

# DEVELOPING IOS APPLICATIONS

11.4.2014

- Inmite (<http://inmite.eu/>)
- Martin Banáš ([martin.banas@inmite.eu](mailto:martin.banas@inmite.eu))
- Jiří Dutkevič ([jiri@inmite.eu](mailto:jiri@inmite.eu))

# OUTLINE

- Tools
  - Xcode server
  - Instruments
  - CocoaPods
  - Xamarin.iOS, Unity3D
- Coding
  - Touches
  - Blocks & Queues
  - Core Data
  - Useful Links

# XCODE SERVER

- introduced with OS X Mavericks & Xcode 5
- part of OS X Server
- continuous integration for iOS and Mac Apps

# XCODE SERVER

demo





## OS X Server 4+

OS X Server is the next generation of Apple's award winning server software. Designed for OS X and iOS devices, OS X Server makes it easy to share files, schedule meetings, synchronize contacts, develop software, host your own website, publish wikis, configure Mac, iPhone and iPad devices, remotely access your network, and more.

### What's New in Version 3.1.1

- Profile Manager support for the Device Enrollment Program
- Management of Fonts, AirPrint and Wi-Fi Hotspot 2.0 settings...

Installed

- Apple Web Site >
- OS X Server Support >
- App License Agreement >
- Privacy Policy >

