



# Advanced Registry Operations Curriculum

## Presenting Your NOC



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# The Network Operations Center

## **NOC** = Network Operations Center

- Come in many forms and depend on the size of your organization and your goals.
- “One or more locations from which control is exercised over your network.”
- NOCs can be:
  - Virtual
  - Located at the core of your network
  - With your help desk
  - Built in pieces
  - Etc.

# The Network Operations Center

For purposes of this class each of you will create a virtual NOC using the project management software Trac already installed and partially configured on your machines.

# A BIG NOC



There are even bigger NOCs out there...

# A small NOC

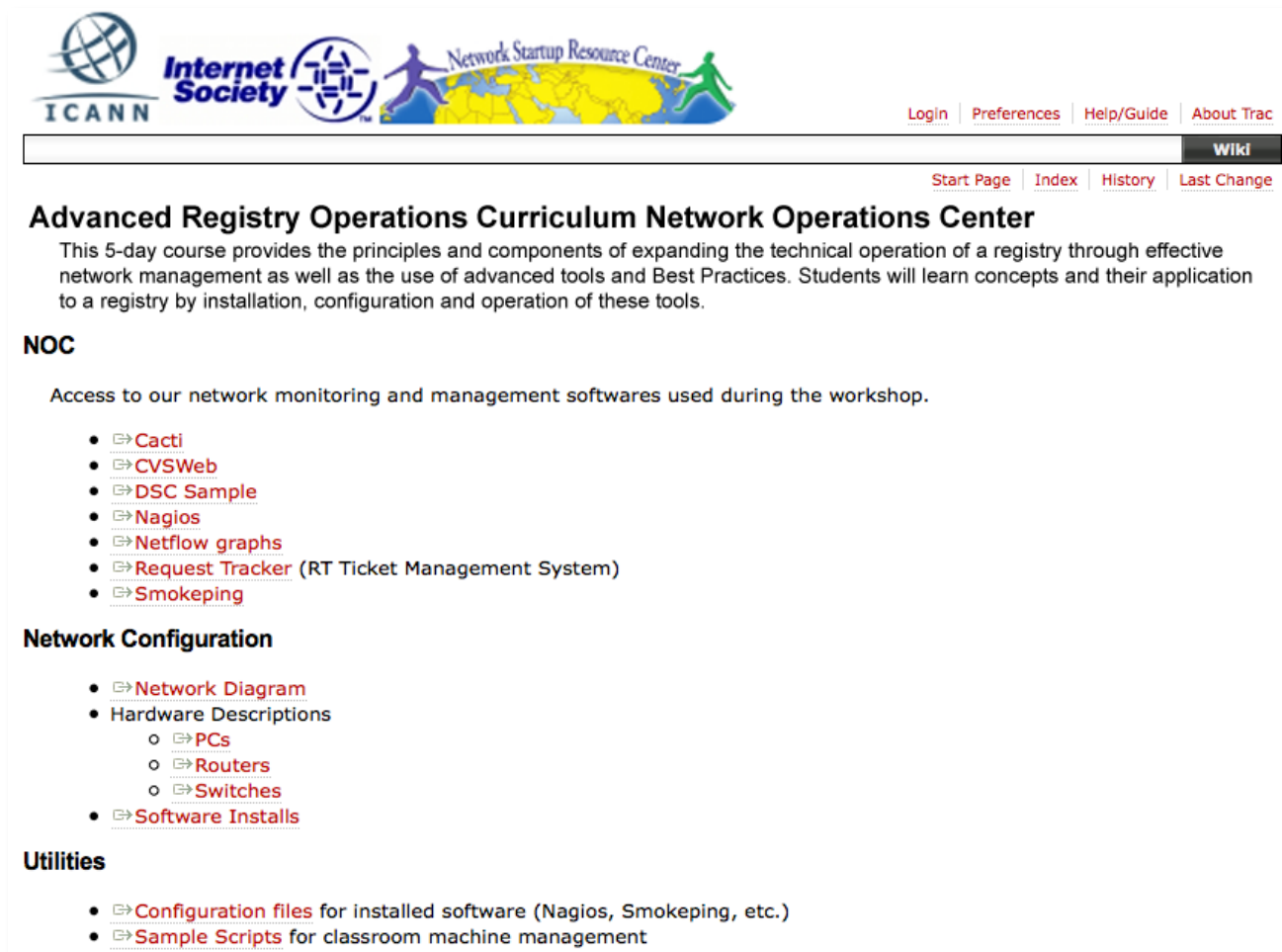


In the same room there is a desk with a phone, another computer and a monitor. This acted as the group's Help Desk.

