

.Net-Entwicklung mit freien Werkzeugen



- > Senior Consultant, Architekt und Trainer (MATHEMA Software GmbH)
- > 25+ Jahre Software
- > 12+ Jahre Java Enterprise
- > 7+ Jahre .Net

- > Schwerpunkte
 - Software Architektur
 - Verteilte Systeme
 - Objekt-Relationales Mapping

- > Artikel und Konferenzen
 - KaffeeKlatsch (www.kaffeeklatsch.de) , ObjektSpektrum
 - gearconf, Herbstcampus, Java Forum Stuttgart, SET Zürich, Jazzon, PRIO



E-Mail: thomas.haug@mathema.de



- Motivation
- Werkzeuge
- Zusammenfassung

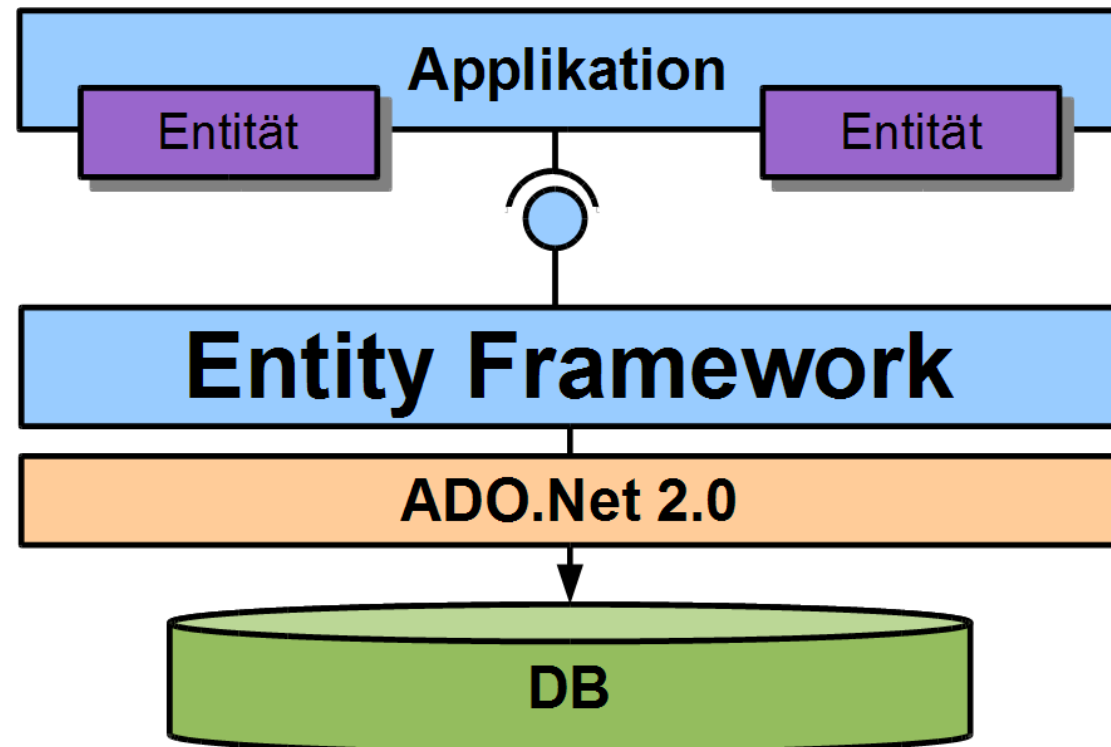


- Motivation
- Werkzeuge
- Zusammenfassung



- Entity Framework 4
 - Objekt-Relationales Mapping Framework
 - Bestandteil des .Net 4.0 Release

- Impedance Mismatch
 - Granularität
 - Vererbung/Polymorphie
 - Identität
 - Beziehungen





■ Beispiel

```
using (EfEntities ctx = new EfEntities()) {
    Category myCat = new Category() { Name = "Motorteile" };

    ctx.Categories.AddObject(myCat);

    ctx.SaveChanges();
}
```

Entity Framework

ADO.Net 2.0

DB



- Mit den Community Technology Preview (CTP) ist Code Frist möglich

```
ContextBuilder<BSContext> builder =
    new ContextBuilder<BSContext>();

builder.Entity<Category>()
    .HasKey(category => category.CategoryID)
    .MapSingleType( cat => new {
        CAT_ID = cat.CategoryID,
        CAT_NAME = cat.Name,
        CAT_DESC = cat.Description    }
    )
    .ToTable("EF4_CTP2_CATEGORY");
```





- Mit dem Community Technology Preview (CTP) 3 Code First möglich

```
EntityConfiguration<Category> catConf = builder.Entity<Category>();

catConf.Property(cat => cat.Name).HasMaxLength(20);
catConf.Property(cat => cat.Name).IsRequired(); // not null
catConf.Property(cat => cat.CategoryID).IsIdentity();
```



EF4_CTP2_CATEGORY				
	Column Name	Condensed Type	Nullable	Identity
🔑	CategoryID	bigint	No	☒
	Description	nvarchar(200)	Yes	☐
	Name	nvarchar(20)	No	☐
				☐

framework

.Net 2.0

DB



■ Projektidee

```
[Entity (Table=" EF4_CTP2_CATEGORY ")]
public class Category {
```

```
    [Id]
```

```
    [Column(Name = " CAT_ID")]
```

```
    public long CategoryID { get; set; }
```

```
    [Column(Name = " CAT_NAME", Length=20, Nullable=false)]
```

```
    public string Name { get; set; }
```

