



TIBCO iProcess® Engine

Configuration Guide for Cloud

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Introduction

This guide describes how to set up TIBCO iProcess® Engine and the related components on the cloud.

Document Scope

This guide describes the process of setting up the following products on Amazon Web Services(AWS) and Microsoft Azure:

- TIBCO iProcess® Engine
- TIBCO iProcess® Workspace (Windows)
- TIBCO iProcess® Workspace (Browser)
- TIBCO iProcess® Workspace Plug-ins
- TIBCO iProcess® Technology Plug-ins

It also provides examples to illustrate how iProcess Engine, database servers, and one or multiple of the following components communicate with each other on the cloud environment.

The examples in this guide explain how these products can operate in some commonly used environments. Some of the examples include environments that are a combination of different platforms and database types.



Note

The concepts explained and applied in the example scenarios can be extended to set up iProcess Engine for Cloud on other less common environments.

Overview

TIBCO iProcess Engine can be configured for Amazon Web Services (AWS) or Microsoft Azure by performing tasks listed in the following sections:

1. [Configuring Virtual Machines](#)
2. [Configuring Security Groups](#)
3. [Configuring TIBCO iProcess Technology Plug-ins](#)

Configuring Virtual Machines

This section explains how to configure a virtual machine (VM) so that iProcess Engine, database server, and other associated components function correctly. You can configure an imported Red Hat Enterprise Linux (RHEL) virtual machine image or create a new virtual machine on your respective cloud service. For example, you can create an Amazon Machine Image (AMI) on AWS or an Azure Virtual Machine on Microsoft Azure.

Configuring an Imported Virtual Machine (RHEL)

You can configure values for an imported virtual machine (VM) in AWS and Azure for it to function correctly.

Prerequisites

Before you can configure a VM, you must perform the following steps:

1. Import a VM. For more information, see [VM Import/Export](#) for AWS or [Import/Export Services](#) for Azure.
2. Start the instance to which you imported the VM for iProcess Engine and the database server. See [Launch Your Instance](#) on the AWS or [Virtual Machines Documentation](#) for Azure.

Procedure

1. Turn off the firewall for all created instances.
2. In the database server files, update the private IP of your domain on the instance where you imported iProcess Engine. For example, for an Oracle Database Server, update `tnsnames.ora` and `listener.ora` files.
3. When you import a virtual machine in AWS or Azure, it is assigned a dynamic

machine name. However, iProcess Engine still has the old machine name entry because of which it cannot be recognized by the connected peripherals or applications.

To fix this, correct the machine name for node entry in `swpro.node_cluster` table. You can use one of the following options to change the machine name:

- Run the following command:
`UPDATE swpro.node_cluster SET physical_machine_name='ip-192-0-2-0'`
`where master=1;`
`where "ip-192-0-2-0" is the hostname of the machine.`
 - Run the `hostname` command to get the string to set the correct name here.
4. To avoid machine name mismatch errors, remove old machine entries from `/etc/hosts`.
 5. To restrict iProcess Engine processes from accepting incoming RPC requests from within a port range, add a fixed port range by running the following commands. Run the following commands to add a fixed port range:

```
swadm ADD_RANGE -p <port_number> -s <port_range>
Example: swadm ADD_RANGE -p 46000 -s 20
```

```
swadm SET_RANGE 1 <port_range_ID>
Example: swadm SET_RANGE 1 1
```

i Note: You must perform this step if your iProcess Engine is in a firewalled environment.

For more information, see “Administering Firewall Port Ranges” in the *TIBCO iProcess Engine Administrator’s Guide*.

6. (Only for Oracle Database Server) Add an AQ port range by running the following command:

```
swadm ADD_AQ_PORT_RANGE 1 <port_number> <port_range>
Example: swadm ADD_AQ_PORT_RANGE 1 48000 50
```

What to do next

After configuring the imported VMs, you must configure security groups for each VM to control inbound and outbound connections. For more information, see [Configuring Security Groups](#).

Configuring an Amazon Machine Image or Azure Virtual Machine

Perform the following procedure to configure values for an Amazon Machine Image (AMI) on AMS or Azure Virtual Machine (AVM) on Azure.

Prerequisites

1. Ensure that you have installed the following software on one or multiple instances (as per your requirement):
 - TIBCO iProcess Engine
 - A database serverFor a list of supported databases, see *TIBCO iProcess Engine Installation for UNIX or Windows*. If you want to configure a relational databases service, such as Amazon RDS or Azure SQL Database, see [Configuring Cloud Databases for iProcess Engine](#).
2. Start all created instances. See [Launch Your Instance](#) for AWS or [Virtual Machines Documentation](#) for Azure.

Procedure

1. Turn off the firewall for all created instances.
2. Add a fixed port range in the iProcess Engine configuration. This step is important when your iProcess Engine is in a firewalled environment. Adding a fixed port range restricts iProcess Engine processes to accept incoming RPC requests from within that port range. For more information, see “Administering Firewall Port Ranges” in *TIBCO iProcess Engine Administrator’s Guide*. Run the following commands to add a fixed port range:

a. `swadm ADD_RANGE -p <port_number> -s <port_range>`

Example: `swadm ADD_RANGE -p 46000 -s 20`

b. `swadm SET_RANGE 1 <port_range_ID>`

Example: `swadm SET_RANGE 1 1`

3. *(Only for Oracle Database Server)* Add an AQ port range by using the following command:

`swadm ADD_AQ_PORT_RANGE 1 <port_number> <port_range>`

For example: `swadm ADD_AQ_PORT_RANGE 1 48000 50`

What to do next

After configuring the virtual machine (AMI or AVM), you must configure security groups for each VM to control inbound and outbound connections. See [Configuring Security Groups](#).

