ROSS PLATFORM MANAGER

Installation Guide for AWS Ubuntu

Version 3.13

Thank You for Choosing Ross

You've made a great choice. We expect you will be very happy with your purchase of Ross Technology.

Our mission is to:

1. Provide a Superior Customer Experience
    - offer the best product quality and support
2. Make Cool Practical Technology
    - develop great products that customers love

Ross has become well known for the Ross Video Code of Ethics. It guides our interactions and empowers our employees. I hope you enjoy reading it below.

If anything at all with your Ross experience does not live up to your expectations be sure to reach out to us at *solutions@rossvideo.com*.

David Ross
CEO, Ross Video
dross@rossvideo.com

Ross Video Code of Ethics

Any company is the sum total of the people that make things happen. At Ross, our employees are a special group. Our employees truly care about doing a great job and delivering a high quality customer experience every day. This code of ethics hangs on the wall of all Ross Video locations to guide our behavior:

1. We will always act in our customers' best interest.
2. We will do our best to understand our customers' requirements.
3. We will not ship crap.
4. We will be great to work with.
5. We will do something extra for our customers, as an apology, when something big goes wrong and it's our fault.
6. We will keep our promises.
7. We will treat the competition with respect.
8. We will cooperate with and help other friendly companies.
9. We will go above and beyond in times of crisis. *If there's no one to authorize the required action in times of company or customer crisis - do what you know in your heart is right. (You may rent helicopters if necessary.)*

Ross Platform Manager · Installation Guide for AWS Ubuntu

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- Software Issue: **3.13**

The information contained in this Guide is subject to change without notice or obligation.

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Patents

Patent numbers 4,205,346; 5,115,314; 5,280,346; 5,561,404; 7,034,886; 7,508,455; 7,602,446; 7,834,886; 7,914,332; 8307284, 2039277; 1237518; 1127289 and other patents pending.

Warranty and Repair Policy

Ross Video Limited (Ross) warrants its Ross Platform Manager systems to be free from defects under normal use and service a time period of 15 months from the date of shipment:

If an item becomes defective within the warranty period Ross will repair or replace the defective item, as determined solely by Ross.

Warranty repairs will be conducted at Ross, with all shipping FOB Ross dock. If repairs are conducted at the customer site, reasonable out-of-pocket charges will apply. At the discretion of Ross, and on a temporary loan basis, plug in circuit boards or other replacement parts may be supplied free of charge while defective items undergo repair. Return packing, shipping, and special handling costs are the responsibility of the customer.

This warranty is void if products are subjected to misuse, neglect, accident, improper installation or application, or unauthorized modification.

In no event shall Ross Video Limited be liable for direct, indirect, special, incidental, or consequential damages (including loss of profit). Implied warranties, including that of merchantability and fitness for a particular purpose, are expressly limited to the duration of this warranty.

This warranty is TRANSFERABLE to subsequent owners, subject to Ross' notification of change of ownership.

Extended Warranty

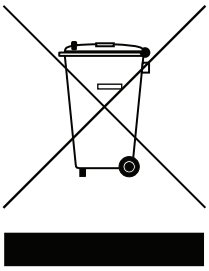
For customers that require a longer warranty period, Ross offers an extended warranty plan to extend the standard warranty period by one year increments. For more information about an extended warranty for your Ross Platform Manager system, contact your regional sales manager.

Environmental Information

The equipment that you purchased required the extraction and use of natural resources for its production. It may contain hazardous substances that could impact health and the environment.

To avoid the potential release of those substances into the environment and to diminish the need for the extraction of natural resources, Ross Video encourages you to use the appropriate take-back systems. These systems will reuse or recycle most of the materials from your end-of-life equipment in an environmentally friendly and health conscious manner.

The crossed-out wheeled bin symbol invites you to use these systems.



If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration.

You can also contact Ross Video for more information on the environmental performances of our products.

Use of Hazardous Substances in Electrical and Electronic Products (China RoHS)

Ross Video Limited has reviewed all components and processes for compliance to:

“Management Methods for the Restriction of the Use of Hazardous Substances in Electrical and Electronic Products” also known as China RoHS.

