



API Platform Developer guide

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Reliance Jio Infocomm Ltd., Reliance Corporate Park

Thane Belapur Road, Ghansoli-400 701



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The Document Author is authorized to make the following types of changes to the document without requiring that the document be re-approved:

- a. Editorial, formatting, and spelling
- b. Clarification

To request a change to this document, contact the Document Author or Owner.

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1.1	23 rd Dec 2013	Garima Singh	<ul style="list-style-type: none"> Updated portal links for different environments and steps to import certificate for Android/iOS and application clients
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1 Introduction

This chapter identifies the document and the engagement to which it relates, describes the contents of the document, and states its purpose.

1.1 Purpose

This document provides a guide to developers who would like to build mobile apps using APIs exposed via Jio API platform. It is primarily meant for

- Outlining steps that should be followed by developers before consuming any APIs exposed via Jio API Platform
- Providing important URLs and key contacts for partner developers for approval & issues

1.2 Intended Audience for this Document

This document provides necessary details for developer onboarding and application lifecycle for developers and architects interested in understanding or working programmatically with Reliance Jio APIs.

1.3 Organization of this Document

The Developer guide is divided into six chapters summarized below:

- Section 1 [Introduction](#) introduces Developer Guide for internal and external partner for Jio, identifies its intended audience, and explains the purpose and organization of the document.
- Section 2 [Developer registration](#) outlines the steps required to signup on API Developer portal.
- Section 3 [Create Application](#) covers the steps required to furnish necessary details for the applications.
- Section 4 [Adding APIs](#) outlines the steps for adding/removing APIs for existing application
- Section 5 [Invoking API](#) talks about the header information that is mandatory for accessing APIs exposed via Jio API platform
- Section 6 [Appendices](#) documents the supplementary details.

1.4 Important URLs & contacts

Extrenal Partner Environment	Jio Environment	URL	Portal admin contact details
Integration	ST	https://stportal.ril.com/	Rjil.secoapidev@ril.com
QA	SIT	https://sitportal.ril.com/	Rjil.secoapidev@ril.com
Production	Production	https://developers.ril.com/	Rjil.topsseco@ril.com



2 Developer registration

The following chapter of the guide provides reference material for the Developer registration process.

2.1 Sign up for a developer account

Use this API to retrieve basic information of the Product based upon list of Service ID

2.1.1 Home page > Sign up

Reliance Jio Developer Portal

Home | Dev

Login | Signup

Personal Information | Additional Info

First Name *
Omkar

Last Name *
Acharya

Email Address *
omkar.a@xyz.com

Username *
OA

Password *

Re-Type your password *

Please tell us you're not a robot *

Thank you, your response has been verified

TERMS OF USE

Please read the following carefully. The following are the terms of use for the API Portal.

1.0 GENERAL

1.1 The Terms of Use define the terms and conditions that you, and/or any person on your behalf agree to when you register to use the API Portal and/or APIs.

I accept the disclaimer *

Cancel Next Step Register Now



2.1.2 Click Next

The screenshot shows a registration form on the Jio Developer Portal. The form is titled 'Personal Information' and 'Additional Info'. It has two tabs: 'Personal Information' and 'Additional Info'. The 'Additional Info' tab is active. The form has two input fields: 'Title' and 'Description'. Below the form are buttons for 'Cancel', 'Next Step', and 'Register Now'. The background shows the Jio Developer Portal interface with a search bar and navigation links.

Provide additional details and click Register Now when done. The Title in the additional information section signifies the name of the Organization (for eg: Name of the company in which developer is working) and Description section signifies the additional data about the organization.

1. Registration request will be sent to Developer portal admin for approval.
2. Once registered, drop a mail to Developer portal admin to approve registration and application.
3. Once approved, your id is activated and you can log into the developer portal.

2.2 Invite developers of your organization

In the sign-up step 3.1, an organization is created for a developer and the person who registers first from the organization becomes the organization admin. Post approval of his account, he can send invitations to developers in his/her team.