Configuring Security Groups

A security group acts as a virtual firewall for your AWS or Azure instance to control inbound and outbound traffic. You can create multiple security groups for access, as required.

In AWS, when you start an instance in a Virtual Private Cloud (VPC), you can assign the instance to a maximum of five security groups. However, in a Virtual Network (VNET) in Azure, there is no limit to the number of security groups to which an Azure Virtual Machine (AVM) can be assigned. Security groups act at the instance level, not the subnet level. Therefore, each instance in your VPC or VNET can be assigned to a different set of security groups. This section provides examples of configuring security groups for iProcess Engine with different database servers.

Examples of Security Groups for TIBCO iProcess Engine on AWS

The following examples describe some common security group configurations. You can also configure security groups as per your security protocols.

Configuring Security Groups When iProcess Workspace (Windows) Is Installed in AWS

To connect to TIBCO iProcess Engine and configure security groups, perform the following steps:

1. Start an Elastic Compute Cloud (EC2) instance in your Virtual Private Cloud (VPC).
2. Name the created instance `ec2-OracleServer` and install the Oracle Database Server on this instance.
3. Start a second EC2 instance in your VPC.
4. Name the created instance `ec2-iPE` and install iProcess Engine on this instance.
5. Start a third EC2 instance in your VPC.

6. Name the created instance `ec2-iPWW` and install iProcess Workspace (Windows) on this instance.
7. Create the following security groups for all three EC2 instances.
 - `sg-OracleServer` for the `ec2-OracleServer` instance.
 - `sg-iPE` for the `ec2-iPE` instance.
 - `sg-iPWW` for the `ec2-iPWW` instance.
8. **Configure `sg-OracleServer`**
 - a. Specify a custom TCP rule so only the machines on an external domain can access the Oracle Database Server (The default port is 1521.)
 - b. Specify a rule on `ec2-OracleServer` for iProcess Engine to communicate with the database server.

Type	Protocol	Port Range	Source		Description
Custom TCP Rule	TCP	22	Custom	192.0.2.0/32	SSH to access the VM
All TCP	TCP	0-65535	Custom	sg-iPE	To allow traffic from members of sg-iPE
Oracle Database Server	TCP	1521	Custom	192.0.2.0/32	To access the Oracle database from an external machine

i Note: 192.0.2.0/32 is used as an example IP address. Replace this with your IP address.

9. **Configure `sg-iPE`**

- a. Specify a rule on `ec2-iPE` for the database server to communicate with iProcess Engine.
- b. Specify a rule on `ec2-iPE` for iProcess Workspace (Windows) to communicate with iProcess Engine.

Type	Protocol	Port	Source		Description
Custom TCP Rule	TCP	22	Custom	192.0.2.0/32	SSH
All TCP	TCP	0-65535	Custom	sg-OracleServer	To allow traffic from members of sg-OracleServer
All TCP	TCP	0-65535	Custom	sg-iPWW	To allow traffic from members of sg-iPWW



Note: 192.0.2.0/32 is used as an example IP address. Replace this with your own IP address.

10. Configure sg-iPWW

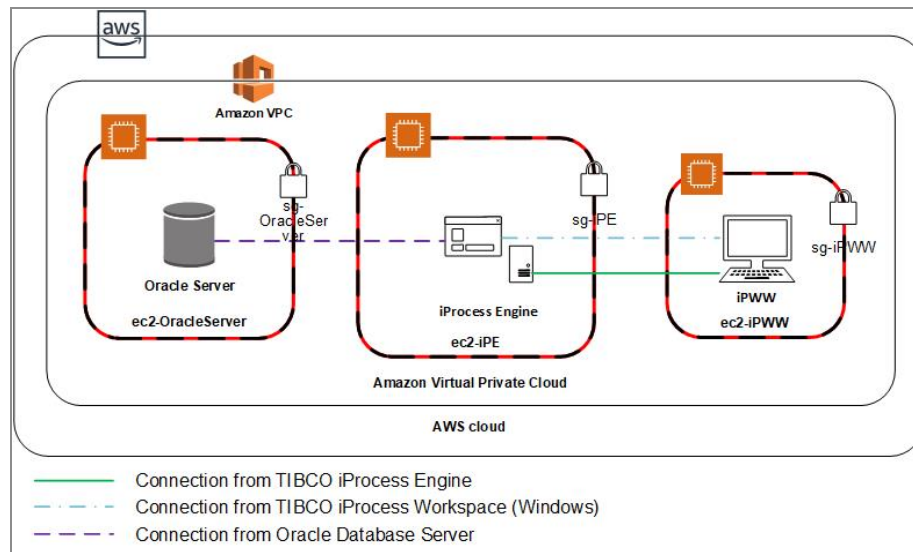
- Specify a rule on ec2-iPWW for iProcess Engine to communicate with the iProcess Workspace (Windows).
- Specify Remote Desktop (RDP) rule for access to ec2-iPWW from an external domain.

Type	Protocol	Port Range	Source		Description
RDP	TCP	3389	Custom	192.0.2.0/32	Remote Desktop Connection



Note: 192.0.2.0/32 is used as an example IP address, replace this with your own IP address.

After configuring these security groups, your setup looks something like the following illustration.



Configuring Security Groups When iProcess Workspace (Windows) Is Installed on an External Machine

To connect to iProcess Engine from an external machine that has iProcess Workspace (Windows) installed, perform the following steps to appropriately configure security groups.

