

# Open-source distribution of Salome-Meca



**Code\_Aster, Salome-Meca course material**

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- Improving the quality and robustness of the codes
- Recognition by the users
- Dissemination of skills and knowledge
- Support the construction of industrial and academic partnership

# The release policy and supported Operating Systems

# Release of code\_aster

## Current state for September 2017

### ▶ Four different versions are available:

- **stable**: this is the production version used by EDF for its industrial studies. It is released every six months.

Version 13.4

- **stable-updates**: these are transient states between two stable releases. They include only bug fixes.

Version 13.4.x

- **testing**: this is a snapshot of the development version. It is released every six months.

Version 14.0

- **unstable**: this is the version that integrates improvements. It is updated daily.

Version 14.0.x

# Release of Salome-Meca

- ▶ **One version each year (summer) containing:**
  - The stable version of SALOME at the date of release
  - The stable version of **code\_aster** at the date of release
  
- ▶ **Salome-Meca is the privileged way for the dissemination of code\_aster**
  - But code\_aster may also be installed as a stand-alone application
  
- ▶ **The current version is Salome-Meca 2017**
  - code\_aster 12.8 and 13.4
  - SALOME 8.3.0

# Supported Operating Systems

## ▶ Binary distribution of Salome-Meca

- As a “monolithic” universal archive
- Works on most of 64-bit Linux distributions (recent enough)
- Straightforward installation

## ▶ No binaries for Windows

## ▶ Source version of code\_aster

- The compilation and installation procedures for the prerequisites and the solver are provided
- Easy with most Linux distributions (32 or 64 bits)

## ▶ Other possibilities (not supported by EDF)

- Stand-alone SALOME ported to Windows ([www.salome-platform.org](http://www.salome-platform.org))
- code\_aster ported to Windows (<https://code-aster-windows.com>), Mac OS X (see the Forum)

# Where to find information?

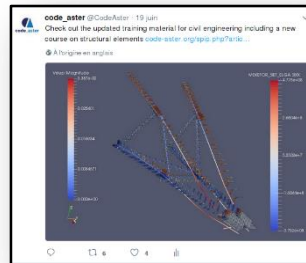
# The web portal [www.code-aster.org](http://www.code-aster.org)

## ▶ Access to all documentations of **Code\_Aster**

- U documents: Usage
  - Using the commands
  - Methodological documents
  - Documents for getting started:
    - *[U1.00.00] Getting started with Code\_Aster*
    - *[U1.02.00] Introduction to Code\_Aster*
    - *[U1.03.00] The main principles of operation of Code\_Aster*
    - *[U1.05.00] A simple example of use*
- V documents: Verification
  - One test-case = one V document
  - Description of the problem and the reference solution
- R documents: Theory
  - Theory related to methods and algorithms of the code

## ▶ Communication

- News, newsletters, tweets





# Learning to use code\_aster

## ▶ Educational resources

- Course materials available on [www.code-aster.org](http://www.code-aster.org)
- Tutorials available through the tests **FORMA\*\*\*** and their documentation
- In general, all test cases
- [U1] documents for getting started with the software

## ▶ Training and other supports

- See service offering from various companies of the code\_aster Professional Network :  
<http://www.code-aster.org/spip.php?article276>

## ▶ Mutual support from the community in the forum

# Tools for the community

# The forum

## ▶ The forum is

- A place of exchange and mutual assistance for code\_aster users
- Exchange of best practices, tips, sharing of experience

## ▶ The forum is not

- A technical assistance that commits itself on the response time. Everyone is free to participate, respond or not.
- A support service as the one provided by a vendor. For professional support services, there are providers that offer this kind of service.

## ▶ Recommendations

- Please do not directly contact the code developers.
- The documentation is very rich, take time to look for information before asking in the forum.
- Be specific in your questions, do not multiply the issues in the same post and attach all files to the post in order to rerun the case.
- Add [SOLVED] at the top of your subject to indicate that the forum has answered your question.
- Thank you for contributing to the forum and helping others!

