TIBCO Cloud Integration — BusinessWorks on the AWS Cloud

Quick Start Reference Deployment

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TIBCO Software
AWS Quick Start Reference Team

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This Quick Start deployment guide was created by TIBCO Software 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 reference deployment guide provides step-by-step instructions for deploying TIBCO Cloud Integration – BusinessWorks (TCI-BW) on the AWS Cloud. TIBCO Cloud Integration – BusinessWorks is an integration product suite that enables you to create services and applications in a visual, model-driven development environment. For more information, see the [documentation on the TIBCO website](https://www.tibco.com).  

**TIBCO Cloud Integration – BusinessWorks on AWS**

TIBCO Cloud Integration – BusinessWorks provides capabilities of TIBCO Cloud Integration and a range of plug-ins for flexible consumption as an Amazon Machine Image (AMI) for use on AWS. The plug-ins extend TIBCO Cloud Integration – BusinessWorks to integrate with other software and standards, such as Advanced Message Queuing Protocol (AMQP), Cassandra, data conversion, Microsoft Dynamics CRM, Apache Kafka, Marketo, MongoDB, IBM WebSphere MQ, OData, Amazon Simple Storage Service (Amazon S3), ServiceNow, Secure File Transfer Protocol (SFTP), and Salesforce.

This Quick Start deploys the AMI into a highly available, secure environment on AWS, so you can connect APIs, microservices, and backend systems. A drag-and-drop graphical development environment, a graphical data mapper, and a vast library of connectors help you quickly and easily create cloud-native integration applications and deploy them on AWS by using the features of Amazon Elastic Container Service (Amazon ECS).

**Costs and Licenses**

You are responsible for the cost of the AWS services used while running this Quick Start reference deployment. You will also be charged for the apps you deploy on your Amazon ECS cluster. There is no additional cost for using the Quick Start.
The AWS CloudFormation templates for this Quick Start include 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.

This Quick Start requires a subscription to the AMI for TIBCO Cloud Integration – BusinessWorks, which is available from AWS Marketplace, and additional pricing, terms, and conditions may apply. TIBCO Cloud Integration – BusinessWorks and Plug-Ins for AWS follows a Flexible Consumption Pricing (FCP) model. This pricing model enables you to pay only for the number of containers running per hour and gives you flexibility to scale on demand and manage software costs as you scale.

Architecture

Deploying this Quick Start for a new virtual private cloud (VPC) with default parameters builds the following TIBCO Cloud Integration – BusinessWorks environment in the AWS Cloud.
The Quick Start sets up the following:

- 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.*
- An internet gateway to allow access to the internet.*
- In the public subnets, managed NAT gateways to allow outbound internet access for resources in the private subnets.*
- In one of the public subnets, your TCI-BW Studio instance (TCI-BW design time).
- In the private subnets, your Amazon ECS host instances in an Auto Scaling group. These instances manage and host your Amazon ECS applications.
- An Amazon Elastic Container Registry (Amazon ECR) repository that contains a TIBCO Cloud Integration – BusinessWorks image with optional plug-ins installed. You can choose one or more plug-ins during the deployment process.
• (Optional) An Amazon Simple Storage Service (Amazon S3) bucket to store plug-ins.

* The template that deploys the Quick Start into an existing VPC skips the tasks marked by asterisks and prompts you for your existing VPC configuration.

**Prerequisites**

**Specialized Knowledge**

Before you deploy this Quick Start, we recommend that you become familiar with the following AWS services. (If you are new to AWS, see [Getting Started with AWS](#).)

- Amazon EBS
- Amazon EC2
- Amazon ECR
- Amazon ECS
- Amazon S3
- Amazon VPC
- AWS CloudFormation

**Deployment Options**

This Quick Start provides two deployment options:

- Deploy TIBCO Cloud Integration – BusinessWorks into a new VPC (end-to-end deployment). This option builds a new AWS environment consisting of the VPC, subnets, NAT gateways, security groups, and other infrastructure components, and then deploys TIBCO Cloud Integration – BusinessWorks into this new VPC.

- Deploy TIBCO Cloud Integration – BusinessWorks into an existing VPC. This option provisions TIBCO Cloud Integration – BusinessWorks in your existing AWS infrastructure.

The Quick Start provides separate templates for these options and lets you configure CIDR blocks, instance types, and TIBCO Cloud Integration – BusinessWorks settings, as discussed later in this guide. You can also install plug-ins to enhance your development experience, making it easier and quicker to integrate different services and applications.
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](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 TIBCO Cloud Integration – BusinessWorks on AWS.

