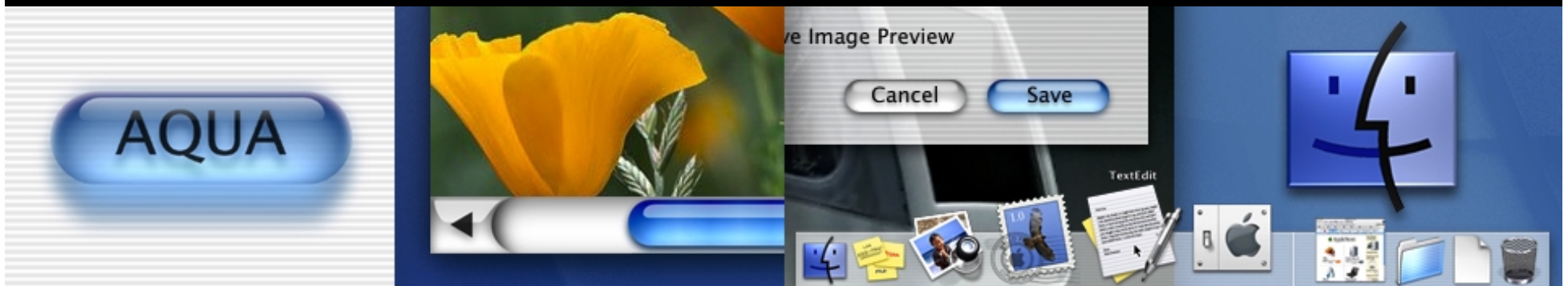




Session 404

WebObjects: Deploying Applications



Dirk Johnson

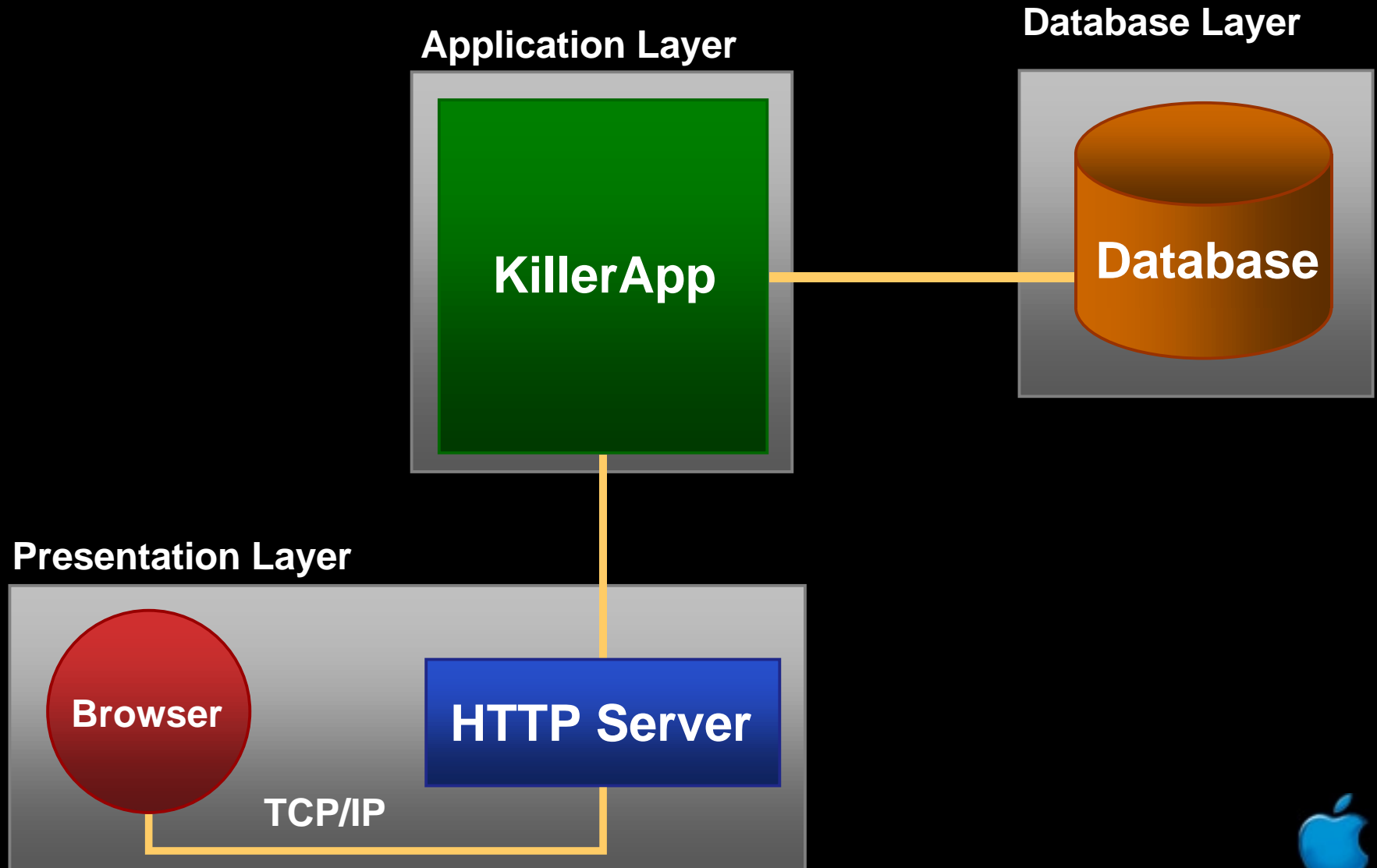
Senior Developer Trainer, Apple iServices