1. Start an EC2 instance in your VPC.
2. Name the created instance `ec2-OracleServer` and install the Oracle Database Server on this instance.
3. Start a second EC2 instance in your VPC.
4. Name the created instance `ec2-iPE` and install iProcess Engine on this instance.
5. Install iProcess Workspace (Windows) on the client machine (on an external domain.) For more information, see *TIBCO iProcess Workspace (Windows) Installation* for more information.
6. Create the following security groups for the two EC2 instances:
 - `sg-OracleServer` for the `ec2-OracleServer` instance.
 - `sg-iPE` for the `ec2-iPE` instance.
7. **Configure `sg-OracleServer`**

- a. Specify a custom TCP rule so only machines on an external domain can access the Oracle Database Server (The default port is 1521.)
- b. Specify a rule on ec2-OracleServer for iProcess Engine to communicate with the database server.

Type	Protocol	Port Range	Source		Description
Custom TCP Rule	TCP	22	Custom	192.0.2.0/32	SSH to access the VM
All TCP	TCP	0-65535	Custom	sg-iPE	To allow traffic from members of sg-iPE
Oracle Database Server	TCP	1521	Custom	192.0.2.0/32	To access the Oracle database from an external machine

i Note: 192.0.2.0/32 is used as an example IP address, replace this with your own IP address.

8. Configure sg-iPE

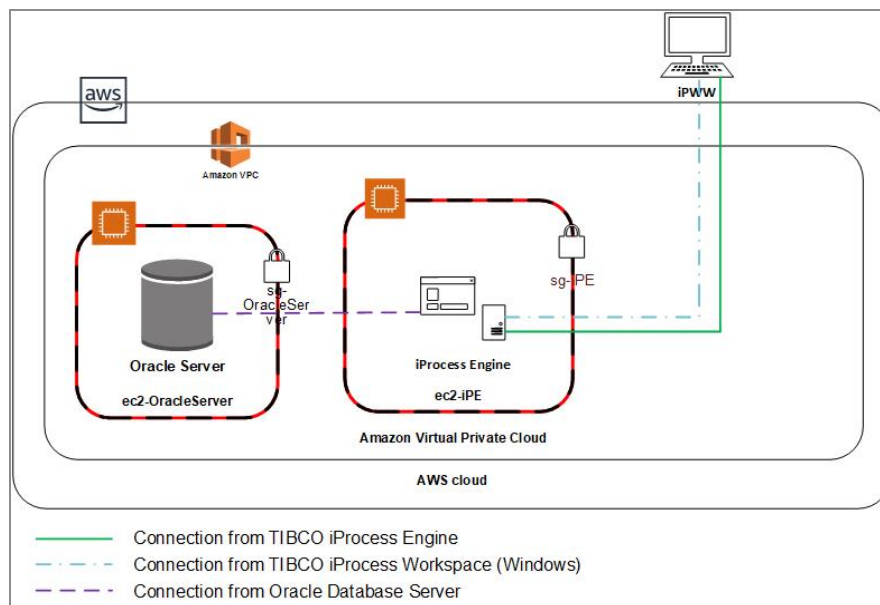
- a. Specify a rule on ec2-iPE for the database server to communicate with iProcess Engine.
- b. Specify a custom TCP rule (for example: 46000-46020) to restrict the number of inbound connections to ec2-iPE.
- c. Specify a custom TCP rule so that only client machines on an external domain can access iProcess Engine on RPC port (The default is 111.)

Type	Protocol	Port Range	Source		Description
Custom TCP Rule	TCP	22	Custom	192.0.2.0/32	SSH to access the VM

Type	Protocol	Port Range	Source		Description
Custom TCP Rule	TCP	46000-46020	Custom	192.0.2.0/32	Port range used by iProcess Engine
All TCP	TCP	0-65535	Custom	sg-OracleServer	To allow traffic from members of sg-OracleServer
Custom TCP Rule	TCP	111	Custom	192.0.2.0/32	To access iProcess Engine

Note: 192.0.2.0/32 is used as an example IP address, replace this with your IP address.

Once you configure these security groups, your setup looks something like the following illustration.



Configuring Security Groups When iProcess Workspace (Browser) is used to Connect to iProcess Engine

To connect to iProcess Engine by using iProcess® Workspace (Browser), perform the following steps to appropriately configure security groups.

1. Start an EC2 instance in your VPC
2. Name the created instance `ec2-OracleServer` and install the Oracle Database Server on this instance.
3. Start a second EC2 instance in your VPC.
4. Name the created instance `ec2-iPETomcat` and install iProcess Engine and iProcess Workspace (Browser) on this instance.
5. Create the following security groups for the two EC2 instances:
 - Create `sg-OracleServer` for `ec2-OracleServer`.
 - Create `sg-iPETomcat` for `ec2-iPETomcat`.
6. Configure `sg-OracleServer`
 - a. Specify a custom TCP rule so only machines on an external domain can access the Oracle Database Server (The default port is 1521.)
 - b. Specify a rule on `ec2-OracleServer` for iProcess Engine to communicate with the database server.

Type	Protocol	Port Range	Source		Description
Custom TCP Rule	TCP	22	Custom	192.0.2.0/32 ¹	SSH to access the VM
All TCP	TCP	0-65535	Custom	sg-iPE	To allow traffic from members of sg-iPE

¹192.0.2.0/32 is used as an example IP address, replace this with your IP address.