The “Environmentally Friendly Use Period” (EFUP) and Hazardous Substance Tables have been established for all products. We are currently updating all of our Product Manuals.

The Hazardous substances tables are available on our website at:

http://www.rossvideo.com/about-ross/company-profile/green-practices/china-rohs.html

电器电子产品中有害物质的使用

Ross Video Limited 按照以下的标准对所有组件和流程进行了审查：

“电器电子产品有害物质限制使用管理办法”也被称为中国RoHS。

所有产品都具有“环保使用期限”（EFUP）和有害物质表。目前，我们正在更新我们所有的产品手册。

有害物质表在我们的网站：

http://www.rossvideo.com/about-ross/company-profile/green-practices/china-rohs.html

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Introduction

A Word of Thanks

Thank you for choosing the Ross Platform Manager as your product orchestration solution.

We are committed to providing you with the highest level of customer satisfaction possible. If, for any reason, you have questions or comments, please call Ross Video at +1-613-652-4886 or send us an e-mail at techsupport@rossvideo.com.

We hope that you visit our website www.rossvideo.com to stay up to date with ongoing software releases, join our customer forum, and learn more about the complete range of Ross Video products.

Note that software maintenance and extended warranties are available for your system to protect and extend the life of your investment. Our sales team are more than happy to provide further information on the plans available. Members of our sales team promptly respond to e-mails sent to: solutions@rossvideo.com.

Again, thank you for your purchase of Ross Platform Manager from Ross Video. We are confident of your future pleasure with your choice.

Yours Sincerely,

Gabriel Duschinsky
Product Manager - Enterprise Management

gabriel.duschinsky@rossvideo.com

About This Guide

This guide contains the following chapters that cover the installation and configuration of Ross Platform Manager software:

- Chapter 1, "**Introduction**" summarizes the guide and provides important terms, conventions, and features.
- Chapter 2, "**System Requirements**" provides the recommended minimum hardware and software requirements to ensure that the Ross Platform Manager software functions correctly.
- Chapter 3, "**Software Installation for AWS-Ubuntu**" provides instructions on how to install Ross Platform Manager software on an Ubuntu based EC2-instance for Amazon Web Services.
- Chapter 4, "**Optional Configuration**" provides instructions on optional configurations that you may choose to use depending on how you are using Ross Platform Manager.

If you have questions pertaining to the operation of the Ross Video product, please contact us at the numbers listed in the section "**Contacting Technical Support**" on page 1–3. Our technical staff is always available for consultation, training, or service.

Documentation Conventions

This guide uses special text formats to identify parts of the user interface, text that a user must enter, or a sequence of menus and submenus that a user must follow to reach a particular command.

Interface Elements

Bold text identifies a user interface element such as a dialog box, a menu item, or a button. For example:

In the **Media Manager Client**, click **Channel 1** the **Channels** section.

User Entered Text

Courier text identifies text that a user must enter. For example:

In the **File Name** box, enter **`Channel01.property`**.

Referenced Guides

Italic text identifies the titles of referenced guides, manuals, or documents. For example:

For more information, refer to the section "**Twitter Configuration**" on page 3–6 in the ***Ross Platform Manager User Guide***.

Menu Sequences

Menu arrows identify a sequence of menu items that a user must follow to reach a particular command. For example: if a procedure step contains "**Server** > **Save As**," a user should click the **Server** menu and then click **Save As**.

Important Instructions

Star icons identify important instructions or features. For example:

✶ After installing Ross Platform Manager software, you must obtain Ross Platform Manager feature licenses from Ross Video Technical Support before users can access Ross Platform Manager features.

Getting Help

To access the Ross Platform Manager Online Help system, click the **Help** icon in the main toolbar. For help about the currently open panel, click the **Help** button in a panel title bar to view a help topic about the panel.