3. Create a key pair in your preferred region.

4. If necessary, request a service limit increase for the Amazon EC2 t2.medium instance type. You might need to do this if you already have an existing deployment that uses this instance type, and you think you might exceed the default limit with this deployment.

Step 2. Subscribe to the TIBCO Cloud Integration – BusinessWorks AMI


2. Open the page for TIBCO Cloud Integration – BusinessWorks, and then choose Continue to Subscribe.

![TIBCO Cloud Integration – BusinessWorks AMI in AWS Marketplace](image)

Figure 2: TIBCO Cloud Integration – BusinessWorks AMI in AWS Marketplace
3. Choose the **Manual Launch** tab, and then choose **Accept Software Terms** to subscribe to the AMI. This involves accepting the terms of the license agreement and receiving confirmation email.

The subscription will enable the AMIs in your AWS account, and the Quick Start will deploy them for you in step 3. For detailed information about AMIs, see the [AWS Marketplace documentation](#).

**Step 3. Launch the Quick Start**

**Note** You are responsible for the cost of the AWS services used while running this Quick Start reference deployment. You will also be charged for the apps you deploy on your Amazon ECS cluster. 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. Choose one of the following options to launch the AWS CloudFormation template into your AWS account. For help choosing an option, see [deployment options](#) earlier in this guide.

<table>
<thead>
<tr>
<th>Option 1</th>
<th>Option 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deploy TIBCO Cloud Integration – BusinessWorks into a new VPC on AWS</td>
<td>Deploy TIBCO Cloud Integration – BusinessWorks into an existing VPC on AWS</td>
</tr>
<tr>
<td><img src="#" alt="Launch" /></td>
<td><img src="#" alt="Launch" /></td>
</tr>
</tbody>
</table>

**Important** If you’re deploying TIBCO Cloud Integration – BusinessWorks into an existing VPC, make sure that your VPC has two private subnets in different Availability Zones for the Amazon ECS host instances. These subnets require [NAT gateways or NAT instances](#) in their route tables, to allow the instances to download packages and software without exposing them to the internet. You will also need the domain name option configured in the DHCP options as explained in the [Amazon VPC documentation](#). You will be prompted for your VPC settings when you launch the Quick Start.

Each deployment takes about 25 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 TIBCO Cloud
Integration – BusinessWorks will be built. The template is launched in the US East (Ohio) Region by default.

**Important** Some instance types aren’t supported in certain Availability Zones, which may cause a failure. For example, the m3.large instance type isn’t supported in all the Availability Zones in the US East (Ohio) Region. For details, see the Amazon EC2 Pricing webpage.

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**.

In the following tables, parameters are listed by category and described separately for the two deployment options:

– **Parameters for deploying TIBCO Cloud Integration – BusinessWorks into a new VPC**

– **Parameters for deploying TIBCO Cloud Integration – BusinessWorks into an existing VPC**

**Option 1: Parameters for deploying TIBCO Cloud Integration – BusinessWorks into a new VPC**

**View template**

**Network template**

<table>
<thead>
<tr>
<th>Parameter label (name)</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Availability Zones</strong> (AvailabilityZones)</td>
<td>Requires input</td>
<td>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.</td>
</tr>
<tr>
<td><strong>Admin Ingress Location</strong> (AdminIngressLocation)</td>
<td>Requires input</td>
<td>CIDR block (IP address range) to allow Secure Shell (SSH) and virtual network computing (VNC) access to your TCI-BW Studio instance, in the format x.x.x.x/x. 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. Note that 0.0.0.0/0 will allow access from all locations and should be used cautiously.</td>
</tr>
<tr>
<td><strong>Cluster CIDR Block</strong> (CIDRBlockCluster)</td>
<td>10.0.0.0/16</td>
<td>The CIDR block for the VPC.</td>
</tr>
</tbody>
</table>
### Parameter label (name) | Default | Description
---|---|---
Public Subnet 1 CIDR (PublicSubnet1CIDR) | 10.0.128.0/20 | The CIDR block for the public (DMZ) subnet located in Availability Zone 1.
Public Subnet 2 CIDR (PublicSubnet2CIDR) | 10.0.144.0/20 | The CIDR block for the public (DMZ) subnet located in Availability Zone 2.
Private Subnet 1 CIDR (PrivateSubnet1CIDR) | 10.0.0.0/19 | The CIDR block for the private subnet located in Availability Zone 1.
Private Subnet 2 CIDR (PrivateSubnet2CIDR) | 10.0.32.0/19 | The CIDR block for the private subnet located in Availability Zone 2.

