

# How to install jems V4 on Mac OSX

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## 1 Procedure

### 1.1 Download

Download jemsMacOSX.dmg from the provided http website address.

### 1.2 Unzip

Copy jemsMacOSX to the Applications folder. Administration rights are required to install the package. Since jems is not distributed through App Store, you will have to weaken the security in order to load the package. Modify the MacOS "System Preferences", "Security & Privacy" according to Fig. 1 During the first startup of jemsMacOSX.app DO NOT PUSH the button "Move to Bin" of the security warning dialogue but instead push the "Cancel" button and open the System Preferences "Security & Privacy" and push the button "Open Anyway". You will have to provide an administrator login and password to modify the system settings and to allow starting the application (these messages' appearance and dialogue details depend on the OS version). Finally push the "Open" button. When jems for the first time, all jems files are checked for viruses and trojans. As a result a delay of several seconds should be expected starting jems. Also remember that java always compiles the *Byte code* of all jems classes every time jems is started.

### 1.3 Setting jems preferences

Start jems and select menu **Parameters**, menu item **Preferences** to open [jems Preferences dialogue](#). The preferences are described in file [jemsPreferencesSelection.pdf](#) of folder [/Applications/jemsMacOSX/pdfFiles](#).

In order to send the license request it is necessary to set several preferences found in these tabs:

- **Debug**
  - **Debug options:** in case of problems select checkbox **License** in order to have more info displayed in the console frame.

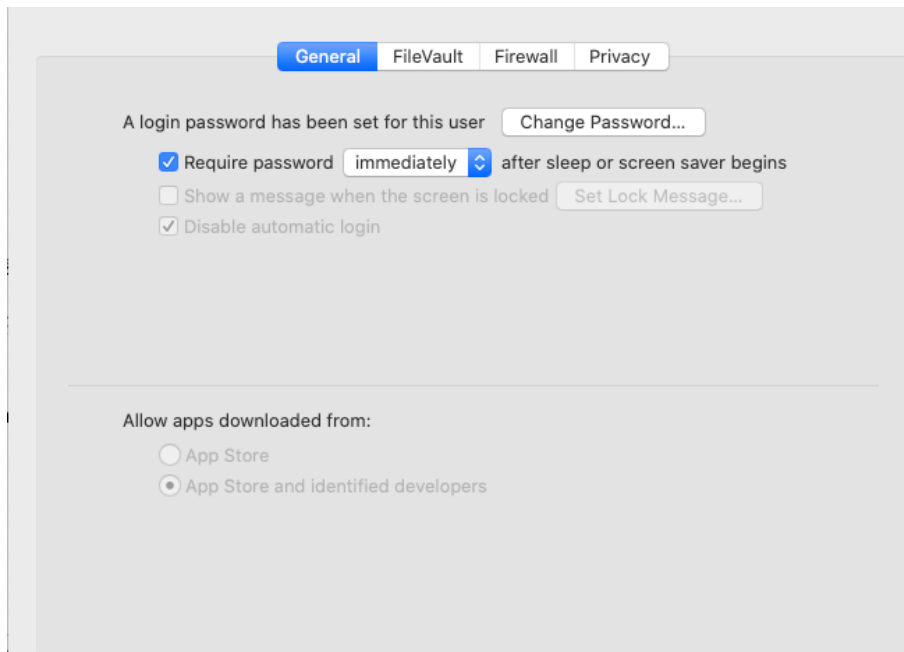


Figure 1: MacOS System Preferences, Security & Privacy settings.

- **Number of cpu's:** this number should be set to 8 for Intel i7 4 cores hyperthreading, 4 to Intel i5 2 cores hyperthreading, etc. When hyperthreading is not available select the number of cores.

- **Mail**

- SMTP server: your company out going mail server.
- From: your email address.

- **Microscope**

- Preferred microscope.
- Transfer function range (0 to 20 will plot the transfer function, the aberrations figure, ... to 0.5 Å).