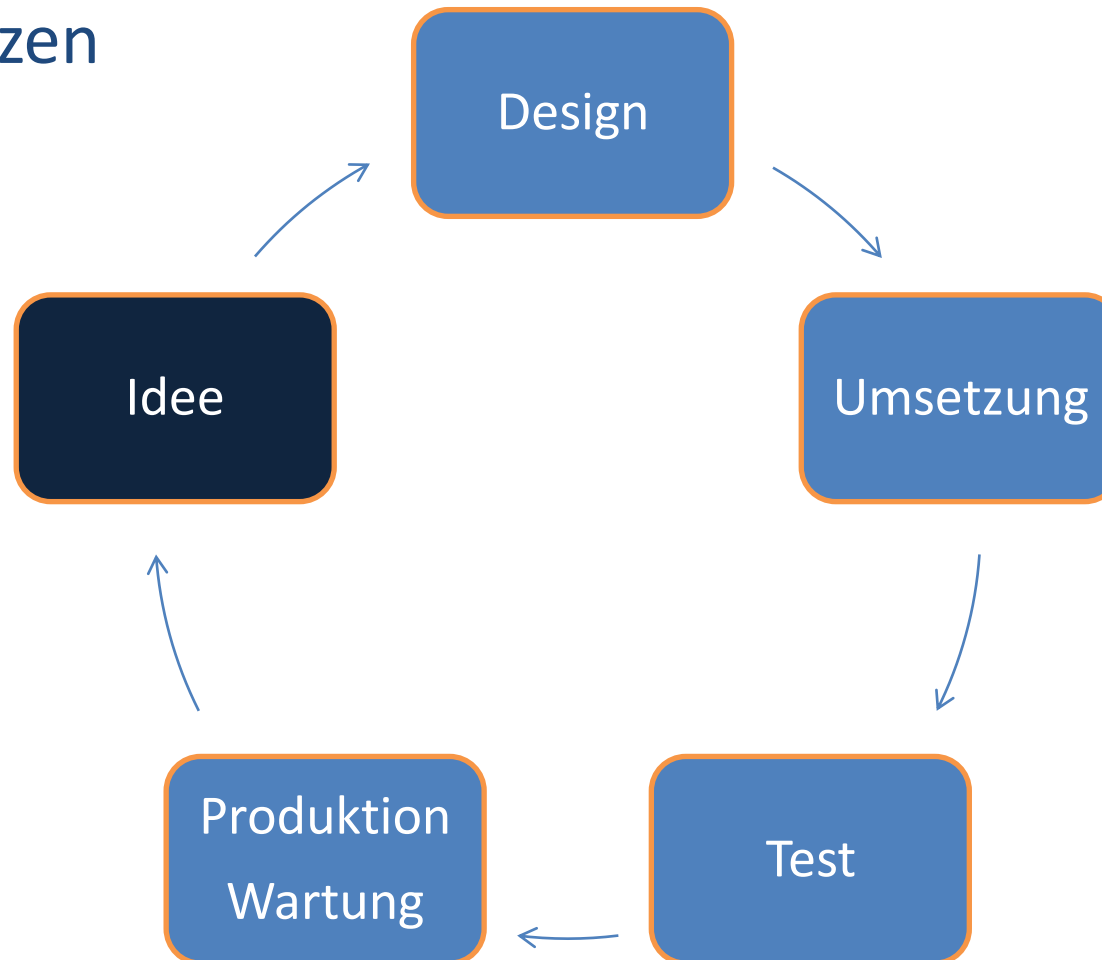
```
    [Column(Name = " CAT_DESC", Length=200)]
```

```
    public string Description { get; set; }
```

