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Integrating Open Source Web Applications

CATS 2004

Seventh Annual Conference

San Luis Obispo, CA

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Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu



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Session Pre-requisites

Integrating Open Source Web Applications

Anyone interested in open source web applications.

Skill set will range from beginning to intermediate web development/admin.

Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu



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Goal

- Introduction to open source (OS)
- Key OS web applications
- www.sjsu.edu re-design
- Share lesson's learned
- Tips for trouble shooting

Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu



Session Layout

- Section I
 - Introduction to OS
 - Key web applications
- Section II
 - www.sjsu.edu specific applications
 - How it works: The whole 9 yards
 - Trouble shooting
- Section III
 - Conclusion
 - Q & A session

Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu





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Section I

Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu





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Open Source

- Free access to source code
- Community based development
- General Public License (GPL)

Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu





Main Components

- Webservice
 - Apache, Tomcat
- Database
 - Mysql, PostgreSQL
- Content Management System
 - OpenCMS, Plone
- Programming language
 - Perl, Php, JSP

Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu





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Section II

Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu



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Background : Old website

Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu

San José State University - Home - Mozilla Firebird
http://www2.sjsu.edu/home.html

San José State University

The metropolitan university of Silicon Valley

News & Info Viewbook Directory Search Contact Us

- Welcome to SJSU
- Prospective Students
- Academic Programs
- Campus Life
- Resources & Services
- Student Services
- Int'l/Extended Studies
- Spartan Athletics
- Alumni and Friends
- Supporting SJSU
- Campus Virtual Tour
- MyEducation

Campus News

- www.sjsu.edu update
- Classes Resume
- SJSU in Top 10
- Int'l Activities
- Summer Activities
- Events this week

News Feature

Free parking available through Fri., Sept. 5 at Park and Ride Lot.

Tower Hall and Morris Dailey Auditorium

San José State UNIVERSITY

Done

- First generation site
- Poor information architecture
- Poor digital identity
- Lack of branding message
- Not built on web standards
- Static in content
- Not easily scalable



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Background:
University
requirements for
new website

- Provide most functionality for money
- Easy maintenance
- Minimal financial investment
- Use leading-edge technology
- Built using web standards

Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu





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Background:
Technical
Requirements for
new website

- Secure
- Stable
- Scalable
- Standards Compliant
- Source code access

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Web Applications Developer
harishvc@sjsu.edu





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www.sjsu.edu
specific
applications

- Webserver
 - Apache, Tomcat
- Database
 - MySQL
- Content Management System
 - OpenCMS
- Source code version control
 - CVS
- File transfer
 - rsync

Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu



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JSP Solution

- Portability
- MVC Architecture
- Scalability

Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu



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www.sjsu.edu:
New website

[SJSU HOME](#) | [NEWS](#) | [EVENTS](#) | [MySJSU](#) | [DIRECTORY](#) | [SEARCH](#) [ADVANCED SEARCH](#)

- » About SJSU
- » Future Students & Families
- » Students
- » Academic Programs
- » Faculty & Staff
- » Alumni & Community
- » Athletics ¹⁷

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News

- » [SJSU Career Center Wins Award for Outstanding Service](#)
- » [Faculty/Staff Activities](#)
- » [Grammy Nominee Visit](#)
- » [King Library Wins John Colton Bona Library PR Award](#)
- » [Milestones in Service Learning](#)
- » [Exhibit on Human Race Opens](#)


[more news](#)

Focus on:

- » [Your Cost-Saving Ideas](#)
- » [On the Ballot: Prop. 55](#)

Quick Links

- » [A to Z Index](#)
- » [Apply to SJSU?](#)
- » [Class Schedules](#)
- » [Commencement](#)
- » [Doing Business with SJSU](#)
- » [Employment Opportunities](#)
- » [Giving to SJSU](#)
- » [Human Resources](#)
- » [King Library?](#)

[More Quick Links](#) 

Choosing San José State

Located at the core of Silicon Valley, SJSU is an exceptional place for hands-on learning, professional development and personal growth. Silicon Valley firms are constantly seeking SJSU students for internships, summer work programs and research and development.

Events

- » [Eating Disorders Awareness Week at SJSU](#)
- » [Scholarship Opportunity with the McNeil Scholars Program](#)
- » [The Glass Menagerie](#)
- » [Black History Show 2004](#)
- » [The Crimson & Cream Ball](#)
- » [Round Table Discussion on "The Passion of the Christ"](#)

[more events](#)

Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu



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Dev & Stage: How it works

- Development
 - Stand-alone environment
 - Development and testing
- Stage
 - Production Database
 - Content Management System
 - Files are transferred from stage to production

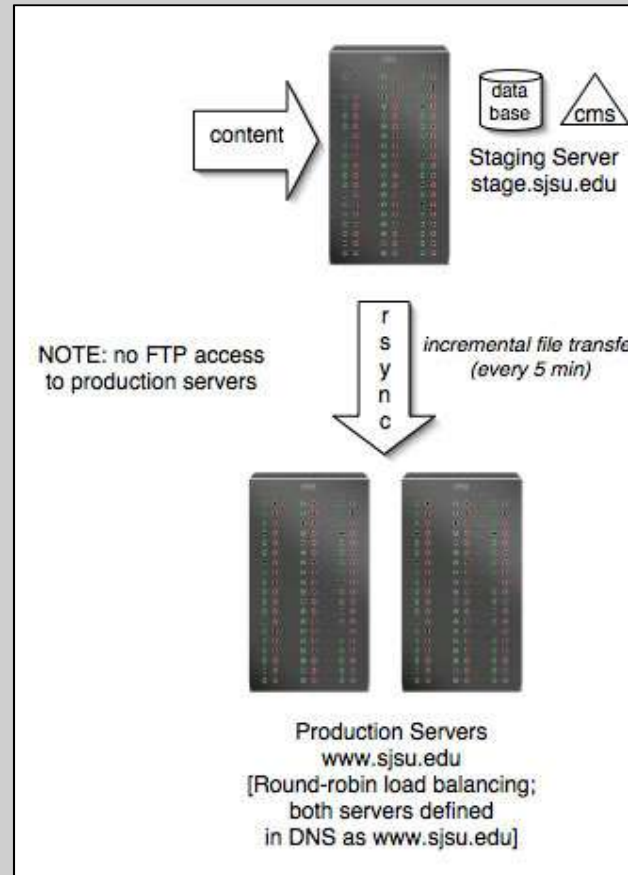
Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu





