How-To Library

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AWS PrivateLink Onboarding Guide for Informatica Intelligent Cloud Services

Abstract

If you use an Amazon Virtual Private Cloud (VPC), you can configure a private connection between your VPC and Informatica Intelligent Cloud Services using Amazon Web Services (AWS) PrivateLink.

You can use AWS PrivateLink with the following services:

- API Manager
- Application Integration
- Cloud Data Integration for PowerCenter (CDI-PC)
- B2B Gateway
- Data Governance and Catalog
- Data Integration
- Data Marketplace
- Data Profiling
- Data Quality
- Integration Hub
- Data Ingestion and Replication (Databases, Files, and Streaming)
- MDM SaaS services (Customer 360 SaaS, Multidomain MDM SaaS, Product 360 SaaS, Reference 360 Saas, and Supplier 360 SaaS)
- Metadata Command Center

Supported Versions

- Informatica Intelligent Cloud Services October 2024

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Overview

If you use an Amazon Virtual Private Cloud (VPC), you can configure a private connection between your VPC and Informatica Intelligent Cloud Services using Amazon Web Services (AWS) PrivateLink.

To use AWS PrivateLink, you must purchase the appropriate SKU through Informatica. AWS PrivateLink communication works with Intelligent Data Management Cloud instances that are deployed on AWS infrastructure.

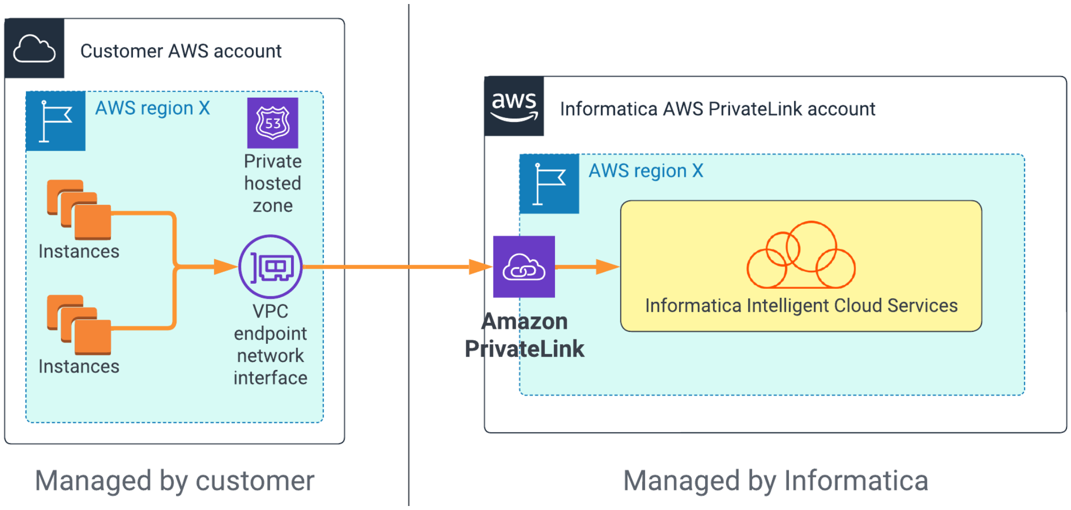
You can use AWS PrivateLink with the following services:

- API Manager
- Application Integration
- Cloud Data Integration for PowerCenter (CDI-PC)
- B2B Gateway
- Data Governance and Catalog
- Data Integration
- Data Marketplace
- Data Profiling
- Data Quality
- Integration Hub
- Data Ingestion and Replication (Databases, Files, and Streaming)
- MDM SaaS services (Customer 360 SaaS, Multidomain MDM SaaS, Product 360 SaaS, Reference 360 Saas, and Supplier 360 SaaS)
- Metadata Command Center

Note: For Advanced Data Integration, you can use AWS PrivateLink only on a private cluster on AWS. You can't use AWS PrivateLink on a local or self-service cluster, or on an advanced cluster in a serverless runtime environment.

When you use AWS PrivateLink, the Secure Agent in your VPC communicates with Informatica Intelligent Cloud Services securely through AWS PrivateLink instead of going over the public internet.

The following image shows an overview of the communication between your AWS account and Informatica Intelligent Cloud Services when you use AWS PrivateLink:



For all services except Application Integration, communication between Informatica Intelligent Cloud Services and the Secure Agent in your VPC is two-way. For Application Integration, communication is from Application Integration to the Secure Agent only. For more information about using Application Integration with AWS PrivateLink, see "Using Application Integration with AWS PrivateLink" on page 16.

To configure Informatica Intelligent Cloud Services to work with AWS PrivateLink, complete the following steps:

1. Open a support case with Informatica Global Customer Support to request access to Informatica Intelligent Cloud Services using AWS PrivateLink.
2. Create a VPC endpoint in your Amazon account.
3. Configure the networking rules on AWS.
4. Open the hosted zone and create a record for each Informatica Intelligent Cloud Services service that you use.
5. Optionally, set up a VPC endpoint for disaster recovery.
6. Verify the IP address to ensure that you're connecting to Informatica Intelligent Cloud Services using AWS PrivateLink.
7. If you use Data Quality or Data Profiling, provision an interface endpoint to enable private communication between the Secure Agent and the Data Quality/Data Profiling S3 storage bucket.
8. If you use Advanced Data Integration, perform additional configuration steps to use AWS PrivateLink.
9. If you use Cloud Data Integration for PowerCenter (CDI-PC), provision an interface endpoint to enable private communication between the Secure Agent and the S3 storage bucket. Contact Informatica Global Customer Support for any support regarding S3 bucket.

   Important: The Secure Agent, the CDI-PC domain, and all corresponding nodes must be on the same VPC.

The following sections in this guide provide details about each of these steps.

Before you begin

Before you begin, note the IP address that you use to connect to Informatica Intelligent Cloud Services over the public internet. When you finish configuring an AWS PrivateLink connection to Informatica Intelligent Cloud Services, you'll need to verify that this IP address differs from the one you use to connect to Informatica Intelligent Cloud Services using AWS PrivateLink.

To verify the IP address, open a terminal on AWS and use the ping command to ping Informatica Intelligent Cloud Services from a server in your AWS account.

For example, if your Informatica Intelligent Cloud Services login URL is `https://dm-us.informaticacloud.com/identity-service/home`, use the following command to ping Informatica Intelligent Cloud Services:

```
ping dm-us.informaticacloud.com
```

The command returns output like the following example:

```
PING iics-gaprod-ids-elb-123456789.us-west-2.elb.amazonaws.com (128.01.23.456): 56 data bytes
```

The IP address is the value within the parentheses. You can record this value in "Appendix B: Worksheet for setting up AWS PrivateLink" on page 26.

Step 1. Open a support case with Informatica Global Customer Support

To start, you'll need to open a support case with Informatica Global Customer Support requesting access to Informatica Intelligent Cloud Services through AWS PrivateLink. Informatica Global Customer Support will add your AWS account ID to the allowlist and provide you with the Amazon Resource Name (ARN) for your POD and region.

If you need help creating a support case, contact your client services manager.

1. Open a support case with Global Customer Support and request access to Informatica Intelligent Cloud Services using AWS PrivateLink. Provide the following information in your support case:
   - Your Informatica Intelligent Cloud Services organization ID.
   - Your AWS region and backup region.

     Your VPC endpoint and the AWS PrivateLink account managed by Informatica will be in the same region. For more information about finding your AWS region, see Regions, Availability Zones, and Local Zones in the AWS documentation.
   - Your AWS account ID and backup account ID.

     The account ID will be in the following format: `arn:aws:iam::<account ID>:root`. For more information about finding your AWS account ID, see Your AWS account identifiers in the AWS documentation.

   You can record these values in "Appendix B: Worksheet for setting up AWS PrivateLink" on page 26.
2. Wait for Informatica to respond to your request and provide you with the ARN.

   You should receive a response within two business days.

