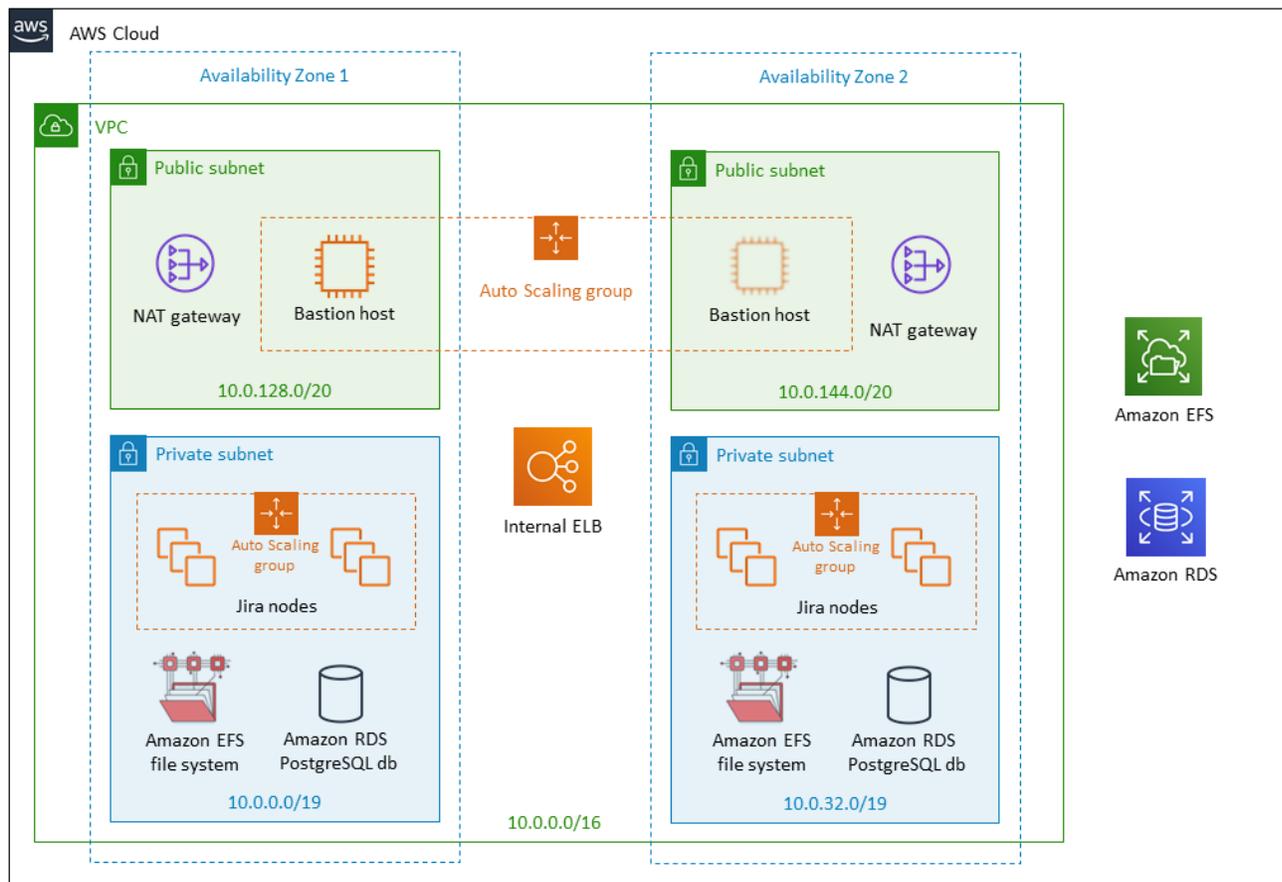


Figure 2: Quick Start architecture for Jira

## Prerequisites

### Specialized Knowledge

Before you deploy this Quick Start, we recommend that you become familiar with [Amazon Virtual Private Cloud \(Amazon VPC\)](#). (If you are new to AWS, see [Getting Started with AWS](#).)