The Online Help system contains the following navigation tabs to locate and access Online Help topics:

- **Contents** — table of contents
- **Search** — full text search
- **Favorites** — preferred information storage and access

Ross Video also supplies a print-ready PDF file of the ***Ross Platform Manager User Guide*** on the Ross Platform Manager Software Installation DVD.

Contacting Technical Support

Technical Support is staffed by a team of experienced specialists ready to assist you with any question or technical issue.

Ross Video has technical support specialists strategically located around the globe to ensure a prompt response to technical inquiries. Our primary technical support center is located in Ottawa, Ontario, Canada. In addition, we have offices in The United Kingdom (London), Australia (Sydney), and Singapore with satellite locations in New York City, The Netherlands, and China. As we expand our presence globally, we are constantly evaluating other key locations to have a local technical support specialist in order to better service our customers.

North America

Our North America center located in Ottawa, Ontario, Canada and is open Monday to Friday 8:30 a.m. to 6:00 p.m. EST, with 24/7/365 on-call service after hours.

Our telephone number is: +1-613-652-4886

Toll free within North America: +1 844-652-0645

EMEA

Our EMEA center is located in Buckinghamshire, England, United Kingdom and is open Monday to Friday 8:30 a.m. to 5:00 p.m. GMT. After hours support is provided by our North America location.

Our telephone number is: +44 (0)1189502446

International toll free: +800 1005 0100

Emergency After-hours Support

Our telephone number is: +1-613-349-0006

Toll free within North America: +1 844-652-0645

International toll free: +800 1005 0100

Online

E-mail: techsupport@rossvideo.com

Website: use the link http://www.rossvideo.com/support/tech-support.html to open a support request.

System Requirements

Ross Video bases Ross Platform Manager products on mainstream PC hardware that use the Windows® operating system. To ensure that Ross Platform Manager software functions correctly, verify that the computer selected to run Ross Platform Manager software meets the recommended minimum requirements described in this chapter.

This chapter discusses the following topics:

- Hardware
- Software
- Before a Software Install
- Supported Ross Products
- Ports

Hardware

Ross Video recommends the following minimum computer hardware configuration to run Ross Platform Manager software:

- **VM or customer-supplied machine that meets the following minimum requirements**:
- **CPU** — quad-core Intel® Core™ i7, 2GHz
- **RAM** — 8GB to 16GB (16GB recommended)
- **Hard Drive** — Minimum 64 GB free
- **LAN** — 100 Mb/s

Software

Ross Video recommends the following minimum computer software configuration to run Ross Platform Manager software:

- **Operating System**: Ubuntu 20.x-22.04
- **Database**: PostgreSQL 15.x
- **Hardware**: VM or customer supplied machine

Before a Software Install

Before you install Ross Platform Manager software on an Ubuntu based EC2-instance, ensure that the instance meets the minimum recommended requirements as listed below:

- Amazon Web Services: Ec2 instance attributes
- AMI type: Ubuntu Server 22.04 x64bit
- Instance type: t2.xlarge
- Storage: 50GiB
- Security Group Settings: Inbound rules

Contact a Ross Video sales representative for information about Ross Platform Manager Commissioning, Training, and Update services.

✶ After installing Ross Platform Manager software, you must obtain a Ross Platform Manager license from Ross Video Technical Support before users can access Ross Platform Manager features.

For More Information on...

› contacting Ross Video Technical Support, refer to the section "**Contacting Technical Support**" on page 1–3.

Supported Ross Products

Please refer to the supported version below or the Release Notes to ensure compatibility. RPM supports the following Ross products:

- XPression 10.5+
- OverDrive 18.2 +
- Carbonite
- Acuity
- SDPE Blade

Ports

As part of the Ross Platform Manager software installation process, the installer automatically creates the required firewall exceptions locally for the ports that Ross Platform Manager uses to communicate with Ross Platform Manager Servers.

- If an external firewall separates your Ross Platform Manager system from your Ross Platform Manager Servers, you may need to update the port exceptions on your external firewall to enable communication with the Ross Platform Manager system.

