



UTOS 2010

UTAH OPEN SOURCE CONFERENCE

IT'S BETTER WHEN IT'S FREE



miller business
resource center

The MBRC can serve as a single point of resources for any business in any period of its business cycle. Our mission is to serve you in ways you can only imagine. If you have a business challenge, we are certain to have the right solution for you. The MBRC offers a wide range of services and support to

entrepreneurs and small business owners. Support is provided through on-site internal resources such as the Salt Lake Region Small Business Development Center and Miller Business Innovation Center as well as partners such as Utah Science Technology and Research Initiative and the Export Assistance Center.



XMISSION
INTERNET

As a local, independent Internet service provider, XMission provides customers with unmatched technical expertise and friendly customer service available 24/7. Since 1993, XMission has developed and supported effective connectivity, hosting, and colocation

services for thousands of Utah residents and businesses. We have a variety of services to meet every requirement and for every price range. Call us, email us, or stop by our offices to customize your XMission account.

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Economic Development



XMISSION
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management and the software application features that can bring a new level to home entertainment including MythTV, XBMC, and MediaTomb.

Graphics Minicourse (Part 2)

Joseph Brower
MFEC 223

Working with RAW images (UFRaw/Rawstudio), Batch Image Processing (Phatch), Filters and Layers in Gimp if time allows.

4:30 p.m.

Introduction to WordPress

John Weeks
MFEC 223

This hands on workshop provides you with the skills to build your first website using WordPress. We will briefly walk through creating a MySQL database on a Linux Apache system and installing WordPress. Then we will immediately start adding pages and blog posts to your websites navigation menus.

Fun with Transactions: What robust transactions can do for you, and how they do it for free

Josh Tolley
MPDC 209

This presentation will explain why developers need to understand transactions, and demonstrate how to use them to good effect. It will compare implementations in the commercial and free worlds, and demonstrate open source transaction management tools suitable for mission-critical use.

There's no place like \${HOME}
Derek Carter
MFEC 123

A beginner's look at some tips and tricks to make the CLI (BASH specifically), a little more comfortable.

Home Internet Filtering Using Free Software

Thad Van Ry
MFEC 101

This presentation will outline how to use a Linux distribution designed for wireless routers to create a home internet firewall and filtering device. The setup uses PacketProtector which incorporates several open source programs to protect the home network from internet based threats. The presentation will describe how to set up this type of system and also offer tips for improving the performance of the setup.

RepRap: Manufacturing on Your Desktop Freedom

Shane Hathaway
MFEC 203

The RepRap project is a global open source effort to build self-replicating rapid prototyping machines. I will present a RepRap-derived machine I have built. We will discuss the technology and how its development will affect people for good.

6:00 p.m.

Boardgame Bash Event Utah Open Source MFEC 123

The Boardgame bash is a tradition! Each year at the end of the conference, we gather and play boardgames until we're too tired to play any more. Everyone invited..

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7b



Thursday, October 7
10:00 a.m.

Nmap
Justin Ricks
MFEC 101

We will be exploring some of the features of Nmap such as the standard TCP Nmap scan, Stealth scans, Information Gathering, Ping scanning, Using decoys and zombies in a scan, zenmap, and real world uses. We will also go over the theory of what Nmap is doing as well as some real uses while we are waiting for each scan to complete.

Webhooks: Enable User Contributed Functionality
Sam Curren
MFEC 123

User Contributed Functionality is the new User Contributed Content. Through the use of WebHooks, web applications, desktop software, and devices can allow user 'scripting' without the need to provide a script environment. WebHooks are a technology that will drive the Event Driven Web. This will explain What, Why, and How.

Deploy the webapps. Immediately!
Dan Langford
MPDC 228

In this presentation we will walk through my favorite tools to quickly turn ideas into working web wonders. Complementing JAVA with Google tools and services, like GWT and AppEngine, can make web app deployment easy, quick and free. If you have great ideas but no server to try them out on, then come on out.