- **Miscellany**

- **Default crystal:** the crystal that is opened when jems starts. When not selected an error message is displayed<sup>1</sup>.

**Do not forget to save the selected preferences (checkbox **Save**).** The preferences are saved in folder  $\sim/jems$  and are loaded when jems is started again.

Close jems and start it again in order to verify the preferences.

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<sup>1</sup>When the license code and serial number are not yet provided only a cubic crystal can be set as default crystal.

## 1.4 Request the license code

When preferences are set, select menu **Help**, menu item **License**. Select tab **Request** and push **Request** button to display the license request dialogue (Fig. 2).

Very often you have to use **SSL** (Secure Sockets Layer or Transport Layer Security) in order to send the license request email. In case SSL doesn't not work as expected you can copy/paste the content of the dialogue in a regular mail (to be addressed to jems.stadelmann@gmail.com).

Mail::request license

Secure mail

☒ Use SSL

SSL login : Put your email login here

SSL password : Put your email password here

From : jems.stadelmann@gmail.com This should be set when Preferences "Mail" are set.

To : jems.Stadelmann@gmail.com

Cc : jems.stadelmann@gmail.com

Subject : jems license request

SMTP server : smtp.gmail.com SMTP port : 465

Name : Your family name

First name : Your first name

Title :

Company :

Street address :

City :

ZIP code :

Country :

E-mail :

Do not change this info

The serial and license code will be provided by jems-saas after receiving the license request

----- jems license -----

Do not edit the following lines)

date : Wed Jun 10 16:18:25 CEST 2015

platform : Mac OS X

hostname : iMac.local

unique ID : DGKLN0HQF8JC

version : 4.3010U2015

serial : to be generated by jems-saas

license : to be generated by jems-saas

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Mail status

Close Send

Figure 2: The dialog used to request a serial and license code.

## 1.5 Setting the serial and license code

After receiving the serial and licence code (e-mail from jems.stadelmann@gmail.com) introduce these infos in the dialogue shown in Fig. 3. The license code can be copy/paste. Take care the license code is case sensitive and letters l (small caps "L") and I (large caps "i") looks very much identical. In case of doubt, change the font to "Courier".

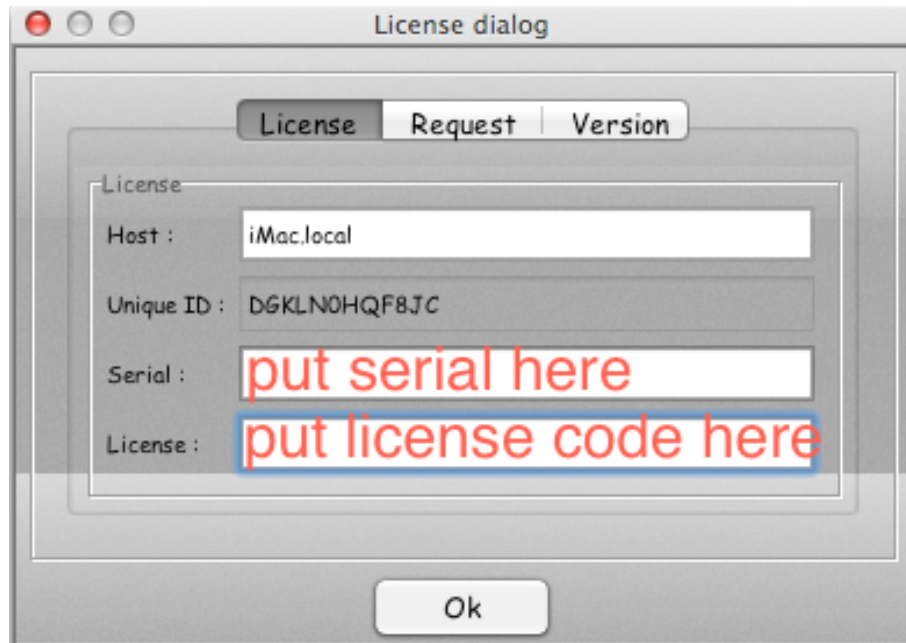


Figure 3: Inserting the serial and license code.

