

# Zváračský kurz na BlazeDS



BarCamp  
Brno - FI  
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Mgr. Juraj Michálek  
SinusGear



Twitter: <http://twitter.com/georgiksk>  
Blog: <http://georgik.sinusgear.com>

# Upozornenie!

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Prezentované riešenia nie sú silver bullet  
ani magický lektvar.

Časť problémov vyriešia.  
Nejaké nové prinesú.

# Časti kurzu

Ako sa vyvíjú klient-server aplikácie?



Prínos Google App Engineu.



Zvýšenie účinnosti pomocou BlazeDS.



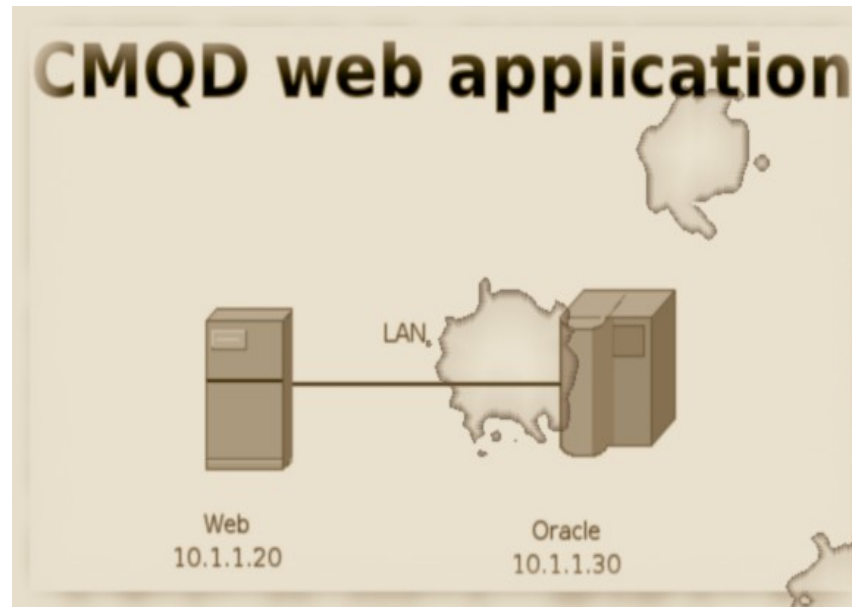
Kontinuálna integrácia a PMD.



# Máme nápad!



Vytvoríme skvelú aplikáciu!



# Klasický model

---

Navrhnúť databázu.

Navrhúť dátovú vrstvu.

Navrhúť vrstvu s logikou  
a kontrolérmi.

... ešte sme neskončili



# Klasický model - klient

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Navrhnutí rozhraní služby.  
(Web services, REST)

Navrhnutí serializaci na klientovi.

Navrhnutí volání serverového API.

Ešte stále sme neskončili...



# Klasický model - UI

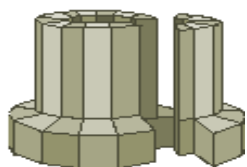
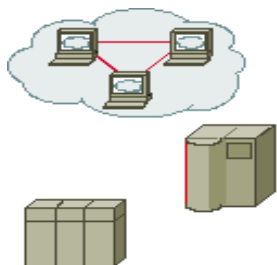
---

Navrhnúť logiku na klientovi.

Navrhnúť GUI na klientovi.

Máme hotovo?

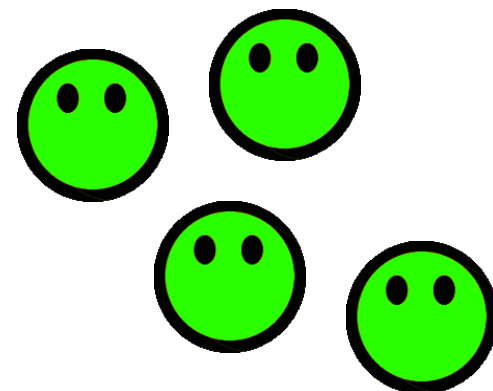
# Klasický model - nasadenie



Nie, nie je hotovo!

Nájsť/kúpiť hosting.

Umiestniť na server.



Testovacia a produkčná verzia.

Zber logov a chybových hlásení.

A aplikácia nám doteraz nezarobila ani groš.



We're on the highway to hell!

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# Náklady na klasický model

---

Náklady - server.

Náklady - klient.

Náklady – komunikácia a hosting.

Postupný nárast používateľov

# Time to market



Čo prosím?

Nerozumiem syntaxi vášho kmeňa!

Vývojár:

„Ešte nemáme vyladený komunikačný protokol.“

# Moment! To ešte nie je všetko!

---

Zmeníme schému v DB?

Musíme zmeniť:

logiku

serverové API

dátovú vrstvu klienta

klienta

# Ako spieva Queens

---

Too much (love) features  
will kill you in the end.

Pattern: Feature soup.

# Hm?

---

Položme si základnú otázku.

Prečo vlastne vôbec niekto vyvíja softvér?

# Skúsme to veselšie a radostnejšie

---

Je vôbec možné zjednodušiť niektoré kroky?

A tým znížiť cenu vývoja?

# Príklad z priemyslu

---

Automatizovať.

Potrebuje systém.

A hlavne: Potom potrebujeme ešte lepší systém.





# Google App Engine

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# Bonusy

Free hosting (až 10 app).