Introduction

- Deployment overview
- Configuring and monitoring your site
- Troubleshooting skills and tools
- Example deployment



Deployment Architecture



Deployment Configuration Issues

Operating System

- Mac OS X Server 1.2
- NT 4.0/Windows 2000
- Solaris 2.6 and higher
- HP-UX 11
- Mac OS X
- Linux



Deployment Configuration Issues

Hardware

- Processor speed
- Processor count
- RAM
- Disk space
- Redundancy





Deployment Configuration Issues

Environment

- Network speed
- Network security
- Physical security
- Temperature control
- Uninterruptable Power Supply (UPS)

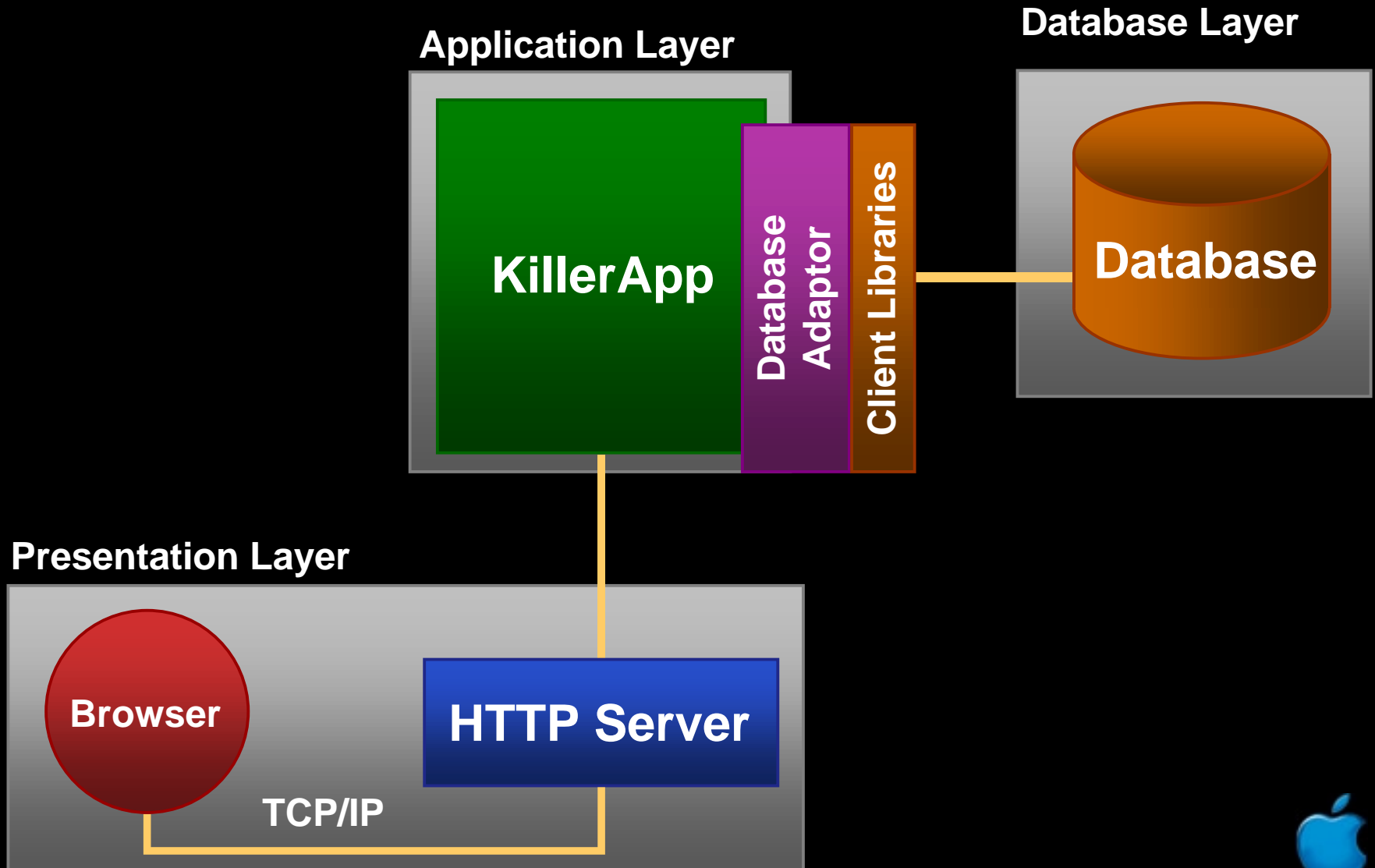


Deployment Licenses

	High-end Deployment
Price	¢
Multi-Processor	
Multiple Instance	
Volume Limit	none