Many network problems could be detected and solved on the spot!

# Our Virtual NOC

We are working towards something like this:



The screenshot shows the homepage of the Internet Society Network Startup Resource Center. The header features logos for ICANN, Internet Society, and the Network Startup Resource Center, along with navigation links for Login, Preferences, Help/Guide, About Trac, and a Wiki button. Below the header, the main heading is "Advanced Registry Operations Curriculum Network Operations Center". A paragraph describes a 5-day course. The "NOC" section lists access to network monitoring and management software used during the workshop, including Cacti, CVSWeb, DSC Sample, Nagios, Netflow graphs, Request Tracker (RT Ticket Management System), and Smokeping. The "Network Configuration" section lists links for Network Diagram, Hardware Descriptions (PCs, Routers, Switches), and Software Installs. The "Utilities" section lists links for Configuration files for installed software and Sample Scripts for classroom machine management.

**Internet Society Network Startup Resource Center**

[Login](#) | [Preferences](#) | [Help/Guide](#) | [About Trac](#)

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## Advanced Registry Operations Curriculum Network Operations Center

This 5-day course provides the principles and components of expanding the technical operation of a registry through effective network management as well as the use of advanced tools and Best Practices. Students will learn concepts and their application to a registry by installation, configuration and operation of these tools.

### NOC

Access to our network monitoring and management softwares used during the workshop.

- [Cacti](#)
- [CVSWeb](#)
- [DSC Sample](#)
- [Nagios](#)
- [Netflow graphs](#)
- [Request Tracker](#) (RT Ticket Management System)
- [Smokeping](#)

### Network Configuration

- [Network Diagram](#)
- Hardware Descriptions
  - [PCs](#)
  - [Routers](#)
  - [Switches](#)
- [Software Installs](#)

### Utilities

- [Configuration files](#) for installed software (Nagios, Smokeping, etc.)
- [Sample Scripts](#) for classroom machine management

# Getting Started

Go to <http://localhost/trac/>



The screenshot shows the Trac web interface. At the top, there are logos for ICANN, Internet Society, and Network Startup Resource Center. Navigation links include Login, Preferences, Help/Guide, About Trac, Register, and a Wiki button. The main heading is "Advanced Registry Operations Curriculum Virtual Network Operations Center". Below this, there are sections for NOC, Network Configuration, Utilities, Other, and Help. The Help section lists TracGuide and TitleIndex. At the bottom, there is a footer with the Trac logo, version information (Trac 0.11.5, Edgewall Software), and contact information (trac@localhost).

ICANN Internet Society Network Startup Resource Center

Login Preferences Help/Guide About Trac Register

Wiki

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## Advanced Registry Operations Curriculum Virtual Network Operations Center

### NOC

Access to network management and monitoring software installed for the workshop.

### Network Configuration

Network diagrams, machine descriptions, installed software, etc.

### Utilities

Scripts, configuration file, etc. used to manage our network.

### Other

You can rename this section and place anything else that you think might be useful here.

### Help

- [TracGuide](#) -- Built-in Documentation
- [TitleIndex](#) -- Complete list of local wiki pages

