

Reducing Project Costs by Integrating Open Source and Commercial Software



By Test Engineering Laboratory

- Test Engineering Laboratory Charter
 - Supports Flight Systems section by investigating and developing new tools and applications for ATLO testing activities
 - Provides engineering tools for projects and programs



Definition of Open Source

- What is Open Source? (opensource.org)
 - Free Redistribution
 - Source Code
 - Derived Works
 - Integrity of the Author's Source Code
 - No Discrimination Against Persons or Groups
 - No Discrimination Against Fields of Endeavor
 - Distribution of License
 - License Must Not Be Specific to a Product
 - The License Must Not Restrict Other Software



Some Open Source Software

Organization	Software Type
Apache	Web Server
Linux	Operating System
PERL	Programming Language
PostgreSQL	Relational Database
MySQL	Relational Database
PHP	Scripting Language
Mozilla	Web Browser
OpenOffice	Office Productivity App.
QuickTime Streaming Server	Streaming Media Server



Companies involved with Open Source

Company	Open Source Support
Red Hat Software	Linux
Qualcomm	Qpopper - POP3 server
Apple Computers	Streaming Media server
Netscape	Mozilla web browser
ActiveState	PERL, Python, Tcl
SGI	Samba Project
IBM	Linux, Samba, Apache, PHP



Pros and Cons



Pros and Cons

- Pros*
 - Little or no cost for license fees
 - Environment changes are less intrusive (change OS)
 - System recovery can be to any similarly configured machine
 - Security issues with open software are fewer and quickly remedied
 - Reliable, bug fixes by user community
 - Large open source community that shares and solves problems
 - Developers more on top of the latest technical advances
 - Source code is included
 - Multi-user and multi-tasking capability is mature and stable
 - Runs on equipment too under powered for other OS

*Reference LinuxWorld, Gartner Pub., Suncoast Linux User Group
TheOpenEnterprise.com, www.gridforum.org



Pros and Cons

- **Cons***
 - Open source development may meet resistance
 - Poor compatibility with MS products
 - Lack of drivers, modems and business apps
 - Office apps software is not as feature rich as MS
 - Deficient in documentation, admin tools, and GUI
 - Support staff needs different skills than MS
 - No one commercial company is responsible
 - OS infrastructure may be too immature
 - Confusion about definition of OS
 - Commercial partners may be unwilling to invest time and resources due to limited financial incentives
 - Industry requires clean provenance of contributions

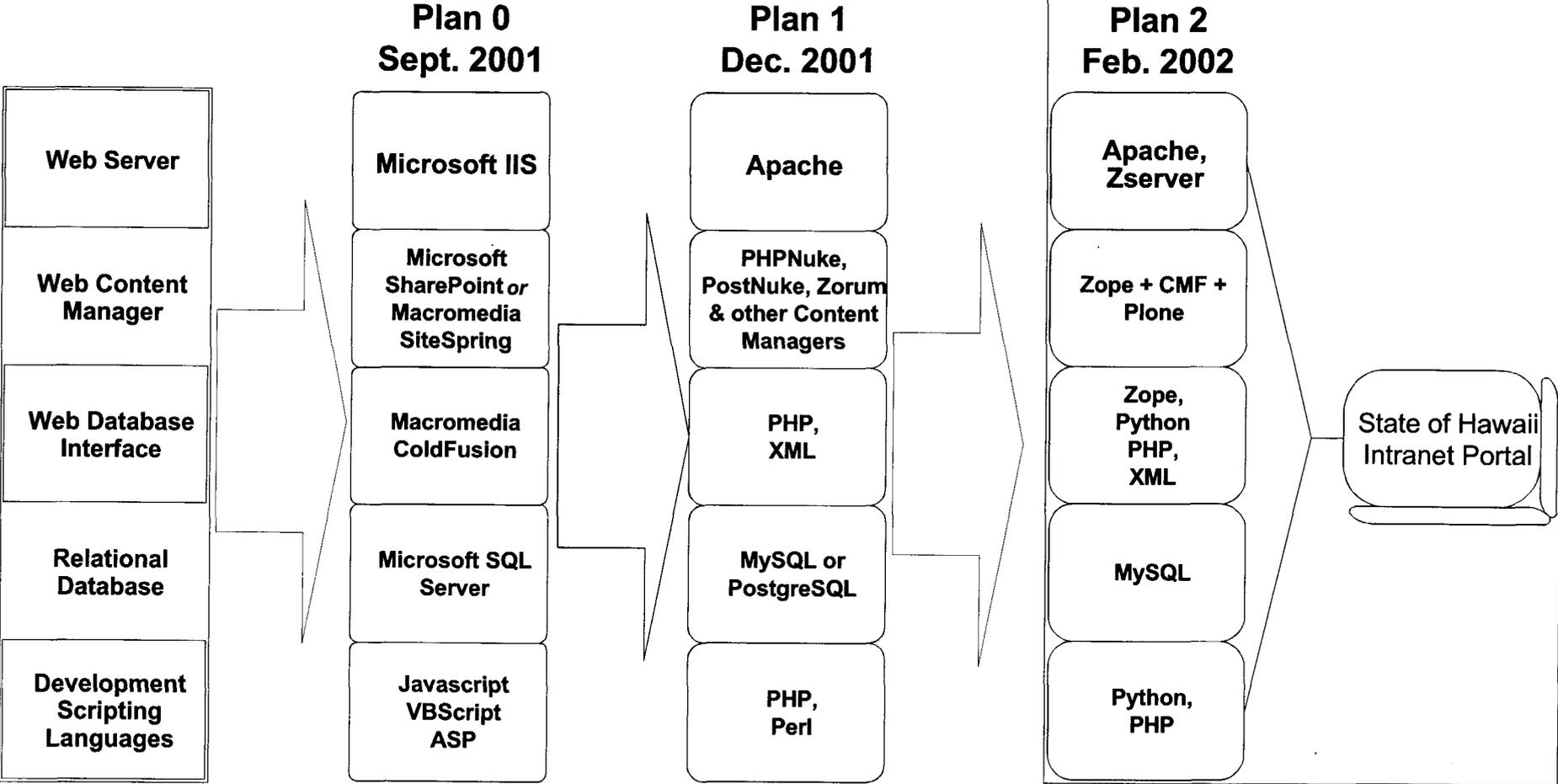
*Reference LinuxWorld, Gartner Pub., Suncoast Linux User Group
TheOpenEnterprise.com, www.gridforum.org