Škálovateľnosť (nútená).

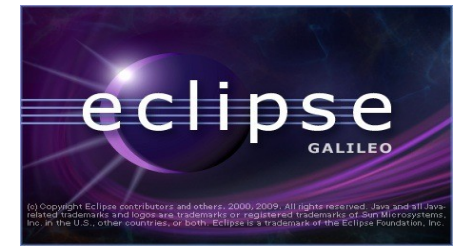
Podpora Python/Java.

Deployment, integrácia s IDE, verzovanie aplikácií, SSL cert, sledovanie app, meranie výkonu.





# GAE + Eclipse



**New Web Application Project**

Create a Web Application project in the workspace or in an external location

Project name: FlexGarden

Package: (e.g. com.example.myproject) net.flexgarden

Location

Create new project in workspace

Create new project in:

Directory: E:\workspace\FlexGarden

Google SDKs

Use Google Web Toolkit

Use default SDK (none)

Use specific SDK:

Use Google App Engine

Use default SDK (App Engine - 1.3.3)

Use specific SDK: App Engine - 1.3.3

Finish Cancel

Pydev

Google

Add/Change Project Type

Configure

Properties Alt+Enter

GWT Compile

Deploy to App Engine

Web Toolkit Settings...

App Engine Settings...

**Deploy Project to Google App Engine**

Deploy

Ready to deploy application version 1

Project: Browse...

Email: flexgarde@gmail.com

Password: .....

App Engine project settings...

Deploy Cancel

# GAE admin console

Google app engine

balzi-server 3

Main

[Dashboard](#)

[Quota Details](#)

[Logs](#)

[Cron Jobs](#)

[Task Queues](#)

[Blacklist](#)

Data

[Datastore Indexes](#)

[Datastore Viewer](#)

[Datastore Statistics](#)

[Blob Viewer](#)

Administration

[Application Settings](#)

[Permissions](#)

[Versions](#)

[Admin Logs](#)

Billing

[Billing Settings](#)

[Billing History](#)

Resources

[Documentation](#)

[FAQ](#)

[Developer Forum](#)

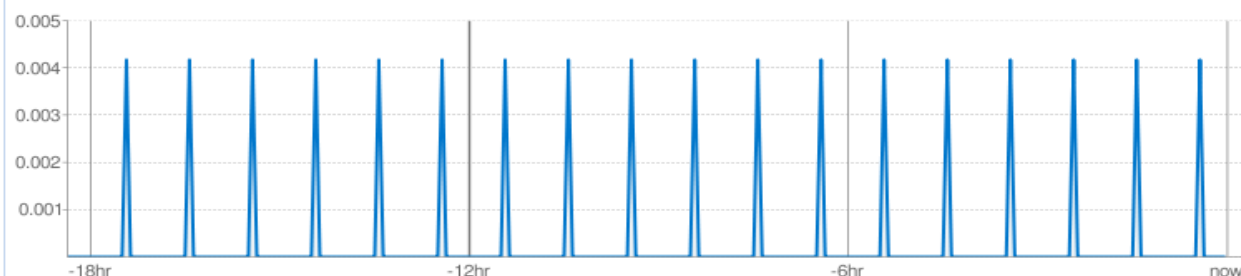
[Downloads](#)

[System Status](#)

## Charts ?

Requests/Second

all 24 hr 12 hr 6 hr



Billing Status: Free - [Settings](#)

Resource	Usage
CPU Time	0% 0.00 of 6.50 CPU hours
Outgoing Bandwidth	0% 0.00 of 1.00 GBytes
Incoming Bandwidth	0% 0.00 of 1.00 GBytes
Total Stored Data	0% 0.00 of 1.00 GBytes
Recipients Emailed	0% 0 of 2,000

## Current Load ?

URI	Requests last 10 hrs	Avg CPU (API) last hr	% CPU last 10 hrs
<a href="#">/cron</a>	10	14 (14)	100%

## Errors ?

URI

# Log report



< Prev 20 **15** Next 20 >

05-23 03:27AM 51.289 /messagebroker/amf 500 1519ms **1919cpu\_ms 33api\_cpu\_ms** ⚠0kb Mozilla/5.0 (Windows; U; Windows NT 5.1; sk; rv:1.9.2.3) Gecko/20100401 Firefox/3.6.3 ( .NET CLR 3.5.30729) 81.200.48.123 - - [23/May/2010:03:27:52 -0700] "POST /messagebroker/amf HTTP/1.1" 500 0 "http://srobick-server.appspot.com/cccd-debug/cccd.swf/[[DYNAMIC]]/4" "Mozilla/5.0 (Windows; U; Windows NT 5.1; sk; rv:1.9.2.3) Gecko/20100401 Firefox/3.6.3 ( .NET CLR 3.5.30729),gzip(gfe)" "srobick-server.appspot.com"

**W** 05-23 03:27AM 52.137

[srobick-server/1.342150599797047027].<stderr>: \*\*\*\* MessageBrokerServlet failed to initialize due to runtime exception: flex.messaging.LocalizedException: Unable to create a parser to load messaging configuration. Exc

```
at flex.messaging.config.FlexConfigurationManager.getMessagingConfiguration(FlexConfigurationManager.java:73)
at flex.messaging.MessageBrokerServlet.init(MessageBrokerServlet.java:106)
at org.mortbay.jetty.servlet.ServletHolder.initServlet(ServletHolder.java:440)
at org.mortbay.jetty.servlet.ServletHolder.doStart(ServletHolder.java:263)
at org.mortbay.component.AbstractLifeCycle.start(AbstractLifeCycle.java:50)
at org.mortbay.jetty.servlet.ServletHandler.initialize(ServletHandler.java:685)
at org.mortbay.jetty.servlet.Context.startContext(Context.java:140)
at org.mortbay.jetty.webapp.WebAppContext.startContext(WebAppContext.java:1250)
at org.mortbay.jetty.handler.ContextHandler.doStart(ContextHandler.java:517)
at org.mortbay.jetty.webapp.WebAppContext.doStart(WebAppContext.java:467)
```

# Ok, vyrišený hosting

---



Čo môžeme optimalizovať ďalej?