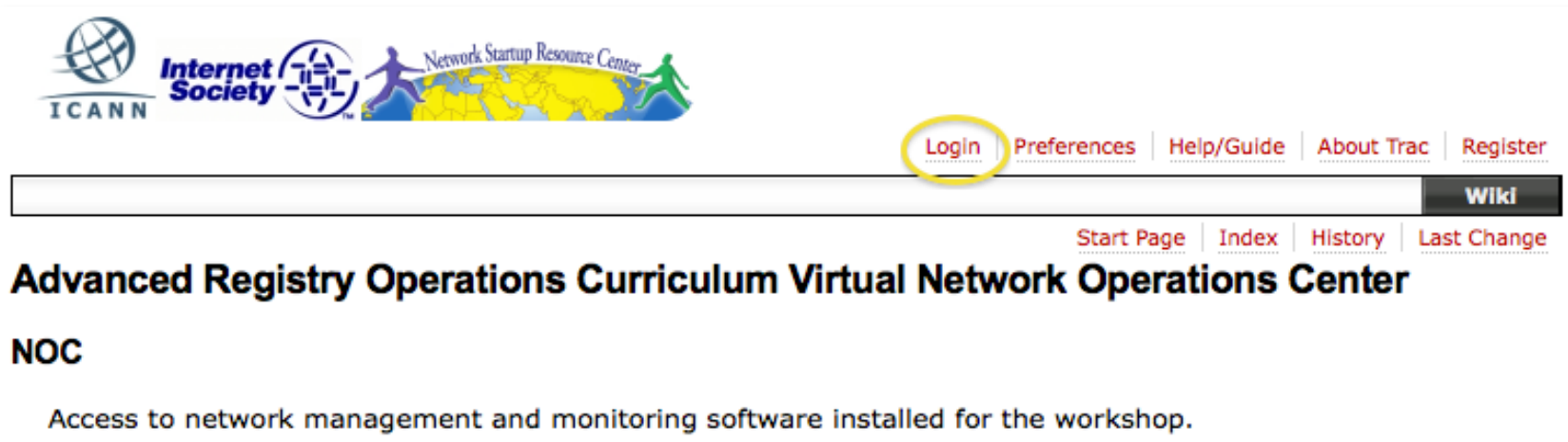
Download in other formats:  
Plain Text

 Powered by **Trac 0.11.5**  
By Edgewall Software.

For assistance send email to  
[trac@localhost](mailto:trac@localhost)

# Getting Started

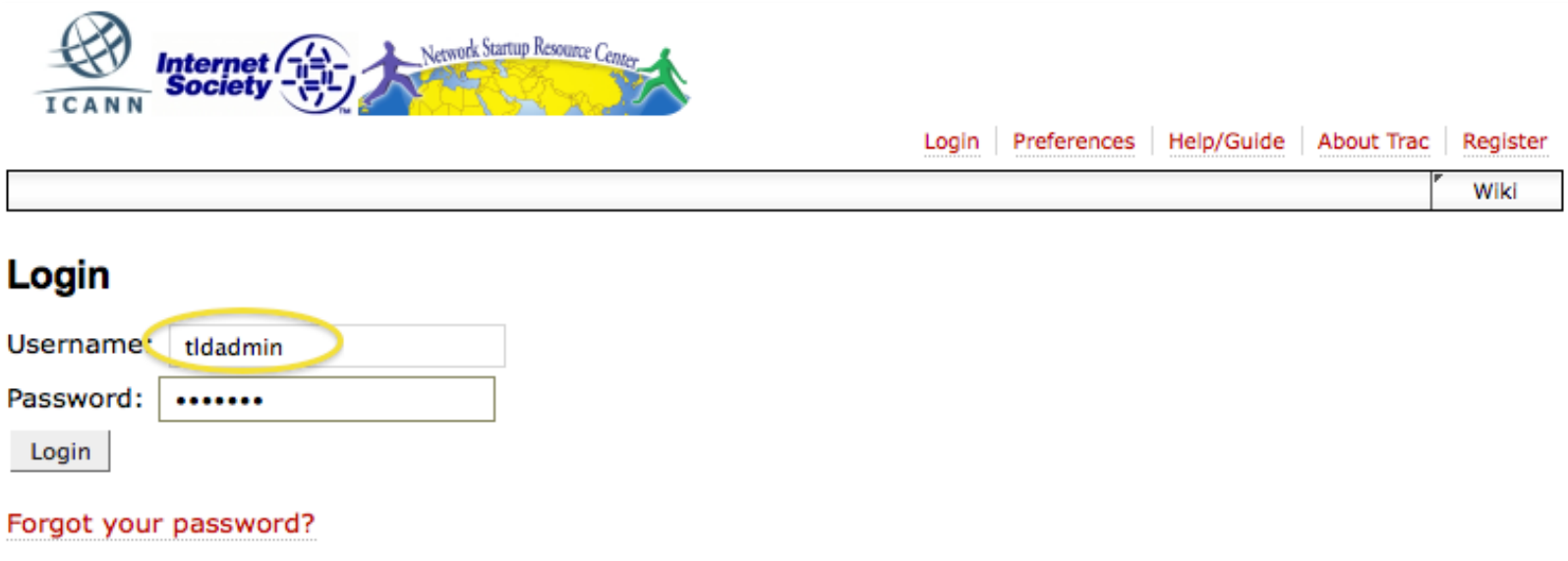
Log in to your Trac instance:



The screenshot shows the Trac web interface. At the top left, there are logos for ICANN, Internet Society, and the Network Startup Resource Center. To the right of these logos is a navigation bar with links: [Login](#) (highlighted with a yellow circle), [Preferences](#), [Help/Guide](#), [About Trac](#), and [Register](#). Below this is a search bar with a [Wiki](#) button on the right. Under the search bar, there are links: [Start Page](#), [Index](#), [History](#), and [Last Change](#). The main heading is **Advanced Registry Operations Curriculum Virtual Network Operations Center**, followed by **NOC**. A description below reads: "Access to network management and monitoring software installed for the workshop."

# Getting Started

Use the “tldadmin” user and same password as used in class:



ICANN Internet Society Network Startup Resource Center

[Login](#) | [Preferences](#) | [Help/Guide](#) | [About Trac](#) | [Register](#)

Wiki

### Login




Username:

Password:

[Forgot your password?](#)

You will now be able to update, create, delete pages in the trac wiki. Click on the “Edit” button at the bottom of each page to do this...

# Getting Started



logged in as tidadmin | [Logout](#) | [Preferences](#) | [Help/Guide](#) | [About Trac](#)

[Wiki](#) | [Timeline](#) | [Roadmap](#) | [View Tickets](#) | [New Ticket](#) | [Search](#) | [Admin](#)

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## Advanced Registry Operations Curriculum Virtual Network Operations Center

### NOC

Access to network management and monitoring software installed for the workshop.

### Network Configuration

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[Edit this page](#) | [Attach file](#) | [Delete this version](#) | [Delete page](#)

# Your Assignment

## Document your network!

- After each software install and configuration link to the new software.
- Create an entry for your PC, other PCs, routers and switches in the classroom.
- Create or copy a classroom network diagram.
- Consider using Trac's Timeline and ticket features for outstanding issues and projects.
- Create a repository of configuration files and link to this.

# Your Assignment cont.

## Documenting your network...

- Make note of what software is installed and versions.
- Document anything else that you think will make managing and monitoring your network easier.
- By the end of the week you should have a Trac instance similar to or better than the instance installed and configured on the workshop NOC machine.