The screenshot shows the Reliance Jio Developer Portal interface. At the top, there is a navigation bar with links: Home, Documentation, APIs & Plans, Resources, Forums, Reports, and APIAppReport. The user is logged in as 'Omkar!' and is viewing the 'omkar_org Pending Invitations' page. The page content shows a message: 'There are no pending invitations.' with a blue button labeled 'Invite New Users'. The left sidebar contains navigation options: DASHBOARD, ORGANIZATION (with sub-items Developers and Invitations), APPLICATIONS, ANALYTICS, and MY PROFILE.

The screenshot shows the same Reliance Jio Developer Portal interface, but with a modal dialog open. The modal is titled 'Add Email Address(es)' and contains a text input field with the value 'omkar.a@xyz.com, ram.y@abc.com'. Below the input field are two buttons: 'Cancel' and 'Send Invitation(s)'. The background page is dimmed, showing the 'omkar_org Pending Invitations' page.

The developer(s) after receiving the email will also have to register on the portal. But they will not be required to give details for the organization during the registration. Developer(s) then can create application(s) in the admin's organization who has sent them the invitation.



3 Create application

After successful registration on the required portal, an organization gets created on the portal with your registered credentials

3.1 Manage Applications > Add application

The screenshot displays the 'Manage Applications' interface in the Jio Developer Portal. The page header includes the Jio logo, user name 'Omkar', and a search bar. The navigation bar contains links for Home, Documentation, APIs & Plans, Resources, Forums, Reports, and APIAppReport. The left sidebar lists navigation options: DASHBOARD, ORGANIZATION, APPLICATIONS (highlighted), ANALYTICS, and MY PROFILE. The main content area shows the 'Manage Applications' section with a summary of application quotas (Unlimited Hits) and account plans (Bronze Account Plan). A table lists the application 'OmkarTesting' with its API key, status (Active), and platform (Android). There are buttons for 'API Usage', 'Add Application', and 'Apply'.

Application	API Key	Status	Platform
OmkarTesting	17xxe8ee6ba7f11e4d29 8fd5fcc8611b4	Active	Android

3.1.1 Add Application > Application Information

This tab is meant for capturing basic information about the application – Name, supported mobile platforms & Description



The screenshot shows the 'Reliance Jio Developer Portal' interface. The user is logged in as 'Omkar' and is on the 'Dashboard'. The navigation menu includes 'Home', 'Documentation', 'APIs & Plans', 'Resources', 'Forums', 'Reports', and 'APIAppReport'. The main content area displays a modal window for adding a new application. The 'Application Information' tab is active, showing the following fields:

- Application Name ***: Text input field containing 'Omkar_Test1'.
- Platform ***: Dropdown menu with 'Android' selected.
- Description**: Rich text editor with a toolbar (Bold, Italic, Underline, etc.) and an empty text area.

At the bottom of the modal, there are 'Cancel', 'Next Step', and 'Save' buttons.