The following table lists the ports on the Ross Platform Manager computer that Ross Platform Manager uses to communicate with Ross Platform Manager Servers:

Table 2.1 Ross Platform Manager System Ports

Port	Type	Description
80 443	HTTP/HTTPS	Ross Platform Manager requires HTTP/HTTPS ports to be open between Ross Platform Manager computers and the Ross Platform Manager computer.
22	SSH	Orchestration functionality will require Port 22 to be open via SSH on the management computer to communicate within the customer's internal network, but not to reach the Internet externally.
514	TCP/UDP	Enables Ross Platform Manager to receive product logs over Syslog.

Software Installation for AWS-Ubuntu

This chapter provides instructions for installing Ross Platform Manager software on an Ubuntu based EC2-instance for Amazon Web Services.

This chapter discusses the following topics:

- Installing PostgreSQL Database Software for AWS
- Installing Ross Platform Manager
- Installing Dependencies

Installing PostgreSQL Database Software for AWS

To install Ross Platform Manager on an ubuntu based AWS instance, you'll need to install PostgreSQL Database Software for AWS. Ubuntu AMI from Amazon typically already contains the PostgreSQL engine.

To install PostgreSQLv15.x

Note: Each of the following commands must be entered as a single line.

1. To add the PostgreSQL repository on the operating system, enter the following commands:

   a. `wget --quiet -O - https://www.postgresql.org/media/keys/ACCC4CF8.asc | sudo apt-key add -`

   b. `RELEASE=$(lsb_release -cs)`

   c. `echo "deb http://apt.postgresql.org/pub/repos/apt/ ${RELEASE}"-pgdg main | sudo tee /etc/apt/sources.list.d/pgdg.list`

2. Install OS updates using the command:

   ```
   sudo apt-get update
   ```

3. Install PostgreSQL version 15.x and start the services using the following commands:

   a. `sudo apt -y install postgresql-15.x`

   b. `pg_ctlcluster 15.x main start`

4. Enable PostgreSQL service using the command:

   ```
   systemctl enable postgresql@15.x-main
   ```

5. Navigate to the PostgreSQL data directory:

   ```
   cd /etc/postgresql/15.x/main
   ```

6. Open `pg_hba.conf` with a text editor, such as `nano/vi/vim`, and edit the local IPv4 connection settings in the METHOD column to "trust" so that lines 84 - 92 match the following:

   ```
   # Database administrative login by Unix domain socket
   local   all             postgres                                trust
   # TYPE   DATABASE       USER            ADDRESS                 METHOD
   # local is for Unix domain socket connections only
   local   all             all                                     trust
   # IPv4 local connections:
   host    all             all             127.0.0.1/32            trust
   host    all             all             0.0.0.0/0               trust
   ```

   If you reach the IPv6 section you've scrolled down too far.

7. If using vi or vim editor, save the file using the following sequence:

   a. Press the esc key.

   b. Enter the command `` `:wq` ``

   c. Press enter.

8. Restart the *postgresql* service:

   ```
   systemctl restart postgresql@15.x-main
   ```

9. Create an RPM database using the steps below.

   a. To create an RPM database, use the following command:

   ```
   psql -U postgres
   ```

b. Create a database for the Ross plaform manager, in this example named `platform_manager`:

```
postgres=# CREATE DATABASE platform_manager;
```

c. To verify that the database was created, enter:

```
postgres=# \l
```

d. To exit enter:

```
postgres=# \q
```

Note: Upgrading Ross Platform Manager software to a new version does not require a re-installation of the PostgreSQL database software.

Installing Ross Platform Manager

After installing and configuring the PostgreSQL database software on the AWS instance, you can install the Ross Platform Manager software. Once Ross Platform Manager is installed, you must configure the software in **Maintenance Mode**.

To install Ross Platform Manager

1. Retrieve the following file from the commissioning package:

   ```
   sudo mkdir /opt/platform_manager/
   ```

2. Create the application directory:

   ```
   sudo mkdir /opt/platform_manager/
   ```

3. Copy the **PlatformManager-3.13.0-.tar.gz** file from the commissioning package to the system. You can use FileZilla to place it into the `/opt/platform_manager/` directory.