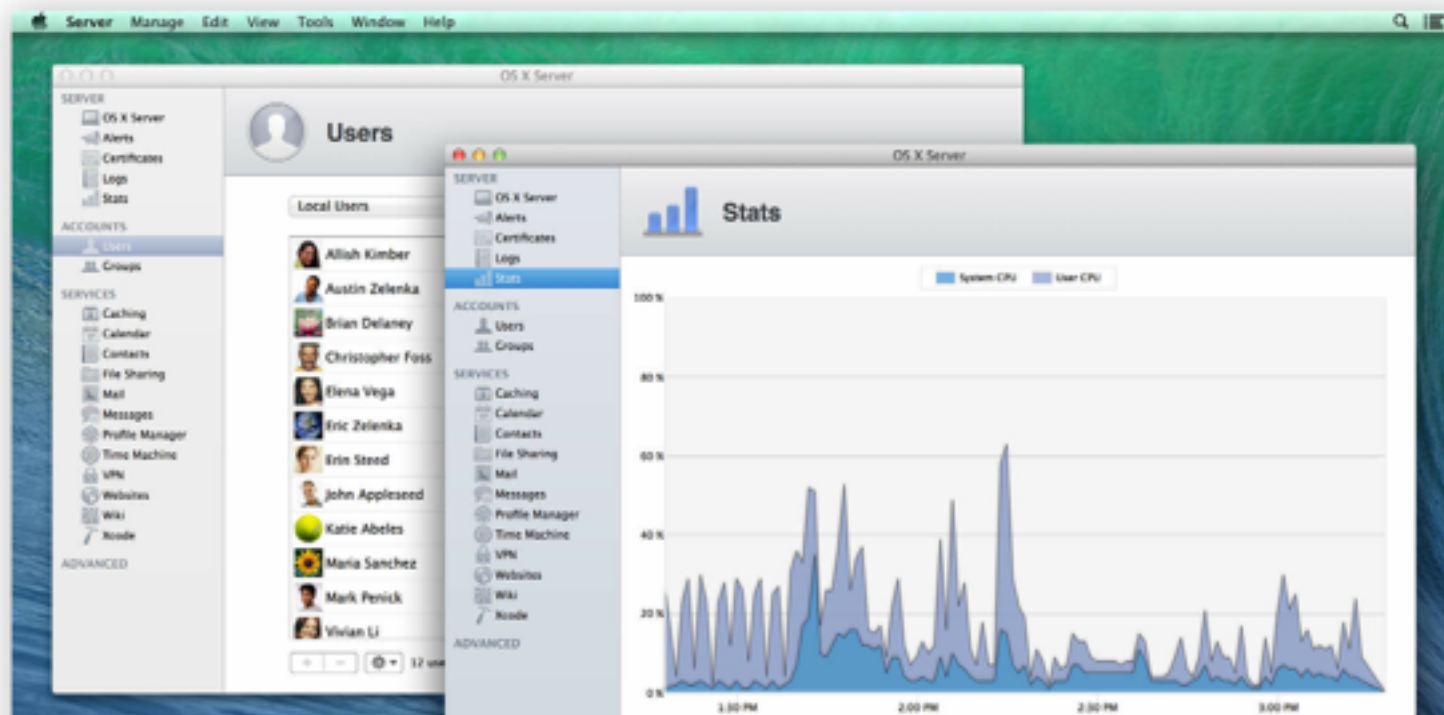
### Information

Category: Utilities  
 Updated: 24 March 2014  
 Version: 3.1.1  
 Price: 17,99 €  
 Size: 179 MB  
 Languages: English, Chinese, Dutch, French, German, Italian, Japanese, Korean, Spanish  
 Developer: iTunes S.a.r.l.  
 © 2013 Apple Inc.