Type	Protocol	Port Range	Source		Description
Oracle Database Server	TCP	1521	Custom	192.0.2.0/32	To access the Oracle database from an external machine

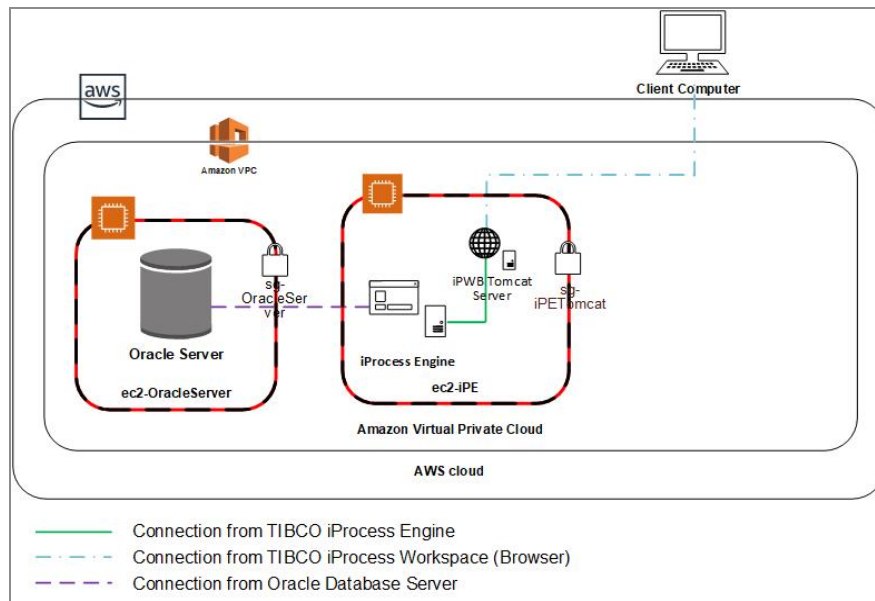
7. Configure sg-iPETomcat

- a. Specify a rule on ec2-iPETomcat for the database server to communicate with iProcess Engine.
- b. Specify a custom TCP rule so that only client machines on an external domain can access the iProcess Workspace (Browser) (The default port is 8080.)

Type	Protocol	Port Range	Source		Description
Custom TCP Rule	TCP	22	Custom	192.0.2.0/32	SSH
All TCP	TCP	0-65535	Custom	sg-OracleServer	To allow traffic from members of sg-OracleServer
Custom TCP Rule	TCP	8080	Custom	192.0.2.0/32	Apache Tomcat Server - To connect to iProcess Workspace (Browser)



Note: Once you configure these security groups, your setup looks something like the following illustration.



Examples of Security Groups for TIBCO iProcess Engine on Azure

The following examples describe some common security group configurations. You can also configure security groups as per your security protocols.

Configuring Security Groups When iProcess Workspace (Windows) Is Installed in Azure

To use iProcess® Workspace (Windows) instances in Azure to connect to TIBCO iProcess Engine, perform the following steps to appropriately configure security groups.

1. Start an Azure Virtual Machine (AVM) in your Virtual Network (VNET).
2. Name the created virtual machine as `avm-OracleServer` and install the Oracle Database Server on this virtual machine.
3. Start a second AVM in your VPC.
4. Name the created virtual machine as `avm-iPE` and install iProcess Engine on this virtual machine.

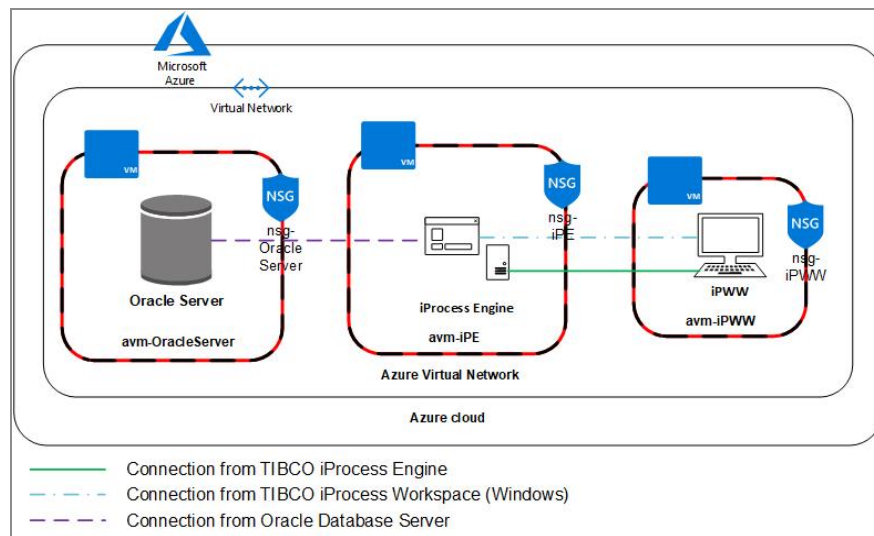
5. Start a third AVM instance in your Virtual Network.
6. Name the created virtual machine as `avm-iPWW` and install iProcess Workspace (Windows) on this virtual machine.
7. Create the following security groups for all three Azure Virtual Machines.
 - `nsg-OracleServer` for the `avm-OracleServer` instance.
 - `nsg-iPE` for the `avm-iPE` instance.
 - `nsg-iPWW` for the `avm-iPWW` instance.
8. **Configure `nsg-OracleServer`, `nsg-iPE`, and `nsg-iPWW`**
 - a. Specify a custom TCP rule that allows only machines on an external domain to access the Oracle Database Server (The default port is 1521.)
 - b. Specify a rule on `avm-OracleServer` for iProcess Engine to communicate with the database server.
 - c. Specify a rule on `avm-iPE` for the database server to communicate with iProcess Engine.
 - d. Specify a rule on `avm-iPE` for iProcess Workspace (Windows) to communicate with iProcess Engine.
 - e. Specify a rule on `avm-iPWW` for iProcess Engine to communicate with the iProcess Workspace (Windows).
 - f. Specify Remote Desktop (RDP) rule for access to `avm-iPWW` from an external domain.