Deployment Architecture

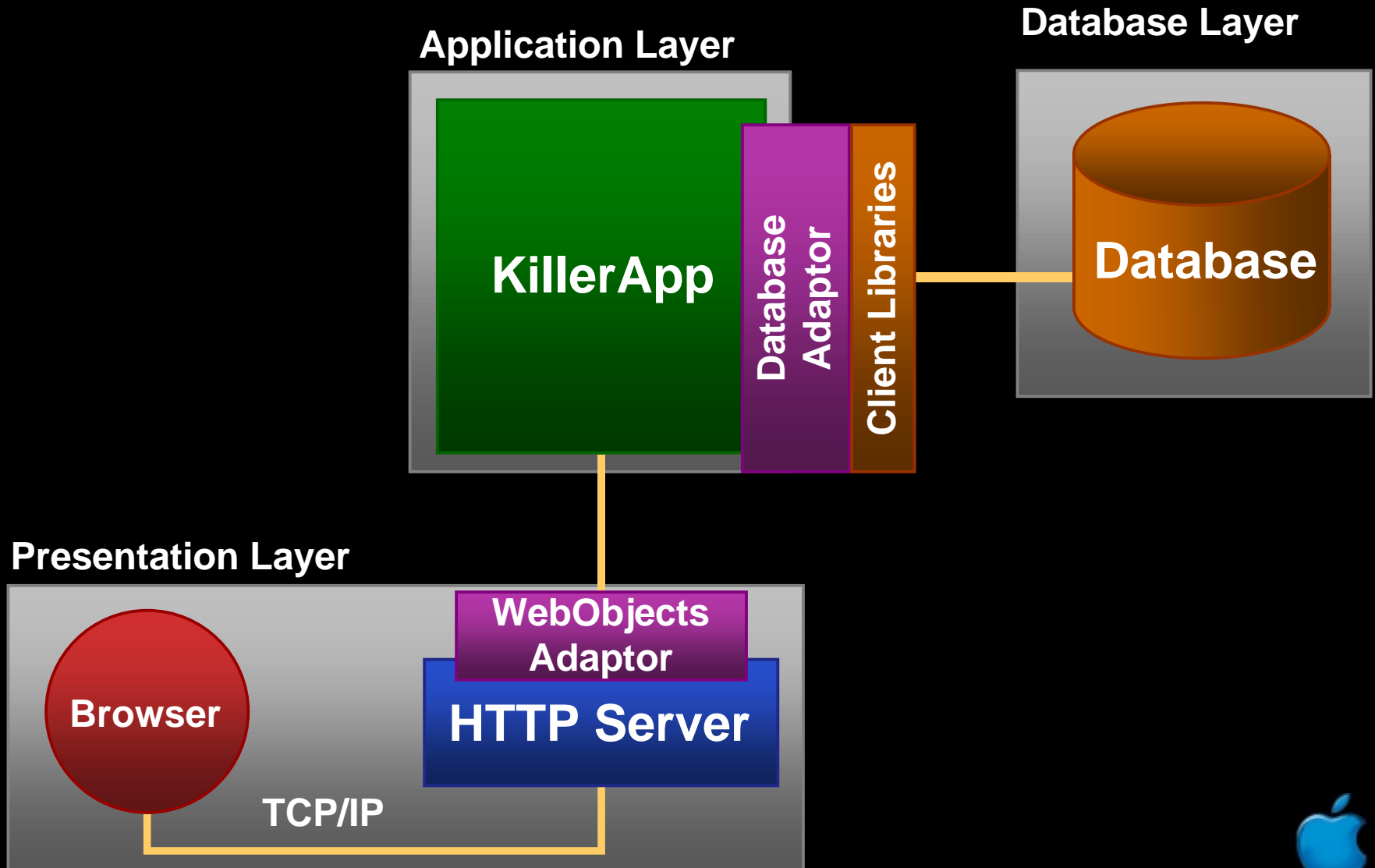


Database Adaptors

	OS X S	Solaris	HP-UX	NT	Mac OS X	Linux
Oracle						
Sybase						
Informix						
ODBC						
WebObjects 5 For Java						