4. Extract the file using this command:

   ```
   sudo tar -xvf PlatformManager-3. 13. 0-. tar. gz
   ```

5. Set the permissions on the /opt/platform_manager directory by enter the following command:

   ```
   sudo chmod -R 755 /opt/platform_manager/
   ```

6. Run Ross Platform Manager:

   ```
   sh Install
   ```

7. View Ross Platform Manager's process status by entering the following command:

   ```
   systemctl status PlatformManager.service
   ```

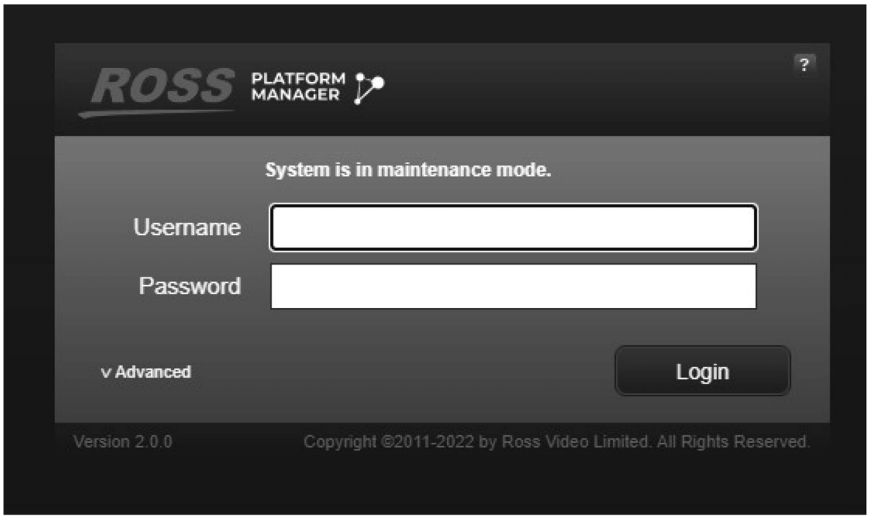
Note: You can monitor the launch process in real time by following the steps below:

```
cd /opt/platform_manager
tail -f workspace/.metadata/logs/application-yyyymmdd. log
```

8. Access Ross Platform Manager via web browser, and enter the IP address of one of the network interfaces:

   `Example: http:/192.168.3.150`

   Ross Platform Manager's **login page** appears:



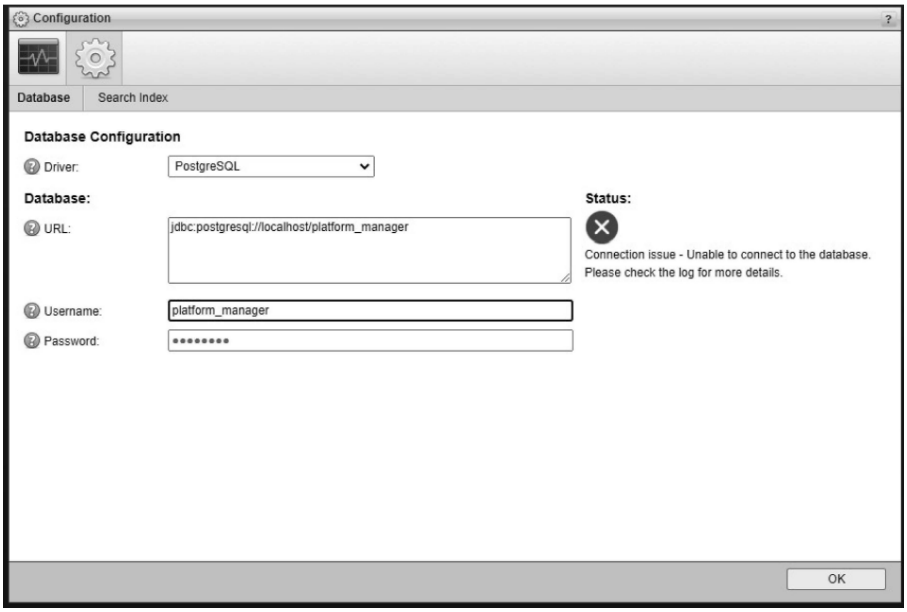
To configure the database in maintenance mode

1. Log in to Ross Platform Manager - Maintenance Mode using the following credentials:

   `Username: maintenance`

   `Password: maintenance`

2. Click the **Configuration** icon  in the top menu bar.
3. Select the **Gear** icon in the dialog box that appears.
4. Enter the **Database** tab.