**ECS Cluster + Studio Configuration:**

<table>
<thead>
<tr>
<th>Parameter label (name)</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Pair (KeyName)</td>
<td>Requires input</td>
<td>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.</td>
</tr>
<tr>
<td>ECS Cluster Size (ClusterSize)</td>
<td>2</td>
<td>The number of EC2 instances to be created initially in the ECS cluster (1-100). This value will be used to set the minimum, maximum, and desired number of instances in the Auto Scaling group.</td>
</tr>
<tr>
<td>ECS Cluster Instance Type (InstanceType)</td>
<td>t2.medium</td>
<td>The instance type for EC2 instances to be created in the ECS cluster.</td>
</tr>
<tr>
<td>ECS Cluster Volume Size (VolSize)</td>
<td>30</td>
<td>The volume size for EC2 instances, in GiB. The volume size must be a numeric value between 30 and 16,384 GiB.</td>
</tr>
<tr>
<td>Studio EC2 Instance Type (InstanceTypeStudioImage)</td>
<td>m4.large</td>
<td>The instance type of the EC2 instance that runs your TIBCO Cloud Integration - BusinessWorks Studio.</td>
</tr>
<tr>
<td>Studio Password (StudioPassword)</td>
<td>Requires input</td>
<td>The password for accessing TCI-BW Studio via VNC. The password must be a 1-8 character string.</td>
</tr>
<tr>
<td>Studio EC2 Volume Size (VolSizeStudioImage)</td>
<td>40</td>
<td>The volume size for EC2 instances running TIBCO Cloud Integration - BusinessWorks Studio, in GiB. The volume size must be a numeric value between 40-100 GiB.</td>
</tr>
</tbody>
</table>
### Base Image Customization Configuration:

<table>
<thead>
<tr>
<th>Parameter label (name)</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>List of Plug-ins</strong> (PluginList)</td>
<td>Optional</td>
<td>A comma-separated list of supported plug-ins you want to add to the customized image.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ADB (plug-in for TIBCO Database)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• AMQP (plug-in for Advanced Message Queuing Protocol)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cassandra (plug-in for Cassandra)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• DC (plug-in for data conversion)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• DCRM (plug-in for Microsoft Dynamics CRM)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Files</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• FTL (plug-in for TIBCO FTL)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Kafka (plug-in for Apache Kafka)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Marketo (plug-in for Marketo)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MongoDB (plug-in for MongoDB)</td>
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<tr>
<td></td>
<td></td>
<td>• MQ (plug-in for IBM WebSphere MQ)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• NetSuite (plug-in for NetSuite)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• OData (plug-in for OData)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• PDF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• S3 (plug-in for Amazon S3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• SAP (plug-in for SAP)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ServiceNow (plug-in for ServiceNow)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• SFDC (plug-in for Salesforce.com)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• SFTP (plug-in for Secure File Transfer Protocol)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• SQS-SNS (plug-in for Amazon Simple Queue Service and Amazon Simple Notification Service)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Workday (plug-in for Workday)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Do not include any spaces between the plug-in identifiers. For example, to include the data conversion, MongoDB, and Amazon S3 plug-ins, enter DC,MongoDB,S3.</td>
</tr>
</tbody>
</table>

| **Create S3 Bucket for Base Image Customization?** (ExtBucket) | No | Set to **Yes** to create a new S3 bucket with the required folder structure for extending the base TIBCO Cloud Integration – BusinessWorks image. You can upload third-party drivers, OSGI bundles, certificates, plug-ins, etc. to this bucket to extend the base image later. |
### AWS Quick Start Configuration:

<table>
<thead>
<tr>
<th>Parameter label (name)</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quick Start S3 Bucket Name (QSS3BucketName)</td>
<td>aws-quickstart</td>
<td>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.</td>
</tr>
<tr>
<td>Quick Start S3 Key Prefix (QSS3KeyPrefix)</td>
<td>quickstart-tibco-tci-bw/</td>
<td>The S3 key name prefix 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.</td>
</tr>
</tbody>
</table>

