

ASP.NET on zLinux: A New Workload

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August 3, 2010
7202



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Agenda

- What is Mono?
- Suggested approach for a Mono proof-of-concept
 - Preparing the POC environment (The fun stuff!!)
- Wrap-up/Questions

What is Mono®?



Mono (mō•nō), *n*:

1. A complete and modern development platform for Linux
2. The necessary software to develop and run .NET client and server applications on Linux, Solaris, Mac OS X, Windows, and Unix
3. A thriving open source project with a growing community

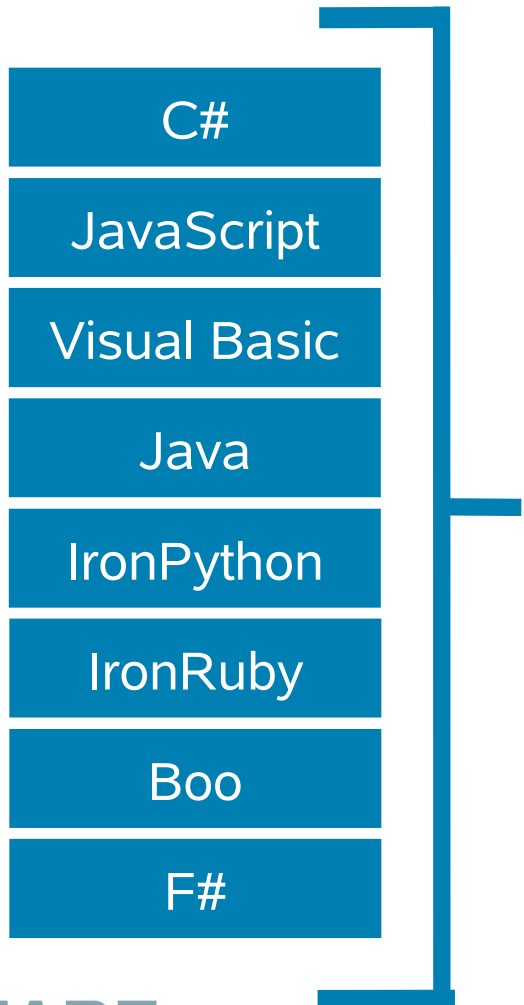
What Can You Do with Mono?

Migrate Microsoft .NET desktop and server applications to Linux without significant investment in rewriting code

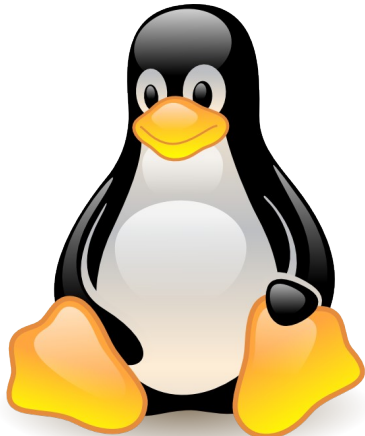
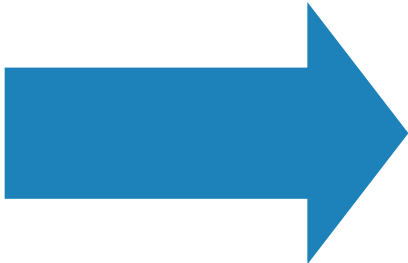
Target multiple platforms and increase addressable market

Leverage existing expertise in computer languages for more efficient development

Multi-Language, Multi-Platform



Binary Compatible



Mono Today: Mono 2.6.7 in July-2010



ASP.NET 1.1, 2.0 & 3.5

Web Forms & Web Services

Supports ASP.NET AJAX
and ASP.NET MVC

ADO.NET 1.1 & 2.0

SQL Server, PostgreSQL,
SQLite

Third parties supply providers
for MySQL, Sybase, DB2,
Oracle and more

Win Forms 1.1 & 2.0

C# 1.0, 2.0, 3.0

GTK#

Everything in .Net
3.5, except WPF,
WF and limited WCF

A Growing Family of Mono Technologies



Free

Mono Platform

MonoDevelop

Moonlight

MoMA: Mono Migration
Analyzer

Paid

SUSE Linux Enterprise
Mono Extension

MonoTouch
(Mono for iPhone)

Mono Tools for Visual
Studio

Using several technologies for a Mono proof-of-concept



Free

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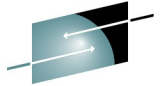
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Suggested approach for a Mono proof-of-concept



