



The PHP Company

# Harnessing the Power of Zend Server for IBM i

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# Agenda

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- Review the IBM relationship
- Technical Overview
- Installation - Update!
- Product Features
  - ▶ Caching
  - ▶ Code Tracing
  - ▶ Job Queue
- Demo
  - ▶ Monitor/Code Tracing
  - ▶ Caching
  - ▶ Job Queue

# Questions?

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- If you have a question you can
  - ▶ Type in the Q&A panel

- Follow us!



▶ <http://bit.ly/cjueZg> (Zend Technologies or search for Zend)



▶ <http://twitter.com/zend>

# Resources

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- Recorded Webinars

- ▶ <http://www.zend.com/en/resources/webinars/i5-os>

- Zend Server for IBM i main page, link to downloads

- ▶ <http://www.zend.com/en/products/server/zend-server-ibm-i>

- Zend Server manual:

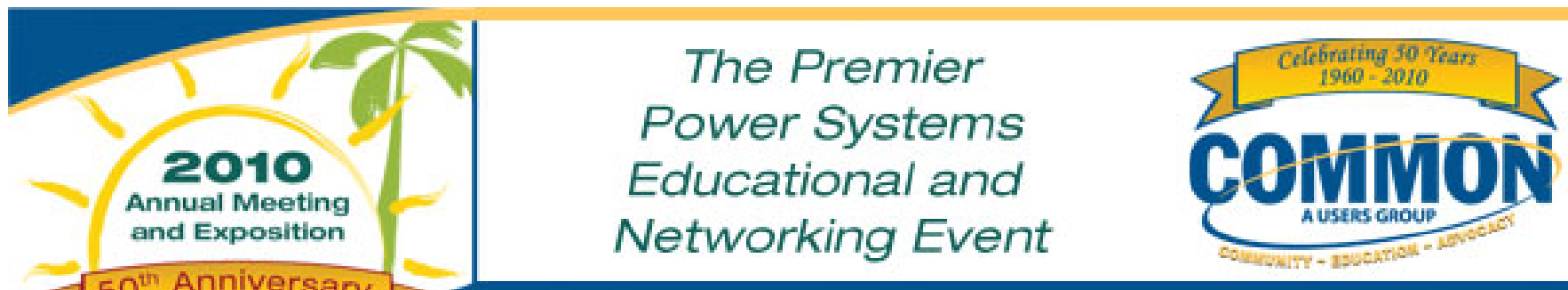
- ▶ PDF: <http://www.zend.com/topics/Zend-Server-5-for-IBMi-Reference-Manual.pdf>

- ▶ Online: [http://files.zend.com/help/Zend-Server-5/zend-server.htm#installation\\_guide.htm](http://files.zend.com/help/Zend-Server-5/zend-server.htm#installation_guide.htm)

# COMMON 2010 - The 50<sup>th</sup> Anniversary

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- Ten sessions on PHP from Zenders
  - ▶ Mike Pavlak, Sam Pinkhasov, Kevin Shroeder
- More sessions by community members
  - ▶ Jeff Olen, Bill Hansen, Erwin Earley, Scott Klement, Brian may
- Visit us in the Zend Booth #624



# IBM Relationship FAQ's

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- **What do we get?**
  - ▶ Zend Server CE
  - ▶ Zend Studio
  - ▶ 1 year Silver Level Support (email/web 72 hour response)
  
- **What happens after 1 year?**
  - ▶ Product will still run
  - ▶ No updates to product or PHP
  - ▶ Forum support only

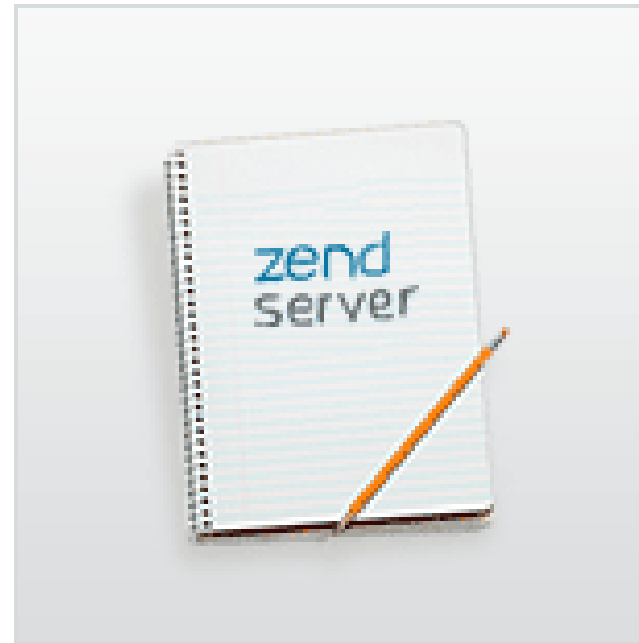
# IBM Relationship FAQ's

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- **What do I do when support runs out?**
  - ▶ Roll the dice
  - ▶ Zend account representative can discuss support options
  