### Option 2: Parameters for deploying TIBCO Cloud Integration – BusinessWorks into an existing VPC

**View template**

### Network Configuration:

<table>
<thead>
<tr>
<th>Parameter label (name)</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VPC ID (VPCID)</td>
<td>Requires input</td>
<td>The ID of your existing VPC (e.g., vpc-0343606e).</td>
</tr>
<tr>
<td>VPC CIDR (CIDRBlockCluster)</td>
<td>10.0.0.0/16</td>
<td>The CIDR block for the VPC.</td>
</tr>
<tr>
<td>Private Subnet 1 ID (PrivateSubnet1ID)</td>
<td>Requires input</td>
<td>The ID of the private subnet for the TIBCO Cloud Integration – BusinessWorks in Availability Zone 1 in your existing VPC (e.g., subnet-c0236ecd).</td>
</tr>
<tr>
<td>Private Subnet 2 ID (PrivateSubnet2ID)</td>
<td>Requires input</td>
<td>The ID of the private subnet for the TIBCO Cloud Integration – BusinessWorks in Availability Zone 2 in your existing VPC (e.g., subnet-bdf5347d).</td>
</tr>
<tr>
<td>Public Subnet 1 ID (PublicSubnet1ID)</td>
<td>Requires input</td>
<td>The ID of the public subnet for the ELB load balancer in Availability Zone 1 in your existing VPC (e.g., subnet-0ba63bb).</td>
</tr>
<tr>
<td>Public Subnet 2 ID (PublicSubnet2ID)</td>
<td>Requires input</td>
<td>The ID of the public subnet for the ELB load balancer in Availability Zone 2 in your existing VPC (e.g., subnet-e323d09).</td>
</tr>
</tbody>
</table>
| Admin Ingress Location (AdminIngressLocation) | Requires input | CIDR block (IP address range) to allow SSH and VNC access to your TCI-BW Studio instance, in the format x.x.x.x/x. 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. Note that 0.0.0.0/0 will allow access from all locations and should be used cautiously.

### ECS Cluster + Studio Configuration:

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<td>The volume size for EC2 instances, in GiB. The volume size must be a numeric value between 30 and 16,384 GiB.</td>
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<td><strong>Studio EC2 Instance Type</strong> (InstanceTypeStudio Image)</td>
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<td>The instance type of the EC2 instance that runs the TIBCO Cloud Integration - BusinessWorks Studio.</td>
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<td><strong>Studio Password</strong> (StudioPassword)</td>
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<td>The password for accessing TCI-BW Studio via VNC. The password must be a 1-8 character string.</td>
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<td>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.</td>
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<td>· AMQP (plug-in for Advanced Message Queuing Protocol)</td>
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<td>· Cassandra (plug-in for Cassandra)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>· DC (plug-in for data conversion)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Parameter label (name) | Default | Description
--- | --- | ---

- DCRM (plug-in for Microsoft Dynamics CRM)
- Files
- FTL (plug-in for TIBCO FTL)
- Kafka (plug-in for Apache Kafka)
- Marketo (plug-in for Marketo)
- MongoDB (plug-in for MongoDB)
- MQ (plug-in for IBM WebSphere MQ)
- NetSuite (plug-in for NetSuite)
- OData (plug-in for OData)
- PDF (plug-in for PDF)
- S3 (plug-in for Amazon S3)
- SAP (plug-in for SAP)
- ServiceNow (plug-in for ServiceNow)
- SFDC (plug-in for Salesforce.com)
- SFTP (plug-in for Secure File Transfer Protocol)
- SQS-SNS (plug-in for Amazon Simple Queue Service and Amazon Simple Notification Service)
- Workday (plug-in for Workday)

Do not include any spaces between the plug-in identifiers. For example, to include the data conversion, MongoDB, and Amazon S3 plug-ins, enter DC,MongoDB,S3.

Create S3 Bucket for Base Image Customization? (ExtBucket) | No | Set to Yes to create a new S3 bucket with the required folder structure for extending the base TIBCO Cloud Integration – BusinessWorks image. You can upload third-party drivers, OSGI bundles, certificates, plug-ins, etc. to this bucket to extend the base image later.

AWS Quick Start Configuration:

Parameter label (name) | Default | Description
--- | --- | ---

**Quick Start S3 Bucket Name** (QSS3BucketName) | aws-quickstart | 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.

**Quick Start S3 Key Prefix** (QSS3KeyPrefix) | quickstart-tibco-tci-bw/ | The S3 key name prefix 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.
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 TIBCO Cloud Integration – BusinessWorks cluster is ready.

9. Use the URLs displayed in the **Outputs** tab under the **BWCEStack** (nested stack) to view the resources that were created, as shown in Figure 3.

---

**Figure 3: Deployment outputs**

### Step 4. Test the Deployment

When the AWS Cloudformation template successfully creates the stack, the EC2 instances will be running in your AWS account, and the TIBCO Cloud Integration – BusinessWorks software will be installed on the Amazon ECS host instances and TCI-BW Studio instance.