Inbound Security Rules

Priority	Name	Source	Destination	Service	Action
105	iPE_Port	192.0.2.0/32	Any	Custom (Any/111)	Allow
130	Tibco	192.0.2.0/32	Any	Custom (Any/48000-48020)	Allow
180	SPO Port	192.0.2.0/32	Any	Custom (Any/45157)	Allow
1000	default-allow-ssh	192.0.2.0/32	Any	SSH (TCP/22)	Allow

Note: 192.0.2.0/32 is used as an example IP address, replace this with your IP address.

After configuring these security groups, your setup looks something like the following illustration.



Configuring Security Groups When iProcess Workspace (Windows) Is Installed on an External Machine

To connect to iProcess Engine from an external machine that has iProcess Workspace (Windows) installed, perform the following steps to appropriately configure security groups.

1. Start an AVM in your Virtual Network.
2. Name the created virtual machine as `avm-OracleServer`. Install the Oracle Database Server on this virtual machine.
3. Start a second AVM in your Virtual Network.
4. Name the created virtual machine as `avm-iPE`. Install iProcess Engine on this virtual machine.

5. Install iProcess Workspace (Windows) on the client machine (on an external domain). For more information, see *TIBCO iProcess Workspace (Windows) Installation*.
6. Now, create security groups for the two Azure Virtual Machines:
 - Create nsg-OracleServer for the avm-OracleServer instance.
 - Create nsg-iPE for the avm-iPE instance.
7. Configure nsg-OracleServer
 - a. Specify a custom TCP rule that allows only machines on an external domain to access the Oracle Database Server (The default port is 1521.)
 - b. Specify a rule on avm-OracleServer for iProcess Engine to communicate with the database server.
 - c. Specify a rule on avm-iPE for the database server to communicate with the iProcess Engine.
 - d. Specify a custom TCP rule (for example: 46000-46020) to restrict the number of inbound connections to avm-iPE.
 - e. Specify a custom TCP rule that allows only client machines on an external domain to access iProcess Engine on the RPC port (The default is 111.)

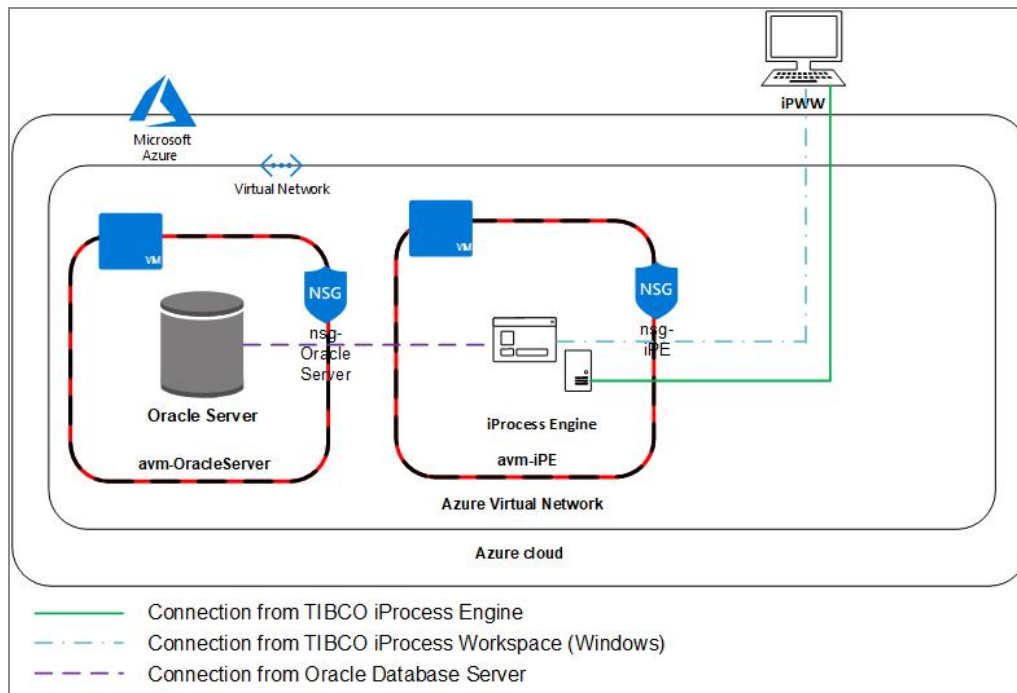
Inbound Security Rules

Priority	Name	Source	Destination	Service	Action
110	Oracle	Any	Any	Custom (Any/1521)	Allow
1000	default-allow-ssh	Any	Any	SSH (TCP/22)	Allow

Outbound Security Rules

Priority	Name	Source	Destination	Service	Action
100	AllTcpOut	Any	Any	Custom (Any/Any)	Allow

After configuring these security groups, your setup looks something like the following illustration.



Configuring Security Groups When iProcess Workspace (Browser) Is used to Connect to iProcess Engine

To connect to iProcess Engine from iProcess® Workspace (Browser), perform the following steps to configure security groups.