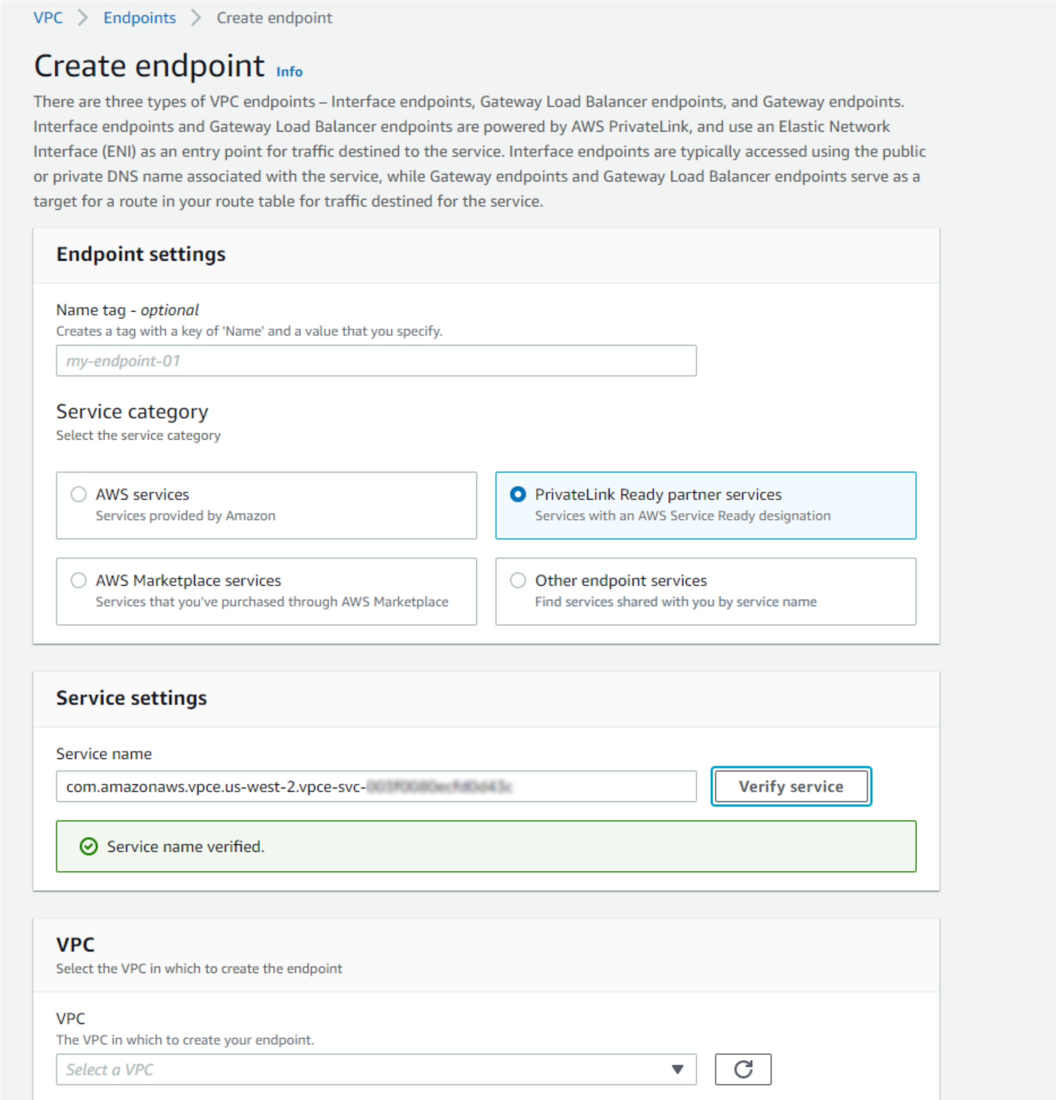
When Informatica responds to your request, we'll add your AWS account ID to the allowlist so that you can request an AWS PrivateLink connection to Informatica Intelligent Cloud Services. We'll also provide you with the ARN for your POD and region and enable the appropriate license for your organization.

Step 2. Create a VPC endpoint in your Amazon account

After Informatica Global Customer Support accepts your request, create a VPC endpoint (VPCE) in your Amazon account.

1. In the AWS Management Console, under **Services**, select **VPC**.
2. Under **Virtual private cloud**, click **Endpoints**.
3. On the **Endpoints** page, click **Create endpoint**.

The **Create Endpoint** page appears:



VPC > Endpoints > Create endpoint

Create endpoint Info

There are three types of VPC endpoints – Interface endpoints, Gateway Load Balancer endpoints, and Gateway endpoints. Interface endpoints and Gateway Load Balancer endpoints are powered by AWS PrivateLink, and use an Elastic Network Interface (ENI) as an entry point for traffic destined to the service. Interface endpoints are typically accessed using the public or private DNS name associated with the service, while Gateway endpoints and Gateway Load Balancer endpoints serve as a target for a route in your route table for traffic destined for the service.

Endpoint settings

Name tag - *optional*
Creates a tag with a key of 'Name' and a value that you specify.
my-endpoint-01

Service category
Select the service category

○ AWS services
Services provided by Amazon

● PrivateLink Ready partner services
Services with an AWS Service Ready designation

○ AWS Marketplace services
Services that you've purchased through AWS Marketplace

○ Other endpoint services
Find services shared with you by service name

Service settings

Service name
com.amazonaws.vpce.us-west-2.vpce-svc-[redacted]

Verify service

✓ Service name verified.

VPC
Select the VPC in which to create the endpoint

VPC
The VPC in which to create your endpoint.
Select a VPC ▼

4. Under **Endpoint settings**, enter a name tag and select the service category **PrivateLink Ready partner services**.
5. Under **Service settings**, enter the ARN name provided by Informatica and click **Verify service**.

   You should see a message saying that the service name was verified.

   If service verification fails, verify that your VPC endpoint and the AWS PrivateLink account managed by Informatica are in the same region as your Informatica Intelligent Cloud Services organization. If they're not, you'll need to set up VPC peering to route traffic to an endpoint that is in the same region as the AWS PrivateLink account managed by Informatica. For more information about setting up VPC peering, see the Amazon VPC Peering Guide.
6. Under **VPC**, select the VPC that you want to use to connect to Informatica Intelligent Cloud Services.

   This is the VPC where your Secure Agents are or will be installed.
7. Under **Subnets**, select the availability zones and subnet IDs that you want to communicate over AWS PrivateLink.

You can select multiple subnets in different availability zones to ensure that your interface endpoint is resilient to availability zone failures.

8. For the **IP address type**, select **IPv4**.
9. Under **Security groups**, select the security groups that define the subnet access.

   Create or select a security group with an inbound rule that allows the following access:

Property	Value
IP version	IP
Protocol	TCP
Port range	443
Source	The IP address of your subnets

10. Click **Create endpoint**.
11. Update your support case with Informatica Global Customer Support to let Informatica know that you've completed the endpoint request. Include the VPC endpoint ID in the support the case.

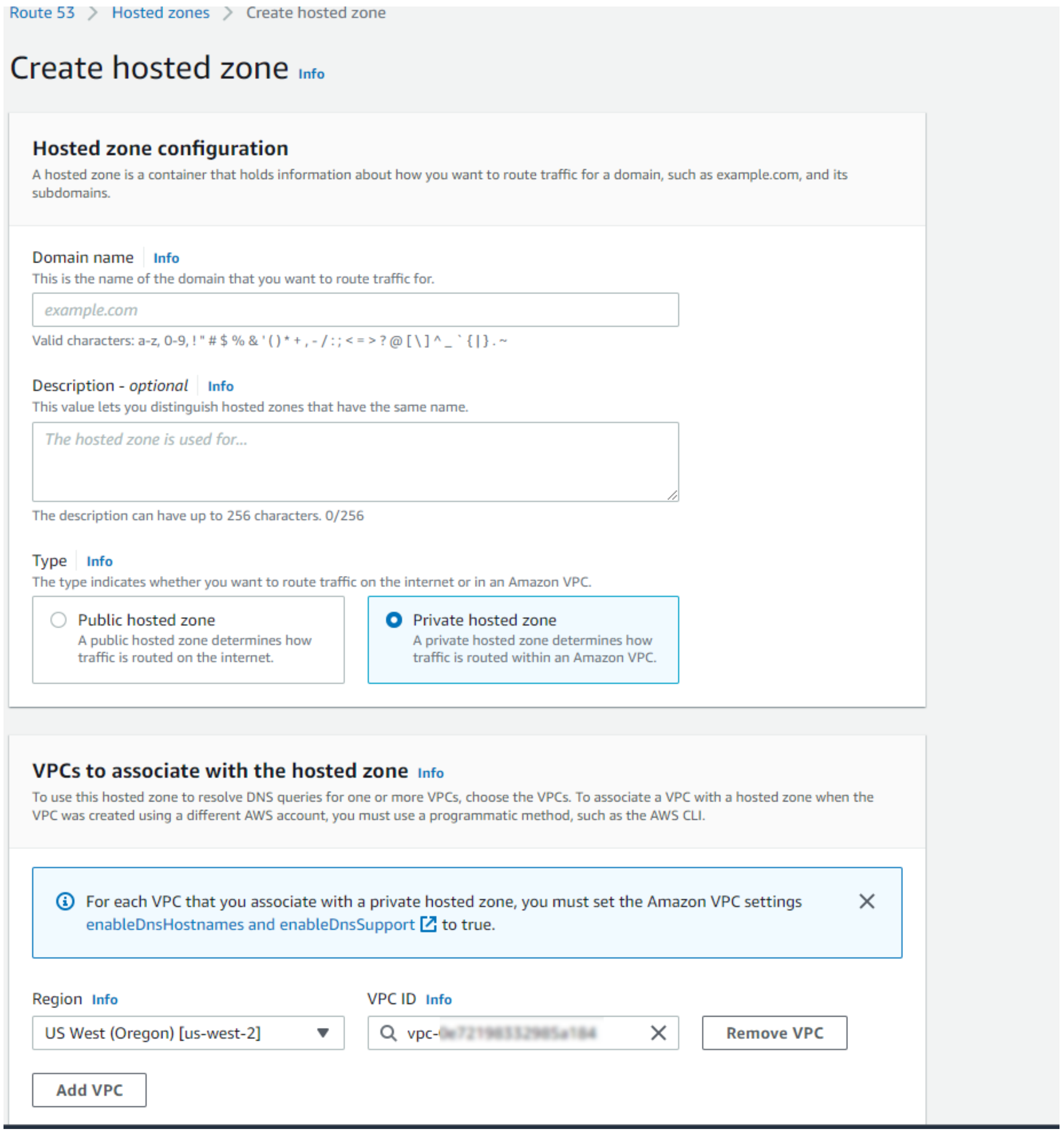
    Informatica Global Customer support will notify you when your request has been accepted. Normally, notification takes two business days or less.