Databáza a mapovanie na objekty.

# ORM a Python

```
9 class TaskDefinition(db.Model):
10     code = db.StringProperty()
11     step = db.IntegerProperty()
12     min = db.IntegerProperty()
13     max = db.IntegerProperty()
14     total = db.IntegerProperty()
15     totalFree = db.IntegerProperty()
16     totalSolved = db.IntegerProperty()
17
18
19 class Task(db.Model):
20     code = db.StringProperty()
21     definition = db.ReferenceProperty(TaskDefinition)
22     min = db.IntegerProperty()
23     max = db.IntegerProperty()
24     status = db.StringProperty(choices=('free', 'assigned', 'solved'))
25
26 class Machine(db.Model):
27     name = db.StringProperty()
28     activeTask = db.ReferenceProperty(Task, collection_name='activeMachines')
```

# ORM a Java

```
21 @PersistenceCapable
22 public class TicketRecord {
23
24     @PrimaryKey
25     @Persistent(valueStrategy = IdGeneratorStrategy.IDENTITY)
26     private Key id;
27
28     @Persistent
29     private String reportedBy;
30
31     @Persistent
32     private Date timestamp;
33
34     @Persistent
35     private String content;
36
37     @Persistent
38     private String type;
39
40     @Persistent(mappedBy = "ticketRecord")
41     @Order(extensions = @Extension(vendorName = "datanucleus"),
42     private List<TicketRecordAttribute> attributes;
```



# Podpora GAE (\*.jar)

---

JDO

Spring

DataNucleus Enhancer

Maven GAE Plugin



[http://www.kindleit.net/maven\\_gae\\_plugin/](http://www.kindleit.net/maven_gae_plugin/)

# JDO

---

Anotácia z enterprise aplikácii.

DB sa vytvára na základe kódu.

<http://code.google.com/appengine/docs/java/datastore/usingjdo.html>

# Zmena v App

---

JPA replikuje zmenu  
schémy do DB.

Milé :-)



# Klient / server

---

API.

Au.

Zmena API?

Ste sa zbláznili!



# Super API na prvý krát?

---

Jedine Chuck Norris!