Rated 4+  
 Compatibility:  
 OS X 10.9.2 or later

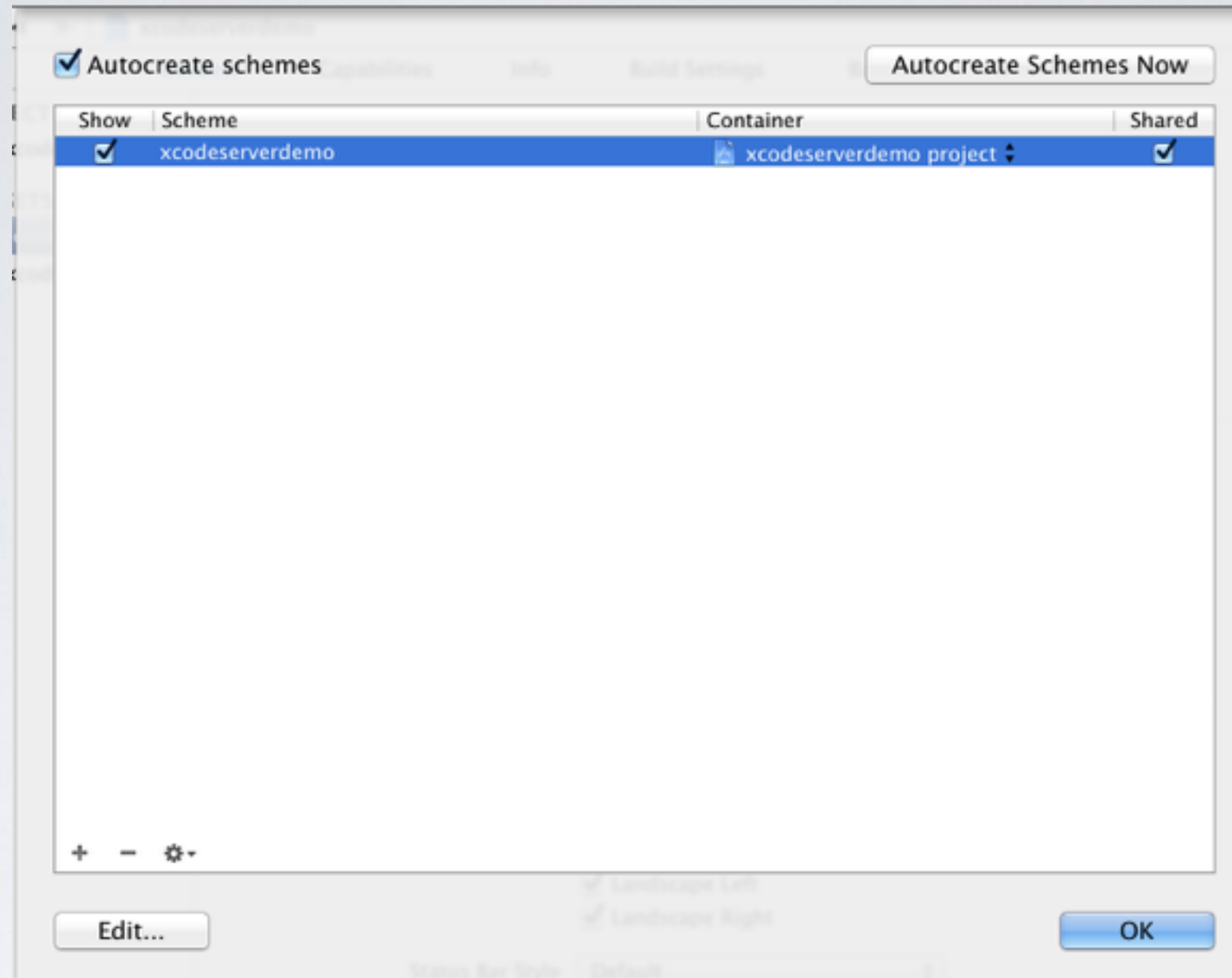
### More Apps by Apple

- Pages  
Productivity
- Logic Pro X  
Music
- Numbers



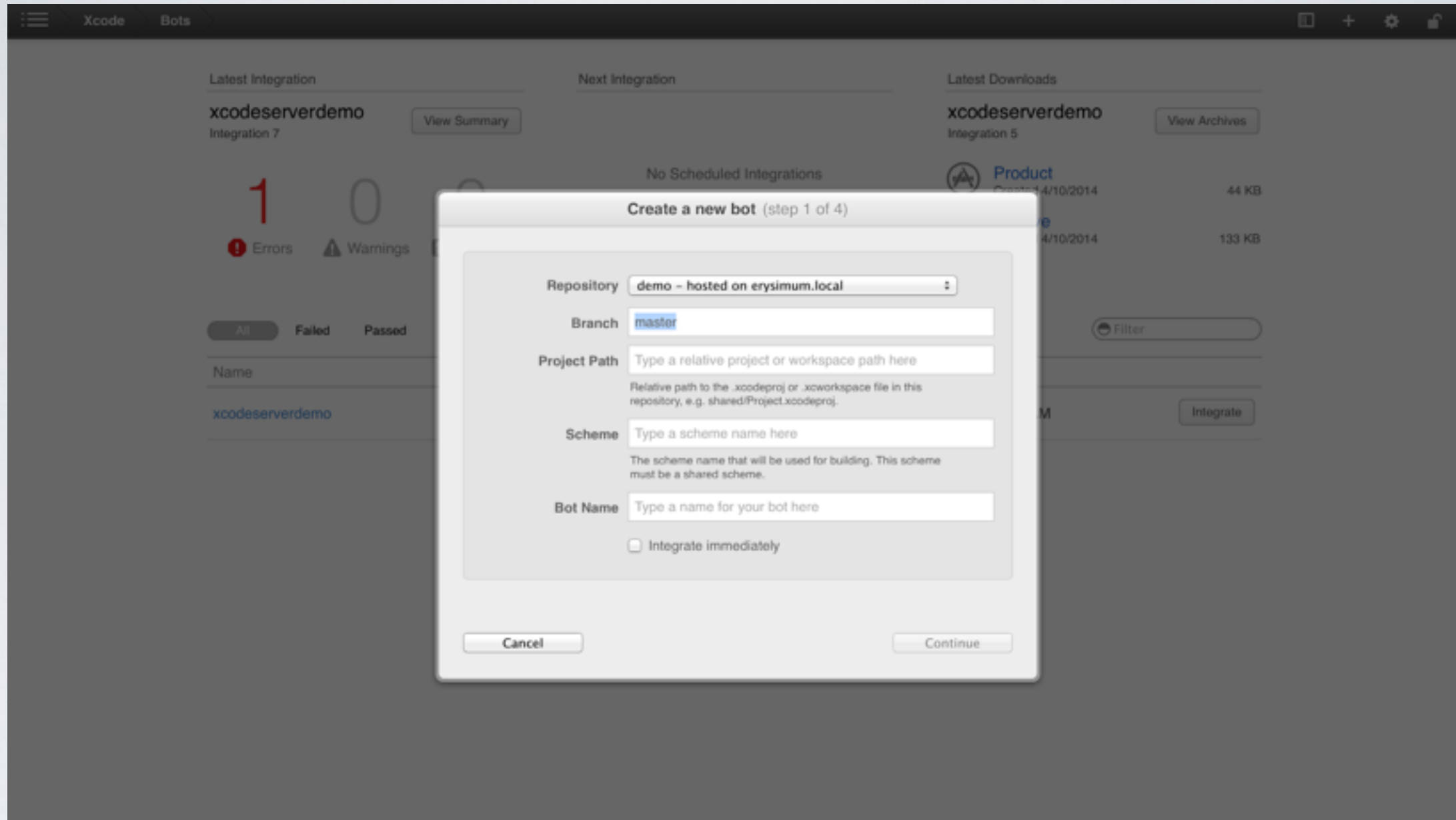
# Install & Setup OS X Server





Open the project in a Xcode a create a shared scheme  
Product - Scheme - Manage Schemes ...