- **I downloaded Core and it's been a year. Can I download Server and get support for another year?**
  - ▶ No, the support entitlement is by server, not Zend Product
  - ▶ The product will still run, however.
  - ▶ Forum support is always available

# Zend Server 5.0 GA on 04/12/2010!

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- The Linux and Windows distributions have been GA since Feb
- Code base consistency is making this gap smaller
- Training class available...see [zend.com/store](http://zend.com/store) for more info

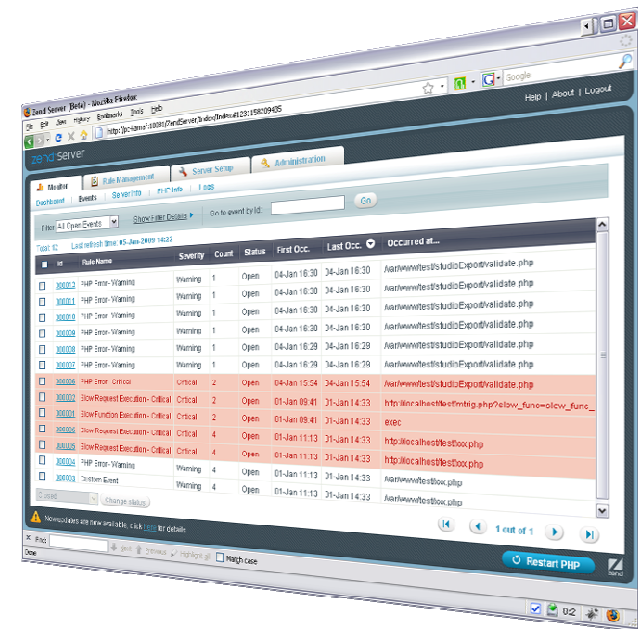
# Zend Server 5 for IBM i

[www.zend.com](http://www.zend.com)

## Technical overview

# What Is Zend Server?

- Production quality PHP stack
  - ▶ PHP, ZF, DB connectivity, debugging extension, and more
- Two Editions - Free “Community Edition” provided by IBM & Full commercial edition
  - ▶ Both are production ready
- Application monitoring and diagnostics (integrated with Zend Studio)
- Multi-level performance enhancement capabilities
- Software updates and security hot fixes
- Easy and quick installation
- Zend Framework Integration



# Zend Server for IBM i

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- Next generation of PHP stack for IBM i
- Best of both Zend Core and Zend Platform
- Single Licensed Program Installation
- Two products
  - ▶ Zend Server for IBM i Community Edition
    - Available at no charge per IBM partnership
  - ▶ Zend Server for IBM i
    - Subscription available from Zend
    - High value extra features
    - Higher Support SLAs

# Why a new generation?

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- **Based on feedback of key areas for Improvement**
- **Improved basic PHP Performance**
  - ▶ 30% to 600% depending on the application
- **New capabilities**
  - ▶ Code Tracing - Faster problem resolution
  - ▶ Job Queue - Performance and scalability
  - ▶ Page Caching - Performance and Scalability
  - ▶ Support for PHP 5.3
- **Easier installation, administration & maintenance**