VMLB IP LoadBalancer
Clint Tinsley
MPDC 209

VMLB is a commercial grade LoadBalancer with a web portal for all administration tasks. Topics to be covered include how a loadbalancer works, load balancing algorithms, vlan configuration (single and multi-homed), and virtual machine implementation for load balancing within the virtual server environment.

11:30 a.m.

OS-Level Virtualization : FreeBSD Jails
Christer Edwards
MPDC 209

This presentation will outline the implementation, security concepts and use of Operating System Level Virtualization with FreeBSD Jails. This will also include a hands-on portion, allowing attendees to attack these jails with whatever they can come up with. Are you 133t enough to take down a FreeBSD Jail?

Using the MooTools Javascript Framework
James Lance
MFEC 123

"MooTools is a compact, modular, Object-Oriented JavaScript framework designed for the intermediate to advanced JavaScript developer." We will go over some of its syntax and how you interact with the DOM. I also will introduce how to create objects the MooTools way and introduce its effects library for the browser.

This presentation will focus on tools and methods for creating the user interface for feature-rich web applications. There will be a brief tutorial on the use of jQuery, Underscore, JSON and available jQuery plugins with the goal of providing the audience with all the required knowledge to perform a simple implementation with these tools.

Python Full Meal Deal (Part II)
Matt Harrison
MFEC 223

This is the second session of the Python Full Meal Deal.

So Many Choices: Web App Deployment with Perl, Python, and Ruby
Jon Jensen
MPDC 209

We'll go over the implications of these new options for webserver independence, performance, process isolation, load balancing, scalability, memory usage, and SELinux. We'll also compare the host-it-yourself model to multi-tenant cloud services such as Heroku and Google App Engine.

Shell Scripting Survival Tools
Mike Adams
MFEC 203

Shell Scripting Survival Tools would be an introduction to basic shell scripting on a Linux/BSD/*nix system using Bash. At the end of the presentation a Linux/BSD/*nix user should be able to identify the basic components and some useful functions of a bash shell script.

3:00 p.m.

Ajax Fragments, Django, jQuery, and You!
Seth House
MFEC 123

We will be talking about a reusable technique for making every widget, sprocket, and cog on your website drip with Ajaxy goodness without sacrificing all that whole-grain nourishment of HTML, back-buttons, bookmark-ability, and beautiful, semantic and crawlable URLs.

Generating Solutions
Brian Hawkins
MFEC 203

Many data related problems can be solved by using generated code. Using generated code instead of dynamic typing or reflection results in more efficient code that is easier to maintain. This presentation provides the tools and techniques to begin generating code for your projects.

Zenoss: They Built A Better Nagios
Corey Edwards
MPDC 209

Zenoss may be the solution for you. It offers many advances over previous generation tools such as Nagios and Cacti. It's simple to use, easily extensible and rich in features. Come learn how Zenoss can make your life easier.

Introduction into managing Media content with Linux
Brandon Beattie
MFEC 101

In this presentation we will go over the basics of media content

A discussion of prudent business-planning and rapid course-correction in an age when everybody instantly knows everything.

11:30 a.m.

Android programming using Google Maps

John Jolly
MFEC 123

Android is Google's answer to the iPhone OS. This class will be a quick overview on how to create an Android App and how to integrate a Google Map into the app. It will show layers and markers and let you persist the data between runs of the app (or instances).

Dumb Simple PostgreSQL Performance

Joshua Drake
MPDC 209

This talk is designed specifically for those who are not DBAs. We discuss the key parameters in the postgresql.conf to adjust and what to adjust them to. We also provide discussion on proper hardware provisioning, basic indexing techniques and external technologies such as replication and connection pooling.

Make Your Pictures POP! (Beginning GIMP)

Laura Moncur
MFEC 223

If you are wondering how to modify your digital photographs, this is the class for you. Using GIMP, a free and open source photo-editing software package, you'll learn how to crop, adjust colors, straighten, and correct your photographs so they are perfect. This

is a hands-on demonstration.