1. Start an AVM in your Virtual Network.
2. Name the created virtual machine as `avm-OracleServer`. Install the Oracle Database Server on this virtual machine.
3. Start a second AVM in your Virtual Network.
4. Name the created virtual machine as `avm-iPETomcat`. Install iProcess Engine and iProcess Workspace (Browser) on this virtual machine.
5. Create security groups for the two Azure Virtual Machines:
 - Create `nsg-OracleServer` for `avm-OracleServer` instance.
 - Create `nsg-iPETomcat` for `avm-iPETomcat` instance.

6. Configure nsg-OracleServer

- a. Specify a custom TCP rule so that only machines (on an external domain) can access the Oracle Database Server (The default port is 1521.)
- b. Specify a rule on avm-OracleServer for iProcess Engine to communicate with the database server.
- c. Specify a rule on avm-iPETomcat for the database server to communicate with iProcess Engine.
- d. Specify a custom TCP rule so only client machines on an external domain can access the iProcess Workspace (Browser) (The default port is 8080.)

Inbound Security Rules

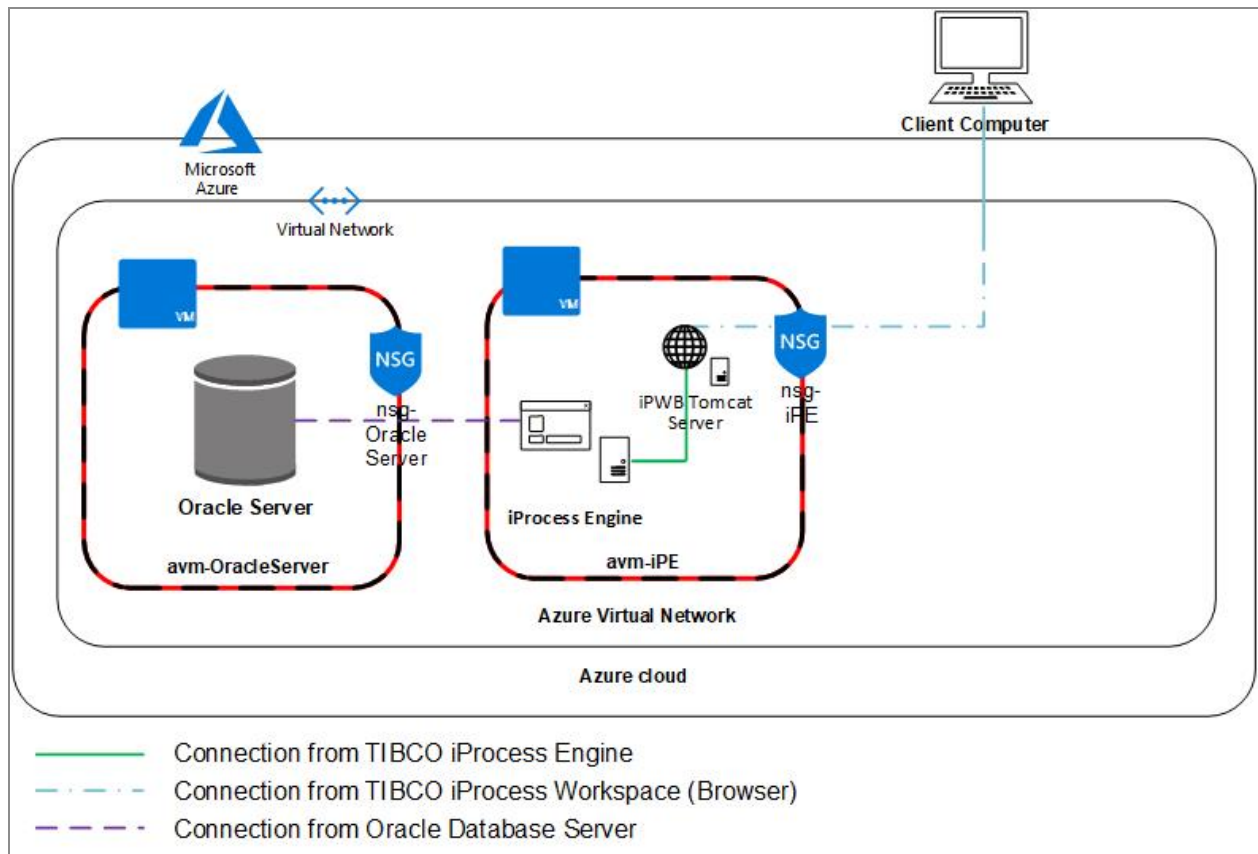
Priority	Name	Source	Destination	Service	Action
200	default-allow-rdp	Any	Any	Custom (TCP/3389)	Allow
300	AllTCP	192.0.2.0/32	Any	Custom (Any/Any)	Allow

Outbound Security Rules

Priority	Name	Source	Destination	Service	Action
100	AllTCP-outbound	Any	Any	Custom (Any/Any)	Allow

i Note: 192.0.2.0/32 is used as an example IP address, replace this with your IP address.

After configuring these security groups, your setup looks something like the following illustration.



Configuring Cloud Databases for iProcess Engine

To use a cloud database, such as Oracle-RDS on AWS or SQL Database on Microsoft Azure, you must configure the same to work with your iProcess Engine setup. This section provides instructions on configuring a cloud database.

Sample Configuration for Oracle Database on Amazon RDS

AWS provides Amazon Relational Database Service (Amazon RDS) that you can use to set up, operate, and scale a relational database on the cloud. Amazon RDS is license-based and works on a “pay only for what you use policy.” For more information about Amazon RDS, visit the Amazon Relational Database Service (RDS) website.