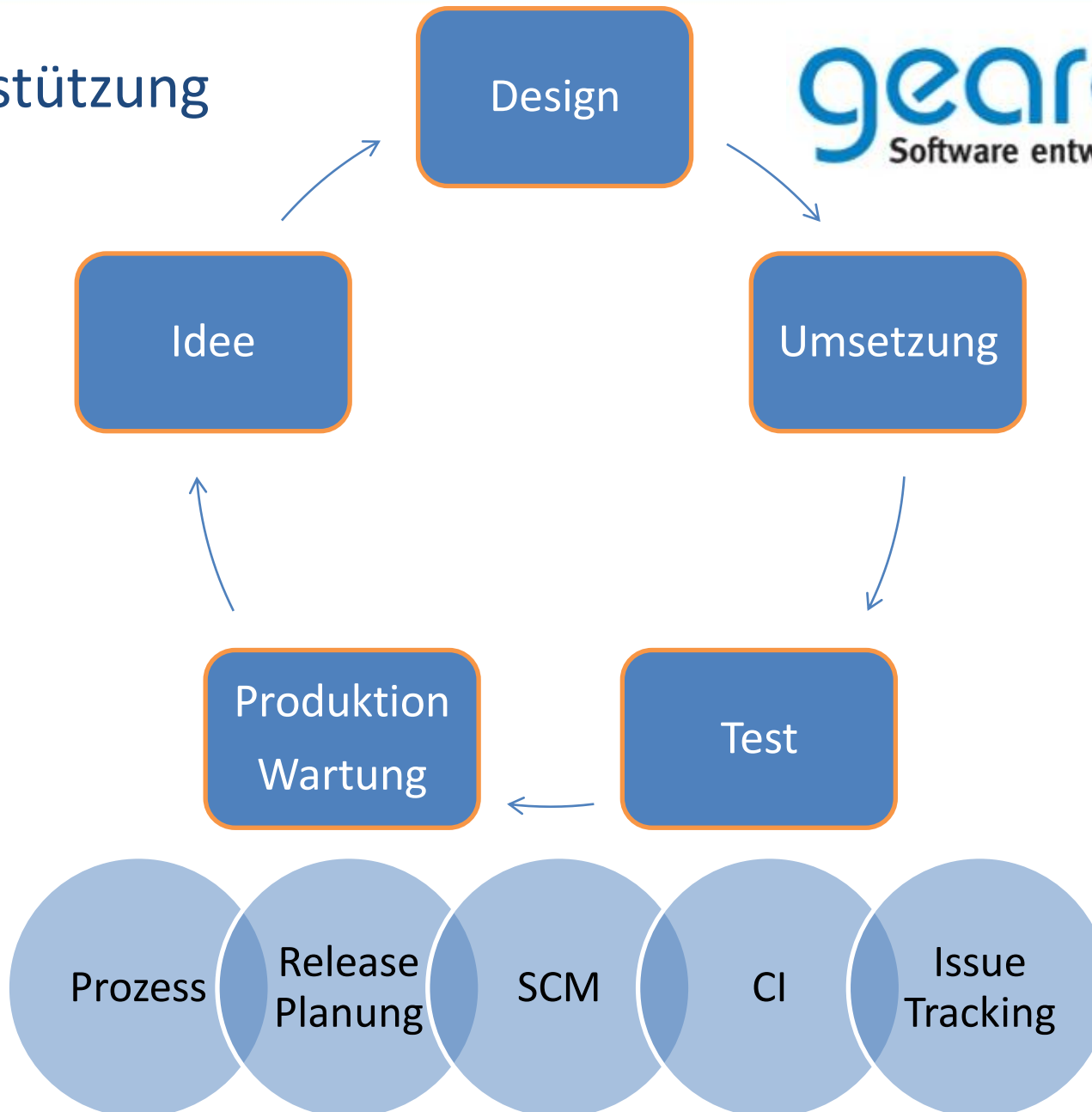
```
}
```



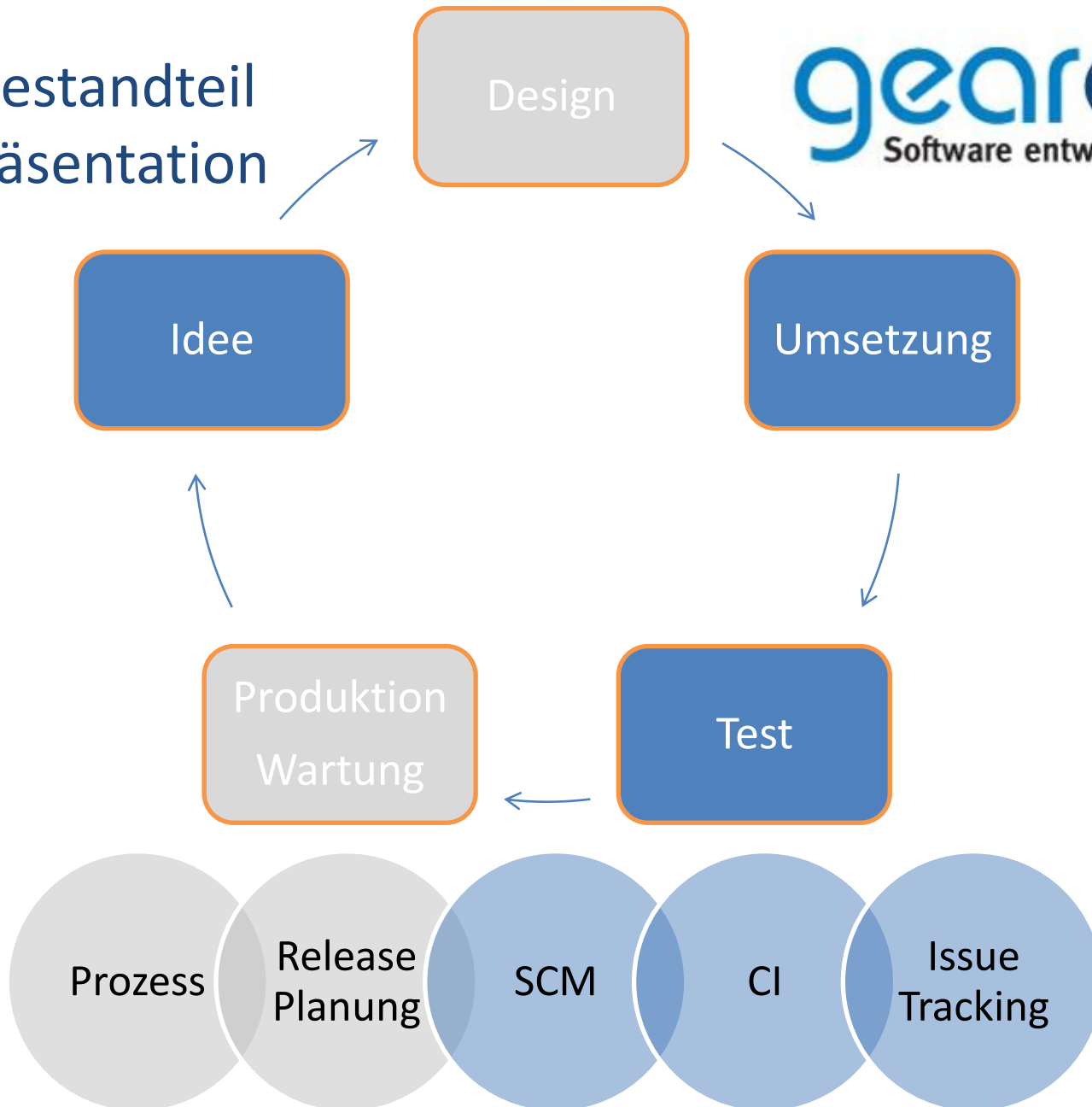
- Was wird benötigt, um die Projektidee „professionell“ umzusetzen