Create bot on the Xcode Server website

Xcode Bots xcodeserverdemo

+ ⚙️ 🔒

xcodeserverdemo erysimum local

Summary Tests Commits Logs Archives
[Integrate](#)

**Today**

- ⬆️ **Integrate (7)** ❌  
Apr 10, 2014 at 9:02 AM
- ⬆️ **Integrate (6)** ❌  
Apr 10, 2014 at 9:01 AM
- ⬆️ **Integrate (5)** ✅  
Apr 10, 2014 at 9:00 AM
- ⬆️ **Integrate (4)** ❌  
Apr 10, 2014 at 8:58 AM
- ⬆️ **Integrate (3)** ❌  
Apr 10, 2014 at 8:57 AM
- ⬆️ **Integrate (2)** ❌  
Apr 10, 2014 at 8:55 AM
- ⬆️ **Integrate (1)** ❌  
Apr 10, 2014 at 8:55 AM

---

**Integration Results**

Status: Finished with errors  
 Start: Thursday at 9:02 AM  
 Duration: Less than a minute  
 No new commits

1  
❌ Errors

0  
⚠️ Warnings

0  
🔍 Analysis

⬇️  
No Downloads

---

**Build History**

- Analysis Issues
- Warnings
- Errors

Build	Errors
1	0
2	0
3	0
4	0
5	0
6	2
7	2

---

**Test History**

- Passed Tests
- Failed Tests

Build	Passed Tests	Failed Tests
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0

---

**Integration Details**

▼ ❌ **Errors**  
 Use of undeclared identifier 'sdscd'