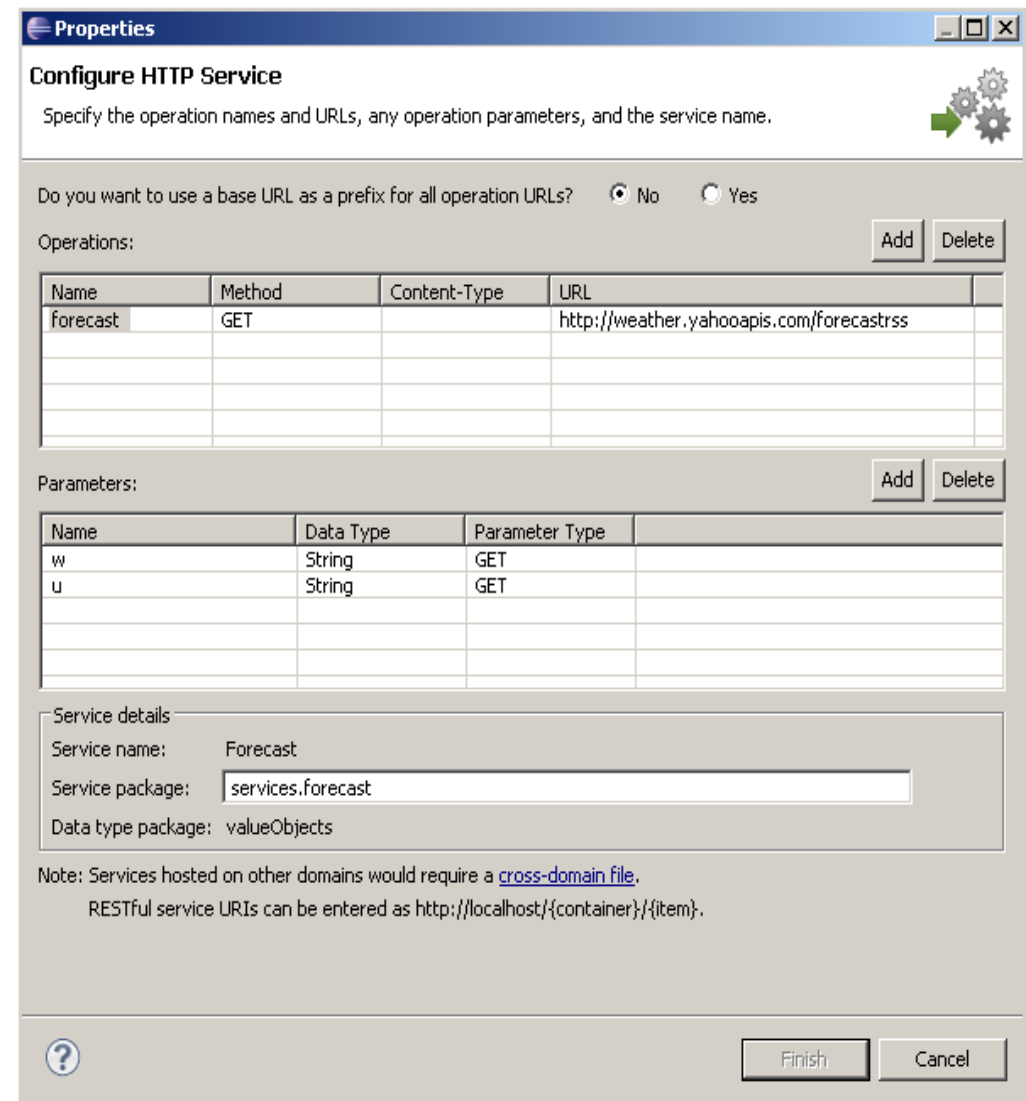
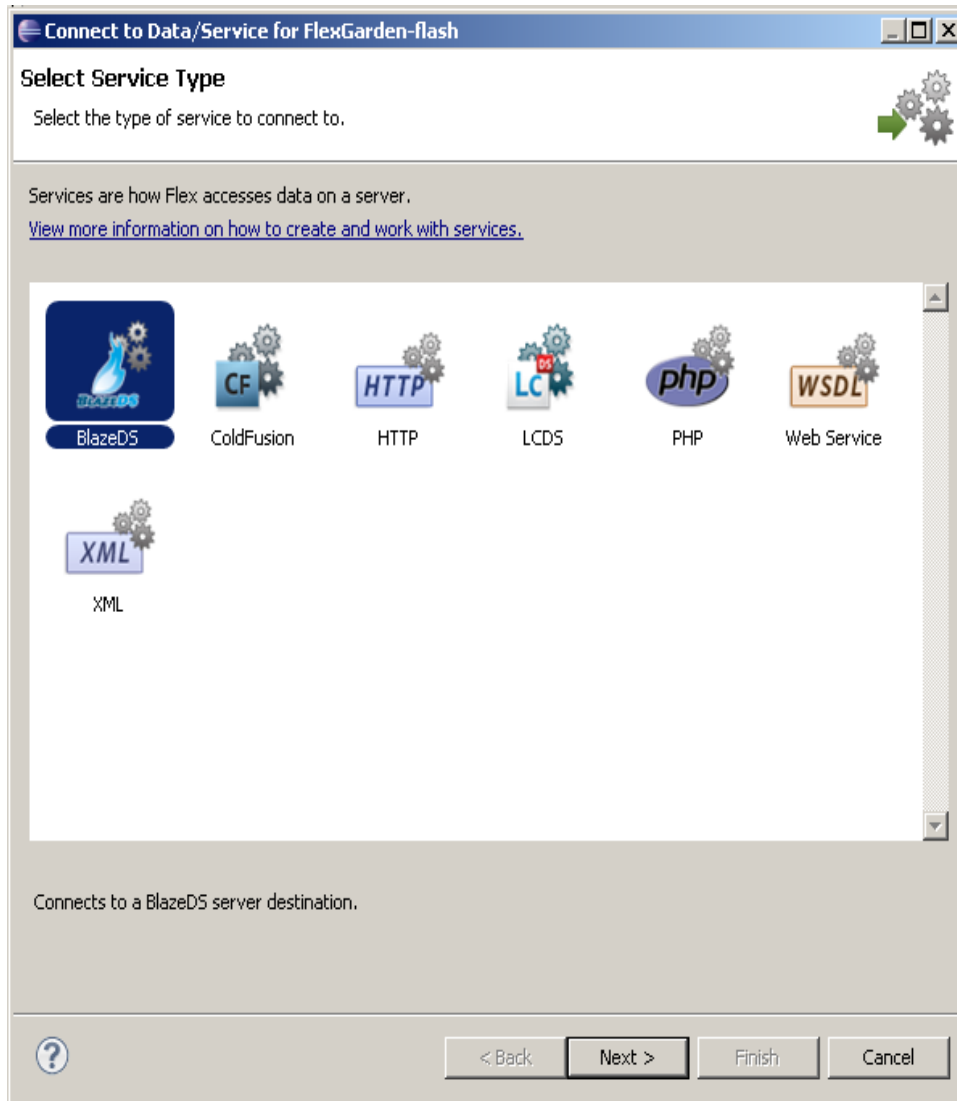
# Flash Builder

Pripojenie na web aplikáciu?

Service discovery.