3.1.2 Add Application > Additional Info

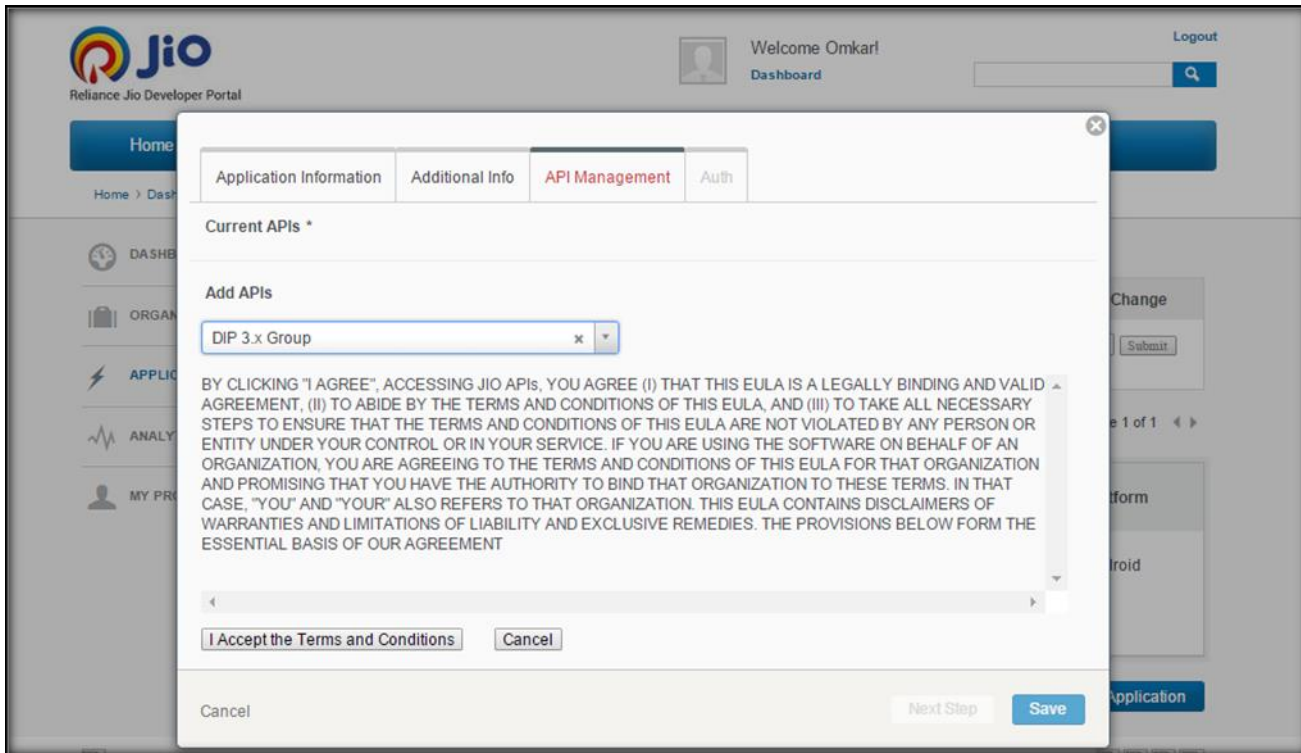
The screenshot shows the 'Reliance Jio Developer Portal' interface. The user is logged in as 'Omkar' and is on the 'Dashboard'. The navigation menu includes 'Home', 'Documentation', 'APIs & Plans', 'Resources', 'Forums', 'Reports', and 'APIAppReport'. The main content area displays a modal window for adding a new application. The 'Additional Info' tab is active, showing the following fields:

- appStatus**: Text input field.
- IdentifyApp ***: Text input field.
- mylist**: Dropdown menu with '-- Please select --' selected.
- Trusted ***: Dropdown menu with 'No' selected.