■ Unterstützung



- Kein Bestandteil der Präsentation

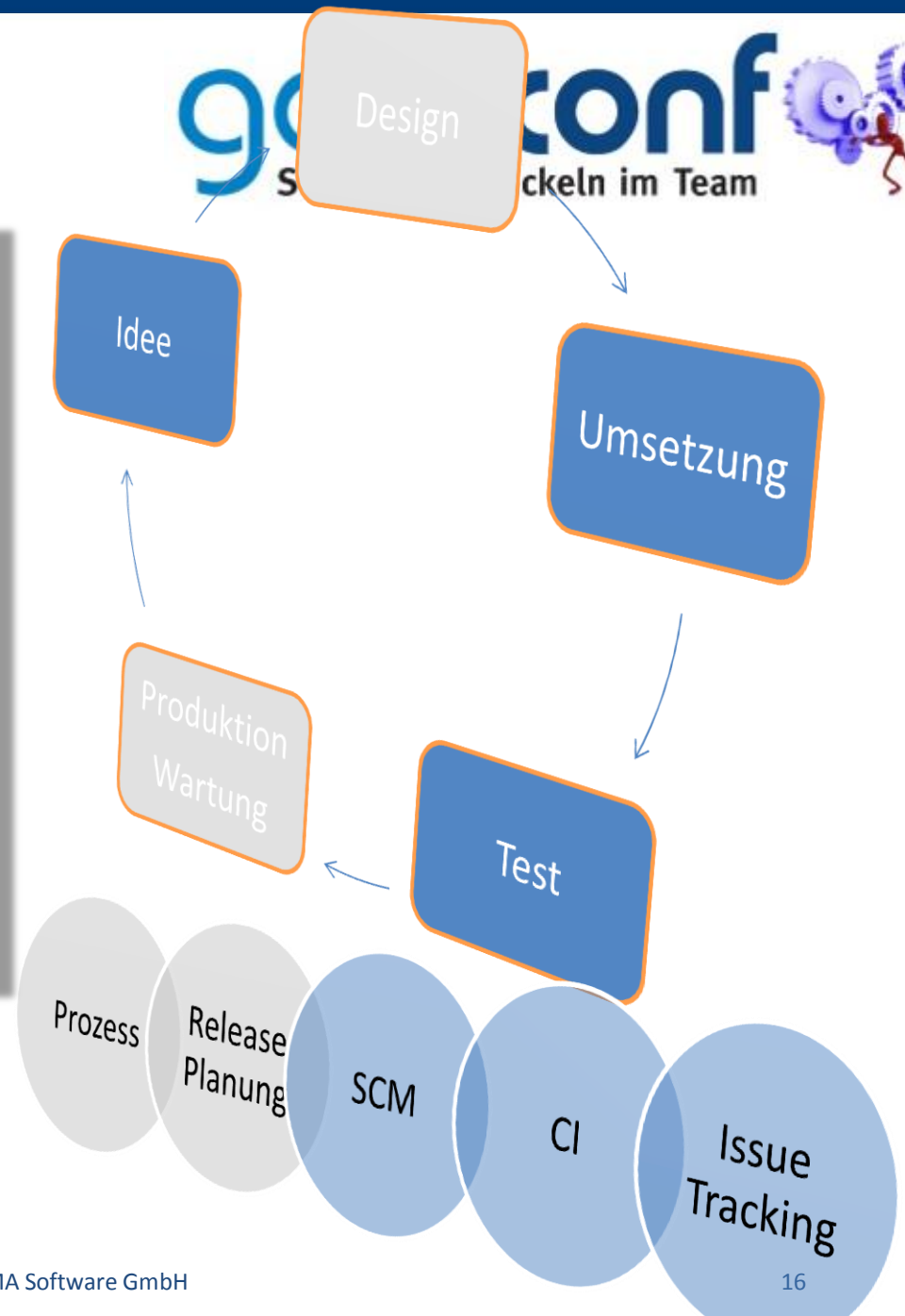