Deployment Architecture



WebObjects Adaptors

	OS X S	Solaris	HP-UX	NT
Apache				
NSAPI / WAI				
ISAPI				
CGI				

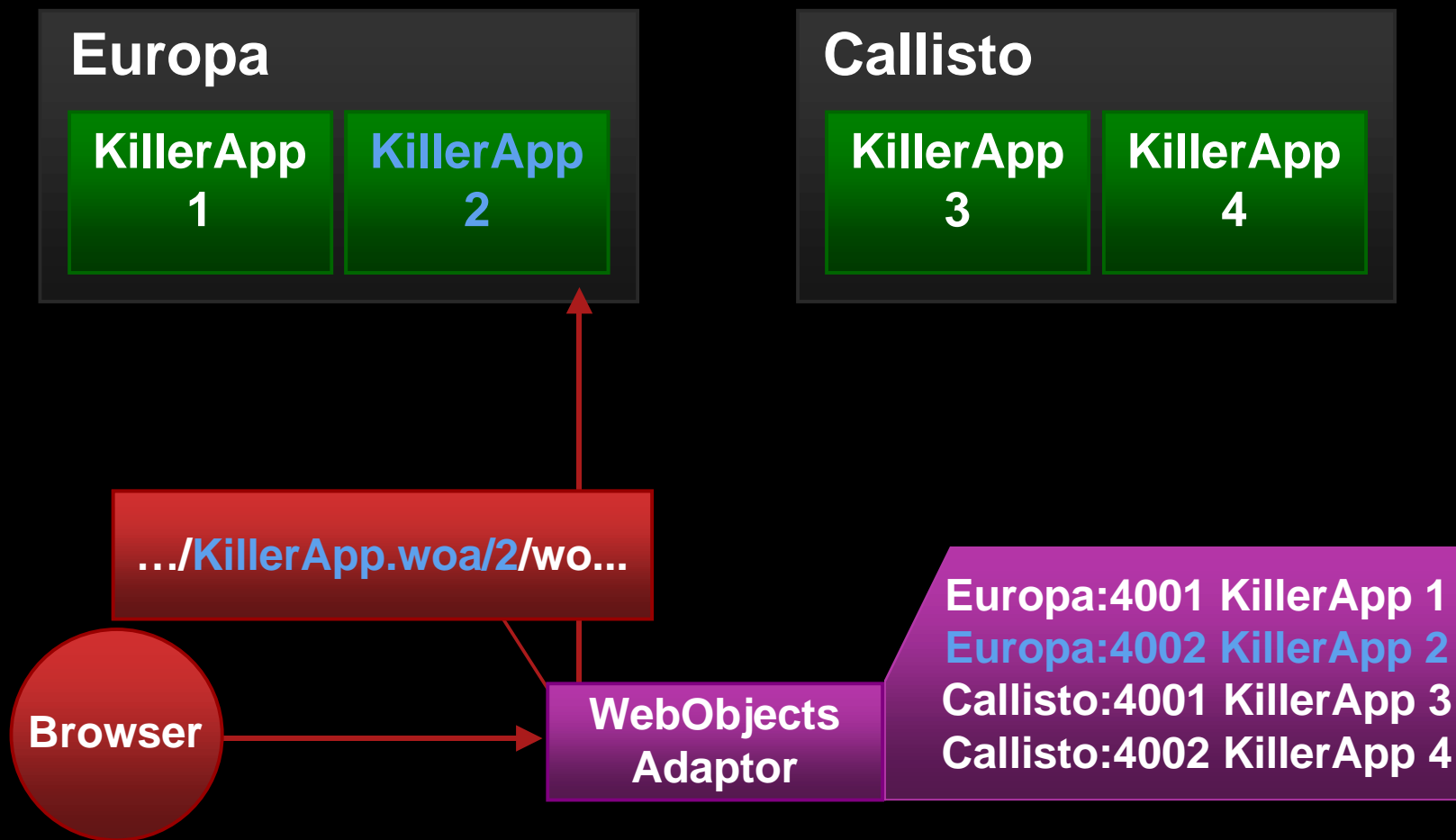


WebObjects Adaptors

- CGI Adaptor
 - Works everywhere
 - Slow—requires forking a process for each request
 - No load balancing
- API Adaptors
 - Load balancing
 - NSAPI, WAI, ISAPI, and Apache Modules
- C source code provided for all adaptors



Forwarding Requests



Adaptor Site Configuration Information

- Configuration information pertains to:
 - The adaptor
 - Available applications
 - Application instances
- Format is XML
 - plist format supported
- Typically obtained via URL
 - Configure in web server configuration file



Adaptor Site Configuration

- Three mechanisms:
 - Flat File
 - Local: `file:///Oberon/WOConfig.xml`
 - Remote: `http://Dione/WOConfig.xml`
 - Host List
 - Uses wotaskd process to supply xml
 - `http://Helene:1085,http://Telesto:1085`
 - Multicast
- All refreshed by default every 10 seconds