Ultimate Randomness -- Girls in Open Source

Malakai Wade, Mirano Cafiero, Saskia Wade
MFEC 101

In this session, a 12-year-old girl involved as a user of, and contributor to, open source projects present some of her work. This is followed by a Q&A session for the audience to explore how to get girls involved in open source.

An Introduction to Django

Jordan Gunderson
MFEC 203

Django is an excellent Python web framework. We'll take a tour of Django by looking at the various components of a very simple, but working Django site: a settings file, a urls file, a simple model, a simple view, a simple form, a template, the admin area, and maybe a context processor and a piece of middleware.

1:30 p.m.

Managing your finances with GNUCash

Joseph Brower
MFEC 101

This presentation covers how to use GNUCash to manage your everyday expenses. Things such as the chart of accounts and reporting would be focused on. Using GNUCash for tracking monthly expenses and budgets would also be covered.

Development of feature-rich web applications

Daniel Evans
MFEC 123

Creating Appliances with Kiwi

Alan Clark
MPDC 228

This presentation will discuss how to use open source Kiwi to create appliances and system images and cover details about the creation of the Kiwi configuration and how to customize the created image. We will use examples to discuss the XML based Kiwi configuration file. Basic XML understanding helpful.

Experience publishing with open source

Jerome Horowitz
MFEC 101

The presentation will relate our experience using open source software to prepare a manuscript for printing. The intent was to get a professional look with a minimum of effort. Tried openoffice.org, lyx, tex, latex, kile, emacs, texmaker, and eclipse. We will go over Latex and Tex resources.

1:30 p.m.

Getting the word out: free software project promotion

Jake Edge
MPDC 209

We'll cover things like interfacing with the press, using blogs and mailing lists, web site organization, and more. Participants will leave with a better idea of how to make a bigger splash with their projects.

Anatomy of a PHP Request

Joseph Scott
MFEC 123

Ever wondered what really happens when your PHP script runs?

I'll cover read, parse, compile, execute, output and where to look for road bumps along the way. We'll dive into op code caches (with APC), op code dumps (Vulcan Logic Dumper), system calls, and profiling (with Xdebug, webgrind, and XHPProf).

Search to Infinity... and Beyond!

Andrew Spencer
MFEC 101

Dive into setting up an industrial-strength search engine for all of your applications. Learn how to install, configure and customize Sphinx for tailor-made searches into your data. See how easy it is to master the Sphinx API and have your applications quickly return relevant results,

Torque: Open Source HPC for home use

Stephen McQuay
MPDC 228

TORQUE is an open source resource manager providing control over batch jobs and distributed compute nodes. I'll show how to use TORQUE to put old computers to *meaningful* work. In combination with NFS (or similar), one can trivially set up a system for batch encoding ogg files, video files, etc.

3:00 p.m.

A Twisted Approach

Gabriel Gunderson
MFEC123

Twisted enables rapid development of networking applications. We'll look at Twisted's basic building blocks, developing Twisted servers and clients, and

introduce Perspective Broker (an asynchronous, symmetric network protocol for secure, remote method calls and transferring of objects).

Ditching Stateless HTTP with Wicket

Craig Kelley
MPDC 209

Apache Wicket is a bridge of PHP, JSP, and MVC frameworks like Struts, Rails or Zend into a coherent application framework. It allows for work in HTML and CSS while back-end developers work in Java. Database information is used directly by Wicket components, which are extensible and customizable.

How ioMemory & open source are creating a new storage tier

Robert Wipfel
MPDC 228

ioMemory is a new tier of solid state persistent storage; positioned closer to RAM than traditional spinning disk: a fusion of Memory and I/O. The performance, cost, and energy benefits of ioMemory is truly disruptive. Attend this session to learn about ioMemory, its impact on OS and Apps,

FreeSeer: Capturing audio and video on the cheap

Clint Savage
MFEC 101

Freeseer (<http://github.com/fosslc/freeseer>) was created as a video capture utility capable of capturing presentations. It captures vga output and audio and mixes them together to produce a video. If you are interested in getting started on the cheap this

presentation is for you.