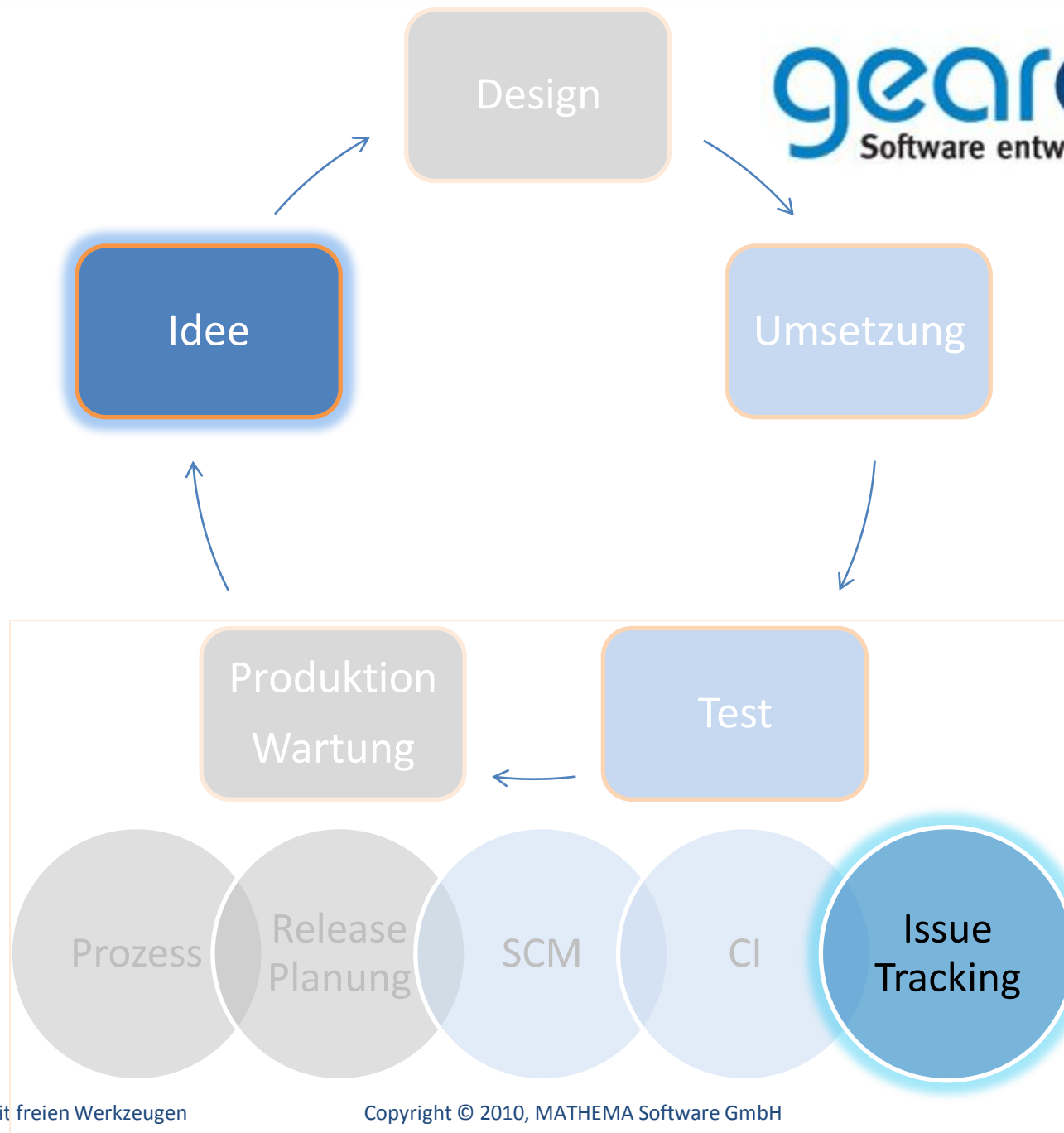






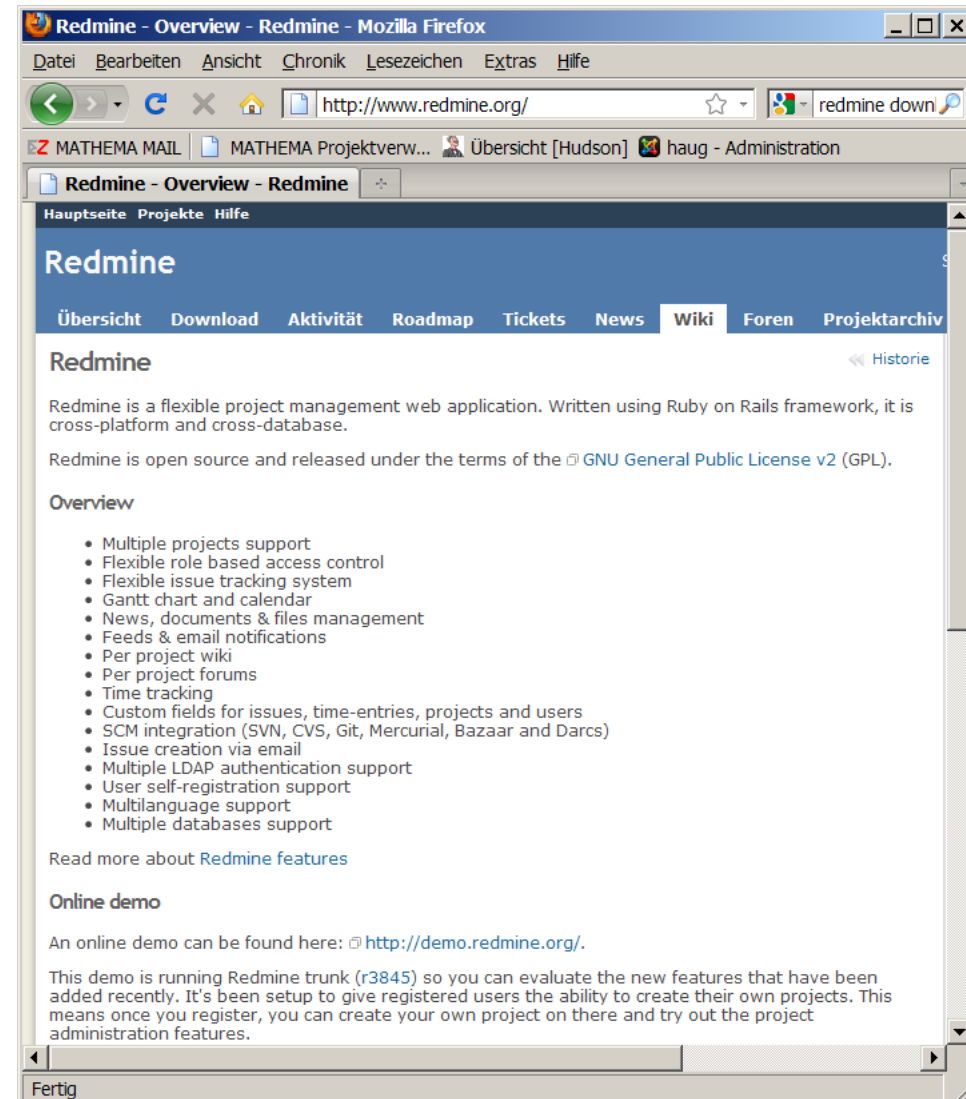
- Motivation
- Werkzeuge
- Zusammenfassung