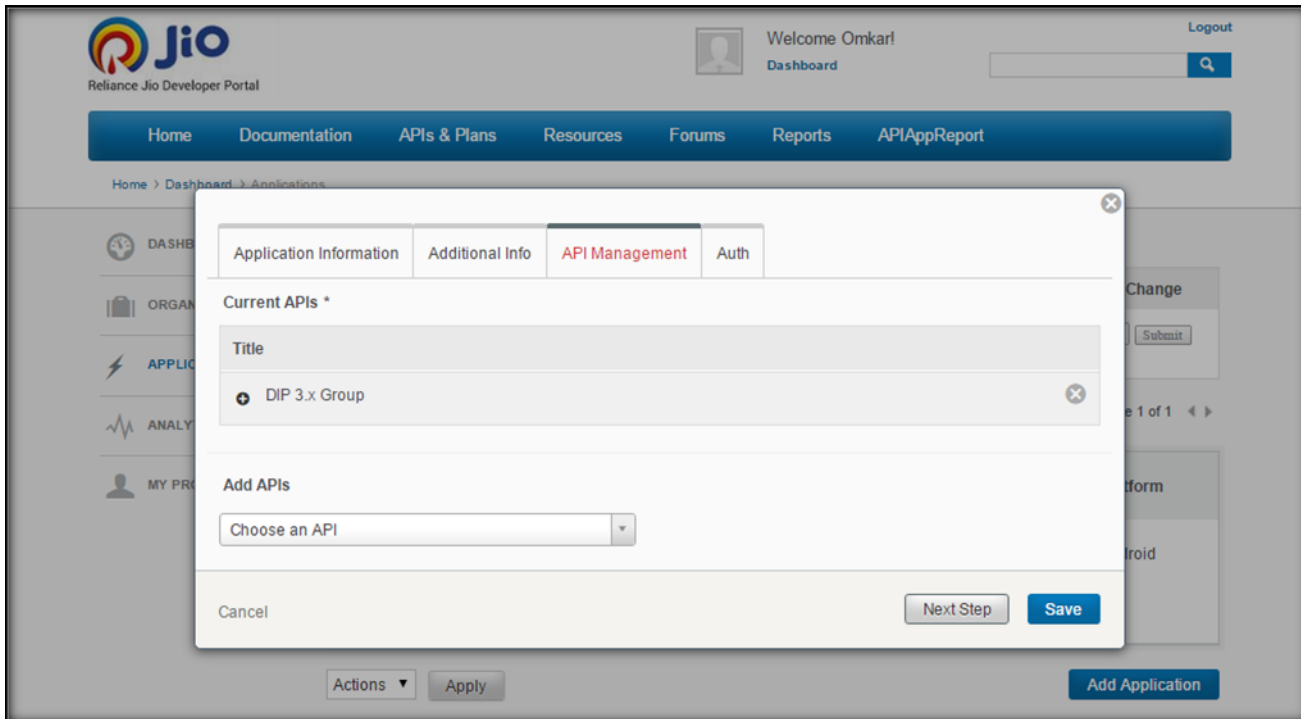
At the bottom of the modal, there are 'Cancel', 'Next Step', and 'Save' buttons.



3.1.3 Add Application > API Management



In the API Management section, you need to select the desired API from the Add API's select box and accept the terms and Conditions and save the selected API.





3.1.4 Add Application > Auth

Use this tab to specify details that will be used in OAuth based authentication flow.

Callback URL: This is required only in case of 3-legged OAuth. Ignore this field for partners that are advised to use service account.

Scope: Agent (Partners which are supposed to use the service account)

3.2 Organization > Create application

Refer section 4.1 for steps



3.3 Application > Pending approval

After the created application is saved, it appears within your organization with Approval Pending as shown in the snapshot given below. For application approval, please API portal admin of the respective environment. After approval you can use the API key which appears in front of the application.

The screenshot displays the 'Manage Applications' interface in the Jio Developer Portal. The page features a sidebar on the left with navigation options: DASHBOARD, ORGANIZATION, APPLICATIONS (highlighted), ANALYTICS, and MY PROFILE. The main content area is titled 'Manage Applications' and includes a summary section for 'Applications' showing 'Quota usage across all applications' as 'Unlimited Hits' and the 'Current Account Plan' as 'Bronze Account Plan'. Below this, there is a table listing applications with columns for Application, API Key, Status, and Platform. The table contains two entries: 'OmkarTesting' (Active, Android) and 'Omkar_Test2' (Pending Approval, Android). At the bottom of the table, there are 'Actions' and 'Apply' buttons, and an 'Add Application' button is located at the bottom right of the page.

Application	API Key	Status	Platform
OmkarTesting	17:xe8ee6ba7f11e4d29 8fd5fcfcc8611b4	Active	Android
Omkar_Test2	N/A	Pending Approval	Android



4 Adding APIs

New APIs will not be accessible to applications by default. Below steps are required in order to make these APIs available to applications

4.1 Manage Applications > Application > Edit

The screenshot displays the 'Manage Applications' interface in the Jio Developer Portal. The page header includes the Jio logo, 'Reliance Jio Developer Portal', a user profile for 'Omkar' with a 'Logout' link, and a search bar. The main navigation bar contains links for Home, Documentation, APIs & Plans, Resources, Forums, Reports, and APIAppReport. The breadcrumb trail is 'Home > Dashboard > Applications'.