Step 3. Configure networking rules on AWS

When your request has been accepted, configure the networking rules on AWS.

1. In the AWS Management Console, under **Services**, select **Route 53**.

2. In the Route 53 Dashboard, under **DNS management**, click **Create hosted zone**.



Route 53 > Hosted zones > Create hosted zone

Create hosted zone Info

Hosted zone configuration

A hosted zone is a container that holds information about how you want to route traffic for a domain, such as example.com, and its subdomains.

Domain name | Info

This is the name of the domain that you want to route traffic for.

example.com

Valid characters: a-z, 0-9, ! " # $ % & ' ( ) * + , - / : ; < = > ? @ [\ ] ^ _ ` { | } . ~

Description - *optional* | Info

This value lets you distinguish hosted zones that have the same name.

The hosted zone is used for...

The description can have up to 256 characters. 0/256

Type | Info

The type indicates whether you want to route traffic on the internet or in an Amazon VPC.

○ Public hosted zone
A public hosted zone determines how traffic is routed on the internet.

● Private hosted zone
A private hosted zone determines how traffic is routed within an Amazon VPC.

VPCs to associate with the hosted zone Info

To use this hosted zone to resolve DNS queries for one or more VPCs, choose the VPCs. To associate a VPC with a hosted zone when the VPC was created using a different AWS account, you must use a programmatic method, such as the AWS CLI.

For each VPC that you associate with a private hosted zone, you must set the Amazon VPC settings enableDnsHostnames and enableDnsSupport to true.

Region Info: US West (Oregon) [us-west-2]

VPC ID Info: vpc-[redacted]

3. Under **Domain name**, enter `informaticacloud.com`.
4. Optionally, enter a description.
5. Under **Type**, select **Private hosted zone**.
6. Under **VPCs to associate with the hosted zone**, select the region and the VPC and subnets that you configured when you created the VPC endpoint.
7. Optionally, under **Tags**, create and apply tags to identify the hosted zone.
8. Click **Create hosted zone**.

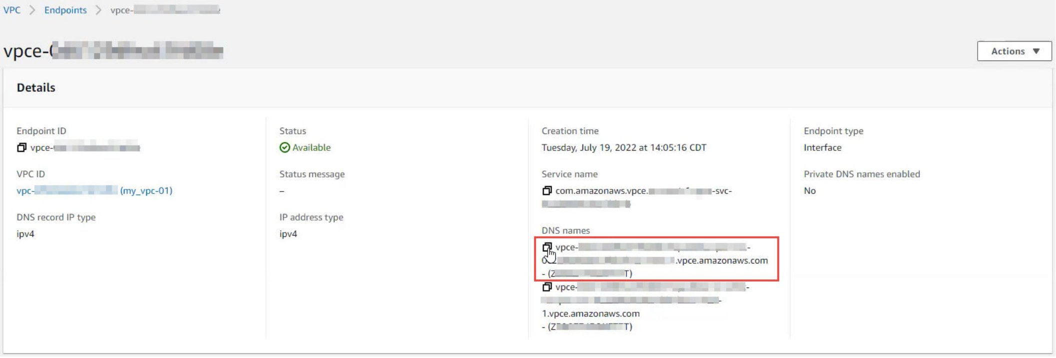
   You should see a message saying that the domain "informaticacloud.com" was successfully created.

Step 4. Open the hosted zone and create a record for each Informatica Intelligent Cloud Services service

Open the hosted zone and create a record for each Informatica Intelligent Cloud Services service that you use.

Note: To use a private hosted zone, the VPC must have DNS host names enabled.

1. In the AWS Management Console, under **Services**, select **VPC**.
2. Under **Virtual private cloud**, click **Endpoints**.
3. On the **Endpoints** page, copy the DNS name for the VPC endpoint:



vpce-[redacted]

Details

Endpoint ID: vpce-[redacted]

VPC ID: vpc-[redacted] (my_vpc-01)

DNS record IP type: ipv4

Status: Available

Status message: –

IP address type: ipv4

Creation time: Tuesday, July 19, 2022 at 14:05:16 CDT

Service name: com.amazonaws.vpce.[redacted]-svc-[redacted]

DNS names:
vpce-[redacted].vpce.amazonaws.com - (Z[redacted]T)
vpce-[redacted]-1.vpce.amazonaws.com - (Z[redacted]T)

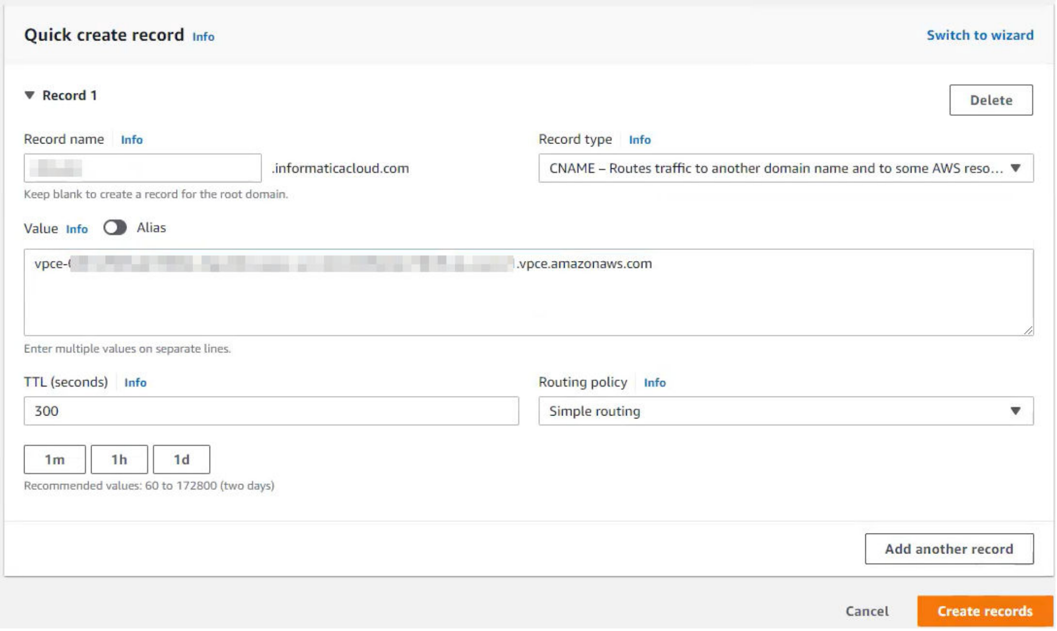
Endpoint type: Interface

Private DNS names enabled: No

   You can record this value in “Appendix B: Worksheet for setting up AWS PrivateLink” on page 26.

4. Close the **Endpoints** page.
5. In the AWS Management Console, under **Services**, select **Route 53**.
6. Select **Hosted zones**.
7. Under **Hosted Zones**, click the **informaticacloud.com** domain.
8. Under **Records**, click **Create record**.

   The **Quick create record** page appears:



Quick create record

Record name: [redacted].informaticacloud.com

Keep blank to create a record for the root domain.

Record type: CNAME – Routes traffic to another domain name and to some AWS reso… ▼

Value: ○ Alias

vpce-[redacted].vpce.amazonaws.com

Enter multiple values on separate lines.

TTL (seconds): 300

Recommended values: 60 to 172800 (two days)

Routing policy: Simple routing ▼

9. Under **Record name**, enter the DNS name you use to access the service over the public internet.

For information on how to obtain the DNS name for each service, see "Appendix A: DNS names for Informatica Intelligent Cloud Services services" on page 16. You can record the DNS names you need in "Appendix B: Worksheet for setting up AWS PrivateLink" on page 26.

10. Under **Record type**, select **CNAME**.
11. Under **Value**, enter the VPC endpoint to which you want to route traffic to, for example, `vpce-svs-abcdefg012345.us-west-2.vpce.amazonaws.com`.