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Novell Recommends a Phased Approach

- Selling a proof-of-concept within your organization
- Select one or two ASP.NET applications for evaluation
- Prepare the Mono developer environment
- Prepare the Mono server environment
- Functionality evaluation
- Performance evaluation

Selling a Mono proof-of-concept within your organization

- Get executive level sponsorship
 - Development sponsor
 - Operations sponsor
- Suggest getting assistance from Novell or partner
- Outline the steps of the POC
- Define success criteria
 - Financial
 - Technical
- Set a proper expectation of POC duration
 - The POC can take three months or more depending on scope

Select one or two ASP.NET applications for evaluation (1 of 3)

- Choosing the evaluation candidate
 - Poor
 - Windows.Forms desktop applications
 - *These depend heavily on Windows platform specific code which may be unavailable in Linux*
 - *May require additional porting effort*
 - Applications that rely heavily on the 3.0 "Foundation" Libraries - WCF, WPF, and WF
 - Good
 - ASP.NET applications (Web Forms and Web Services)
 - Other non-Windows desktop applications (console applications and other headless services)

Select one or two ASP.NET applications for evaluation (2 of 3)

- Choosing the evaluation candidate
 - Best
 - Applications that meet the good criteria
 - A database which runs on Linux (especially zLinux)
 - *Mono has excellent support for MS SQL server*
 - *Far superior performance when database is on same machine as the application!*
- Run the Mono Migration Analyzer (MoMA) against the application
 - Submit the MoMA output to Novell for analysis

Select one or two ASP.NET applications for evaluation (3 of 3)



- **Optional:** Conference call with Novell or partner to review ASP.NET application selection
 - Review analysis of MoMA output
 - Discuss potential code changes that may be required for application to run on Mono
 - Discuss any third party components used by the application
 - Determine whether application is a good candidate for Mono POC

Prepare the Mono developer environment**

- On a Developer workstation
 - Install Mono Tools for Visual Studio
 - Install Mono for Windows
 - **Recommended:** Download and boot Linux target VM on Vmware Player to enable remote application debugging to Linux from within the Mono Tools in Visual Studio
 - Overview of Mono Tools functionality with developer
- Developer can begin testing ASP.NET application on local Mono instance

** Contact Novell for the recommended version of Mono and Mono Tools to use during the POC

Prepare the Mono server environment**

- Install/configure z/VM (suggested for evaluation on System z)
- Install SUSE Linux Enterprise Server 11 using installation defaults
- Install the SLE Mono Extension
- Use BlogEngine.NET or some other free ASP.NET application to verify server is functioning
- **Optional:** Configure SAMBA share for developer(s) to publish application code

** Contact Novell for the recommended version of the SUSE Linux Enterprise Mono Extension to use during the POC

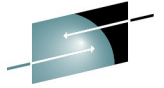
Functionality evaluation**

- Make required code changes determined from analysis
- Deploy and test on Mono on Windows
- **Recommended:** Deploy and test on Linux target VM
- Deploy and test on Mono on SLES on System z
- Make any additional changes to resolve functionality issues

** Evaluation should verify functionality, including database connections, user interfaces, integration with other applications, on each platform

Performance evaluation

- Define acceptable performance metrics for application(s)
- Run application with load
 - Record application performance metrics
 - Collect Linux server performance metrics
- Work with Novell or partner for recommended changes to Linux server and Mono configuration
 - CPUs
 - Memory
 - Mono optimizations



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Wrap-up/Questions



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SUSE Linux Enterprise Mono Extension System Requirements



Minimum requirements for installation & operation

Same as SUSE Linux Enterprise Server

Supported processor platforms

x86

x86_64 (AMD64 and Intel EM64T)

IBM System z (64-bit)

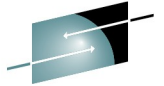


For More Information

- Mono Project
 - <http://www.mono-project.com>
- SUSE Linux Enterprise Mono Extension
 - <http://www.novell.com/products/mono>
- Mono Migration Analyzer (MoMA)
 - <http://www.mono-project.com/MoMA>

Review

- What is Mono?
- What is the SUSE Linux Enterprise Mono Extension?
- Does the suggested approach for a Mono POC make sense?
- Are you interested in trying to get a Mono POC started at your company?



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Questions?

THANK YOU FOR ATTENDING



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