- RedMine
- Projekt Management Web Application
- www.redmine.org
- Features (Ausschnitt)
 - ticket management
 - email notifications
 - project wiki
 - SCM integration





■ RedMine Installations „Tipp“

(www.bitnami.org/stack/redmine)



BitNami :: Redmine - Mozilla Firefox

DATEI Bearbeiten Ansicht Chronik Lesezeichen Extras Hilfe

http://bitnami.org/stack/redmine

MATHEMA MAIL MATHEMA Projektverw... Übersicht [Hudson] haug - Administration

BitNami :: Redmine

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Redmine

Categories: [Bug-Tracking](#) [Project Management](#)

Technologies: [MySQL](#) [Ruby on Rails](#)

Licenses: [Apache GPL](#)

BitNami Redmine Stack greatly simplifies the deployment of Redmine and its required dependencies. It can be deployed using a [native installer](#), as a [virtual machine](#), in [the cloud](#) or as a [module](#) over an already installed infrastructure Stack.

Redmine is a flexible project management web application. Written using Ruby on Rails framework, it is cross-platform and cross-database. Its main features are:

- Multiple projects support
- Flexible role based access control.
- Flexible issue tracking system
- Gantt chart and calendar
- News, documents and files management
- Feeds and email notifications.
- Per project wiki
- Per project forums
- Simple time tracking functionality
- Custom fields for issues, projects and users
- SCM integration (SVN, CVS, Mercurial and Darcs)
- Multiple LDAP authentication support
- User self-registration support
- Multilanguage support
- Multiple databases support

The BitNami Redmine Stack native installers were packaged using BitRock's [cross platform installer](#) tool.

☐ Subscribe to this project

Fertig



■ Projekt Übersicht



The screenshot displays the Redmine web interface in a Mozilla Firefox browser window. The browser's address bar shows the URL `https://redmine.mathema.de/projects/show/a4e`. The page title is "Attributes4Entities - Übersicht - MATHEMA Projektverwaltung".

The interface includes a top navigation bar with links for "Hauptseite", "Meine Seite", "Projekte", and "Hilfe". Below this, a search bar and a link to "Zu einem Projekt springen..." are visible. The main content area is titled "Attributes4Entities" and features a sidebar with navigation links: "Übersicht", "Aktivität", "Tickets", "Neues Ticket", "News", "Dokumente", "Dateien", "Projektarchiv", "Konfiguration", and "Kuverso".

The "Übersicht" (Overview) section provides a brief description of the project: "Entity Framework per Annotationen steuern. Erweiterung des Microsoft Entity Framework 4.0 CTP 3 bzw. 4". It also lists the project's status: "Fehler: 0 offen von 1", "Feature: 4 offen von 5", and "Unterstützung: 3 offen von 3". A link "Alle Tickets anzeigen" is provided.

The "Mitglieder" (Members) section lists the project's participants: "Entwickler" (Developer) and "Manager: Thomas Haug".

The "Terminplanung" (Scheduling) section includes links for "Kalender | Gantt-Diagramm" and "Aufgewendete Zeit" (Time Spent), showing a total of "29.00 Stunden".

The bottom of the page features a footer with the text "Powered by Redmine © 2006-2009 Jean-Philippe Lang".



■ Projekt Tickets



Attributes4Entities - Tickets - MATHEMA Projektverwaltung - Mozilla Firefox

Suche: Zu einem Projekt springen...

Übersicht Aktivität **Tickets** Neues Ticket News Dokumente Dateien Projektarchiv Konfiguration Kuverto

Tickets

Filter

☒ Status Filter hinzufügen:

☒ Anwenden

#	Tracker	Status	Priorität	Thema	Zugewiesen an	Aktualisiert
☐ 177	Feature	Neu	Normal	PartCover Integration	Thomas Haug	01.09.10 22:21
☐ 176	Feature	Neu	Normal	FXCop Integration	Thomas Haug	01.09.10 22:19
☐ 175	Feature	Neu	Normal	StyleCop Integration in NAnt und Hudson	Thomas Haug	01.09.10 22:18
☐ 164	Unterstützung	Gelöst	Hoch	MS SQL Server 2008 R2 Express installieren	Thomas Haug	01.09.10 22:15
☐ 163	Unterstützung	Gelöst	Niedrig	E-Mails aus Hudson senden	Thomas Haug	01.09.10 22:16
☐ 139	Feature	Zugewiesen	Normal	Support for NAnt Build	Thomas Haug	01.09.10 22:17
☐ 115	Unterstützung	Neu	Normal	Architektur und Design Review	Thomas Haug	10.07.10 22:16

(1-7/7) | Pro Seite: 25, 50, 100

Auch abrufbar als: ☒ Atom ☐ CSV ☐ PDF

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Fertig

Tickets

Alle Tickets anzeigen
Zusammenfassung
Change-Log

Terminplanung

Kalender | Gantt-Diagramm

Users and Darc(s)

evaluate the new features that have been
the ability to create their own projects. This
t on there and try out the project



■ Projekt SCM View



Attributes4Entities - Projektarchiv - MATHEMA Projektverwaltung - Mozilla Firefox

Suche: Zu einem Projekt springen...