## 1.6 Set read/write access to jems files

Make sure that users have **read/write** access to the whole **jemsMacOSX** folders tree since jems writes info in particular in **/Applications/jemsMacOSX/license** (jemsLicense.txt and in **/Applications/jemsMacOSX/license/jemsData** (Fig. 4).

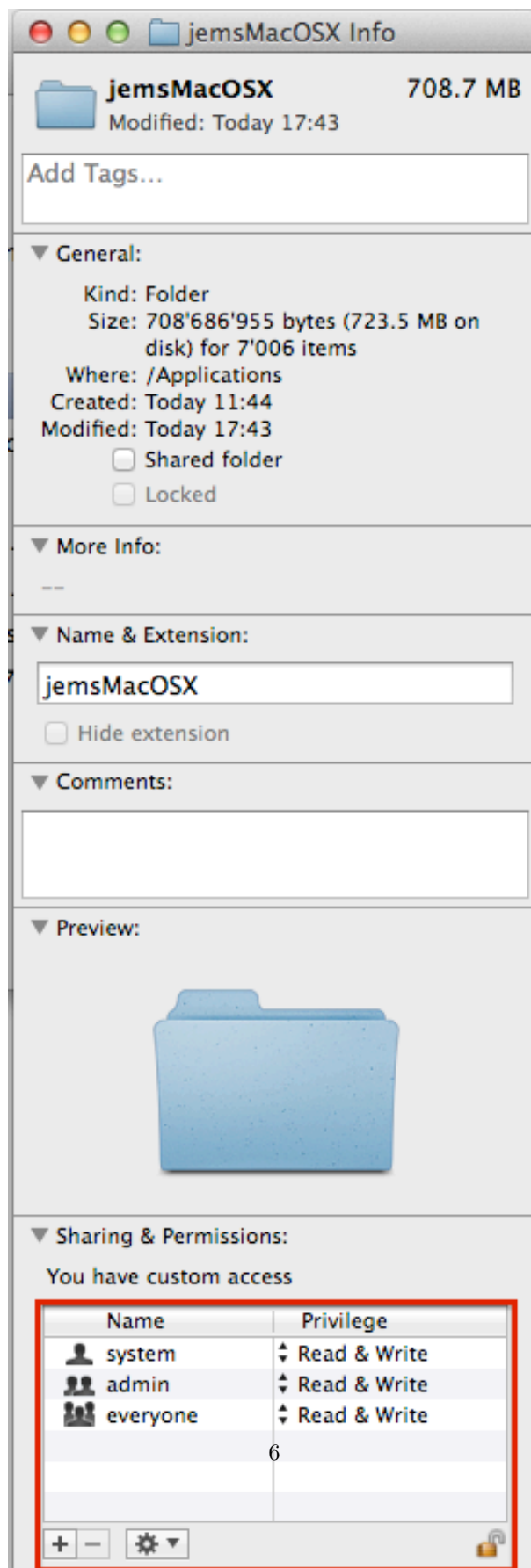


Figure 4: Setting the read/write access to jemsMacOSX folders tree.

## 1.7 WiFi connection

Depending on the WiFi settings, a dynamic **hostname** is attributed to the Mac when connected using WiFi. In such a case when starting, jems will display a **Wrong license code** error message. Your local IT manager can fix the problem (DHCP protocol). Another solution (a bit cumbersome) consists in:

- Stopping jems (when running).
- Disconnecting WiFi.
- Starting jems.
- Connecting WiFi.

You can also try to use DHCP with a manual address (usually possible at home) as shown on Fig. 5.