4:30 p.m.

KEYNOTE: Jared Smith **Swimming upstream: How Linux distributions help the entire community** **MFEC 101**

In my keynote, I'll talk about the job of Linux distributions --How they take upstream code, package it up, and put it pieces together to build a distribution. I'll also talk a bit about community-building and working in a collaborative fashion with upstream projects.

6:00 p.m.

LaunchUP **Utah Open Source** **MFEC 101**

LaunchUp.org is going to help entrepreneurs in new ways. A community based advisory board if you will. A way to help get some companies launched, or help existing companies launch past problems to new levels.

6:30 p.m.

Fedora, FOSS, and Schools.. **The story of Fedora Campus** **Ambassadors**

Ryan Rix
MFEC 123

Many colleges and universities have been dominated by proprietary software requiring students to purchase expensive software. Over the last year, however, FOSS has matured to the point that schools can begin assessing Free alternatives. This presentation will touch on the current state of Fedora's Campus Ambassador

However, its great data reliability comes at a cost - performance. I will examine various hardware and software approaches to tuning your OpenSolaris+ZFS NAS and share what sort of performance can be expected from each.

7:30 p.m.

Amateur Radio Operators BoF **Robert Bolton** **MFEC 123**

A chance for current amateur radio operators and those interested in amateur radio to come together to discuss the different aspects of amateur radio and open source technology. Topics include software defined radio, APRS, digital communications, high-speed multimedia radio, etc.

Fedora BoF **Larry Cafiero** **MFEC 203**

A birds-of-a-feather meeting around the Fedora Project.

Tornado: Real-time web **Allan Carroll** **MPDC 209**

With Google's launch of Instant Search, real-time experiences have become the gold standard across the web. Tornado is a lightweight Python web server and framework for building real-time web applications. Discussion will focus on Tornado's non-blocking, asynchronous request handling, and various tools.

PGP/GPG Keysigning BoF **Aaron Toponce** **MFEC 101**

What to do before the key signing

party? If you don't have a GPG or PGP key yet, create yourself a key as described in section 4.1 of the GPG key signing HOWTO (http://www.cryptnet.net/fdp/crypto/keysigning_party/en/keysigning_party.html). What to bring? printout of your key including the fingerprint information and an official, valid ID with a photo of yourself on it.

Drupal and You BoF **Jason Hill** **MFEC 223**

Anyone interested in learning more about Drupal. The talk will cover the basics (nodes, taxonomy, content types), intermediate/advanced (modules, views, cck, theming, apis) and beyond. Find out what makes this open source CMS tick.

8:30 p.m.

Geek Dinner - Texas Road House **Utah Open Source**

Join us at the Utah Open Source Geek Dinner, held at Texas Road House. Enjoy some great grub with a bunch of your friends and geeks. Discuss the conference, cool topics or anything of interest! Texas Road House 200 West 10600 South (@ South Towne Mall, west side) Sandy, UT 84070-4144 801-572-7718

Saturday, October 9
10:00 a.m.

KEYNOTE: Imitating Success and Identifying Failure **Howard Tayler** **MFEC 101**

4:30 p.m

KEYNOTE: Barn raising and musicians on the green - old ideas in a digital world

Karsten Wade

MFEC 101

We like to give it a fancy term, “the open source way”, but that’s really just riding the back of a strong and recognizable brand. What this is really about is learning from thousands of years of natural law that describes what people do when they get together over a shared field of endeavor. In this presentation, you are introduced to why free and open source software (FOSS) represent that barnraising and commons on a global scale, with the same reach as folks in your local community. How FOSS is history’s first worldwide barn building, complex and troublesome and beautiful, and ultimately very useful. Why people are specifically using the open source brand to talk about how these methods can be applied to other domains and endeavors.