Übersicht Aktivität Tickets Neues Ticket News Dokumente Dateien **Projektarchiv** Konfiguration Kuverto

Projektarchiv (Subversion)

Name	Größe	Revision	Geändert vor	Autor	Kommentar
EF_Attributes		724	14 Tagen	Thomas Haug	IssueID #176 FxCop Regeln
libs		723	14 Tagen	Thomas Haug	IssueID #176 FxCop 10 (Bestandteil des Windows ...
projects		724	14 Tagen	Thomas Haug	IssueID #176 FxCop Regeln
EfAttributes		644	63 Tagen	Thomas Haug	CTP4 added adjustments for .Net 4.0 Nant Suppor...
EfAttributesTests		710	33 Tagen	Thomas Haug	Doppeltes "\ " führt zu Instanzausfall (SQL Serv...
EFAttributesRules.FxCop	24.3 KB	724	14 Tagen	Thomas Haug	IssueID #176 FxCop Regeln
EFAttributesTest.nunit	322 Bytes	647	63 Tagen	Thomas Haug	initial version
nant.build	7.1 KB	722	14 Tagen	Thomas Haug	IssueID #176 Nant Target für FxCop 10 (Bestand...
EF_CTP4		635	73 Tagen	Thomas Haug	Example using EF CTP4 Data Annotations

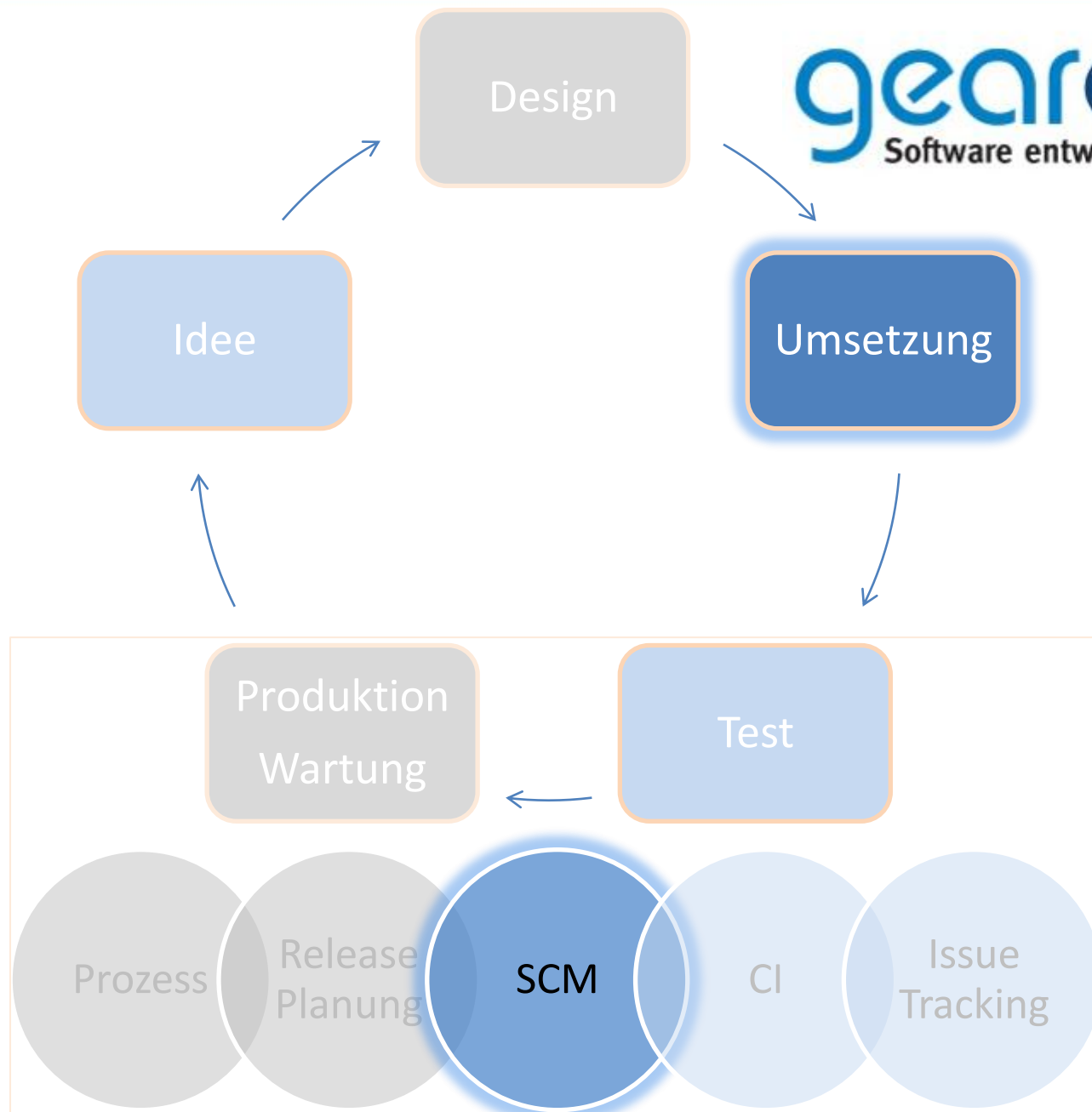
Aktuellste Revisionen

#	Datum	Autor	Kommentar
724	20.09.10 22:07	Thomas Haug	IssueID #176 FxCop Regeln
723	20.09.10 21:51	Thomas Haug	IssueID #176 FxCop 10 (Bestandteil des Windows 7.1 SDK)
722	20.09.10 21:50	Thomas Haug	IssueID #176 Nant Target für FxCop 10 (Bestandteil des Windows 7.1 SDK)
721	20.09.10 20:15	Thomas Haug	relativen Pfad verwenden
710	01.09.10 22:08	Thomas Haug	Doppeltes "\ " führt zu Instanzausfall (SQL Server) fehler Nachricht.
709	01.09.10 22:04	Thomas Haug	relativer Pfad für Coverage und Nant.xml
708	31.08.10 22:20	Thomas Haug	test...
698	10.08.10 23:45	Thomas Haug	xml file specified
697	10.08.10 23:13	Thomas Haug	coverage with report generation
696	10.08.10 22:20	Thomas Haug	adjustment for .Net 4.0