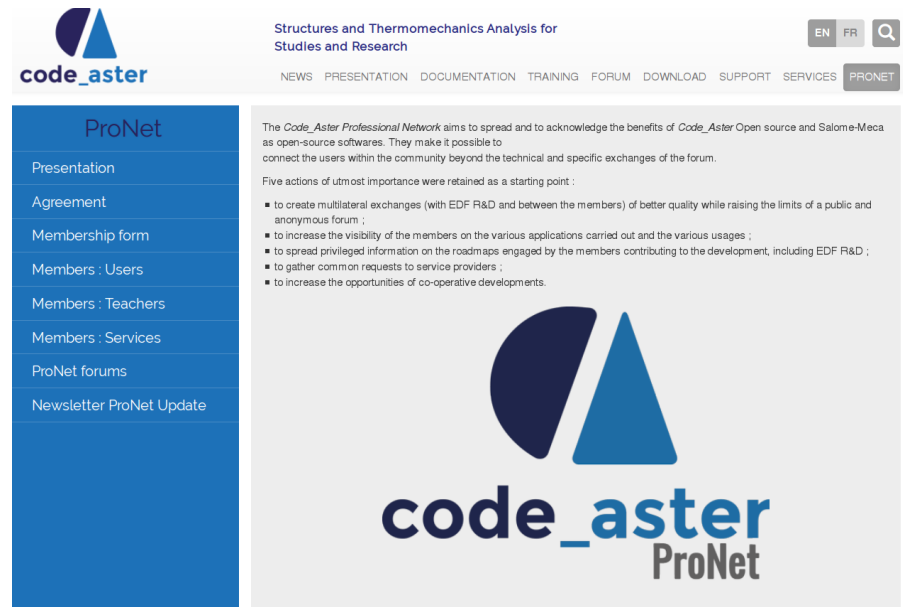
# The professional network code\_aster ProNet

## ▶ Aims

- Create multilateral exchange between institutions (companies, academics), of higher quality than the public and anonymous forum
- Increase the visibility of members on their work and their uses
- Group and structure the service providers offering
- Increase the possibilities of cooperative developments

## ▶ Various profiles : industrials, academics and service providers

## ▶ More information on the website, in the ProNet section



code\_aster

Structures and Thermomechanics Analysis for  
Studies and Research

EN FR Q

NEWS PRESENTATION DOCUMENTATION TRAINING FORUM DOWNLOAD SUPPORT SERVICES PRONET

ProNet

- Presentation
- Agreement
- Membership form
- Members : Users
- Members : Teachers
- Members : Services
- ProNet forums
- Newsletter ProNet Update

The *Code\_Aster Professional Network* aims to spread and to acknowledge the benefits of *Code\_Aster* Open source and Salome-Meca as open-source softwares. They make it possible to connect the users within the community beyond the technical and specific exchanges of the forum.

Five actions of utmost importance were retained as a starting point :

- to create multilateral exchanges (with EDF R&D and between the members) of better quality while raising the limits of a public and anonymous forum ;
- to increase the visibility of the members on the various applications carried out and the various usages ;
- to spread privileged information on the roadmaps engaged by the members contributing to the development, including EDF R&D ;
- to gather common requests to service providers ;
- to increase the opportunities of co-operative developments.

code\_aster  
ProNet

# The Salome-Meca Users Day

- ▶ **Every year around mid-March**
- ▶ **Presentation of studies done at EDF with Salome-Meca**
- ▶ **Event open to all!**
  - Opportunity to discover advanced uses of the code in the simulations carried out at EDF and other companies
  - Opportunity to meet the development team
- ▶ **Presentations from previous years are available on the website (mostly in French)**
  - Tab *Presentation / Examples of studies*

# EDF intents for the open-source distribution

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## ► Improving the codes

- By demultiplying the number of users



300 EDF in-house users

2000 downloads of each biannual release  
+ uncontrolled redistribution

- By collecting feedback from them (when they agree to). For instance:
  - Benchmarks
  - Validation (Limits of the validity of models for instance)
  - Bug reporting (or errors / inaccuracies in the documentation)

# EDF intents for the open-source distribution

## ► Improving reputation through increased use

### ■ Peer recognition

- Disseminating the code as open source is the software equivalent to publication with peer-review for research
- Important way of communication and reputation improvement for EDF R&D

### ■ **Facilitating the dissemination** and acceptability of methods and models developed by EDF



# EDF intents for the open-source distribution

## ▶ Dissemination of skills

### ■ Through education and research

- For training students: addressing realistic cases with professional tools
- For Ph.D projects: providing industrial non-commercial tools with FEM basic and advanced features already available and the capability to capitalize research works. Facilitate upstream transfer from research to industry
- Having a pool of students and graduates already trained with EDF tools

### ■ By creating an **eco-system of skills** among our service providers and partners

- **Interest for providers:** offer them the opportunity to sell their skills on a broader basis than just the EDF contracts
- **Interest for EDF:** ensure that our studies suppliers are even more effective and relevant

# End of presentation

Is something missing or unclear in this document?  
Or feeling happy to have read such a clear tutorial?

Please, we welcome any feedbacks about Code\_Aster training materials.  
Do not hesitate to share with us your comments on the Code\_Aster forum  
[dedicated thread](#).