5. Set the **Database Configuration** to the values configured in the **To Configure the PostgreSQL Database for Ross Platform Manager**.

   ```
   Driver: PostgreSQL
   URL : jdbc: postgresql: //localhost/platform_manager
   Username: platform_manager
   Password: R0ss@dmin
   ```

6. Click **OK**.

   A *warning* appears to indicate that you have modified the database settings. Click **OK**.

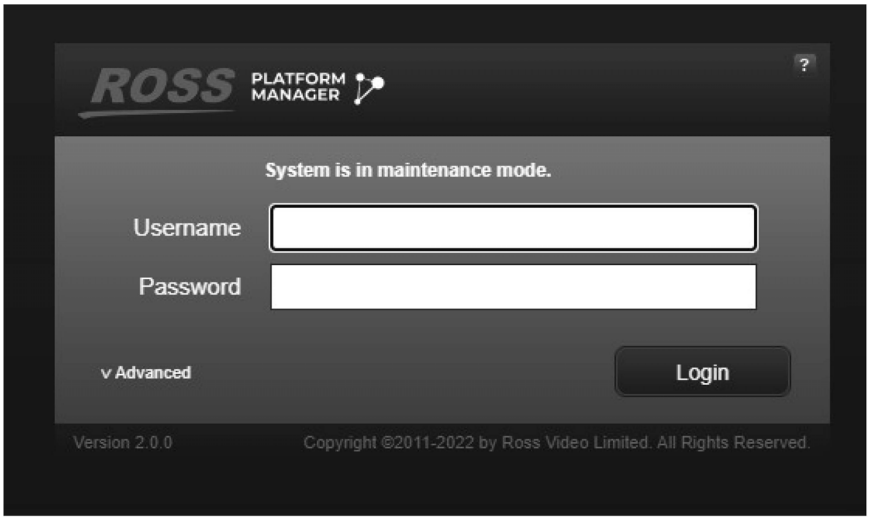
7. Issue the following command at the Ross Platform Manager server to restart the application:

   ```
   sudo systemctl restart PlatformManager
   ```

8. Access Ross Platform Manager via web browser, and enter the IP address of one of the network interfaces:

   ```
   Example: http:/192.168.3.150
   ```

   Ross Platform Manager's **login page** appears:



9. Log in to Ross Platform Manager using the following credentials:

   ```
   Username: root
   Password: password
   ```

   Once Ross Platform Manager is successfully configured, change the default password.

Installing Dependencies

Ross Platform Manager requires a number of dependencies to be installed on the EC2 instance to support orchestration. See below for a list of required dependencies.

Dependency	Version
Python	>=3.6
python-pip	3
Ansible	2.9.9 or 2.9.22
sshpass	1.0.9

To install Python dependency

1. Python comes pre-installed on EC2 instance for Ubuntu.

To install Python-pip dependency

1. Issue the following command:

```
sudo apt-get install python3-pip
```

To install Ansible dependency

1. Issue the following command for Ansible version 2.9.9:

```
sudo python3 -m pip install ansible==2. 9. 9
```

Issue the following command for Ansible version 2.9.22:

```
sudo python3 -m pip install ansible==2. 9. 22
```

To install SSHPASS dependency

1. Issue the following command:

```
sudo apt-get install sshpass
```

Optional Configuration

This chapter provides instructions on optional configurations that you may choose to use depending on how you are using Ross Platform Manager.