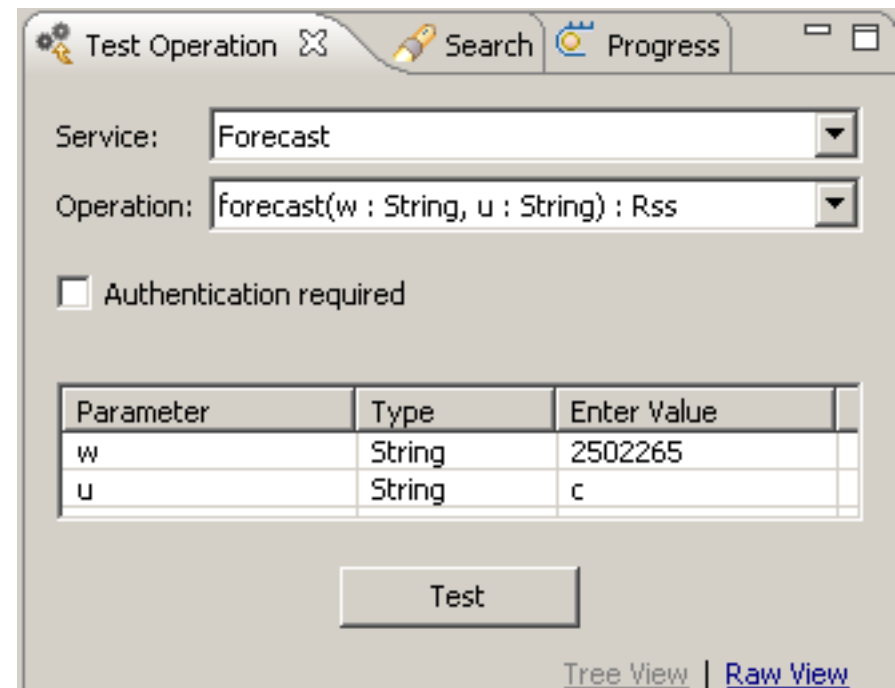
# Zadám adresu a...



# Zázrak



Funguje aj drag-n-drop  
do datagridu.





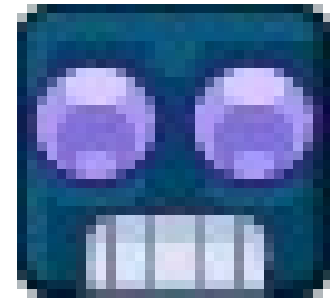
# No, ale zmením adresu

---

A všetky parametre operácie povedia

pápá :-)

Evil Wizard?



# Remote Discovery Service

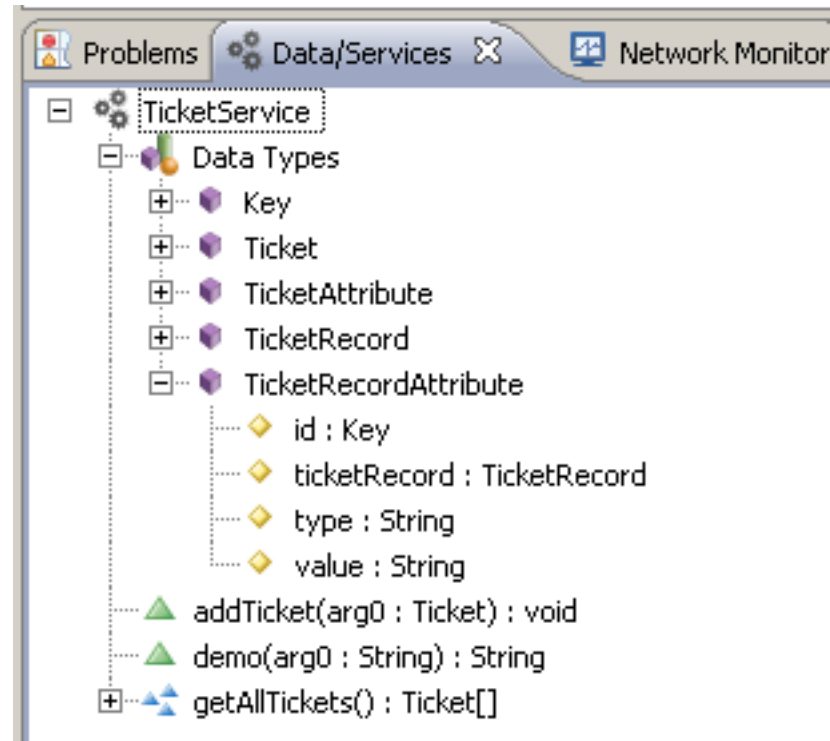


Podpora pre PHP, LiveCycle a BlazeDS.

Zadám URL serveru a...