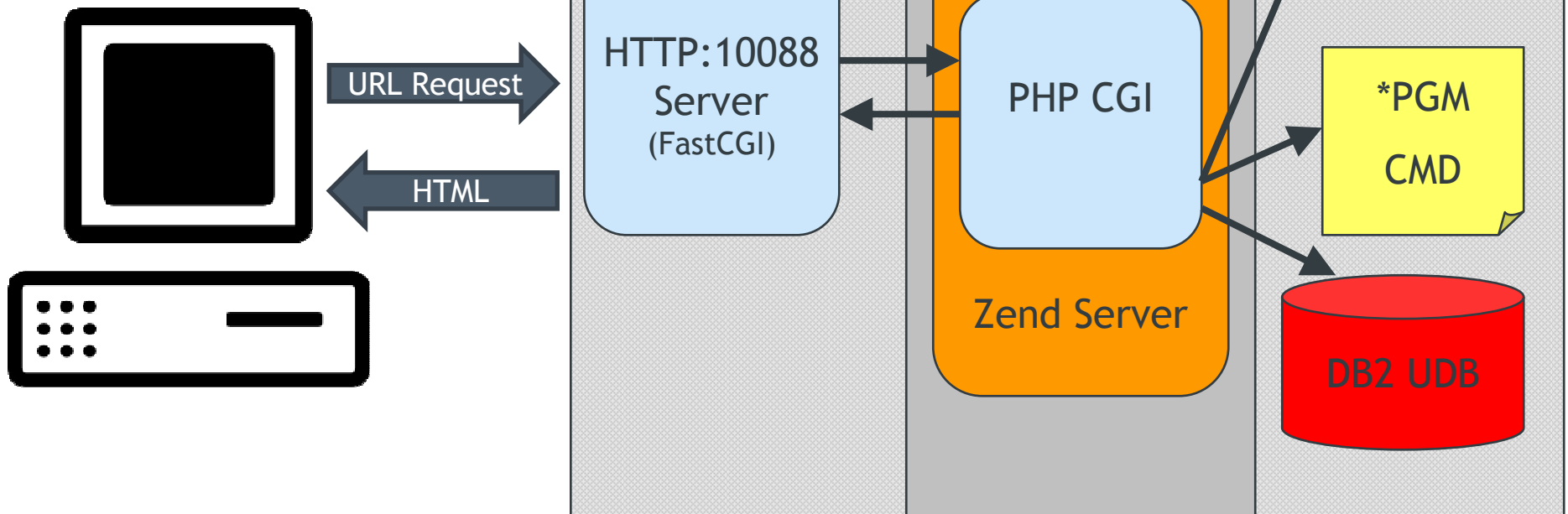
# Zend Server vs. CE comparison

Features	Zend Server	Zend Server Community Edition
Native installation	✓	✓
Certified PHP	✓	✓
Zend Framework	✓	✓
Apache or IIS integration	✓	✓
MySQL (on Windows and Mac)	✓	✓
Built-in DB connectivity (Oracle, DB2, MySQL,...)	✓	✓
Java connector	✓	✓
Web-based administrator console	✓	✓
Debugger interface	✓	✓
Bytecode acceleration	✓	✓
Caching API	✓	✓
Page caching	✓	
Application monitoring (alerting)	✓	
Application problem diagnostics	✓	
Zend Download Server (Linux only)	✓	
Software updates and hot fixes	✓	
Technical support	✓	

# Zend Server Under the Covers

ILE Apache:10088

- Default configuration FastCGI



# Zend Server for IBM i

[www.zend.com](http://www.zend.com)

## Installation - Update!

# Zend Server Installation

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- Can install PHP 5.2 or 5.3
- Save File or Windows installer available at Zend.com
- Updated Fast CGI built by IBM requires PTF's
  - ▶ Current group for 57nnDG1 - IBM HTTP Server for i5/OS
  - ▶ [http://www-912.ibm.com/s\\_dir/sline003.nsf/GroupPTFs?OpenView&view=GroupPTFs](http://www-912.ibm.com/s_dir/sline003.nsf/GroupPTFs?OpenView&view=GroupPTFs)
  - ▶ V5R4 - Updated!
    - PASE - SI36004 - Updated!
    - HTTP - SI36026
  - ▶ i6.1 - Updated!
    - PASE - SI36005
    - HTTP - SI36027

# Beta customers

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- Early beta must remove LP and install GA version
- RC1 beta can apply PTF update
- How do I know which beta I have?
  - ▶ Early beta: about screen from Zend Server admin
    - Version Zend Server 5.0 Beta
  - ▶ RC1 Beta about screen in Zend Server admin
    - Version Zend Server 5.0
  - ▶ GA version is Zend Server 5.0.1, nothing more to do.

# Zend Server Administration

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- New unified interface for all Zend controls
- Multi platform consistency in the interface
  
- Apache changes
  - ▶ Single server (YAY!)
  - ▶ PASE server eliminated
  - ▶ IBM HTTP Server Powered by Apache
  - ▶ PHP implemented using Fast CGI developed by IBM
  - ▶ Restart button saves round trip to green screen!