The 'Manage Applications' section features a summary card for 'Applications' showing 'Quota usage across all applications' as 'Unlimited Hits' and 'Current Account Plan' as 'Bronze Account Plan'. Below this is a table of applications:

Application	API Key	Status	Platform
OmkarTesting API Usage	l7xxe8ee6ba7f11e4d29 8fd5fcfcc8611b4	Active	Android
Omkar_Test 2 API Usage	N/A	Pending Approval	Android

At the bottom of the table, there are 'Actions' and 'Apply' buttons, and an 'Add Application' button.

4.2 Manage Applications > Application > Edit > API Management



The screenshot shows the Jio Developer Portal interface. The user is logged in as 'Omkar' and is on the 'API Management' tab. The 'Current APIs' table lists the following APIs and their plans:

APIs/API Groups	Current Plan	Plan Change
DIP 3.x Group		
DV-v2-Wildcard	Sandbox	
getcustdetails	Sandbox	
policy1	Sandbox	

The 'Add APIs' dropdown menu is open, showing a search bar and a list of available APIs:

- Choose an API
- DIP 2.1 Group
- a-jio
- AppAPIKeyInfo
- chetan1.0-Test1
- DV-V2-Wildcard-ATP

A 'Save' button is visible at the bottom right of the modal.

If you do not find desired API (published in the API guide) in Add APIs list, then contact API developer portal admin team for clarification.



5 Invoking APIs

After creating an application, use the API key assigned to the application to access the API exposed by Jio API platform.

1. Use the header for using the API key as X-API-Key.
2. The value of the header is the value of the API-key.

Example: X-API-Key: l7xxd7xxxxxxxxxxxxxxxxxxxxxx (Note the case)

6 Appendices

6.1 Appendix A – Export certificates from browser

URLs for Jio API gateways (External partners)

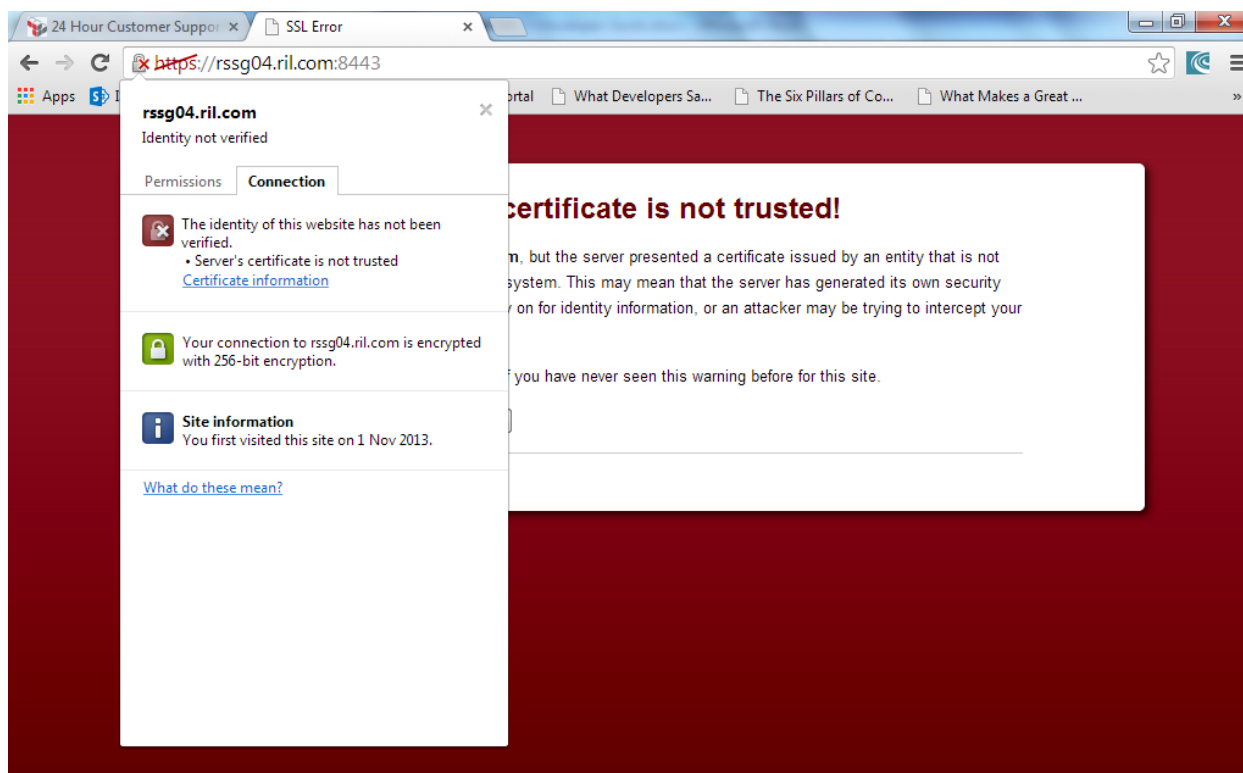
Integration (Jio internal env - ST) <https://api-st.ril.com:8443/>