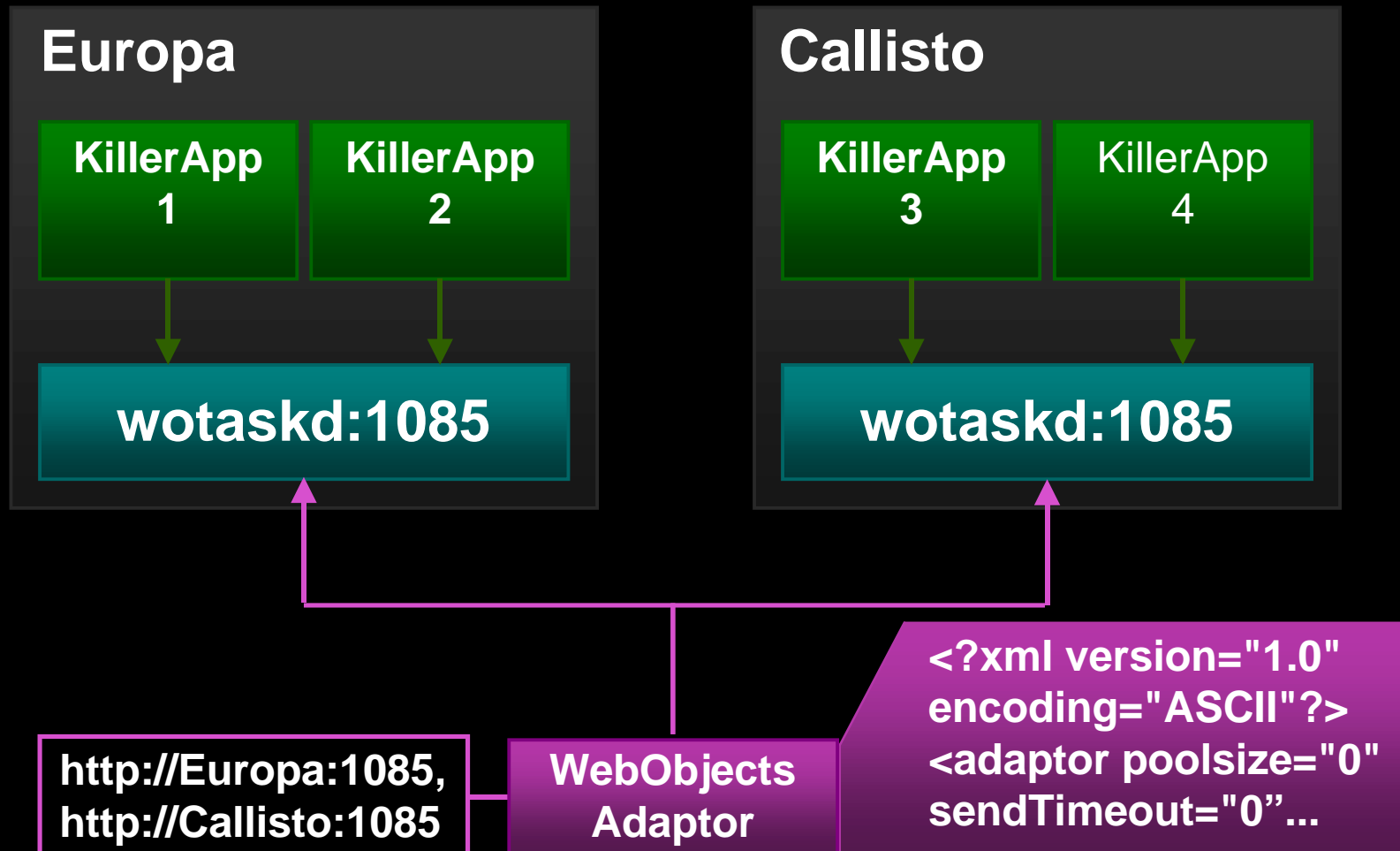


wotaskd

- Runs on every WebObjects application server
- Started and restarted by woservice daemon
- Supplies adaptor with configuration data
 - XML data served on port 1085
- Monitors, cycles, and restarts configured instances
 - Also registers non-configured applications via lifebeat
- Configured with Monitor