# Keeping “Trac” of it All

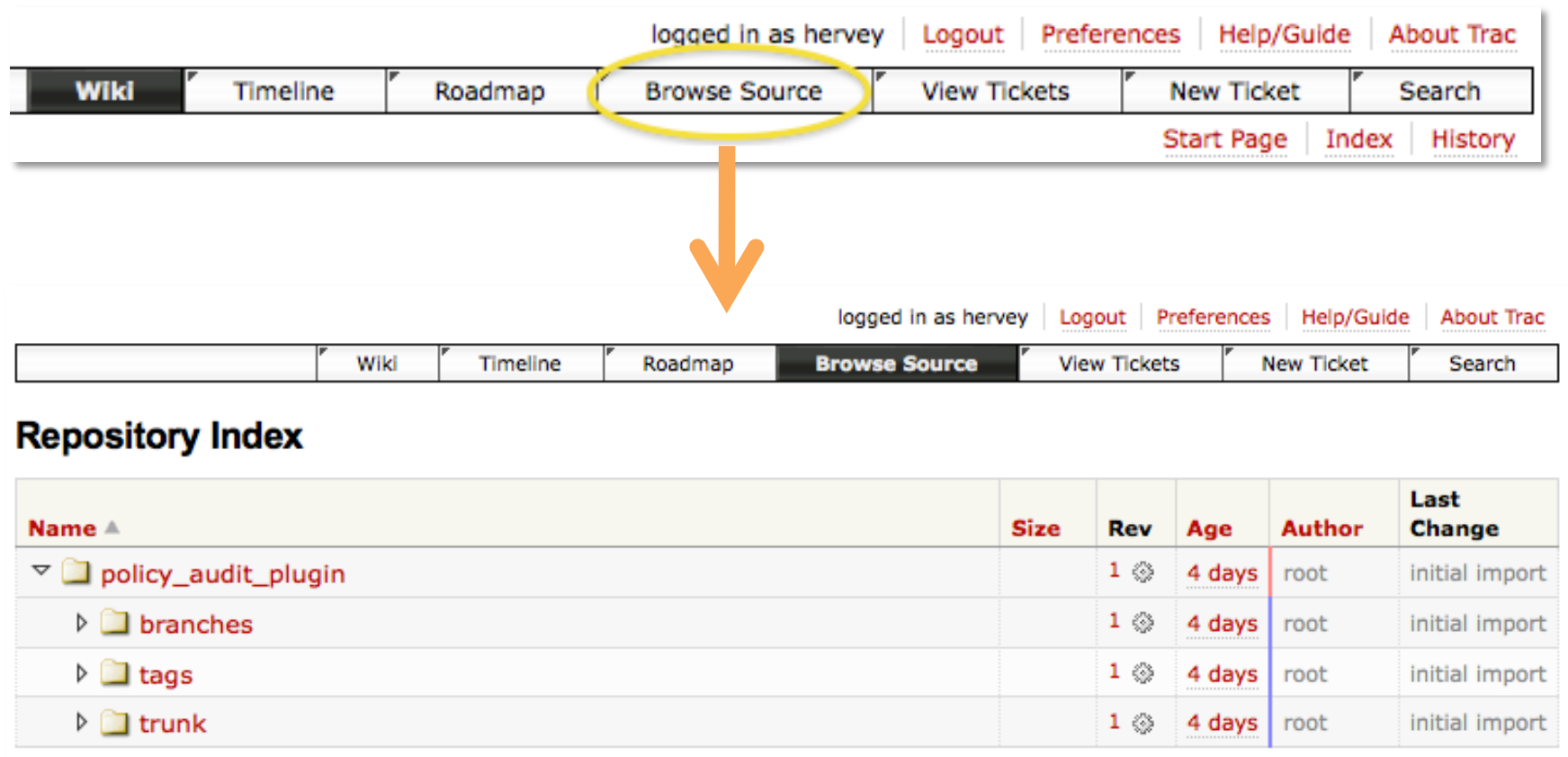
Note that Trac includes a *Timeline* feature. This includes:

- Changes to wiki pages.
  - Updates, creation, deletion and responsible user.
- Ticket history
  - Updates, creation, deletion and responsible user.
- Milestone updates

This is part of the built-in Version Control System (VCS) in Trac. Trac uses the *Subversion* VCS.

# Trac and Subversion

You can link trac to Subversion repositories and access them via the Wiki:



The screenshot shows the Trac web interface. The top navigation bar includes links for 'logged in as hervey', 'Logout', 'Preferences', 'Help/Guide', and 'About Trac'. Below this is a secondary bar with 'Wiki', 'Timeline', 'Roadmap', 'Browse Source' (highlighted with a yellow circle), 'View Tickets', 'New Ticket', and 'Search'. An orange arrow points from the 'Browse Source' link to the 'Repository Index' table below.

**Repository Index**

Name ▲	Size	Rev	Age	Author	Last Change
▼ policy_audit_plugin		1	4 days	root	initial import
▷ branches		1	4 days	root	initial import
▷ tags		1	4 days	root	initial import
▷ trunk		1	4 days	root	initial import

# Versioning and Documentation

Version Control Systems are part of any good documentation project.

During the week you will be exposed to this concept several more times.

There are many version control systems:

- CVS
- Subversion
- Mercurial
- etc...

Wikipedia has a good article on the concepts of “Revision Control”:

[http://en.wikipedia.org/wiki/Revision\\_control](http://en.wikipedia.org/wiki/Revision_control)

# Using Trac

Use the built-in documentation:

## Help

- **TracGuide** -- Built-in Documentation
- **TitleIndex** -- Complete list of local wiki pages

Located at the bottom of the Trac main page.

- If you have questions ask an instructor.
- You can find Trac here:

<http://trac.edgewall.org/>