View integration results

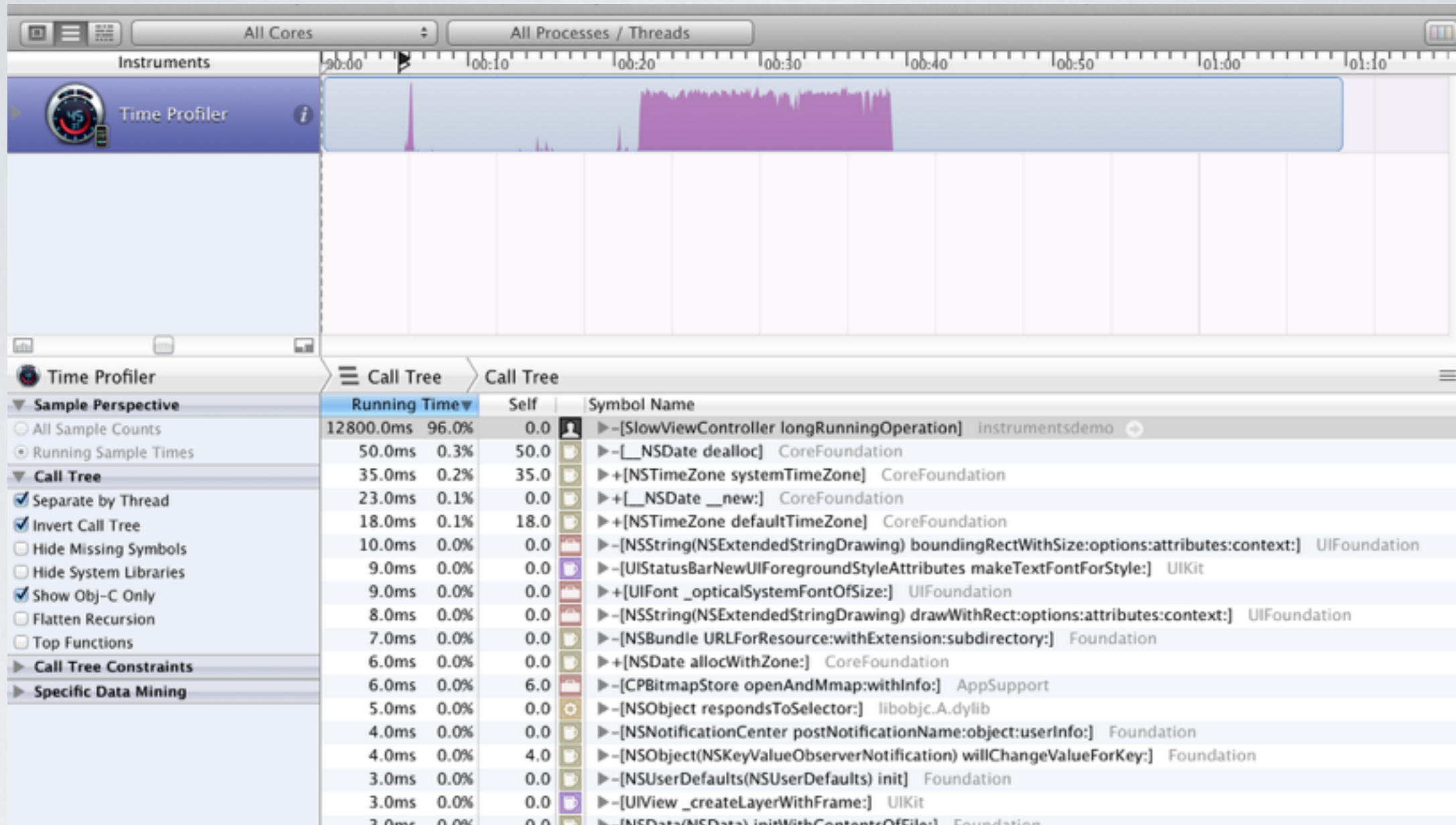
# INSTRUMENTS

- Performance and behaviour analysis tool for iOS and Mac Apps
- Included with Xcode
- Xcode - Other Developer Tool - Instruments