6:00 p.m

Metasploit: Free, Powerful, Flexible

Jason Wood

MFEC 101

Metasploit is a powerful tool to have in the hands of a penetration tester. This presentation will cover what Metasploit is, who are the drivers of this project, and what its capable of. Metasploit is a framework for exploitation that can help you develop and build your own utilities to use in testing.

Automated Deployments of Linux in a Small-business Environment

Jared Smith

MPDC 209

In this talk, I will show attendees how they can automate a system to deploy Linux to desktop machines in a small-business environment. I’ll cover topics such as network booting with PXE, how to use Cobbler, how to write a kickstart script, and how to automate other system settings.

Getting Futuristic with JavaScript - Programming as if f(x) had already happened.

AJ O’Neal

MFEC 223

A hands-on experiment using Futures to create a contact list application. Aimed for those familiar with JavaScript (have used a framework, such as jQuery, with callbacks) the exercise takes 2 to 3 hours.

Business Models for Open Source

David Richards

MFEC 203

There are many business cases to be made using open source technologies. This presentation will what worked and what didn’t. This presentation should be useful for developers, entrepreneurs, project managers, business owners, and investors.

Performant Network Attached Storage

David Hilton

MFEC 123

From the aspect of data reliability, opensolaris+ZFS is great.

program, the future of the program, and how it can grow and succeed.

7:30 p.m.

Ignite Salt Lake

Jesse Harding

MFEC 101

“Enlighten us, but make it quick” is the slogan of Ignite--a community event celebrating the passion and creativity of geek culture, sponsored by O’Reilly Media. Ignite events showcase a series of speakers who, in rapid succession, give five-minute talks on whatever ignites their passion.

Friday, October 8

10:00 a.m.

Designing and Building a Domain Specific Language

Phil Windley

MFEC 101

When most programmers set out to gather input for a program, they look to a user interface of some sort. Most never think about using a language as the basis for their system. This talk will discuss domain specific language design and implementation based the speaker’s experience building the Kynetx Rule Language,

Graphics Minicourse (Part 1)

Joseph Brower

MFEC 223

In this presentation we will cover F-Spot and work on image organization, image versioning, basic editing, creating web galleries, slideshows, posters and collages.

Learn the Command Line the Quick and Easy Way

Jared Bernard

MFEC 203

An introduction to the command line for the beginner. Learn how to navigate around the command line with confidence. See how easy it is to manage files, to find your data, kill programs that won’t respond, automate tasks and be more productive.

CLI Judo

Derek Carter

MFEC 123

In this presentation, you will learn to make the most of your command-line experience including Bash “strict” mode, Variable tricks, Scripting best practices, History tricks, Pipe tricks, Completion tricks, and Great one-liners.

11:30 a.m

Advanced Git (Part 1)

Tim Harper

MFEC 223

So, you’ve been using git in your projects. It’s fast, you’re able to create and switch branches in the blink of an eye, and you’re liking it better than any other VCS (version control system) you’ve ever used. But... if that’s all you do with git, did you know that you’ve just scratched the surface?

opensource.com: How open source is changing your life beyond technology

Karsten Wade

MFEC 203

Open source—once a way to describe software source code and

the collaborative model for how it's developed. Today it's becoming much more. What happens when the open source way is applied to the world? What problems can we solve? How would it affect the way we learn? Run our businesses? Our governments?

HTTP for Web Developers
Michael Place
MFEC 123

We'll talk about what's actually happening when a browser requests a web page and we'll see HTTP in action using free tools like Firebug. We'll learn about common problems that occur between a browser and a web server and how to diagnose them.

User Groups 2.0
Larry Cafiero
MFEC 101

With Linux and FOSS gaining in popularity, many newcomers are invited to participate in Linux User Groups (LUGs) or other program-specific user groups. Once the sole domain of geeks, user groups now have a wider range of people attending and groups must evolve to meet the needs of the non-technical user.

Elphel - Open Hardware Company
Oleg Dzhimiev
MPDC 209

Discusses the benefits of Open Design, based on it's experience of developing high-end digital cameras over 9 years, in Utah.