The Adaptor and wotaskd

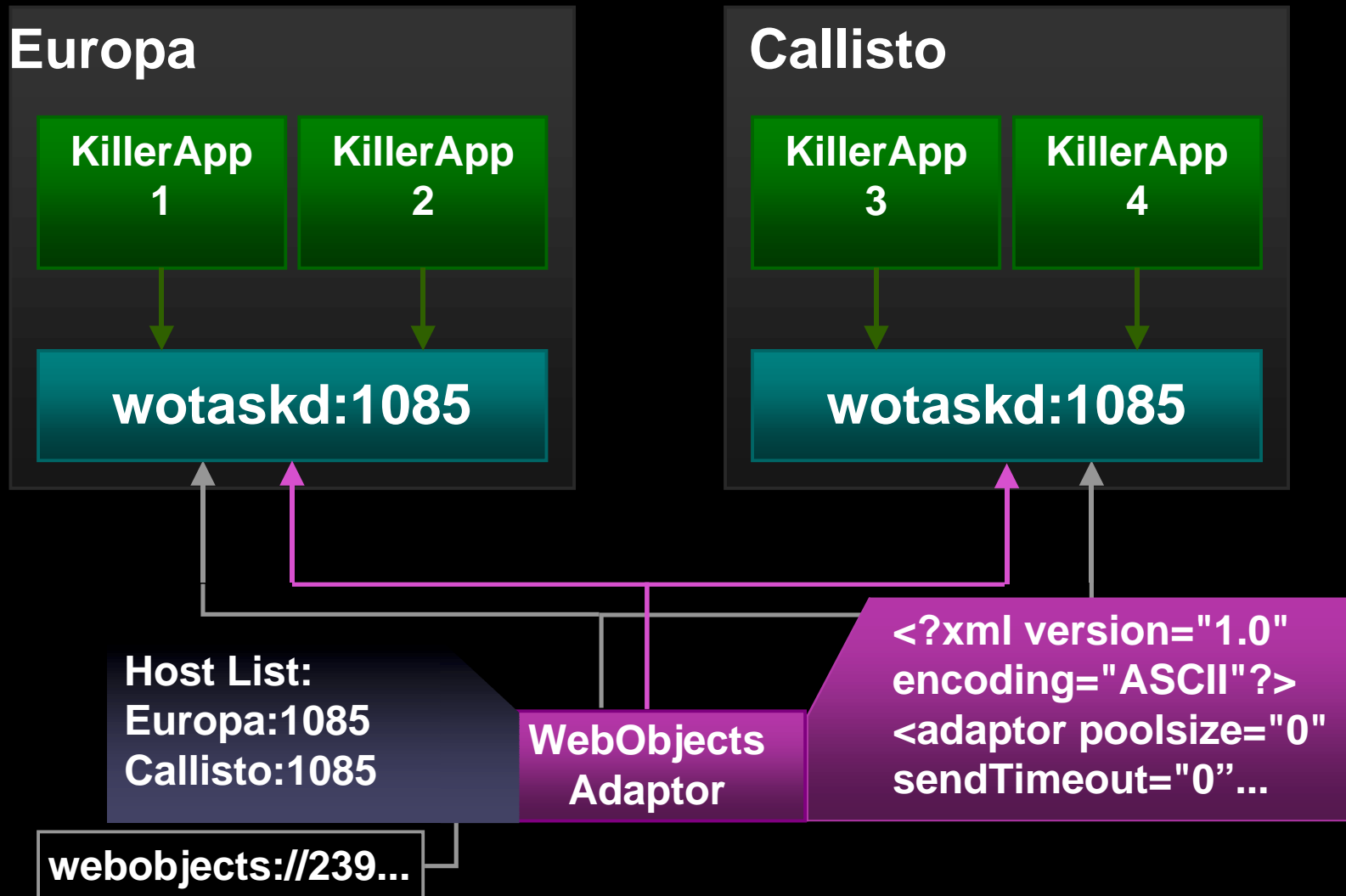


Multicast Adaptor Configuration

- Uses an IP address from the administratively scoped domain
 - `webobjects://239.128.14.2:1085`
 - Limited to subnet by default
 - Routers can be configured to pass multicast packets to other subnets
- Builds list of available hosts/wotaskds
 - Default host rediscovery is every 100 seconds



The Adaptor and Multicasting



Troubleshooting the Adaptor

- View adaptor status by messaging the adaptor
 - <http://Oberon/cgi-bin/WebObjects/xyzzzy>
 - Returns detailed configuration information
 - Can be password protected
- Enable adaptor logging
 - Create file named [logWebObjects](#) in /tmp directory
 - Log file named [WebObjects.log](#) will be generated



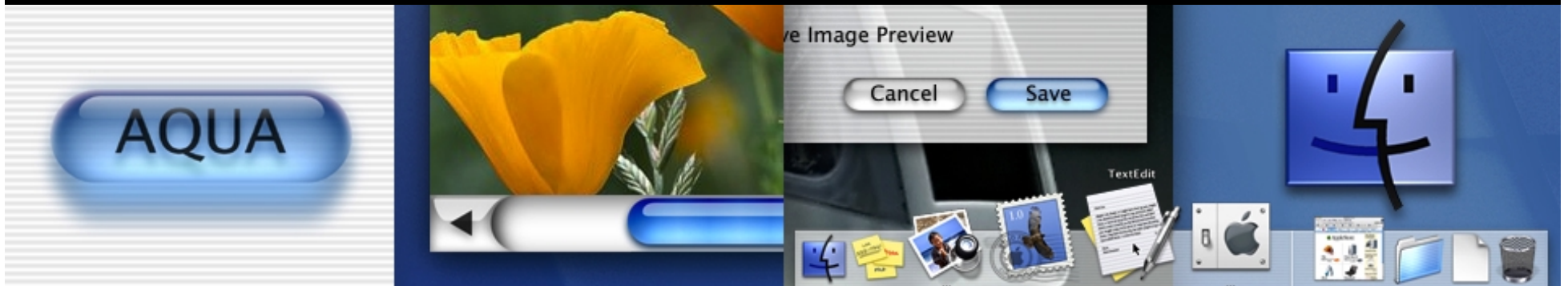
Monitor

- WebObjects application
- Interface to wotaskd
 - Schedule application instances
- Manage multiple hosts
- Configure WebObjects adaptor
- Password protected