# Integration points

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- **MySQL**
  - ▶ Supports DB2 Storage Engine
  - ▶ Zend Server admin has phpMyAdmin
- **Data Sources**
  - ▶ Simultaneously access DB2, MySQL, Microsoft SQL Server
- **Java Bridge**
  - ▶ Now part of Community Edition
- **PHP Toolkit**
  - ▶ Access RPG, COBOL & CL Programs
  - ▶ Access resources native to IBM i like data queues & Spooled Files

# Zend Server 5 for IBM i

[www.zend.com](http://www.zend.com)

## Caching

# Optimizer+

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## Eliminates what's not needed

- ▶ Opcode cache
  - Caches the PHP bytecode in RAM
  - Significantly reduces disk access
- ▶ Opcode optimizer
  - Optimizes certain code fragments to improve execution speed

**Now part of the free Community package**

# Data Caching

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Provides a set of API functions for caching data items

- ▶ DB query results, web service calls, complex or hard-to-get data
- ▶ Output elements
- ▶ Allows skipping slow PHP code chunks
- ▶ Shared memory and Disk storage backends
- ▶ Data could be grouped using namespaces
- ▶ APC user cache compatibility layer
- ▶ Zend Framework Zend\_Cache\_Backend adapters

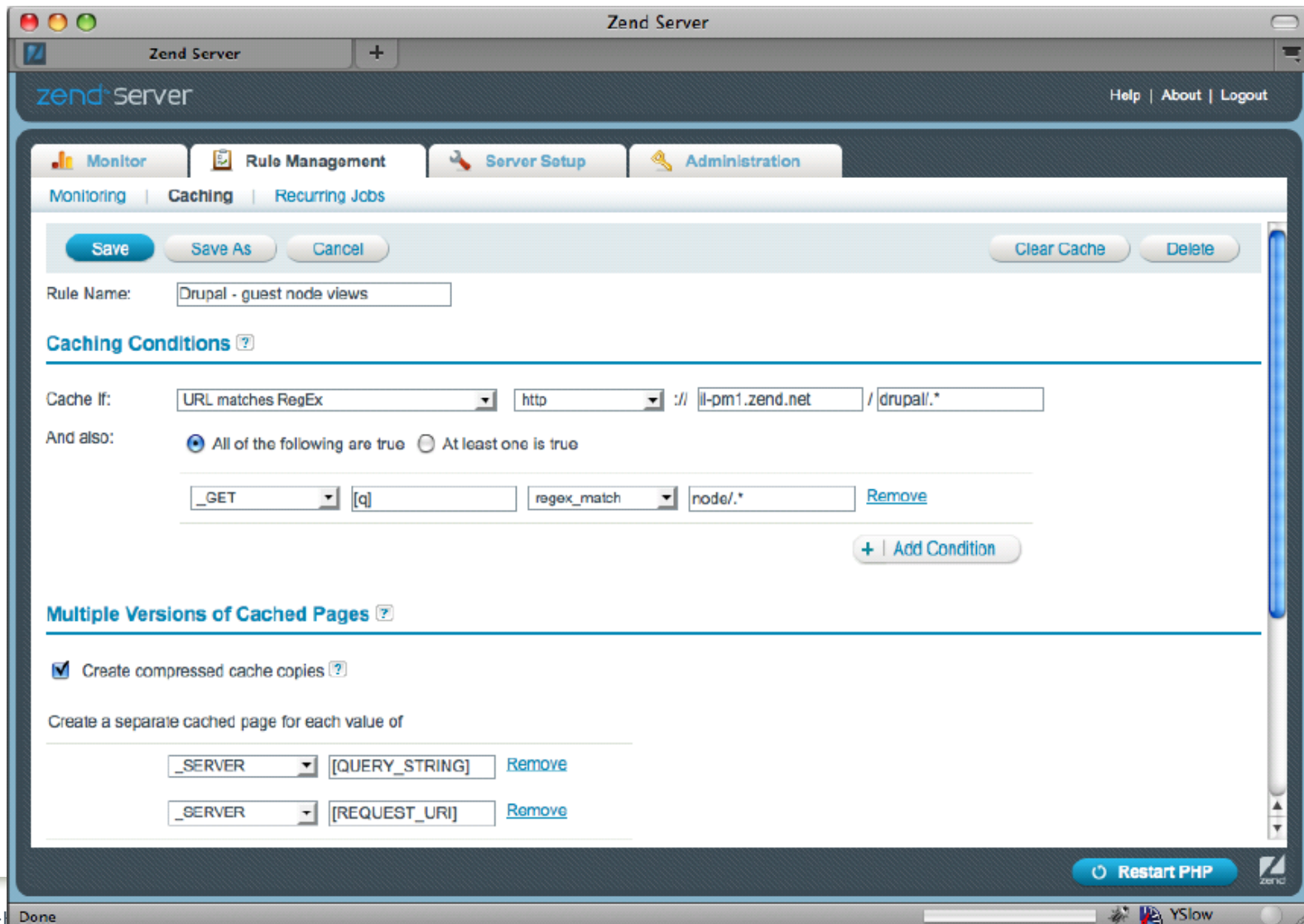
# Page Caching

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**Don't execute a single line of PHP if you don't have to**