1:30 p.m

Keep your website running on

the straight and narrow

JT Zemp
MFEC 209

If your web app is important to your business, you need it to be running, responsive and giving your users a good experience. Using Cucumber and Nagios, we will cover making sure your site doesn't break. Cucumber is a tool that defines what a web app should do from the user's perspective.

E-Commerce with the Magento Open Source Shopping Cart
Mac Newbold
MFEC 123

Magento is one of the most popular open source shopping carts. This talk should be appropriate for business people looking for an online shopping cart solution, as well as technical people interested in working with the system or modifying and extending it.

Extending Puppet with Custom Facts

Joseph Hall
MFEC 101

You've been using Puppet at your datacenter, but you just can't help but feel that maybe you're being held back just a little. Facter, the program which Puppet uses to collect facts about your system, can be extended with the addition of your own custom facts!

Tour de OMNOM (Open Marketing, not Obscured Marketing)
Robyn Bergeron
MFEC 203

"Open marketing", in a nutshell, is taking the principles of FOSS and applying them to the ways projects market themselves. At-

tendees will learn about the many ways that communities can utilize Open Marketing practices to promote their projects or causes.

Advanced Git (Part 2)

Tim Harper
MFEC 223

So, you've been using git in your projects. It's fast, you're able to create and switch branches in the blink of an eye, and you're liking it better than any other VCS (version control system) you've ever used. But... if that's all you do with git, did you know that you've just scratched the surface?

3:00 p.m

Exploring the Radio Frequency Spectrum

Robert Bolton
MFEC 203

An in depth look at amateur radio's effect on today's technology. Topics include the history of amateur radio, requirements for becoming an amateur radio operator, exploration of the technologies amateur radio uses, and open source tools that can be used in conjunction with amateur radio.

Python Full Meal Deal (Part I)
Matt Harrison
MFEC 223

We're going to mesh TDD, a desire to learn Python and Brazilian BBQ. Bring your laptop (having Python 2.x installed). This is hands on! You will program! Hopefully you'll walk away from this double session knowing a little bit about Python, perhaps even writing your own decorators and generators.

Leveraging Outsourced Development Resources

Scott Lemon
MPDC 209

Does it make sense to use offshore, outsourced developers? How do I do it? What are some best practices? What can I expect? This presentation would give an example of how outsourced development resources can be used to create a powerful software development team. It will include real world experiences.

Linux Backup Strategies

Rob Oakes
MFEC 101

This presentation will overview the challenges of preserving memory in a digital world. It will introduce two different types of tools: those used for backup, and those used for archiving. It will then describe an automated, open source system for routinely creating a backup of digital memories.

Rapid application development with node.js

Shane Hansen
MFEC 123

Node.js is a server side framework for developing massively concurrent servers. In my presentation I'll provide a brief introduction to node.js, and walk through a brief example app for collecting real time web analytics to showcase how rapidly applications can be developed with node.

About Utah Open Source

Utah Open Source Foundation
(UTOS)

The Utah Open Source Foundation was created in June of 2006 with the goal of 'Helping grow open source in Utah'. This goal, while a tremendous challenge, has brought with it some great successes, and some serious trials. UTOS is in place because of the hard work and efforts from a group of volunteers, several business folk who are interested in UTOS' success and the generous encouragement of the Utah Open Source community.

UTOS launched out of the now defunct Utah Open Source Coalition. Our ideals are similar in nature to theirs, though on a larger scale. UTOS plans help Local User Groups (LUGs) and others involved in open source in Utah in several areas. Our main focuses are community, technology and business, with a growing interest in spreading open source in education. We believe that helping those who help free software succeed is a noble goal.

A broader discussion of these goals can be found on our wiki.

Utah Open Source 2010 Core Team Members

Clint Savage
Executive Director

Justin Carmony
Sponsorship Manager

David Owen
Volunteer Manager

Victor Villa
Marketing Manager

Adam Barrett
Code Guru

Jayce^
MC

Utah Open Source Resources

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