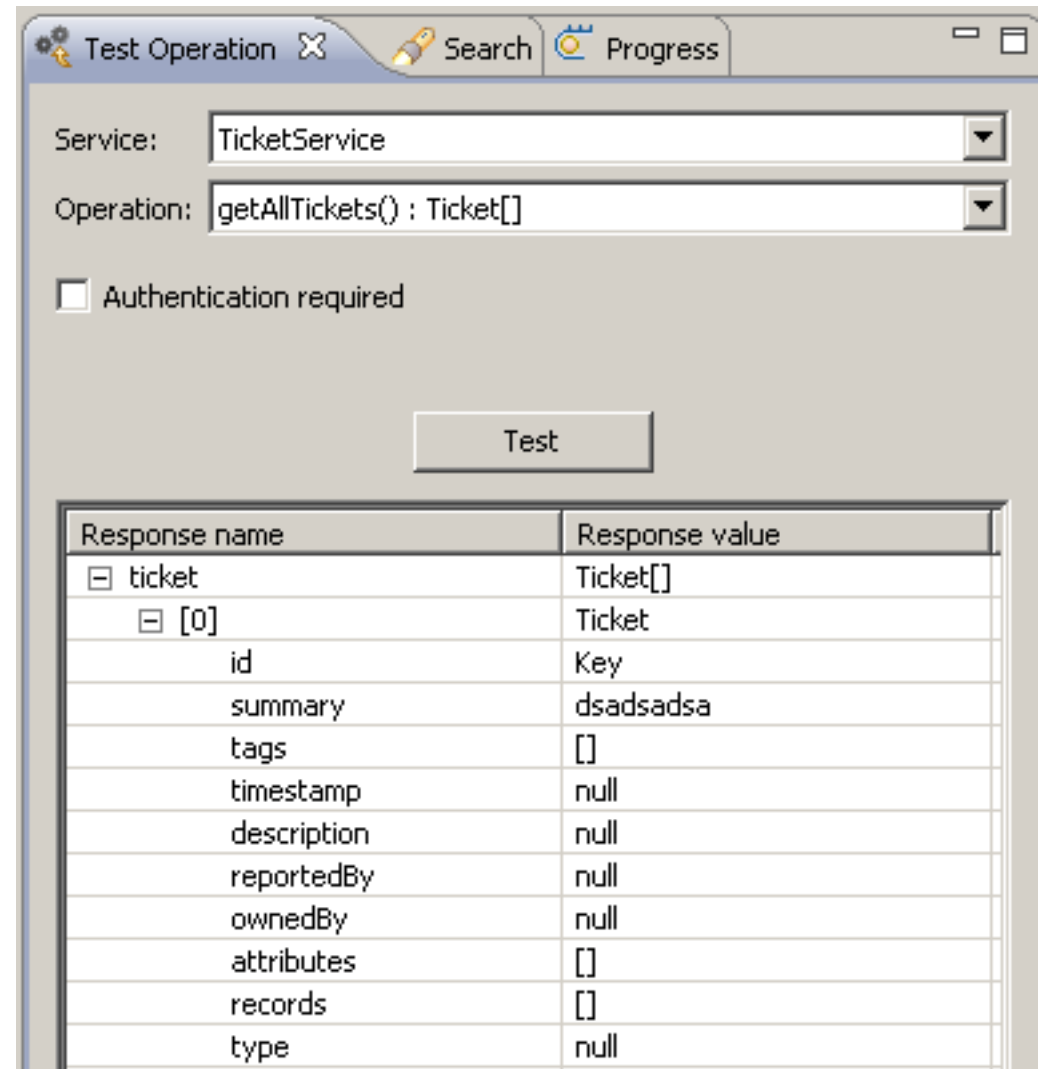
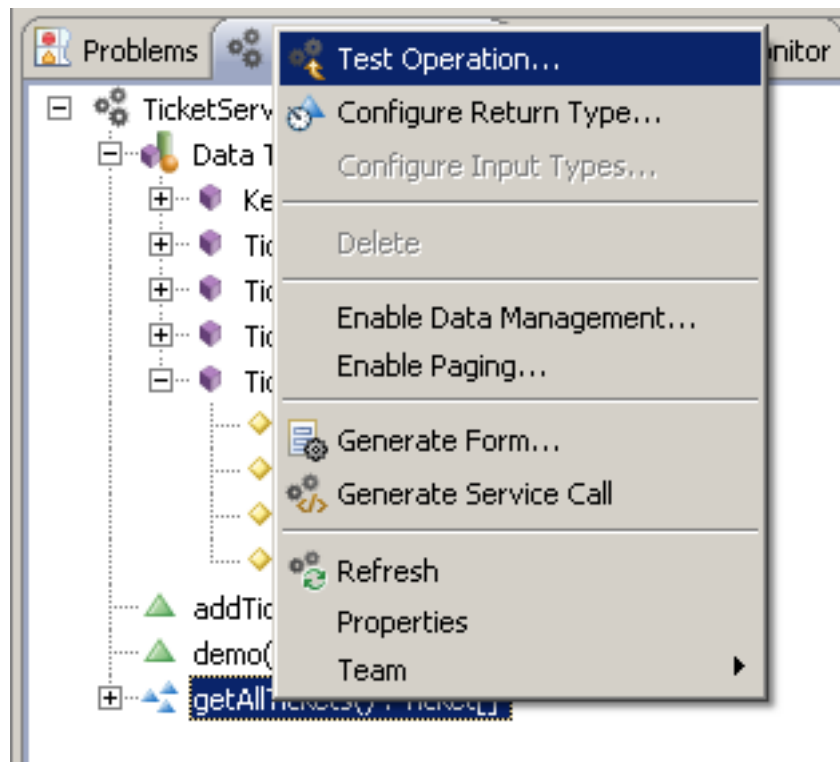