- ▶ Caches entire HTTP response
- ▶ Configured from UI, no code changes required
- ▶ Live / cached decision is based on request or session parameters
- ▶ Variants can be created based on request or session parameters

# Page Caching



# Zend Server 5 for IBM i

[www.zend.com](http://www.zend.com)

## Code Tracing

# Code Tracing Supported Workflows

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- **Monitoring workflow:**

- ▶ When a monitoring event is created, the associated trace data of the specific request is captured
- ▶ Trace data is attached and associated to the monitoring event

- **Manual tests/functional workflow:**

- ▶ Manually through the GUI or from a browser by adding a parameter to the request

- **Production workflow**

- ▶ Can be activated automatically in case of a Zend Monitoring event, for example a PHP error, a slow execution or high memory usage

# Code Tracing Enhancements since last demo

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- We are working this stuff pretty hard 😊
- Toggle Critical path display
- Toggle Memory display
- Arguments display

# Zend Server 5: Technical Overview

[www.zend.com](http://www.zend.com)

## Job Queue

# Job Queue allows you to...

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- **Put certain tasks into a separate execution queue**
  - ▶ Off-load to new process (or defer to a later time)
  - ▶ Off-load to a different server
- **Execute certain tasks at a specified time**
  - ▶ Distribute processing load to off-hours
- **Execute certain tasks periodically**
- **While..**
  - ▶ Maximizing reuse of existing infrastructure & code
  - ▶ Making sure nothing falls between the cracks
  - ▶ Doing it all from a PHP API

# Creating Jobs

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- Jobs are created using the `createHttpJob()` method

```
$queue = new ZendJobQueue ();  
$queue->createHttpJob (  
    'http://backend.local/jobs/somejob.php' );
```

- Pass parameters
  - ▶ Simple ones, via query string `$_GET`
  - ▶ Complex ones, as an associative array of key => value pairs
- Set job options
  - ▶ Name, priority, schedule, etc.
  - ▶ Create deferred or recurring jobs
- Or... create from the UI

# Demo Agenda

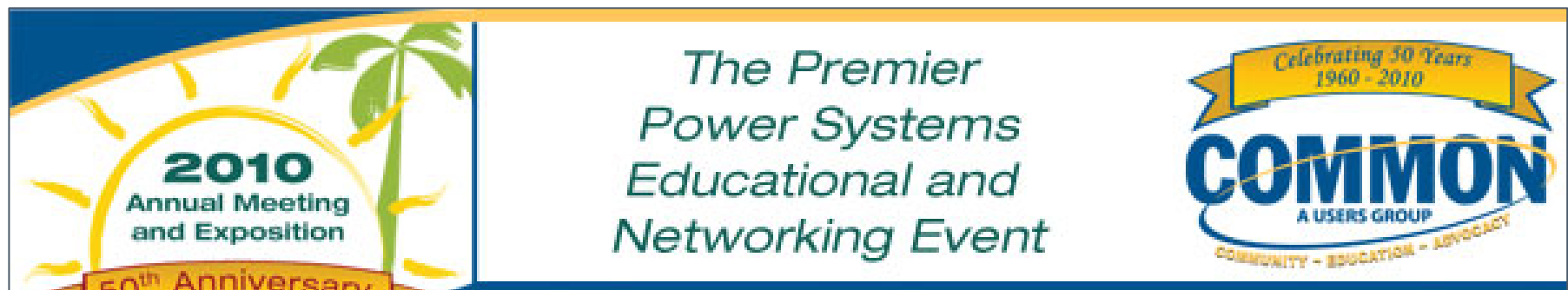
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- Demo programs
- Code Tracing update
  - ▶ My broken script
- Job Queue
  - ▶ Recurring job

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# Thank you & Q&A

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▶ <http://twitter.com/zend>

# Q&A

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