QA (Jio internal env - SIT) <https://api-sit.ril.com:8443/>

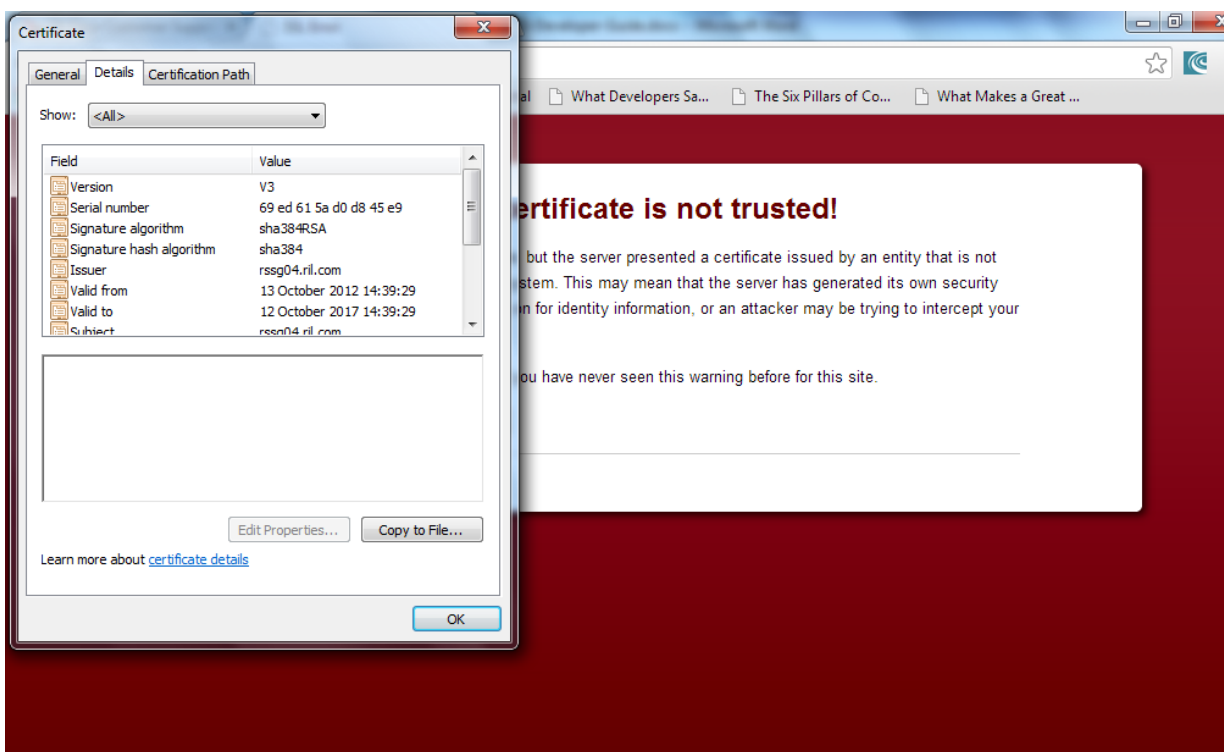
Production <https://api.ril.com/>

1. Go to respective environments API gateway link and download the certificate from browser.

E.g. in Chrome browser, click on the lock sign in the address bar > Go to Connection Tab > Click on Certificate Information link