## Deployment Steps

### Step 1. Prepare Your AWS Account

1. If you don't already have an AWS account, create one at <https://aws.amazon.com> by following the on-screen instructions.
2. Use the region selector in the navigation bar to choose the AWS Region where you want to deploy the VPC.

**Important** This Quick Start is also available on [AWS GovCloud](#) Regions, but only for testing purposes. AWS and Atlassian do not support any deployments on GovCloud Regions resulting from this Quick Start.

3. Create a [key pair](#) in your preferred region.

## Step 2. Launch the Quick Start

**Note** You are responsible for the cost of the AWS services used while running this Quick Start reference deployment. There is no additional cost for using this Quick Start. For full details, see the pricing pages for each AWS service you will be using in this Quick Start. Prices are subject to change.

1. [Deploy the Quick Start](#) into your AWS account.



The deployment takes about 20 minutes to complete.

2. Check the region that's displayed in the upper-right corner of the navigation bar, and change it if necessary. This is where the network infrastructure for your Atlassian environment will be built. The template is launched in the US East (Ohio) Region by default.
3. On the **Select Template** page, keep the default setting for the template URL, and then choose **Next**.
4. On the **Specify Details** page, change the stack name if needed. Review the parameters for the template. Provide values for the parameters that require input. For all other parameters, review the default settings and customize them as necessary. When you finish reviewing and customizing the parameters, choose **Next**.

The following tables describe all configurable parameters, grouped by category.

### [View template](#)

#### *VPC network configuration:*

Parameter label (name)	Default	Description
<b>Access CIDR</b> (AccessCIDR)	<i>Requires input</i>	The CIDR IP range that is permitted to access Atlassian services. We recommend that you set this value to a trusted IP range. For example, you might want to grant only your corporate network access to the software.

Parameter label (name)	Default	Description
<b>Availability Zones</b> (AvailabilityZones)	<i>Requires input</i>	The list of Availability Zones to use for the subnets in the VPC. The Quick Start uses two Availability Zones from your list and preserves the logical order you specify.
<b>VPC CIDR</b> (VPCCIDR)	10.0.0.0/16	The CIDR block for the VPC.
<b>Private Subnet 1 CIDR</b> (PrivateSubnet1CIDR)	10.0.0.0/19	The CIDR block for the private subnet located in Availability Zone 1.
<b>Private Subnet 2 CIDR</b> (PrivateSubnet2CIDR)	10.0.32.0/19	The CIDR block for the private subnet located in Availability Zone 2.
<b>Public Subnet 1 CIDR</b> (PublicSubnet1CIDR)	10.0.128.0/20	The CIDR block for the public (DMZ) subnet located in Availability Zone 1.
<b>Public Subnet 2 CIDR</b> (PublicSubnet2CIDR)	10.0.144.0/20	The CIDR block for the public (DMZ) subnet located in Availability Zone 2.

#### Amazon EC2 configuration:

Parameter label (name)	Default	Description
<b>Key Name</b> (KeyPairName)	<i>Requires input</i>	A public/private key pair, which allows you to connect securely to your instance after it launches. When you created an AWS account, this is the key pair you created in your preferred region.
<b>NAT Instance Type</b> (NATInstanceType)	t2.small	The Amazon EC2 instance type for the NAT instance. This is used only if the AWS Region you selected doesn't support NAT gateways.

#### AWS Quick Start configuration:

Parameter label (name)	Default	Description
<b>Quick Start S3 Bucket Name</b> (QSS3BucketName)	atlassian-aws-resources	The S3 bucket you have created for your copy of Quick Start assets, if you decide to customize or extend the Quick Start for your own use. The bucket name can include numbers, lowercase letters, uppercase letters, and hyphens, but should not start or end with a hyphen.
<b>Quick Start S3 Key Prefix</b> (QSS3KeyPrefix)	quickstart-atlassian-services/	The <a href="#">S3 key name prefix</a> used to simulate a folder for your copy of Quick Start assets, if you decide to customize or extend the Quick Start for your own use. This prefix can include numbers, lowercase letters, uppercase letters, hyphens, and forward slashes.