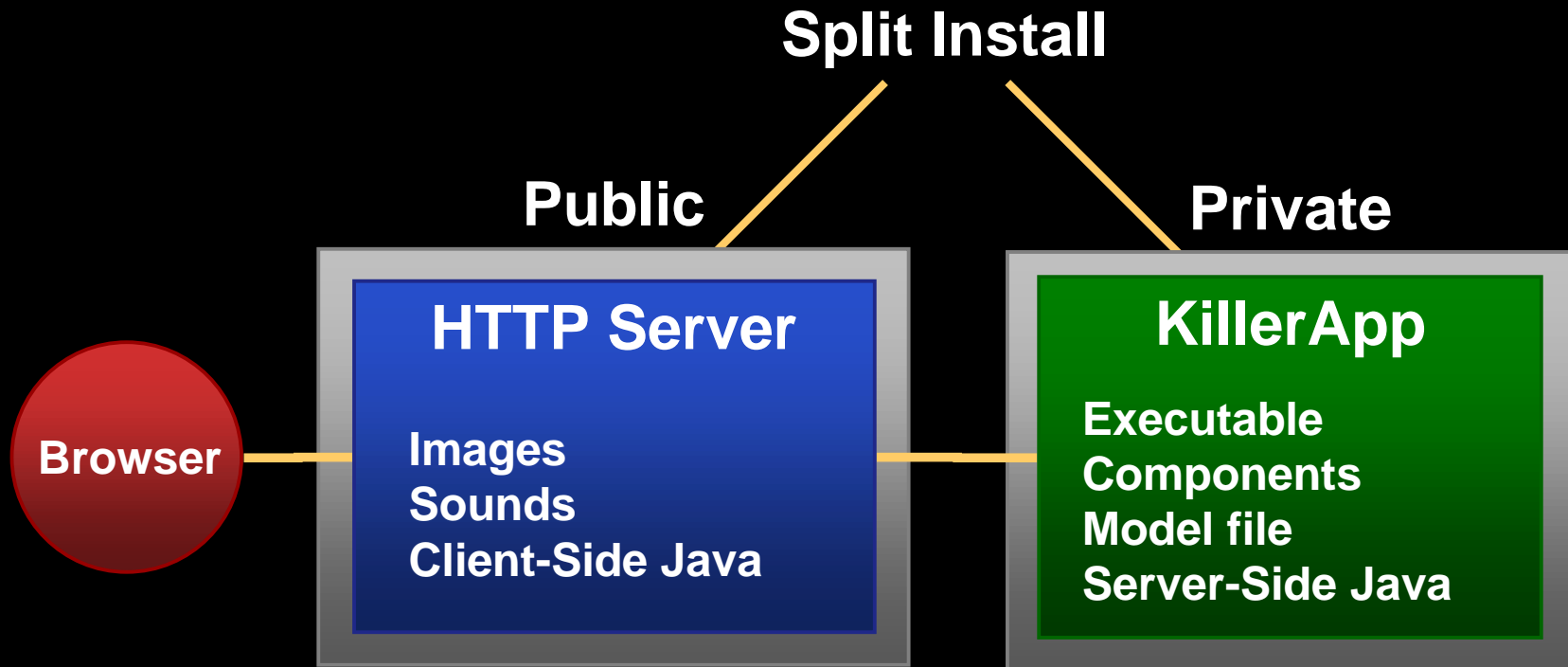


Monitor Demo



Melissa Turner
WebObjects Engineer

Public and Private Resources



Application Configuration

- Defaults database
 - Application level settings for each user account
 - Use NSGlobalDomain for cross application settings
- Command-line arguments
 - Override Defaults database settings
- Code
 - Override command-line arguments and Defaults database



Bottlenecks

- Application
- Database
- CPU
- Virtual Memory/RAM
- Network

See the [Optimizing Your Application](#) session 410 to learn about overcoming the first two bottlenecks



Unix Performance Measuring Tools (Solaris, Mac OS X, Linux, etc.)

- CPU
 - ps/top
 - uptime
- VM/RAM
 - vmstat / vm_stat
 - ps / top
- Network
 - Packet sniffers
 - netstat