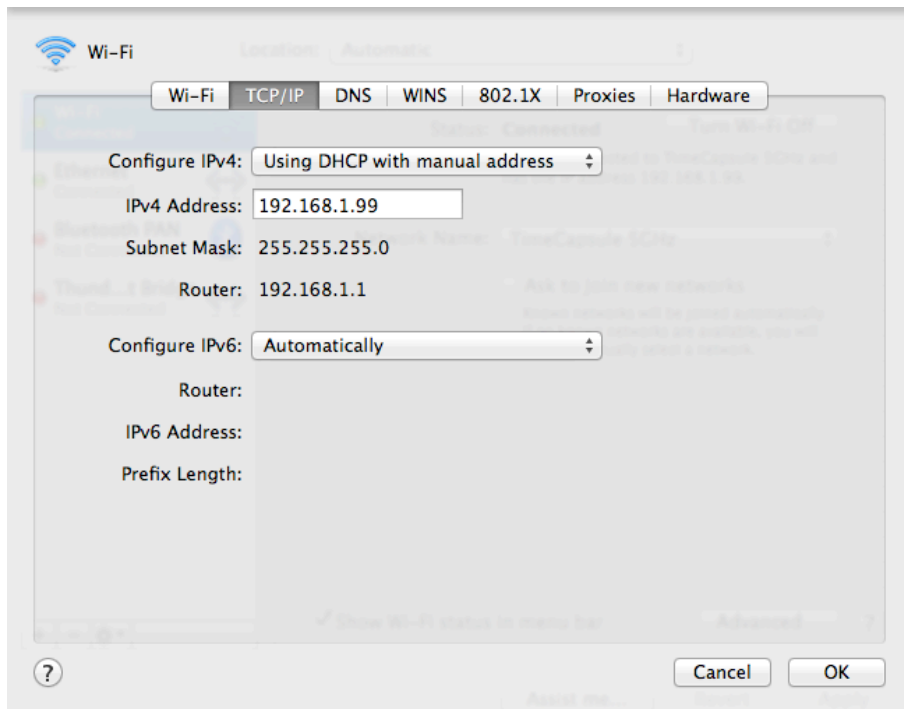


Figure 5: WiFi settings.

## 1.8 Data files

jems contains a few hundreds crystal structures stored either as jems .txt format (loaded using *Open*) or as .cif format (loaded using *Import*). On MacOSX these structures can be found in folder `/Applications/jemsMacOSX.app/jemsData` (Fig. 6).

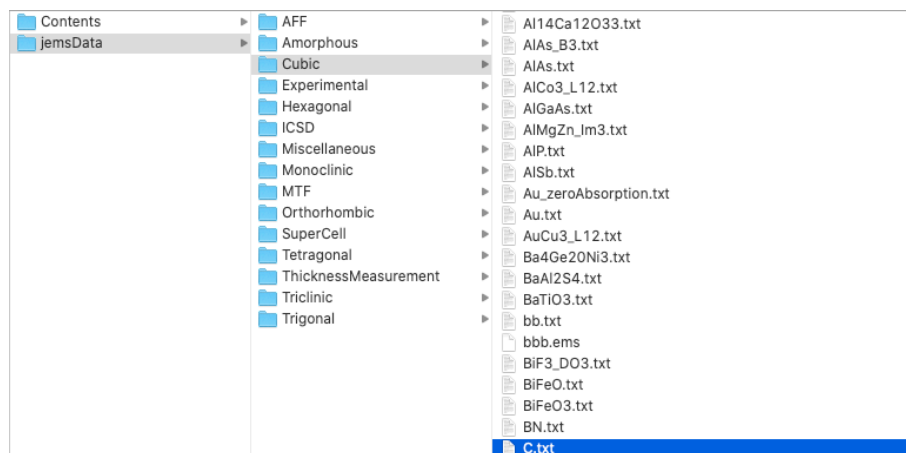


Figure 6: jems data files on MacOSX.