# Discovery

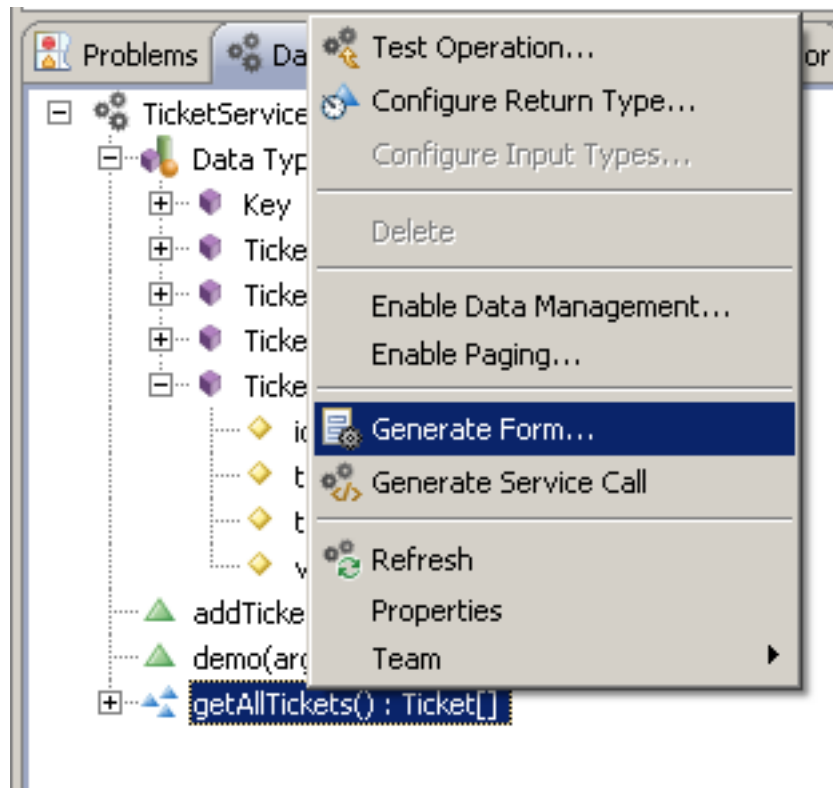


Dokonca funguje aj update API!

# Test operácie



# Vygenerovanie formuláru



Key	
Id	<input type="text"/>
Complete	<input type="checkbox"/>
Name	<input type="text"/>
Parent	
Kind	<input type="text"/>
Timestamp	<input type="text"/> <input type="button" value="Calendar"/>
Summary	<input type="text"/>
Tags	String[]
Description	<input type="text"/>
ReportedBy	<input type="text"/>
OwnedBy	<input type="text"/>
Attributes	TicketAttribute[]
Type	<input type="text"/>
Records	TicketRecord[]

# Drag-n-drop výsledkov do tabuľky

tags	timestamp	summary	id	description	reportedBy
		dsadsadsa	[object Key]		

▲ addTicket(arg0 : Ticket) : void  
▲ demo(arg0 : String) : String  
+ ▲ getAllTickets() : Ticket[]

Column 1	Column 2	Column 3

# Spustíme!

---

Jetty server.

Ako to tak chodí u vývojára to ide.

A v cloude?

# Ale ved' to poznáte...

---

Error!

Duplicated Session....

:-O



# Drobná úprava



Patchneme a  
prekompilujeme  
BlazeDS ;-)