    This is the DNS name that you copied from the endpoint in step 3 above.
12. If you use more than one Informatica Intelligent Cloud Services service, click **Add another record** and repeat steps 9-12 for each of the other services.
13. Click **Create records**.

Step 5. Set up a VPC endpoint for disaster recovery (optional)

Optionally, set up a VPC endpoint for disaster recovery. In the event of a faillover, you can move your DNS to the backup location.

To set up a VPC endpoint for disaster recovery, repeat the steps in "Step 2. Create a VPC endpoint in your Amazon account" on page 5 for the VPC endpoint that you want to use for disaster recovery.

Step 6. Verify the IP address

To verify that you are using AWS PrivateLink to connect to Informatica Intelligent Cloud Services, verify the IP address. The IP address you use should differ from the one you noted in the "Before you begin" step.

Open a terminal in your AWS VPC and use the ping command to verify that the IP address now differs from the one returned in "Before you begin" on page 4.

For example, if your Informatica Intelligent Cloud Services login URL is `https://dm-us.informaticacloud.com/identity-service/home`, use the following command to ping Informatica Intelligent Cloud Services:

```
ping dm-us.informaticacloud.com
```

The command now returns output like the following example:

```
PING iics-gaprod-ids-elb-123456789.us-west-2.elb.amazonaws.com (10.98.76.543): 56 data bytes
```

The new IP address should start with the same numbers as the IP address for your VPC.

Step 7. Provision an interface endpoint for Data Quality and Data Profiling

If you use Data Quality or Data Profiling, you can configure a private connection between the Secure Agent and the Data Quality/Data Profiling S3 storage bucket.

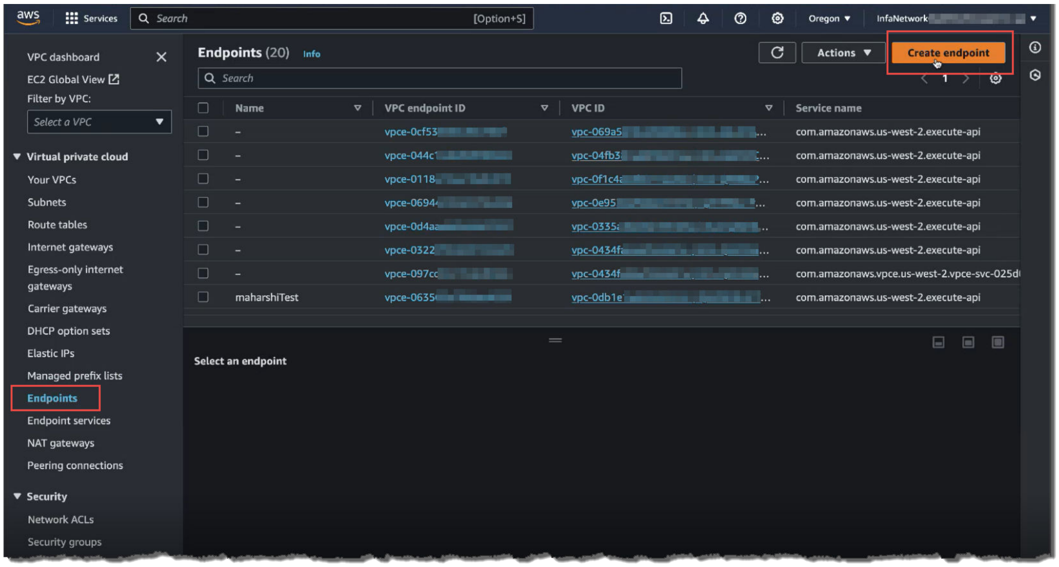
Note: If you don't use Data Quality or Data Profiling, skip this step.

To configure a private connection, provision an interface endpoint for Data Quality and Data Profiling in your VPC and enable private DNS names for your VPC endpoint. An interface VPC endpoint creates an elastic network interface (ENI) with private IP addresses in your VPC subnets.

Note that interface VPC endpoints incur hourly and per-GB data processing charges. For more information, see AWS PrivateLink Pricing in the AWS documentation.

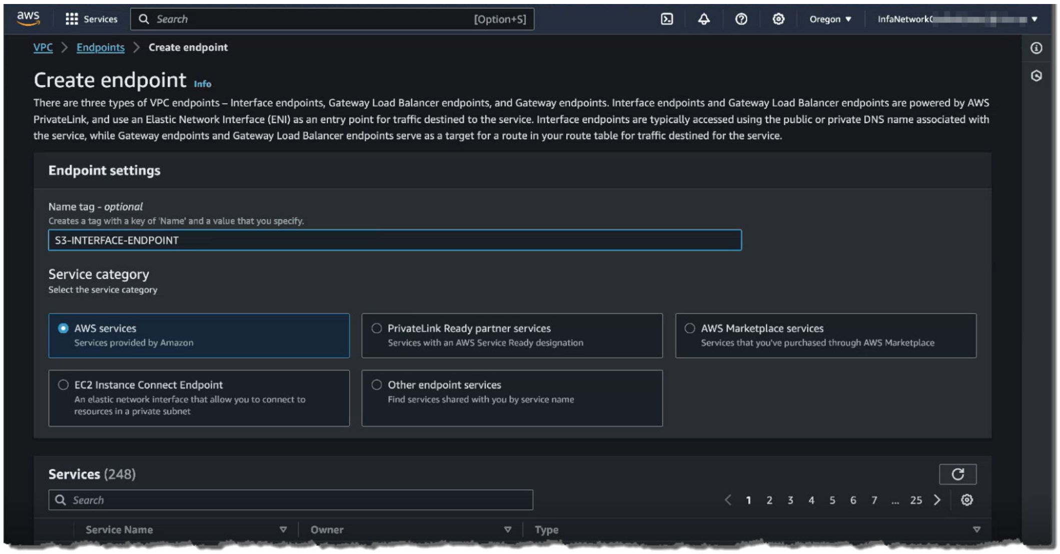
For more information about configuring interface endpoints, see Configure an interface endpoint in the AWS documentation.

1. In the AWS Management Console, under **Services**, select **VPC**.
2. Under **Virtual private cloud**, select **Endpoints**.
3. On the **Endpoints** page, click **Create endpoint**:



Name	VPC endpoint ID	VPC ID	Service name
–	vpce-0cf53[redacted]	vpc-069a5[redacted]...	com.amazonaws.us-west-2.execute-api
–	vpce-044c1[redacted]	vpc-04fb3[redacted]...	com.amazonaws.us-west-2.execute-api
–	vpce-0118[redacted]	vpc-0f1c4[redacted]...	com.amazonaws.us-west-2.execute-api
–	vpce-0694[redacted]	vpc-0e95[redacted]...	com.amazonaws.us-west-2.execute-api
–	vpce-0d4a[redacted]	vpc-0335[redacted]...	com.amazonaws.us-west-2.execute-api
–	vpce-0322[redacted]	vpc-0434f[redacted]...	com.amazonaws.us-west-2.execute-api
–	vpce-097c[redacted]	vpc-0434f[redacted]...	com.amazonaws.vpce.us-west-2.vpce-svc-025d
maharshiTest	vpce-0635[redacted]	vpc-0db1e[redacted]...	com.amazonaws.us-west-2.execute-api

The **Create endpoint** page appears:



Create endpoint Info

There are three types of VPC endpoints – Interface endpoints, Gateway Load Balancer endpoints, and Gateway endpoints. Interface endpoints and Gateway Load Balancer endpoints are powered by AWS PrivateLink, and use an Elastic Network Interface (ENI) as an entry point for traffic destined to the service. Interface endpoints are typically accessed using the public or private DNS name associated with the service, while Gateway endpoints and Gateway Load Balancer endpoints serve as a target for a route in your route table for traffic destined for the service.