Parameter label (name)	Default	Description
<b>ASI identifier</b> (ExportPrefix)	ATL-	This is a prefix used as an identifier in all variables (VPCID, SubnetIDs, Keyname) exported from this deployment's ASI. Use different identifiers if you're deploying multiple ASIs in the same AWS region.

5. On the **Options** page, you can [specify tags](#) (key-value pairs) for resources in your stack and [set advanced options](#). When you're done, choose **Next**.
6. On the **Review** page, review and confirm the template settings. Under **Capabilities**, select the check box to acknowledge that the template will create IAM resources.
7. Choose **Create** to deploy the stack.
8. Monitor the status of the stack. When the status is **CREATE\_COMPLETE**, the AWS environment for Atlassian products is ready.

### Step 3. Deploy Atlassian Products

Now that you've set up your Atlassian Standard Infrastructure, you can provision Jira, Confluence, or Bitbucket in it.

**Important** If you already deployed Jira, Confluence, or Bitbucket on AWS by using earlier versions (before February 2019) of the Quick Starts for those products, we recommend that you back up your existing instance, redeploy the product by using the new templates, and then restore the product on the new instance.

To deploy these products:

1. Review the deployment guide for the [Jira](#), [Confluence](#), or [Bitbucket](#) Quick Start, including the licensing requirements.
2. Use the **Deploy into your existing ASI** option to install the product into your VPC.
3. When configuring parameters, choose the VPC ID and subnets from the VPC you created in [step 2](#).
4. Follow the instructions in the deployment guide to test and configure the product.
5. Repeat these steps to deploy additional Atlassian Data Center products (Jira, Confluence, and Bitbucket).

## Troubleshooting

**Q.** I encountered a `CREATE_FAILED` error when I launched the Quick Start.

**A.** If AWS CloudFormation fails to create the stack, we recommend that you relaunch the template with **Rollback on failure** set to **No**. (This setting is under **Advanced** in the AWS CloudFormation console, **Options** page.) With this setting, the stack's state will be retained and the instance will be left running, so you can troubleshoot the issue.

**Important** When you set **Rollback on failure** to **No**, you will continue to incur AWS charges for this stack. Please make sure to delete the stack when you finish troubleshooting.

For additional information, see [Troubleshooting AWS CloudFormation](#) on the AWS website.

**Q.** I encountered a size limitation error when I deployed the AWS CloudFormation templates.

**A.** We recommend that you launch the Quick Start templates from the links in this guide or from another S3 bucket. If you deploy the templates from a local copy on your computer or from a non-S3 location, you might encounter template size limitations when you create the stack. For more information about AWS CloudFormation limits, see the [AWS documentation](#).

## GitHub Repository

You can visit our [GitHub repository](#) to download the templates and scripts for this Quick Start, to post your comments, and to share your customizations with others.

## Additional Resources

### AWS services

- [Amazon VPC](#)
- [AWS CloudFormation](#)

### AWS Quick Starts for Atlassian products

- Jira products
  - [Data sheet](#)
  - [Deployment guide](#)

- Confluence Data Center
  - [Data sheet](#)
  - [Deployment guide](#)
- Bitbucket Data Center
  - [Data sheet](#)
  - [Deployment guide](#)

### Other Quick Start reference deployments

- [AWS Quick Start catalog](#)

## Document Revisions

Date	Change	In sections
<b>January 2020</b>	Added ExportPrefix parameter and disclaimer for GovCloud availability	<a href="#">Step 1: Prepare Your AWS Account</a> <a href="#">Step 2. Launch the Quick Start</a>
<b>February 2019</b>	Initial release	–

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