**EngineDS**  
Maven repository  
Project archetype - JDO  
<http://maven.sinusgear.com>



# Kontinuálna integrácia

---

SCRUM, Agile

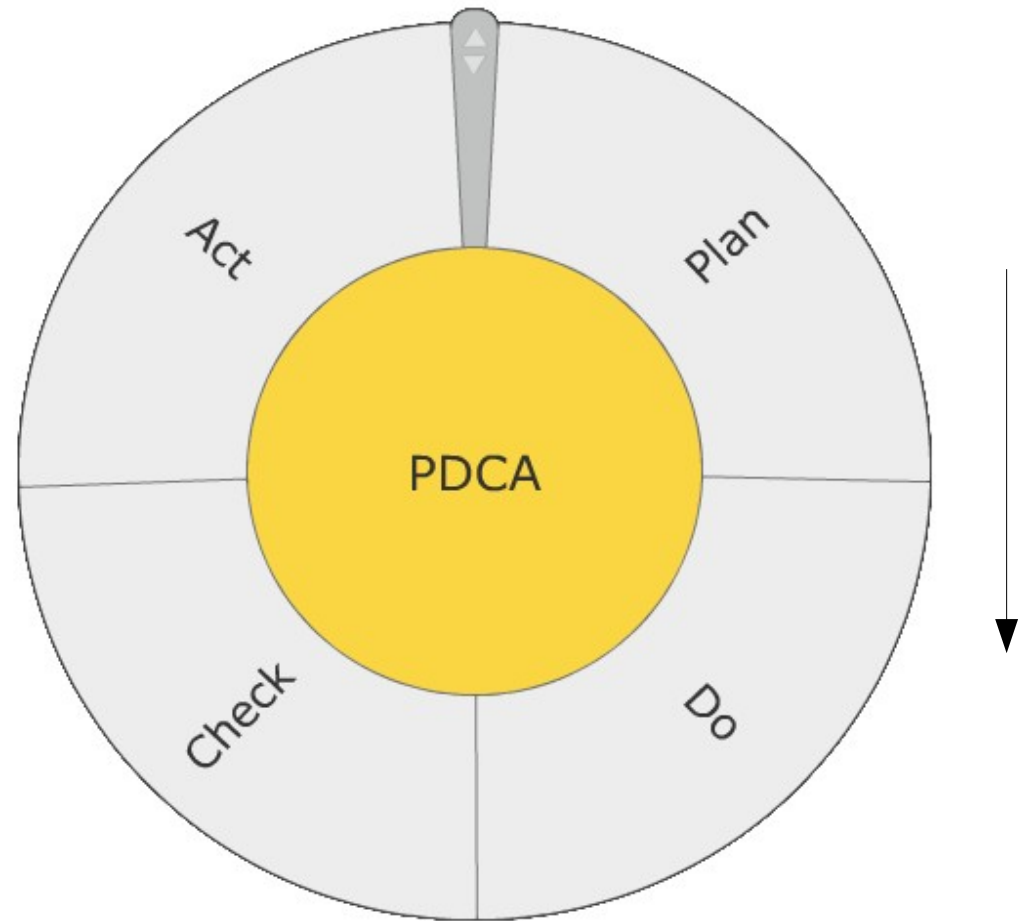
<http://www.agilnikonsorcium.cz/>

Hudson CI

PMD

# Plan, Do, Check, Act

Návrh  
Vývoj  
Kontrola  
Zlepšenie



<http://www.goalscape.com>

# Kontinuálna integrácia



Hudson

ENABLE AUTO REFRESH

People

Build History

Build Queue

No builds in the queue.

Build Executor Status

#	Status
1	Idle
2	Idle

All	S	W	Job ↓	Last Success	Last Failure	Last Duration
			<a href="#">picasaflashapi</a>	11 days (#50)	11 days (#49)	41 sec

Icon: [S](#) [M](#) [L](#)

Legend for all for failures for just latest builds

## Hudson CI

V spolupráci s Michalom Gronom

<http://www.sinusgear.com/hosting/hudson-ci>

# PMD – don't shoot the messenger



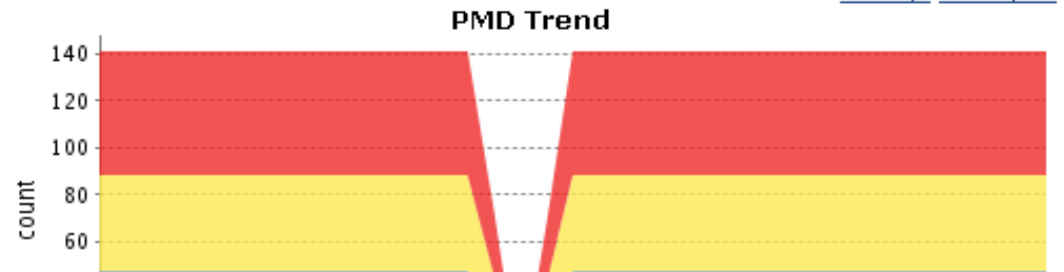
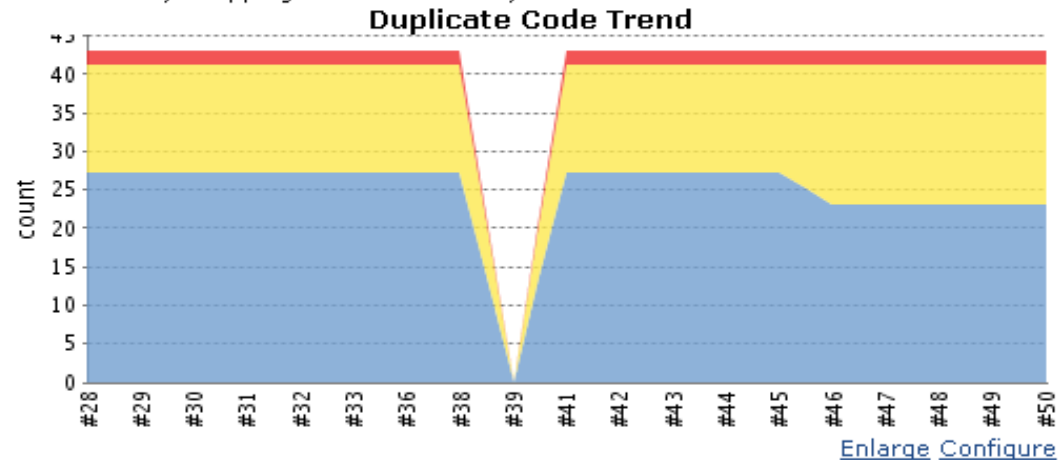
Hudson » [picasaflashapi](#)

- [Back to Dashboard](#)
- [Status](#)
- [Changes](#)
- [Duplicate Code](#)
- [PMD Warnings](#)
- [Document](#)
- [Coverage Trend](#)
- [Java NCSS Report](#)
- [Google Code \(automatic configuration\) Polling Log](#)

Build History		<a href="#">(trend)</a>
#50	<a href="#">17.5.2010 21:26:10</a>	
#49	<a href="#">17.5.2010 21:05:50</a>	
#48	<a href="#">17.5.2010 21:01:29</a>	
#47	<a href="#">6.5.2010 8:26:17</a>	
#46	<a href="#">6.5.2010 0:00:53</a>	
#45	<a href="#">23.4.2010 13:07:54</a>	

## Project picasaflashapi

AS3 swc library wrapping some functionality around Picasa Web Albums Data API



# Software Engineering Radio

Model driven development



<http://www.se-radio.net>



# Diskusia

Témy:



Google App Engine  
Python, Java, Jetty



ORM, JPA, JDO  
BlazeDS



Agile  
Hudson CI  
PMD



# Školenia, konzultácie

---

Adobe technológie  
Flex, AIR, BlazeDS  
Google, Clouds

Implementácia kontinuálnej integrácie  
a automatizácia SW projektov.

<http://www.sinusgear.com/skolenia>



# Ďakujem za pozornosť



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