Stage & Production: How it works

Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu





Configuration files: rsync

Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu

- rsync settings

```
OPTIONS="-e ssh --archive --compress --recursive -checksum"
```

```
ADDITIONAL_FLAGS="--perms --delete --verbose --times  
--timeout=20 --ignore-errors --exclude=local.file"
```

- Output

```
----- prod1  Mon Feb 23 20:50:00 PST 2004  -----  
building file list ... done  
deleting upload/path/Test.doc  
upload/course/course_123/  
upload/course/course_123/Greensheet.doc  
wrote 202168 bytes  read 36 bytes  8604.43 bytes/sec  
total size is 210205821  speedup is 1039.57
```



Configuration files: tomcat load balancing

Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu

- worker.properties

```
worker.list=  
    tomcat1,tomcat2,tomcat3,loadbalancer  
...  
worker.tomcat1.type=ajp13  
worker.tomcat1.host=localhost  
worker.tomcat1.port=8080  
worker.tomcat1.lbfactor=10  
worker.tomcat1.cachesize=10  
worker.tomcat1.cache_timeout=600  
...  
worker.loadbalancer.type=lb  
worker.loadbalancer.balanced_workers=  
    tomcat1,tomcat2,tomcat3
```





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Don' t forget

- Fine tune
 - sjsu.edu go-live lesson
- Security
 - Change default settings
 - Install update patches
 - Restricted user & services
- Backup plan

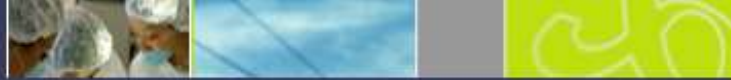
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Web Applications Developer
harishvc@sjsu.edu



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Trouble shooting

- Development environment
- Log files
 - Log level
 - JDK Logger
- Mailing list

Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu





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Section III

Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu





Conclusion

- Challenging & rewarding experience
- Future enhancements
 - Content Management System
 - Multiple DB instances
 - Integrate with other on campus web applications

Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu





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Q & A Session

Harish V.Chakravarthy
Web Applications Developer
harishvc@sjsu.edu



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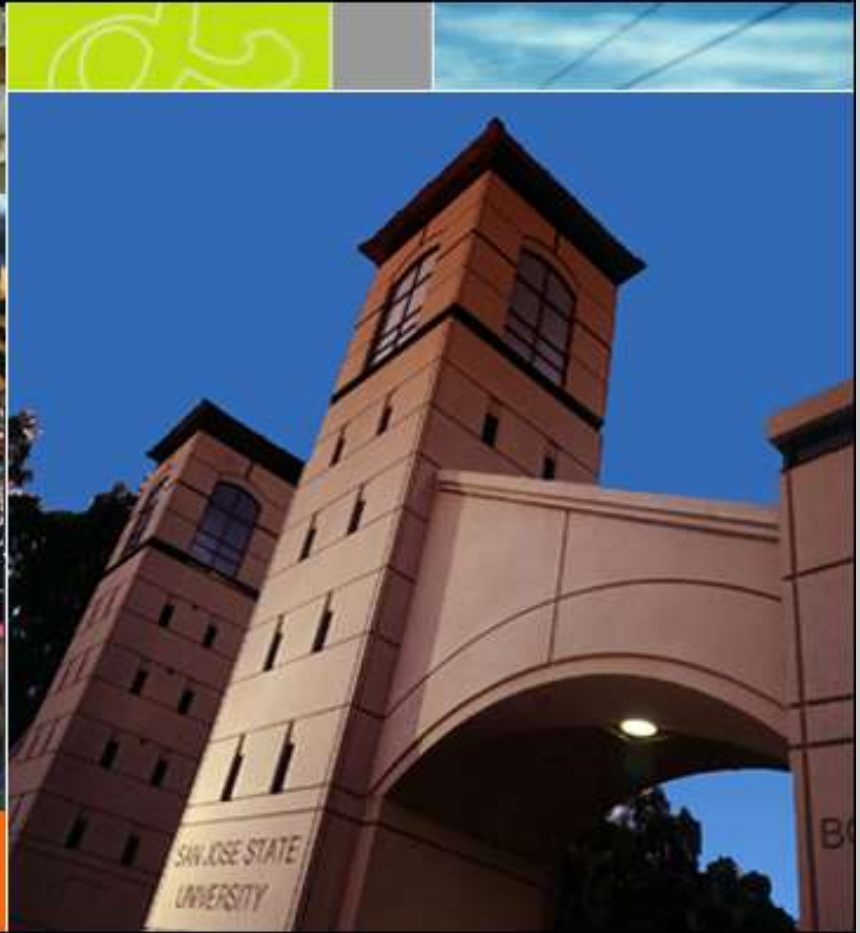
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www.sjsu.edu/cats/2004/prezo/opensource/

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