Cost Trade-Off



Cost Decision



Commercial vs. Open Source Solutions

Commercial Choice	Cost	Open Source Choice	Cost
Microsoft Windows 2000 Server	\$850	Mandrake & RedHat Linux	\$0
Commercial Web Server (MS-IIS)	\$0	Apache Server & ZServer	\$0
Relational Database (MS-SQL)	\$1,350	MySQL	\$0
Scripting Language	\$0	PHP, Python, & Zope	\$0
Commercial Portal Product	\$4,000	Zope + CMF + Plone	\$0
Office Productivity Applications	\$560	OpenOffice.org & Abiword	\$0
Database Integration Engine	\$1,200	PHP, Python, & Zope	\$0
Programming IDE	\$570	jEdit	\$0
Still Graphics Application	\$600	Pixia	\$0
Portal Client Access License	\$72	Client Access License	\$0
SQL Client Access License	\$72	SQL Client Access License	\$0
Single Server Config	\$7,650	Single Server Config	\$0
Cost per developer seat	\$1,730	Cost per developer seat	\$0
20,000 Client Licenses	\$2,880,000	10,000 Client Licenses	\$0



State of Hawaii Intranet Portal



HIGOV.NET

 search

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you are here: home » members » todd ogasawara » **todd's home page** : add to my favorites 05/20/2002 11:13 am

navigation

Todd's Home Page

Other items

- 📄 Zope MySQL Connector Installation Instructions
- 📄 Using Zope & MySQL (Intro)

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Todd's front page

[MySQL Test](#)

[MySQL Zope Data Connector Instructions for Windows 2000](#)

[Using Zope with MySQL: A Brief Introductory Example](#)

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Created by:
: todd

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Making the Decision for Open Source

- Questions to Ask Yourself*
 - What changes would the enterprise need to make open source products fit
 - What functional capabilities does the enterprise require
 - What package does the enterprise require and will open source meet them
 - What service-level agreements must be implemented (support level)
 - What current tools and technologies can be applied
 - What benefits and returns will the open source software bring

*Reference Gartner Inc and eWeek



Applications Using Open Source



Work Agreements System

- Work Agreement (WA) tool uses open source and commercial software
 - Apache (web server)
 - PERL (programming language)
 - HTMLDoc (HTML to PDF converter)
 - Oracle (Relational Database)
- WA System Architecture
 - 3-Tier system
 - Application code and Web server on UNIX, Solaris
 - DB on EIS Oracle UNIX Solaris
- View tool



MER ATLO Applications

- MER Test Conductor's activity report and spacecraft configuration tool uses open source and commercial software
 - IIS (web server)
 - PERL (programming language)
 - PostgreSQL (Relational Database)
- MER Tools System Architecture
 - 3-Tier system
 - Application code and Web server on Windows2000 server
 - Database on UNIX Solaris
- View Tool



Project Snapshot Application

- Project snapshot tool uses open source and commercial software
 - IIS (web server)
 - PERL (programming language)
 - Microsoft SQL (Relational Database)
- Snapshot tools System Architecture
 - 2-Tier system
 - Application code, database and Web server on WindowNT4 (SP5) server
 - Successful port of database and application code to open source system under UNIX
- View Tool



Contact Information

- Gerardo Rivera (technical lead) 4-9803
- Raka Mehra (developer) 4-5537
- Fred Rosenblatt (developer) 3-1233