Endpoint settings

Name tag - *optional*
Creates a tag with a key of 'Name' and a value that you specify.
S3-INTERFACE-ENDPOINT

Service category
Select the service category

● AWS services
Services provided by Amazon

○ PrivateLink Ready partner services
Services with an AWS Service Ready designation

○ AWS Marketplace services
Services that you've purchased through AWS Marketplace

○ EC2 Instance Connect Endpoint
An elastic network interface that allow you to connect to resources in a private subnet

○ Other endpoint services
Find services shared with you by service name

4. Under **Endpoint settings**, enter a name tag and select the service category **AWS services**.

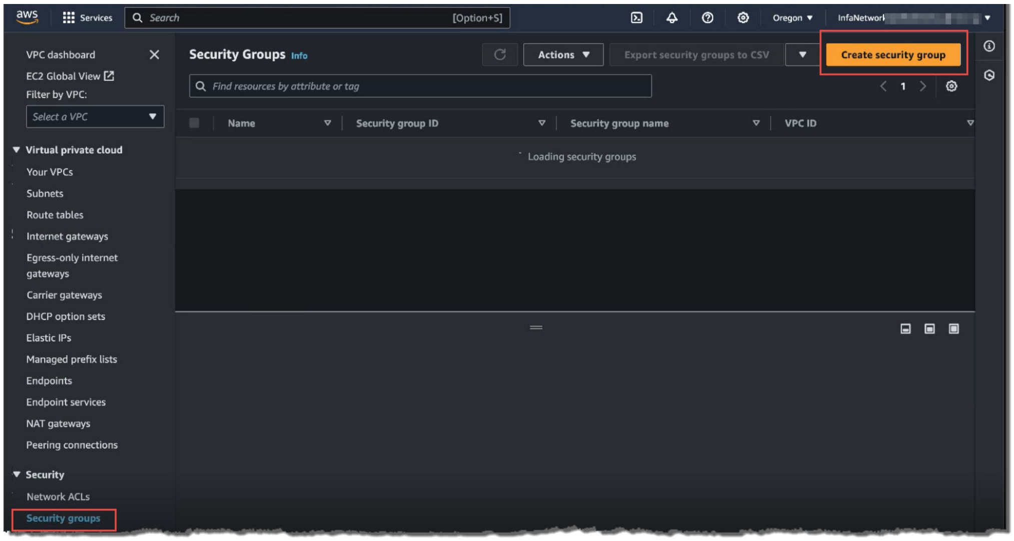
   If you're using any other DNS provider and can't use the AWS private hosted zone, contact Informatica Global Customer Support.

5. Under **Services**, search for `S3` and select the endpoint for your region, for example, `com.amazonaws.us-west-2.s3`. Be sure that the **Type** is **Interface**.
6. Under **VPC**, select the VPC in which to create your endpoint.
7. Under **Subnets**, select the availability zones and subnet IDs associated with your endpoint. Be sure to choose subnets that aren't public.

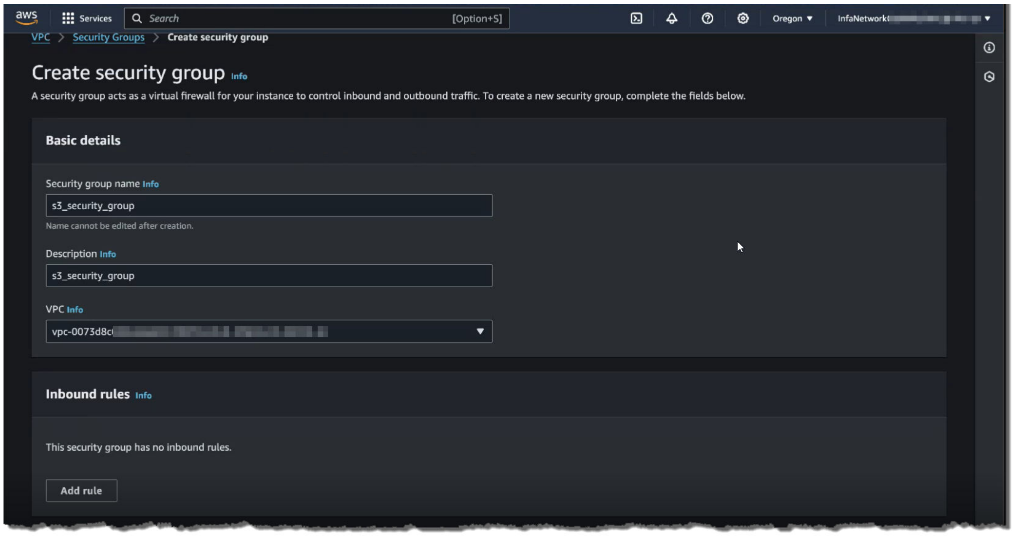
8. Under **Security groups**, select the security groups that define the subnet access or create a new security group and select it.

   To create a new security group:

   a. In the AWS Management Console, under **Security**, select **Security groups** and click **Create security group**:



   The **Create security group** page appears:



A security group acts as a virtual firewall for your instance to control inbound and outbound traffic. To create a new security group, complete the fields below.

Security group name: s3_security_group

Name cannot be edited after creation.

Description: s3_security_group

VPC: vpc-0073d8c[redacted]

This security group has no inbound rules.

   b. Enter a name for the security group.

   c. Optionally, enter a description for the security group.

   d. Select your VPC.

   e. Under **Inbound rules**, create a rule of type **HTTPS** and choose the appropriate number of CIDR blocks.

      The number of CIDR blocks should match the IP address range for the VPC.

   f. Click **Create security group** and note the security group ID.

      You'll need the security group ID when you select the security group for the endpoint.

g. In the AWS Management Console, switch back to the **Create endpoint** page, and under **Security groups**, select the security group you created.

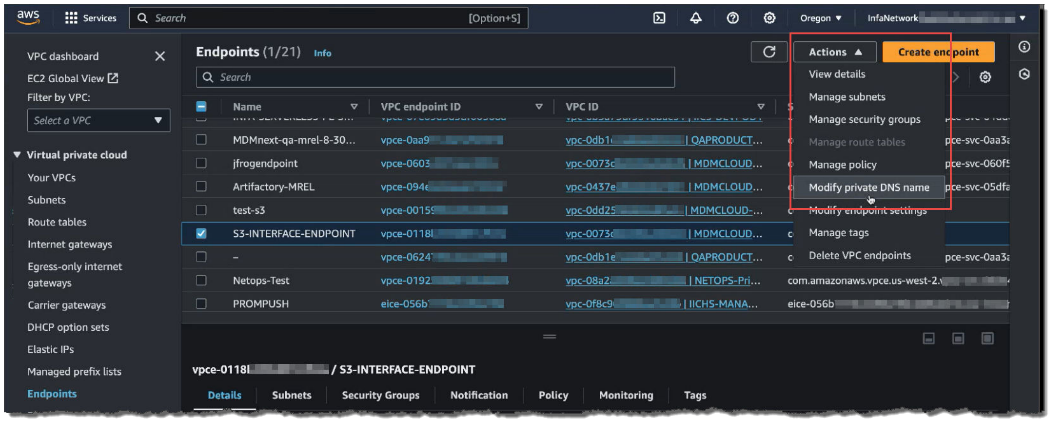
9. On the **Create endpoint** page, under **Policy**, select **Full access**, or select **Custom** and enter a custom policy for the VPC endpoint to control access to the service.

10. Optionally, add tags for the endpoint.

11. Click **Create endpoint**.

    It takes several minutes for the endpoint to become available. When the endpoint is available, its state changes to "Available" on the **Endpoints** page.

12. When the endpoint is available, on the **Endpoints** page, select the endpoint and choose **Actions** > **Modify private DNS name**:

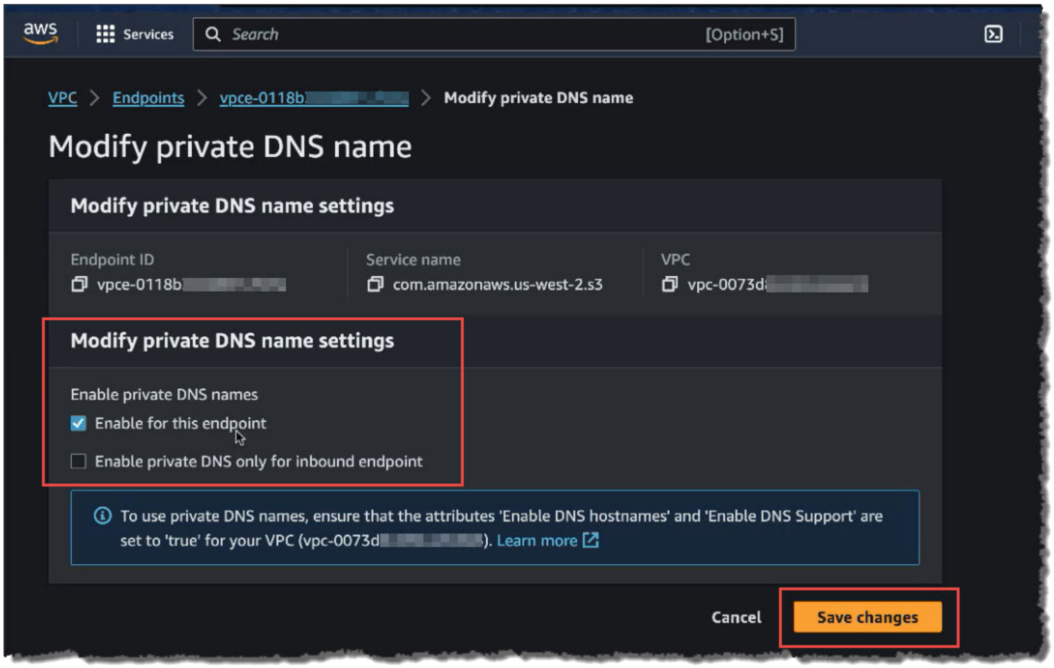


Endpoints (1/21)