To verify that the TCI-BW Studio instance is running and accessible, follow these steps:
1. In the AWS CloudFormation console, choose the Outputs tab, find the StudioEC2Instance key, and choose the link in the Value column.

2. Wait 25 minutes for the TCI-BW Studio instance to run through all the user data scripts.

3. On your local device, set up an SSH tunnel into the Studio instance with port forwarding. For example:

   ```
   ssh -i </path/to/ec2/key-pair.pem> -L 5905:localhost:5905 ec2-user@<Studio-instance-IP-address>
   ```

4. Open your favorite virtual network computing (VNC) viewer. The TCI-BW Studio instance uses VNC to provide a GUI for TIBCO Cloud Integration – BusinessWorks design time. The VNC server is running on port 5905 and can be accessed on your local host by using the local port you selected for port forwarding; for example, localhost:5905 in the previous example.

5. In the authentication prompt, use the password you set for the Studio Password parameter in step 3.

![Figure 4: Accessing the VNC server](image-url)
6. If this is the first time you're accessing your VNC server, you will have to do the initial GNOME setup. The setup will include which language you want to use, the keyboard type, and whether you prefer to turn location services on or off.

7. The resolution during startup may be poor. Fix this by choosing **Settings, Displays** and changing the resolution. By default, the resolution is set to 1024 x 768 (4:3).

8. No Docker image will exist on your Studio instance at startup. Pull the image from the ECR repository you specified during the configuration stage to your Studio instance. You can start developing after you do this.

9. Open TIBCO Cloud Integration – BusinessWorks by using either the terminal or the GUI, from `/home/ec2-user/bwce/bwce-studio/studio/4.0/eclipse/TIBCOBusinessStudio`. You will be prompted to enter a workspace. This can be any directory, but we suggest you use the default value. You are now ready to design in TIBCO Cloud Integration – BusinessWorks.

   **Note** Starting TCI-BW for the first time may take a few minutes. If you get an error message that prompts you to **Force Quit** or **Wait**, choose **Wait**. TCI-BW Studio should start shortly after that. You can ignore any other messages.

10. In TIBCO Cloud Integration – BusinessWorks, select a sample project to try out. For more information, see the TIBCO documentation. To deploy your application on Amazon ECS, see TIBCO Cloud Integration - BusinessWorks for AWS Marketplace user’s guide.

### Best Practices for Using TIBCO Cloud Integration – BusinessWorks on AWS

TIBCO Cloud Integration – BusinessWorks behaves the same on AWS as in any other deployment environment. Make sure that your ECS host instances are healthy and span across several Availability Zones.

### Security

Only port 22 is open at startup. You can restrict this port by providing an IP address or range of IP addresses for the **AdminIngressLocation** parameter. If you want to open these ports to everyone, set the IP address to 0.0.0.0/0. However, this is not advised because it leaves your instances insecure.
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. (Look at the log files in `%ProgramFiles%\Amazon\EC2ConfigService` and `C:\cfn\log`.)

**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](https://aws.amazon.com/documentation/cloudformation/user-guide/) 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 location we’ve provided 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](https://aws.amazon.com/documentation/cloudformation/user-guide/).

Git Repository

You can visit our [GitHub repository](https://github.com/aws-solutions/aws-solutions-architectures) 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 EBS
  

- Amazon EC2
  
  [https://aws.amazon.com/documentation/ec2/](https://aws.amazon.com/documentation/ec2/)

- Amazon ECS
  
  [https://aws.amazon.com/documentation/ecs/](https://aws.amazon.com/documentation/ecs/)
- Amazon S3  

- Amazon VPC  
  https://aws.amazon.com/documentation/vpc/

- AWS CloudFormation  
  https://aws.amazon.com/documentation/cloudformation/

**BusinessWorks Container Edition documentation**

- TIBCO Software  
  https://www.tibco.com

- BusinessWorks Container Edition 2.3.4 documentation  
  https://docs.tibco.com/products/tibco-businessworks-container-edition-2-3-4

- BusinessWorks Container Edition 2.3.4 for AWS Marketplace User’s Guide  
  https://docs.tibco.com/pub/bwce-aws/2.3.4/doc/html/GUID-407B8F8E-D53F-4E33-93FE-53397B44FE84-homepage.html

**Quick Start reference deployments**

- AWS Quick Start home page  
  https://aws.amazon.com/quickstart/

**Document Revisions**

<table>
<thead>
<tr>
<th>Date</th>
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<tbody>
<tr>
<td>September 2018</td>
<td>Product name change and new AMI</td>
<td>Templates and throughout guide</td>
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<tr>
<td>April 2018</td>
<td>Initial publication</td>
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