Perform the following steps to configure an Oracle database instance on Amazon RDS and establish connections with iProcess Engine:

1. Create a database instance on Amazon RDS running Oracle. For more information, see the User’s Guide for Amazon Relational Database Service (Amazon RDS).

After you select the database engine and specify details such as the identifier, password, and so on, the final step is to configure advanced settings for the database, which in this case is Oracle.

2. On the Configure Advanced settings page, add the Oracle database instance to the VPC on which iProcess Engine exists or is to be installed. On this page, you can also define accessibility levels, availability zone, and security groups. The following table lists the fields and their respective values that you must configure on this page.

Database Settings

Field	Required Value
Virtual Private Cloud (VPC)	Select the VPC on which iProcess Engine exists or needs to be installed.
Subnet group	Defines the subnets and IP range that the DB instance can use in the selected VPC. You must create a subnet group for the database instance and then select the same in this field. For more information about creating subnets, see User's Guide for Amazon RDS.
Public accessibility	Determines whether you want EC2 instances and devices outside the VPC to connect DB instance. If yes, a public IP is assigned to the DB instance.
Availability Zone	Specifies the availability zone of your DB instance.
VPC Security Group	In this field, you can choose an existing security group or create a new one. Security groups have rules authorizing connections from all EC2 instances and devices that must connect to the database instance.

For this sample configuration, the following table lists the security group settings for sg-iPE such that iProcess Engine can connect to the Oracle database instance on Amazon RDS.

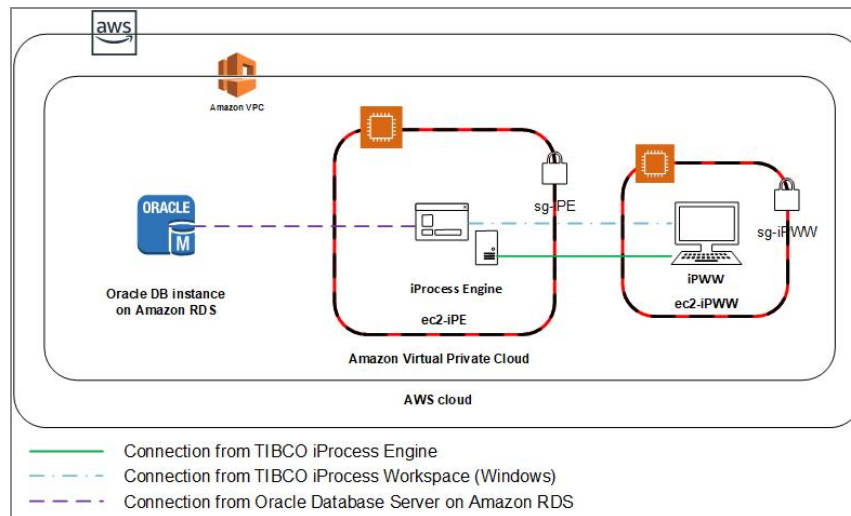
VPC Port Range

Type	Protocol	Port Range	Source	Description
All traffic	All	All	192.0.2.0/32	From private network
All traffic	All	All	sg-iPE	From Oracle Database Server on Amazon RDS



Note: 192.0.2.0/32 is used as an example IP address, replace this with your IP address.

The sample setup would resemble the following illustration.



Sample Configuration for SQL Database on Microsoft Azure

SQL Database is a relational database service provided by Microsoft Azure. It allows efficient migration capabilities from an on-premises SQL Server and is also highly scalable with regards to performance and storage.

For more information about SQL Database, visit the SQL Database topic on the Microsoft Azure website.

Perform the following steps to configure SQL Database on Microsoft Azure to establish connections to and from iProcess Engine:

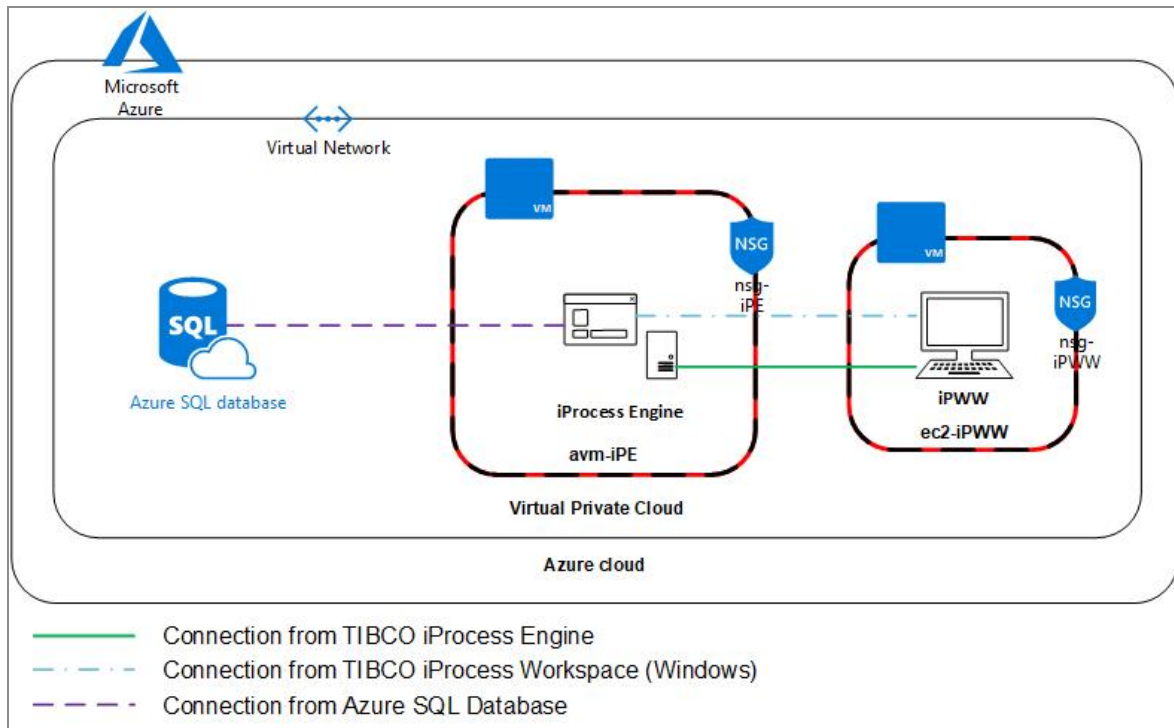
1. From Azure Home, navigate to SQL databases.
2. Select the SQL database that you want to configure with iProcess Engine.
3. Click Firewalls and virtual networks on the left pane.
4. Ensure that **Allow access to Azure services** is ON and the Client IP address is the IP of your private network.