	Name	VPC endpoint ID	VPC ID	S
□	MDMnext-qa-mrel-8-30...	vpce-0aa9[redacted]	vpc-0db1[redacted] | QAPRODUCT...	pce-svc-0aa3a
□	jfrogendpoint	vpce-0603[redacted]	vpc-0073c[redacted] | MDMCLOUD...	pce-svc-060f5
□	Artifactory-MREL	vpce-094e[redacted]	vpc-0437e[redacted] | MDMCLOUD...	pce-svc-05dfa
□	test-s3	vpce-0015[redacted]	vpc-0dd25[redacted] | MDMCLOUD-...	
☑	S3-INTERFACE-ENDPOINT	vpce-0118[redacted]	vpc-0073c[redacted] | MDMCLOUD...	
□	–	vpce-0624[redacted]	vpc-0db1e[redacted] | QAPRODUCT...	pce-svc-0aa3a
□	Netops-Test	vpce-0192[redacted]	vpc-08a2[redacted] | NETOPS-Pri...	com.amazonaws.vpce.us-west-2.v[redacted]
□	PROMPUSH	eice-056b[redacted]	vpc-0f8c9[redacted] | IICHS-MANA...	eice-056b[redacted]

vpce-0118[redacted] / S3-INTERFACE-ENDPOINT

13. On the **Modify private DNS name** page, under **Modify private DNS name settings**, check **Enable for this endpoint**, uncheck **Enable private DNS only for inbound endpoint**, and then click **Save changes**:



aws
Services
Search [Option+S]
VPC > Endpoints > vpce-0118b[redacted] > Modify private DNS name
Cancel
Save changes

Modify private DNS name

Modify private DNS name settings

Endpoint ID: vpce-0118b[redacted]

Service name: com.amazonaws.us-west-2.s3

VPC: vpc-0073d[redacted]

Modify private DNS name settings

Enable private DNS names

☑ Enable for this endpoint

□ Enable private DNS only for inbound endpoint

To use private DNS names, ensure that the attributes 'Enable DNS hostnames' and 'Enable DNS Support' are set to 'true' for your VPC (vpc-0073d[redacted]). Learn more

After you provision the endpoint, you can use the Linux dig command to verify that communication between the Secure Agent and S3 bucket goes through the VPC. To do this, enter the following command and verify that the IP addresses returned are part of the subnet where you created your interface endpoint:

```
dig s3.<region>.amazonaws.com +short
```

Step 8. Configure AWS PrivateLink for Advanced Data Integration

If you use Advanced Data Integration, perform additional configuration steps to use AWS PrivateLink between your VPC and Informatica Intelligent Cloud Services.

Complete the following tasks:

- Create EC2, S3, Autoscaling, Elastic Load Balancing, and STS endpoints.
- Add the artifact hub to the Informatica Cloud hosted zone.
- Configure the NAT gateway for AWS IAM and the AWS CLI.
- Enable AWS PrivateLink in the advanced cluster.

Create EC2, S3, Autoscaling, Elastic Load Balancing, and STS endpoints

Create endpoints for EC2, S3, Autoscaling, Elastic Load Balancing, and STS in your AWS account.

1. In the AWS Management Console, under **Services**, select **VPC**.
2. Under **Virtual private cloud**, click **Endpoints**.
3. On the **Endpoints** page, click **Create endpoint** to create an EC2 endpoint.
    a. Under **Endpoint settings**, enter a name tag and select the service category **AWS Services**.
    b. Under **Services**, select the EC2 service such as `com.amazonaws.eu-west-1.ec2`.
    c. Under **VPC**, select the VPC that you want to use to connect to Informatica Intelligent Cloud Services.
    d. Under **Subnets**, select the availability zones and subnet IDs that you want to communicate over AWS PrivateLink.

       You can select multiple subnets in different availability zones to ensure that your interface endpoint is resilient to availability zone failures.
    e. Under **Security groups**, select the security groups that define subnet access through port 443.
4. Click **Create endpoint** to create an S3 endpoint
    a. Under **Endpoint settings**, enter a name tag and select the service category **AWS Services**.
    b. Under **Services**, select the S3 service with type `Gateway` such as `com.amazonaws.eu-west-1.s3`.
    c. Under **VPC**, select the VPC that you want to use to connect to Informatica Intelligent Cloud Services.
    d. Under **Route Tables**, select the route table associated with the private subnet.
5. Click **Create endpoint** to create an Autoscaling endpoint.
    a. Under **Endpoint settings**, enter a name tag and select the service category **AWS Services**.
    b. Under **Services**, select the Autoscaling service such as `com.amazonaws.eu-west-1.autoscaling`.
    c. Under **VPC**, select the VPC that you want to use to connect to Informatica Intelligent Cloud Services.
    d. Under **Subnets**, select the availability zones and subnet IDs that you want to communicate over AWS PrivateLink.

       You can select multiple subnets in different availability zones to ensure that your interface endpoint is resilient to availability zone failures.

   e. Under **Security groups**, select the security groups that define subnet access through port 443.

6. Click **Create endpoint** to create an Elastic Load Balancing endpoint.
   a. Under **Endpoint settings**, enter a name tag and select the service category **AWS Services**.
   b. Under **Services**, select the Elastic Load Balancing service such as `com.amazonaws.eu-west-1.elasticloadbalancing`.
   c. Under **VPC**, select the VPC that you want to use to connect to Informatica Intelligent Cloud Services.
   d. Under **Subnets**, select the availability zones and subnet IDs that you want to communicate over AWS PrivateLink.

      You can select multiple subnets in different availability zones to ensure that your interface endpoint is resilient to availability zone failures.
   e. Under **Security groups**, select the security groups that define subnet access through port 443.
7. Click **Create endpoint** to create an STS endpoint.
   a. Under **Endpoint settings**, enter a name tag and select the service category **AWS Services**.
   b. Under **Services**, select the STS service such as `com.amazonaws.eu-west-1.sts`.
   c. Under **VPC**, select the VPC that you want to use to connect to Informatica Intelligent Cloud Services.
   d. Under **Subnets**, select the availability zones and subnet IDs that you want to communicate over AWS PrivateLink.

      You can select multiple subnets in different availability zones to ensure that your interface endpoint is resilient to availability zone failures.
   e. Under **Security groups**, select the security groups that define subnet access through port 443.

Add the artifact hub to the Informatica Cloud hosted zone

In the Informatica Cloud hosted zone, create a record for the artifact hub.

1. In the AWS Management Console, under **Services**, select **Route 53**.
2. Select **Hosted zones**.
3. Under **Hosted Zones**, click the **informaticacloud.com** domain.
4. Under **Records**, click **Create record**.
5. Under **Record name**, enter `artifacthub.informaticacloud.com`.
6. Under **Record type**, select **CNAME**.
7. Under **Value**, enter the VPC endpoint to which you want to route traffic to, for example, `vpce-svs-abcdefg012345.us-west-2.vpce.amazonaws.com`.
8. Click **Create records**.

Configure the NAT gateway for AWS IAM and the AWS CLI

Configure the NAT gateway to enable AWS IAM and the AWS CLI.

1. On an EC2 instance in your VPC, run the following commands to get the IP addresses of the AWS IAM and AWS CLI services:
   - `nslookup iam.amazonaws.com` to get the IP address of the AWS IAM service
   - `nslookup awscli.amazonaws.com` to get the IP address of the AWS CLI service
2. In the AWS Management Console, under **Services**, select **VPC**, and select your VPC.
3. Under **Resource map**, select the route table associated with the private subnet.

4. Click **Edit Routes**.
5. Click **Add route** to add a route to enable AWS IAM.

   In the route entry, add the IP address of the AWS IAM service as the destination and select NAT Gateway as the target. You can also use a dynamic IP address like 44.216.0.0/16 as the destination since the IP address can change at any time.
6. Click **Add route** to add a route to enable the AWS CLI.

   In the route entry, add the IP address of the AWS CLI service as the destination and select NAT Gateway as the target.
7. Click **Save changes.**

Enable AWS PrivateLink in the advanced cluster

Edit the advanced configuration for the advanced cluster to enable AWS PrivateLink.

1. In Administrator, navigate to the **Advanced Clusters** page.
2. Edit the advanced configuration for the advanced cluster.
3. Under **Runtime Configuration**, add a runtime property.
4. Enter the runtime property name css.aws.enable.service.endpoint.config and set it to true.

Using Application Integration with AWS PrivateLink

Application Integration supports only one-way communication through AWS PrivateLink, that is, from Application Integration to the Secure Agent.

You can invoke processes that are published on a Secure Agent through any REST client such as Postman or cURL only if the ports are allowed in the AWS security group. However, you cannot access Amazon resources using an Application Integration service connector or connection.