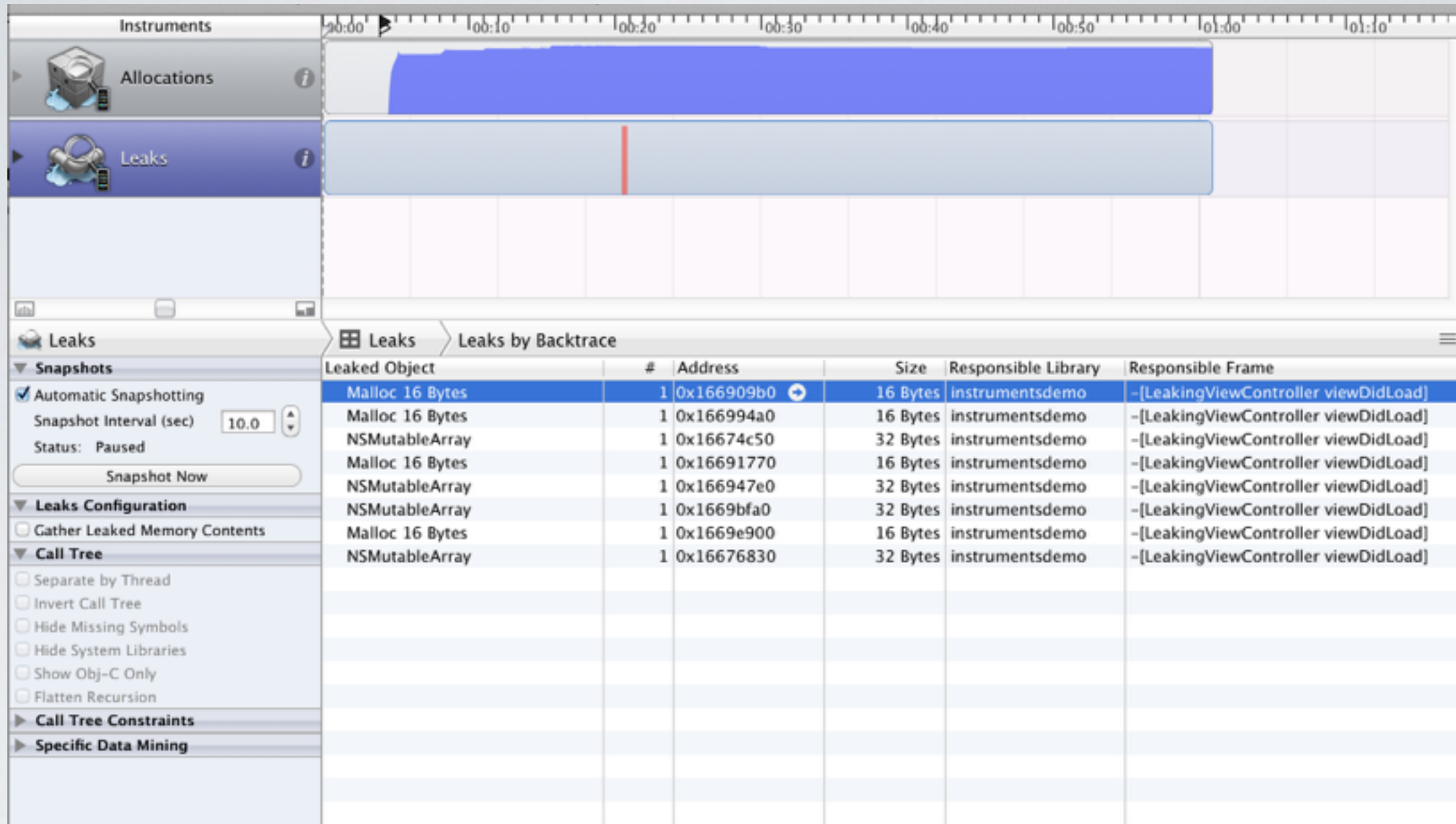
# INSTRUMENTS

demo





Performance analysis



**Leaks by Backtrace**

Leaked Object	#	Address	Size	Responsible Library	Responsible Frame
Malloc 16 Bytes	1	0x166909b0	16 Bytes	instrumentsdemo	-[LeakingViewController viewDidLoad]
Malloc 16 Bytes	1	0x166994a0	16 Bytes	instrumentsdemo	-[LeakingViewController viewDidLoad]
NSMutableArray	1	0x16674c50	32 Bytes	instrumentsdemo	-[LeakingViewController viewDidLoad]
Malloc 16 Bytes	1	0x16691770	16 Bytes	instrumentsdemo	-[LeakingViewController viewDidLoad]
NSMutableArray	1	0x166947e0	32 Bytes	instrumentsdemo	-[LeakingViewController viewDidLoad]
NSMutableArray	1	0x1669bfa0	32 Bytes	instrumentsdemo	-[LeakingViewController viewDidLoad]
Malloc 16 Bytes	1	0x1669e900	16 Bytes	instrumentsdemo	-[LeakingViewController viewDidLoad]
NSMutableArray	1	0x16676830	32 Bytes	instrumentsdemo	-[LeakingViewController viewDidLoad]

Memory management analysis

# COCOAPODS

- Dependency management tool for iOS and OS X
- Hundreds of 3<sup>rd</sup> party libraries available
- <http://cocoapods.org/>

# COCOAPODS

demo



# XAMARIN.IOS

- Cross-platform solution for developing native Apps for OS X, iOS, Android and Windows
- <http://xamarin.com/>
- free and student licences available
- write iOS apps in C# or F#