This chapter discusses the following topics:

- Setting up SSL/TLS Certificates

Setting up SSL/TLS Certificates

It is recommended that you configure web applications with HTTPs, as it is more secure, and the industry standard practice. To configure RPM for HTTPs transport, a certificate is required. Ross Platform Manager can use either a Self Signed Certificate, or a CA Signed Certificate.

To properly set up SSL/TLS certificates in order to configure RPM for HTTPs transport, follow the procedures in the following sections:

- "**Generating Certificates**" on page 4–2
- "**Configuring Ross Platform Manager with an SSL/TLS Certificate**" on page 4–2

Generating Certificates

The first step in setting up SSL/TLS certificates for RPM is to generate the certificate, and convert it to the required format. Follow the procedures in this section before continuing on to "**Configuring Ross Platform Manager with an SSL/TLS Certificate**" on page 4–2.

To generate a certificate using Java keytool

1. Navigate to the RPM directory and access "keytool" using the command:

   ```
   cd /opt/platform_manager/jre/bin/
   ```

2. Give the file keytool execute permissions using the command:

   ```
   chmod +x keytool
   ```

3. Begin to generate the certificate using the command:

   ```
   ./keytool -genkey -keyalg RSA -alias RPM -keystore RPM.keystore -storepass
   R0ssVid30 -validity 3800 -keysize 2048 -ext SAN=DNS:<servername>.rossvideo.com
   -dname "CN=, OU=RossVideo, O=RossVideo, L=Ottawa, ST=ON, C=CA" -noprompt
   ```

   For the following definitions in the command, enter the appropriate info for your system:

   - CN - Customer first and Last name
   - OU - Organizational Unit
   - O - Organization
   - L - Location
   - ST - State or Province
   - C - Country

4. Press **ENTER** to set the password as the same as the keystore password, or input your desired password.

   The certificate has been generated.

To convert a CA signed certificate to the required format

1. Convert the CA signed certificate to PEM format using the following commands in Java keytool:

   ```
   keytool -keystore RPM.keystore -alias RPM -genkey -keyalg RSA
   keytool -certreq -alias RPM -keystore RPM.keystore -file RPM.csr
   keytool -keystore RPM.keystore -import -alias RPM -file RPM.crt –trustcacerts
   ```

   The CA signed certificate has been converted to the required format.

Configuring Ross Platform Manager with an SSL/TLS Certificate

Now that the certificate has been generated and converted to the required format, RPM must be configured with an SSL/TLS certificate.

To configure Ross Platform Manager with an SSL/TLS certificate

1. Navigate to the RPM install location using the command:

   ```
   cd /opt/platform_manager/configuration
   ```

2. Open the **http.conf** file using the command:

   ```
   vim http.conf
   ```

3. In the **http.conf** file, change lines 7-19 to the following:

   ```
   wrapper.java.additional.50=-Dorg.eclipse.equinox.http.jetty.https.enabled=true

   wrapper.java.additional.51=-Dorg.eclipse.equinox.http.jetty.https.port=443

   wrapper.java.additional.52=-Dorg.eclipse.equinox.http.jetty.ssl.keystore=path_to.k
   eystore

   wrapper.java.additional.53=-Dorg.eclipse.equinox.http.jetty.ssl.password=
   <keystore password>

   wrapper.java.additional.54=-Dorg.eclipse.equinox.http.jetty.ssl.keypassword=
   <keystore password>

   wrapper.java.additional.55=-Dorg.eclipse.equinox.http.jetty.ssl.needclientauth=fal
   se

   wrapper.java.additional.56=-Dorg.eclipse.equinox.http.jetty.ssl.wantclientauth=tru
   e

   wrapper.java.additional.57=-Dorg.eclipse.equinox.http.jetty.ssl.protocol=TLS

   wrapper.java.additional.58=-Dorg.eclipse.equinox.http.jetty.ssl.algorithm=RSA

   wrapper.java.additional.59=-Dorg.eclipse.equinox.http.jetty.ssl.keystoretype=JKS
   ```

4. Save the **http.conf** file.

5. Restart Ross Platform Manager using the command:

   ```
   sudo systemctl restart platform_manager
   ```

   Ross Platform Manager has been configured.