Note

If you have iProcess Engine installed on a different virtual network, you must add this to the Azure SQL configuration. For more information, see the documentation for Azure SQL Database.

iProcess Engine can now communicate with Azure SQL Database. See the following illustration.



CORs Filter Configuration

The following functionality and features have been changed in this release of TIBCO iProcess® Engine.

- JIRA summary
- JIRA summary

Configuring TIBCO iProcess Technology Plug-ins

This section describes how to configure iProcess® Technology Plug-ins installed on iProcess Engine.

Setting Parameters

For iProcess Technology Plug-ins to function correctly, you must explicitly set the `java.rmi.server.hostname` property with the public IP of the AWS or Azure machine.

- **Linux/UNIX:** Edit the `SWJVM_OPTIONS` line in `$SWDIR/eaijava/scripts/env.sh` to append
`-Djava.rmi.server.hostname=<iProcess Engine FQDN>`
- **Windows:** Edit the `SWJVM_OPTIONS` environment variable to append
`-Djava.rmi.server.hostname=<iProcess Engine FQDN>`

For example (on both Windows and Linux):

```
SWJVM_OPTIONS="-Dsun.lang.ClassLoader.allowArraySyntax=true -  
Djava.rmi.server.hostname=ec2-52-66-190-210.ap-south-1.compute.amazonaws.com"
```

If you have iProcess Workspace Plug-ins/iProcess Workspace (Browser) installed on a non-AWS or non-Azure network, add the following security group configuration rules to connect to iProcess Engine/iProcess Technology Plug-ins hosted on AWS or Azure.

Type	Protocol	Port Range	Source	Purpose
Custom TCP Port	TCP	10021	Custom	JMX Port
Custom TCP Port	TCP	10022	Custom	RMI Port



Note

In this table, 192.0.2.0/32 is used as an example IP address, replace this with your IP address.

Support for EAICOM

EAICOM plug-in is not supported in Microsoft Azure. This is because Microsoft Distributed Transaction Coordinator (MSDTC) is not supported on the Azure environment.

Related Documents

This appendix lists documents that you could refer to for further help.

Document Title	Link or Description
AWS Documentation	https://aws.amazon.com/documentation
Troubleshooting Connecting Instance for AWS	http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/TroubleshootingInstancesConnecting.html
Amazon RDS Documentation	https://aws.amazon.com/rds/resources/
Azure Documentation	https://docs.microsoft.com/en-us/azure/
Azure SQL Database Documentation	https://docs.microsoft.com/en-us/azure/sql-database/
Troubleshooting Connecting	https://azure.microsoft.com/en-us/resources/knowledge-center/

Document Title	Link or Description
Instance for Azure	

Known Issue

The following issue exists in this release of TIBCO iProcess® Engine.

Key	Summary
IPE-5036	The EAICOM feature is not available on iProcess Engine for Azure.

Troubleshooting

This section describes problems you might encounter and the recommended courses of action to resolve them.

Authentication Error

Problem

Http failure response for (unknown URL): 0 Unknown Error.

Description

While logging into the iProcess Administration Console, sometimes the server returns an authentication error as stated here.

Resolution

- export NLS_LANG=American_America.AL32UTF8(NLS_CHARACTERSET on database server and the NLS_LANG env should match)
- Update the IP address value of the attribute apiUrl present in the json file at \$SWDIR/tomcat/webapps/ipac/config/ipac.properties.json with the public IP address. If

Given public IP address : 13.126.165.172

Given private IP address : 172.31.17.169

In the \$SWDIR/config/ipac.properties, IP_ADDR must be updated as

IP_ADDR= 172.31.17.169

In \$SWDIR/tomcat/webapps/ipac/config/ipac.properties.json, apiUrl must be updated as

"apiUrl":"https://13.126.165.172:8443/",

- The browser's cache (related to Administrator console) is cleared before opening the Administrator Console Login page.

TIBCO Documentation and Support Services

For information about this product, you can read the documentation, contact TIBCO Support, and join TIBCO Community.

How to Access TIBCO Documentation

Documentation for TIBCO products is available on the [Product Documentation website](#), mainly in HTML and PDF formats.

The [Product Documentation website](#) is updated frequently and is more current than any other documentation included with the product.

Product-Specific Documentation

The documentation for this product is available on the [TIBCO iProcess® Engine Product Documentation](#) page.

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- To create a Support case, you must have a valid maintenance or support contract with a Cloud Software Group entity. You also need a username and password to log in to the [product Support website](#). If you do not have a username, you can request one by clicking **Register** on the website.

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