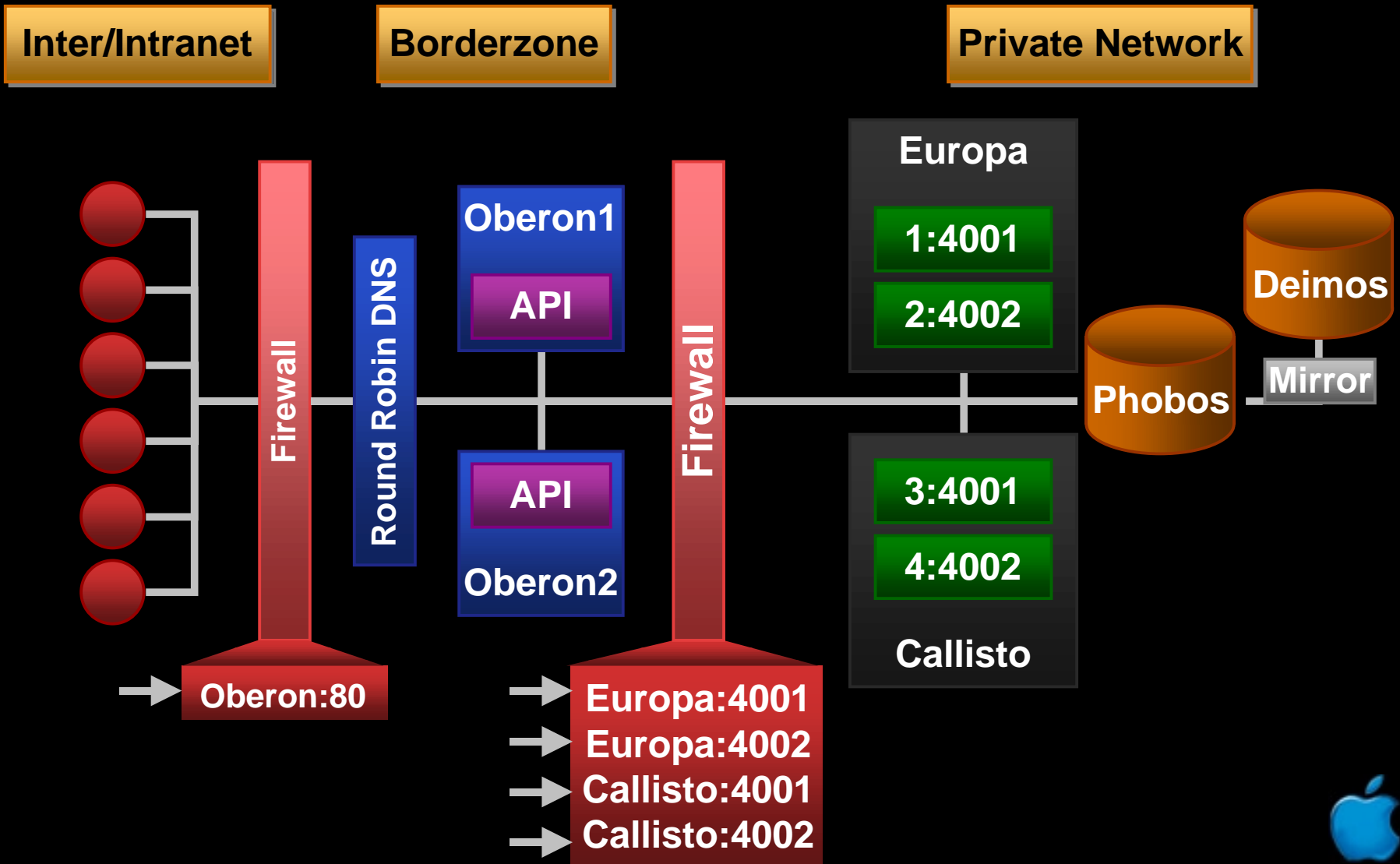


NT/Win 2000 Performance Measuring Tools

- CPU, VM/RAM
 - Task Manager
 - Performance Monitor
- Network
 - Network Monitor



Sample Deployment



Question

How many instances should I run?



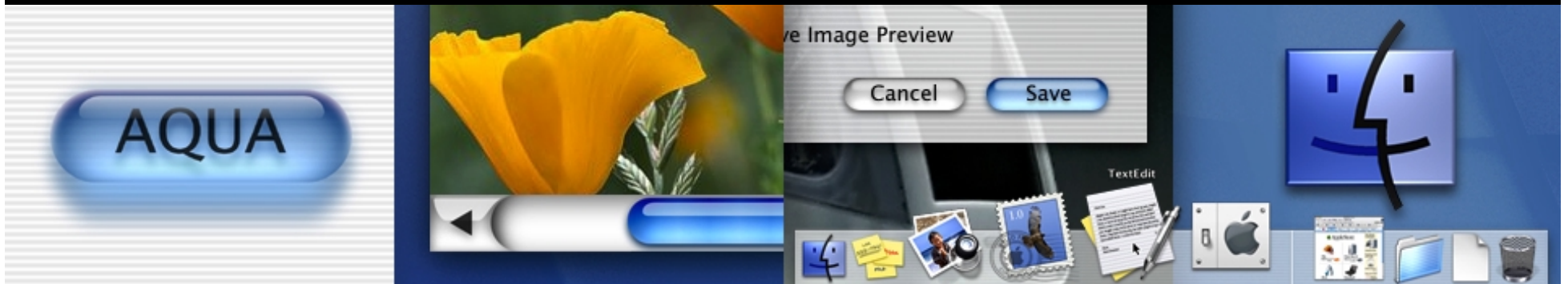
Answer

Consult the Deployment Calculator!





Deployment Calculator Demo



Melissa Turner
WebObjects Engineer

Where Can I Get the Deployment Calculator?

- WWDC CD in your WWDC bag
- <http://enterprise.apple.com/wwdc2000>



Roadmap

410 WebObjects: Optimization

Maximizing performance in production

Room J2
Thurs., 9:00 a.m.

414 WebObjects: Performance Metrics

Analyzing application performance

Room J2
Thurs., 5:00 p.m.



For More Information

<http://www.apple.com/webobjects>

Visit the WebObjects lab downstairs!
Everyday from 11:00 a.m.–2:00 p.m.

Try out your WebObjects 4.5 Evaluation CD!

WebObjects Community BOF
Wed., 6:30 p.m.–8:00 p.m.



Who to Contact

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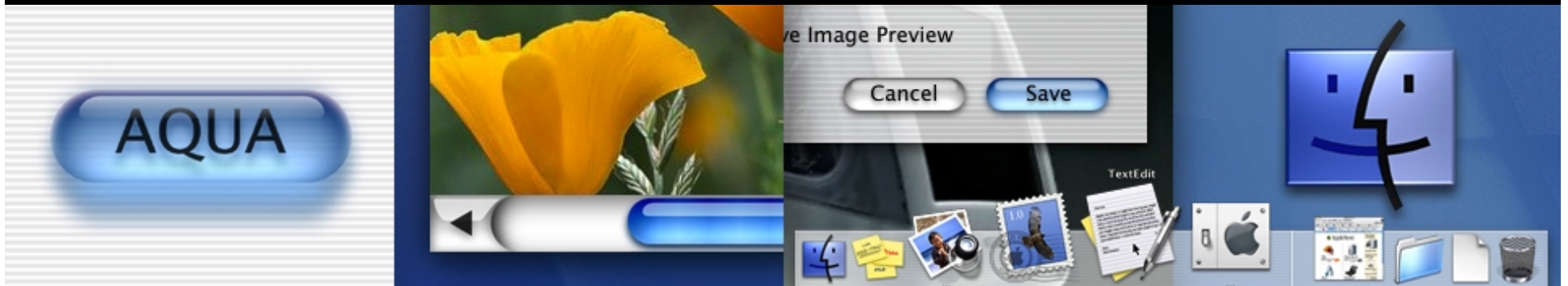
Product Line Manager, WebObjects
wofeedback@group.apple.com





Session 404

Q&A



For the First Question...

What was the relationship between all host names in this presentation?





WWDC

Worldwide Developers Conference 2000



Think different.