

ROOT for Summies

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Tutorials

- Hands-on



Tutorials

- 60 versus 2?
- On the web!
 - <http://cern.ch/go/XX9R>
- If you know ROOT: go for it!

Tutorials



The screenshot shows the ROOT website interface. At the top, there is a banner with the ROOT logo, a search bar, and a navigation menu. The main content area is titled "Tutorials and Courses" and includes a list of links to various resources. A sidebar on the left contains user account options and a "What's New" section. A dropdown menu is open over the "Documentation" link in the top navigation bar.

```
//create the file, the Tree and a few branches
TFile f("tree1.root","recreate");
TTree t1("t1","a simple Tree with simple branches");
t1.Branch("px",&px,"px/F");
t1.Branch("py",&py,"py/F");
```

axel

- My account
- Create content
- Feed aggregator
- Administer
- Log out

What's New

- June 26, 2013, 17:09
Patch release 5.34/09
- June 4, 2013, 16:55
Patch release 5.34/08
- April 26, 2013, 17:10
ROOT has moved to Git

Home | What's New | About | Screenshots | Download | Documentation | Support | Forum | Developers | Drupal

Home

Tutorials and Courses

View Edit Outline

courses tutorials

This page lists a number of ROOT tutorials made by third parties others by the ROOT team.

- Introductory Tutorials (approx. 100)
- BaBar tutorials
- FNAL tutorials
- Minos tutorials
- Lectures at the CERN School of Computing (CSC)

28717 reads

Architectural Overview

Discovering ROOT

User's Guide

Reference Guide

Tutorials

HowTo's

FAQ

Other Resources

Access control

Publication List

Example Applications

Tutorials and Courses

Workshops

Starting up ROOT

- ROOT (usually) needs environment variables, e.g. `$ROOTSYS / %ROOTSYS%`
- bash:
 - `source /PathToROOT/bin/thisroot.sh`
- [t]csh:
 - `source /PathToROOT/bin/thisroot.csh`

Starting up ROOT

- ROOT has a prompt:

```
opt$ cd ../opt/
opt$ source bin/thisroot.sh
opt$ root
*****
*                                     *
*           W E L C O M E  to  R O O T           *
*                                     *
*   Version      5.34/07      26 April 2013      *
*                                     *
*   You are welcome to visit our Web site      *
*           http://root.cern.ch                *
*                                     *
*****

ROOT 5.34/07 (branches/v5-34-00-patches@49358, Apr 29 2013, 08:55:00
on macosx64)

CINT/ROOT C/C++ Interpreter version 5.18.00, July 2, 2010
Type ? for help. Commands must be C++ statements.
Enclose multiple statements between { }.
root [0]
```

TFile

- TFile stores data
 - for instance LHC experiments' data
 - key/value
 - read into C++ objects:
`TH1* hist = (TH1*) file->Get("hist");`

TFile

- Self describing
 - knows what is stored, e.g. data of a TH I
- Needs recipe for filling C++ objects in memory from data on file
 - either from description in file
 - or using a “dictionary” (compiled recipe)

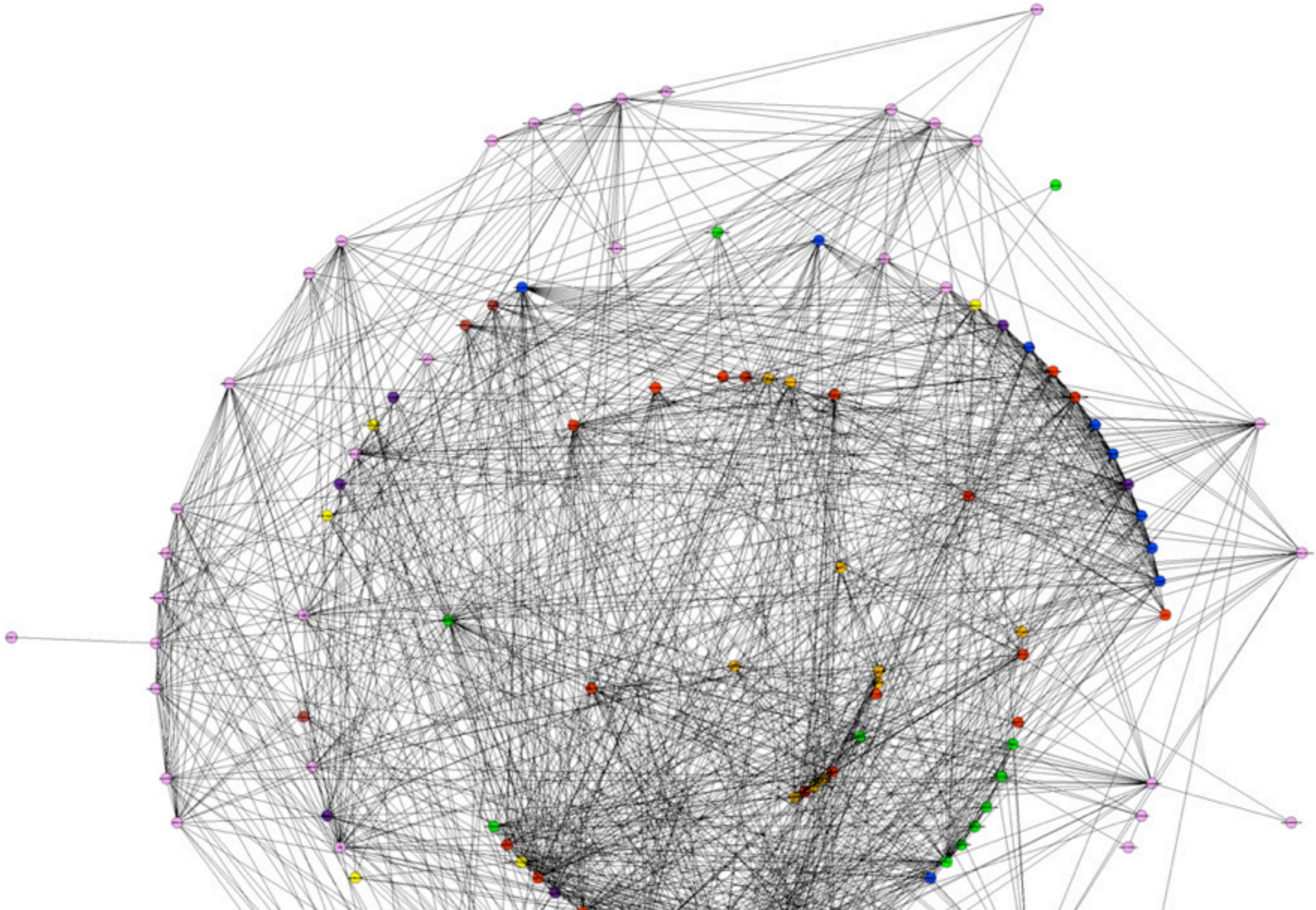
TFile in Tutorials

- Open a TFile, from the web
- Access the TTree container object in it
 - TTree reads its content: C++ objects
 - here: no dictionary - thus using description in file

And now?

- We have experts and beginners
- Small ROOT dev team and it's summer: Bertrand and Axel is a large fraction of ROOT devs
- Only way out:

Serviced Web Tutorials



La Fin

- Contact us with
 - questions
 - complaints
- axel@cern.ch
- root.cern.ch/bugs

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- REALLY.