2. Next Click on **Details** Tab > **Copy to File** > Accept all default and save the certificate.





6.2 Appendix B – Import certificate and key

6.2.1.1 iOS Client

You should install the SSL distribution certificate and private cryptographic key you obtained earlier on the server computer on which the provider code runs and from which it connects with the development or production versions of APNs. To do so, complete the following steps:

1. Open Keychain Access utility and click the My Certificates category in the left pane.
2. Find the certificate you want to install and disclose its contents.

You'll see both a certificate and a private key.

3. Select both the certificate and key, choose File > Export Items, and export them as a Personal Information Exchange (.p12) file.
4. Servers implemented in languages such as Ruby and Perl often are better able to deal with certificates in the Personal Information Exchange format. To convert the certificate to this format, complete the following steps:
 - a. In KeyChain Access, select the certificate and choose File > Export Items. Select the Personal Information Exchange (.p12) option, select a save location, and click Save.
 - b. Launch the Terminal application and enter the following command after the prompt:


```
openssl pkcs12 -in CertificateName.p12 -out CertificateName.pem -nodes
```
5. Copy the .pem certificate to the new computer and install it in the appropriate place.

Reference

<https://developer.apple.com/library/ios/documentation/NetworkingInternet/Conceptual/RemoteNotificationsPG/Chapters/ProvisioningDevelopment.html>

6.2.1.2 Android Client

1. Once you have the .keystore file and passphrase file, embed .keystore file in asset folder of application
2. Write java code to read .keystore file using the passphrase. Sample java code is attached –



Android-SSL-Code

3. Create SSL connection using certificate within the .keystore

6.2.1.3 Java /other application Client

1. Once you have the .keystore file and passphrase file, write code to read .keystore file by providing .keystore file path and using the passphrase. Sample java code is attached -



Java-SSL-Code.txt

2. Create SSL connection using certificate within the .keystore.



6.3 Appendix C – Mutual SSL

For external partners who are advised to communicate over mutual SSL- A unique client certificate will be provided to each partner with cert key. App will have to present the same while calling APIs on Jio API Platform.

6.4 Appendix D – Developer FAQs

1. On invoking the API, the application gets a response that says “Invalid API Key Error”. What could be the reason for this error?

Resolution - This can happen due to two reasons

a) Either the API is not assigned to your application. Please ensure that the API for which you are getting this error is assigned to your application.

b) The API key used while invocation is incorrect. Please check the API key shown against your application and ensure the same is being used while consuming the APIs.

2. API name is not getting displayed in the API drop down list of your applications.

Resolution - This typically happens when either API is not assigned to your organization or it is already added to your application.

3. On invocation of API, the calling app gets an error “Please Provide API Key Error”.

Resolution - Please make sure you are passing API key in header parameter.

Example: X-API-Key : l7xxd7xxxxxxxxxxxxxxxxxxxxxx (Note it is case sensitive)

4. I have forgotten my password, how do I retrieve it from the API developer portal?

Resolution. You can use Forgot Password link given in the Login window. Valid users will receive an email with further instruction about how to generate new password.

5. While logging in, I am getting “No user found with provided credentials” error

Resolution. Please contact the Developer portal admin for this issue. This happens especially when user credentials are disabled.

6. After successful sign-up, I was trying to login but got a message “Account Disabled”

Resolution. Please contact the Developer portal admin for this issue. This happens when user account is not yet approved.