# UNITY3D

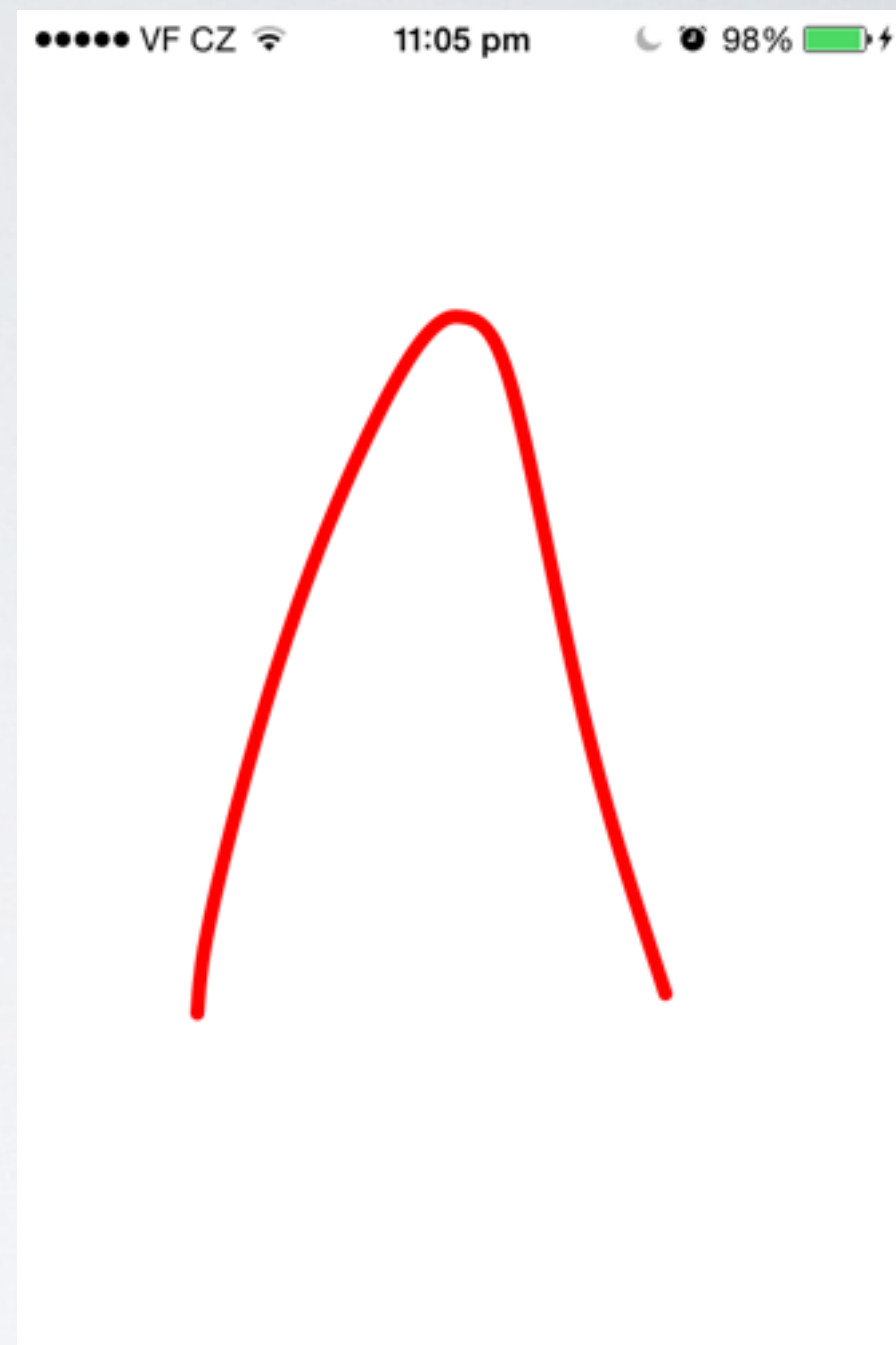
- Cross-platform solution for developing 2D and 3D games for multiple platforms
- <http://unity3d.com/>
- free license available
- write scripts in Boo, Javascript or C#

# BLOCKS & QUEUES

# TOUCHES

demo





basic drawing vs. line smoothing

# CORE DATA

# INFORMATION SOURCES

- WWDC (<https://developer.apple.com/wwdc/>)
- Stanford iTunesU (<http://cs193p.stanford.edu/>)
- Apple Documentation (<https://developer.apple.com/library/ios/navigation/>)
- NS Hipster (<http://nshipster.com/>)
- iOS Dev Weekly (<http://iosdevweekly.com/>)
- objc.io (<http://www.objc.io/>)

# TOOLS

- Dash (<http://kapeli.com/dash>)
- iExplorer (<http://www.macroplant.com/iexplorer/>)
- iFunBox (<http://www.i-funbox.com/>)
- ida (<https://www.hex-rays.com/products/ida/>)
- Source Tree (<http://www.sourcetreeapp.com/>)
- Live View (<http://www.zambetti.com/projects/liveview/>)
- Test Flight (<https://www.testflightapp.com>)



# Q&A

- Thanks!
- <https://dl.dropboxusercontent.com/u/3758672/fi-muni-2014-L02.zip>