After you enable a Secure Agent that is installed in an AWS VPC, the agent connects directly to the connection endpoints through AWS PrivateLink. You can perform all the Application Integration operations that the Secure Agent supports. However, if the process runs on a Secure Agent that is installed on an AWS VPC, you cannot invoke the process using the endpoint URL in a browser. Instead, you can invoke the process endpoint URL using the cURL command from a machine where the Secure Agent is installed.

To invoke a process using the cURL command, use the following syntax:

```
curl -X PUT -k https://<host_name>:<port_number>/process-engine/public/rt/<process_name>
```

You can also invoke scheduled processes.

For more information about Application Integration, see the Application Integration help.

Appendix A: DNS names for Informatica Intelligent Cloud Services services

When you create records in the hosted zone for the informaticacloud.com domain, you need to allow the DNS names for each Informatica Intelligent Cloud Services service that you use. DNS names vary based on your POD.

When you enter DNS names to allow, enter the global service DNS names and the Data Integration DNS name for your POD. If you use any service other than Data Integration, you also need to enter the DNS names for the service.

For example, if you're on the APSE1 POD and you use the Application Integration (CAI) and API Manager services, you would allow the following DNS names:

```
dm-ap.informaticacloud.com
content.dm-ap.informaticacloud.com
apse1.dm-ap.informaticacloud.com
global-package.dm.informaticacloud.com
icsdownloadsecure.informatica.com
apse1-cai.dm-ap.informaticacloud.com
apse1-apim.dm-ap.informaticacloud.com
apse1-apigw.dm-ap.informaticacloud.com
```

If you are unsure of your POD or your organization uses a custom URL to log in to Informatica Intelligent Cloud Services, contact your Informatica representative to find the DNS names.

Asia/Pacific/Japan (APNE2)

If your POD is APNE2, allow the following DNS names:

Service	DNS names
Global Identity Service	dm-apne.informaticacloud.com content.dm-apne.informaticacloud.com
Global Package Delivery Manager	global-package.dm.informaticacloud.com icsdownloadsecure.informatica.com
Data Integration (CDI)	apne2.dm-apne.informaticacloud.com

If you use any of the following services, allow their DNS names as well:

Service	DNS names
API Manager	apne2-apim.dm-apne.informaticacloud.com apne2-apigw.dm-apne.informaticacloud.com
Application Integration (CAI)	apne2-cai.dm-apne.informaticacloud.com
Application Integration (Salesforce)	apne2-sfdc-cai.dm-apne.informaticacloud.com
Data Governance and Catalog, Data Marketplace and Metadata Command Center	cdgc-api.dm-apne.informaticacloud.com cdgc.dm-apne.informaticacloud.com cdmp-app.dm-apne.informaticacloud.com idmcp-api.dm-apne.informaticacloud.com idmcp-mgmt.dm-apne.informaticacloud.com mcc.dm-apne.informaticacloud.com idmc-api.dm-apne.informaticacloud.com
Data Profiling (CDP)	apne2-dqprofile.dm-apne.informaticacloud.com
Data Quality (CDQ)	apne2-dqcloud.dm-apne.informaticacloud.com
Integration Hub (CIH)	apne2-cih.dm-apne.informaticacloud.com
Data Ingestion and Replication (CMI)	apne2-ing.dm-apne.informaticacloud.com

Asia/Pacific/Japan (APSE1)

If your POD is APSE1, allow the following DNS names:

Service	DNS names
Global Identity Service	`dm-ap.informaticacloud.com` `content.dm-ap.informaticacloud.com`
Global Package Delivery Manager	`global-package.dm.informaticacloud.com` `icsdownloadsecure.informatica.com`
Data Integration (CDI)	`apse1.dm-ap.informaticacloud.com`

If you use any of the following services, allow their DNS names as well:

Service	DNS names
API Manager	`apse1-apim.dm-ap.informaticacloud.com` `apse1-apigw.dm-ap.informaticacloud.com`
Application Integration (CAI)	`apse1-cai.dm-ap.informaticacloud.com`
Application Integration (Salesforce)	`apse1-sfdc-cai.dm-ap.informaticacloud.com`
B2B Gateway	`apse1-b2bgw.dm-ap.informaticacloud.com`

Data Governance and Catalog, Data Marketplace and Metadata Command Center	`cdgc.dm-ap.informaticacloud.com`
	`mcc.dm-ap.informaticacloud.com`
	`cdmp-app.dm-ap.informaticacloud.com`
	`idmc-api.dm-ap.informaticacloud.com`
	`cdgc-api.dm-ap.informaticacloud.com`
	`idmcp-api.dm-ap.informaticacloud.com`

Data Profiling (CDP)	`apse1-dqprofile.dm-ap.informaticacloud.com`
Data Quality (CDQ)	`apse1-dqcloud.dm-ap.informaticacloud.com`
Integration Hub (CIH)	`apse1-cih.dm-ap.informaticacloud.com`
Data Ingestion and Replication (CMI)	`apse1-ing.dm-ap.informaticacloud.com`

European Union (EMW1)

If your POD is EMW1, allow the following DNS names:

Service	DNS names
Global Identity Service	`dm-em.informaticacloud.com` `content.dm-em.informaticacloud.com`
Global Package Delivery Manager	`global-package.dm.informaticacloud.com` `icsdownloadsecure.informatica.com`
Data Integration (CDI)	`emw1.dm-em.informaticacloud.com`

If you use any of the following services, allow their DNS names as well:

Service	DNS names
API Manager	`emw1-apim.dm-em.informaticacloud.com` `emw1-apigw.dm-em.informaticacloud.com`
Application Integration (CAI)	`emw1-cai.dm-em.informaticacloud.com`
Application Integration (Salesforce)	`emw1-sfdc-cai.dm-em.informaticacloud.com`
B2B Gateway	`emw1-b2bgw.dm-em.informaticacloud.com`

Data Governance and Catalog, Data Marketplace and Metadata Command Center	`cdgc.dm-em.informaticacloud.com`
	`mcc.dm-em.informaticacloud.com`
	`cdmp-app.dm-em.informaticacloud.com`
	`cdgc-api.dm-em.informaticacloud.com`
	`idmcp-api.dm-em.informaticacloud.com`
	`idmc-api.dm-em.informaticacloud.com`

Data Profiling (CDP)	`emw1-dqprofile.dm-em.informaticacloud.com`
Data Quality (CDQ)	`emw1-dqcloud.dm-em.informaticacloud.com`
Integration Hub (CIH)	`emw1-cih.dm-em.informaticacloud.com`
Data Ingestion and Replication (CMI)	`emw1-ing.dm-em.informaticacloud.com`

United Kingdom (UK1)

If your POD is UK1, allow the following DNS names:

Service	DNS names
Global Identity Service	dm-uk.informaticacloud.com content.dm-uk.informaticacloud.com
Global Package Delivery Manager	global-package.dm.informaticacloud.com icsdownloadsecure.informatica.com
Data Integration (CDI)	uk1.dm-uk.informaticacloud.com

If you use any of the following services, allow their DNS names as well:

Service	DNS names
API Manager	uk1-apim.dm-uk.informaticacloud.com uk1-apigw.dm-uk.informaticacloud.com
Application Integration (CAI)	uk1-cai.dm-uk.informaticacloud.com
Application Integration (Salesforce)	uk1-sfdc-cai.dm-uk.informaticacloud.com
B2B Gateway	uk1-b2bgw.dm-uk.informaticacloud.com
Data Governance and Catalog, Data Marketplace and Metadata Command Center	cdgc.dm-uk.informaticacloud.com mcc.dm-uk.informaticacloud.com cdmp-app.dm-uk.informaticacloud.com cdgc-api.dm-uk.informaticacloud.com idmcp-api.dm-uk.informaticacloud.com idmc-api.dm-uk.informaticacloud.com
Data Profiling (CDP)	uk1-dqprofile.dm-uk.informaticacloud.com
Data Quality (CDQ)	uk1-dqcloud.dm-uk.informaticacloud.com
Integration Hub (CIH)	uk1-cih.dm-uk.informaticacloud.com
Data Ingestion and Replication (CMI)	uk1-ing.dm-uk.informaticacloud.com

United States East (USW1)

If your POD is USW1, allow the following DNS names:

Service	DNS names
Global Identity Service	dm-us.informaticacloud.com
Global Package Delivery Manager	global-package.dm.informaticacloud.com icsdownloadsecure.informatica.com
Data Integration (CDI)	na1.dm-us.informaticacloud.com

If you use any of the following services, allow their DNS names as well:

Service	DNS names
API Manager	apim-pod1.dm-us.informaticacloud.com apigw-pod1.dm-us.informaticacloud.com
Application Integration (CAI)	na1.ai.dm-us.informaticacloud.com
Application Integration (Salesforce)	na1.sfdc-ai.dm-us.informaticacloud.com
B2B Gateway	usw1-b2bgw.dm-us.informaticacloud.com
Cloud Data Integration for PowerCenter (CDI-PC)	na1-idms.dm-us.informaticacloud.com
Data Governance and Catalog, Data Marketplace and Metadata Command Center	cdgc.dm-us.informaticacloud.com mcc.dm-us.informaticacloud.com ccma.dm-us.informaticacloud.com icd-app.dm-us.informaticacloud.com cdgc-api.dm-us.informaticacloud.com cdmp-app.dm-us.informaticacloud.com idmc-api.dm-us.informaticacloud.com
Data Profiling (CDP)	na1-dqprofile.dm-us.informaticacloud.com
Data Quality (CDQ)	na1-dqcloud.dm-us.informaticacloud.com
Integration Hub (CIH)	cih-pod1.dm-us.informaticacloud.com
Data Ingestion and Replication (CMI)	na1-ing.dm-us.informaticacloud.com

United States East (USE2)

If your POD is USE2, allow the following DNS names:

Service	DNS names
Global Identity Service	dm-us.informaticacloud.com
Global Package Delivery Manager	global-package.dm.informaticacloud.com icsdownloadsecure.informatica.com
Data Integration (CDI)	na2.dm-us.informaticacloud.com

If you use any of the following services, allow their DNS names as well:

Service	DNS names
API Manager	apim-pod2.dm-us.informaticacloud.com apigw-pod2.dm-us.informaticacloud.com
Application Integration (CAI)	na2.ai.dm-us.informaticacloud.com
Application Integration (Salesforce)	na2.sfdc-ai.dm-us.informaticacloud.com
B2B Gateway	use2-b2bgw.dm-us.informaticacloud.com
Cloud Data Integration for PowerCenter (CDI-PC)	na2-idms.dm-us.informaticacloud.com
Data Governance and Catalog, Data Marketplace and Metadata Command Center	cdgc.dm-us.informaticacloud.com cdmp-app.dm-us.informaticacloud.com mcc.dm-us.informaticacloud.com icd-app.dm-us.informaticacloud.com cdgc-api.dm-us.informaticacloud.com idmc-api.dm-us.informaticacloud.com
Data Profiling (CDP)	na2-dqprofile.dm-us.informaticacloud.com
Data Quality (CDQ)	na2-dqcloud.dm-us.informaticacloud.com
Integration Hub (CIH)	cih-pod2.dm-us.informaticacloud.com
Data Ingestion and Replication (CMI)	na2-ing.dm-us.informaticacloud.com

United States East (USE4)

If your POD is USE4, allow the following DNS names:

Service	DNS names
Global Identity Service	dm-us.informaticacloud.com
Global Package Delivery Manager	global-package.dm.informaticacloud.com icsdownloadsecure.informatica.com
Data Integration (CDI)	use4.dm-us.informaticacloud.com

If you use any of the following services, allow their DNS names as well:

Service	DNS names
API Manager	use4-apim.dm-us.informaticacloud.com use4-apigw.dm-us.informaticacloud.com
Application Integration (CAI)	use4-cai.dm-us.informaticacloud.com
Application Integration (Salesforce)	use4-sfdc-cai.dm-us.informaticacloud.com
B2B Gateway	use4-b2bgw.dm-us.informaticacloud.com
Cloud Data Integration for PowerCenter (CDI-PC)	use4-idms.dm-us.informaticacloud.com
Data Governance and Catalog, Data Marketplace and Metadata Command Center	cdgc.dm-us.informaticacloud.com mcc.dm-us.informaticacloud.com ccma.dm-us.informaticacloud.com icd-app.dm-us.informaticacloud.com cdgc-api.dm-us.informaticacloud.com cdmp-app.dm-us.informaticacloud.com idmc-api.dm-us.informaticacloud.com
Data Profiling (CDP)	use4-dqcloud.dm-us.informaticacloud.com
Data Quality (CDQ)	use4-dqprofile.dm-us.informaticacloud.com
Integration Hub (CIH)	use4-cih.dm-us.informaticacloud.com
Data Ingestion and Replication (CMI)	use4-ing.dm-us.informaticacloud.com

United States West (USW5)

If your POD is USW5, allow the following DNS names:

Service	DNS names
Global Identity Service	`dm-us.informaticacloud.com`
Global Package Delivery Manager	`global-package.dm.informaticacloud.com` `icsdownloadsecure.informatica.com`
Data Integration (CDI)	`usw5.dm-us.informaticacloud.com`

If you use any of the following services, allow their DNS names as well:

Service	DNS names
API Manager	`usw5-apim.dm-us.informaticacloud.com` `usw5-apigw.dm-us.informaticacloud.com`
Application Integration (CAI)	`usw5-cai.dm-us.informaticacloud.com`
Application Integration (Salesforce)	`usw5-sfdc-cai.dm-us.informaticacloud.com`
B2B Gateway	`usw5-b2bgw.dm-us.informaticacloud.com`
Cloud Data Integration for PowerCenter (CDI-PC)	`usw5-idms.dm-us.informaticacloud.com`

Data Governance and Catalog, Data Marketplace and Metadata Command Center	`cdgc.dm-us.informaticacloud.com`
	`cdmp-app.dm-us.informaticacloud.com`
	`mcc.dm-us.informaticacloud.com`
	`icd-app.dm-us.informaticacloud.com`
	`cdgc-api.dm-us.informaticacloud.com`
	`idmc-api.dm-us.informaticacloud.com`

Data Profiling (CDP)	`usw5-dqprofile.dm-us.informaticacloud.com`
Data Quality (CDQ)	`usw5-dqcloud.dm-us.informaticacloud.com`
Integration Hub (CIH)	`usw5-cih.dm-us.informaticacloud.com`
Data Ingestion and Replication (CMI)	`usw5-ing.dm-us.informaticacloud.com`
MDM SaaS services	`usw5-mdm.dm-us.informaticacloud.com`

United States East (USE6)

If your POD is USE6, allow the following DNS names:

Service	DNS names
Global Identity Service	dm-us.informaticacloud.com
Global Package Delivery Manager	global-package.dm.informaticacloud.com icsdownloadsecure.informatica.com
Data Integration (CDI)	use6.dm-us.informaticacloud.com

If you use any of the following services, allow their DNS names as well:

Service	DNS names
API Manager	use6-apim.dm-us.informaticacloud.com use6-apigw.dm-us.informaticacloud.com
Application Integration (CAI)	use6-cai.dm-us.informaticacloud.com
Application Integration (Salesforce)	use6-sfdc-cai.dm-us.informaticacloud.com
B2B Gateway	use6-b2bgw.dm-us.informaticacloud.com
Cloud Data Integration for PowerCenter (CDI-PC)	use6-idms.dm-us.informaticacloud.com
Data Governance and Catalog, Data Marketplace and Metadata Command Center	cdgc.dm-us.informaticacloud.com cdmp-app.dm-us.informaticacloud.com mcc.dm-us.informaticacloud.com icd-app.dm-us.informaticacloud.com cdgc-api.dm-us.informaticacloud.com idmc-api.dm-us.informaticacloud.com
Data Profiling (CDP)	use6-dqprofile.dm-us.informaticacloud.com
Data Quality (CDQ)	use6-dqcloud.dm-us.informaticacloud.com
Integration Hub (CIH)	use6-cih.dm-us.informaticacloud.com
Data Ingestion and Replication (CMI)	use6-ing.dm-us.informaticacloud.com
MDM SaaS services	use6-mdm.dm-us.informaticacloud.com

Appendix B: Worksheet for setting up AWS PrivateLink

Use the following worksheet to record the information that you need to configure Informatica Intelligent Cloud Services to work with AWS PrivateLink.

The following table lists the information you'll need and the reason you need it:

Information needed	Reason	My value
Original Informatica Intelligent Cloud Services IP address	Used to verify your AWS PrivateLink connection.	
Informatica Intelligent Cloud Services organization ID	Needed by Informatica Global Customer support.	
AWS region	Needed by Informatica Global Customer support.	
AWS backup region	Needed by Informatica Global Customer support.	
AWS account ID	Needed by Informatica Global Customer support.	
ARN for your POD and region	Needed to create your VPC endpoint.	
VPC endpoint ID	Needed by Informatica Global Customer support.	
DNS name for the VPC endpoint	Needed to create records in the hosted zone for your Informatica Intelligent Cloud Services services.	
DNS names for the Informatica Intelligent Cloud Services services for which you want to create an AWS PrivateLink connection	Needed to create records in the hosted zone for your Informatica Intelligent Cloud Services services. To find the DNS names, see "Appendix A: DNS names for Informatica Intelligent Cloud Services services" on page 16.	
New Informatica Intelligent Cloud Services IP address	Used to verify your AWS PrivateLink connection. If successful, this address will differ from the original IP address.	

Author

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