Revisionen anzeigen

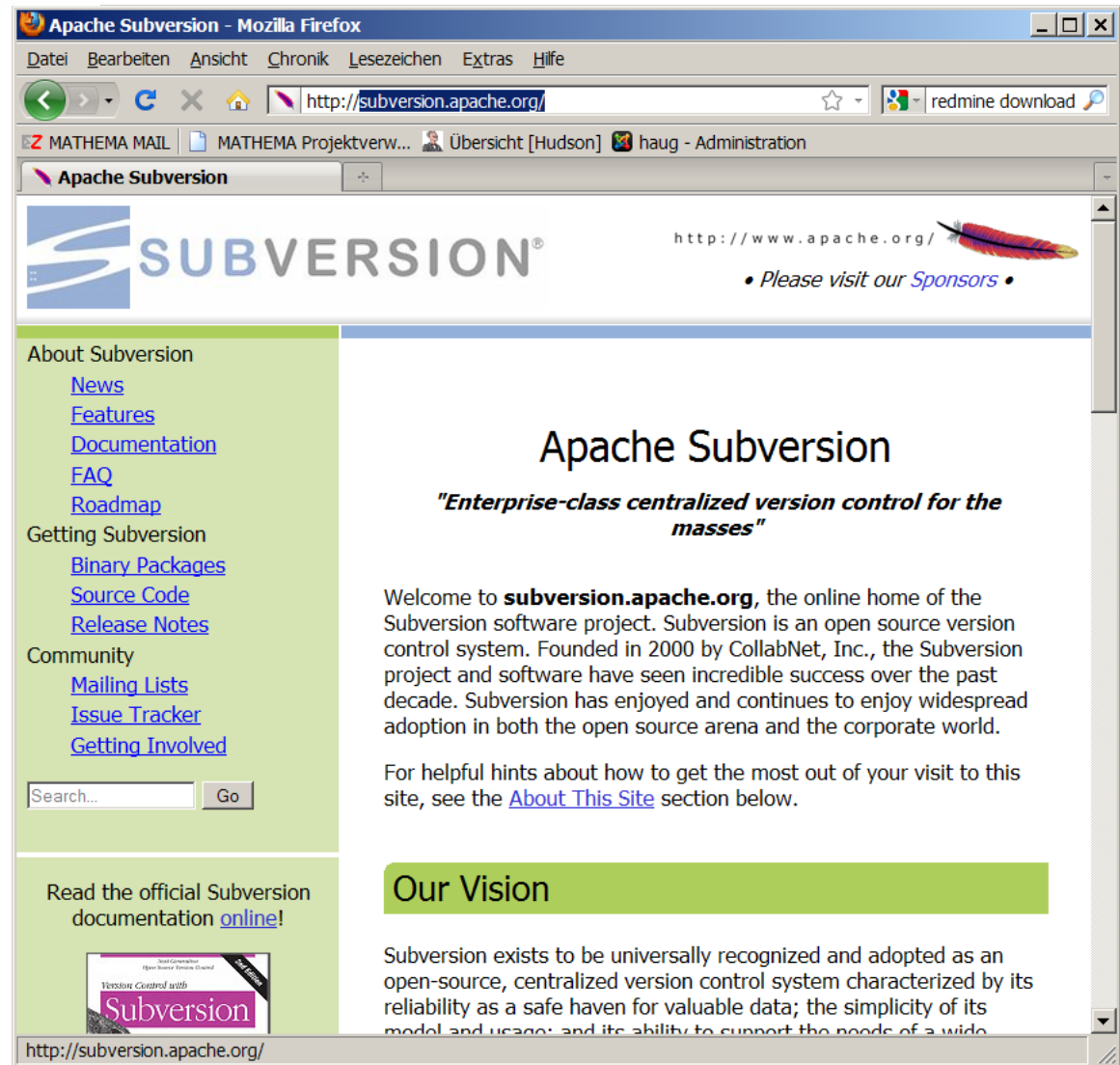
Auch abrufbar als: Atom

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- Subversion
- subversion.apache.org





SUBVERSION®



■ Subversion

■ www.visualsvn.com

VisualSVN Server | Subversion Server for Windows - Mozilla Firefox

http://www.visualsvn.com/server/

VisualSVN SERVER // Subversion Server for Windows

VisualSVN Server allows you to easily install and manage a fully-functional Subversion server on the Windows platform. Thanks to its robustness, unbeatable usability and unique enterprise-grade features, VisualSVN Server is affordable both for small business and corporate users.

VisualSVN Server is based on open standards and offers rock-solid stability, security and performance. Its key features are:

- Works out-of-the-box
- Powerful management console
- Integrated Windows Authentication
- Remote Server Administration
- Access and Operational Logging

Trusted by Fortune 500 customers:

McKesson Raytheon Siemens Harris

MSDN Magazine

Easy to install, configure and maintain

VisualSVN Server is distributed as a single installation package with the latest versions of all the required components. The installation process is extremely simple and allows you to setup a full-featured and ready to use Subversion server in just a few clicks. Upgrades to newer versions are simple too. [Learn more...](#)

Powerful management console

VisualSVN Server provides a handy management console co-called *VisualSVN Server Manager*. It is implemented as a standard MMC snap-in and allows you to manage your Subversion server without dealing with configuration files and command line tools. [Learn more...](#)

http://subversion.apache.org/

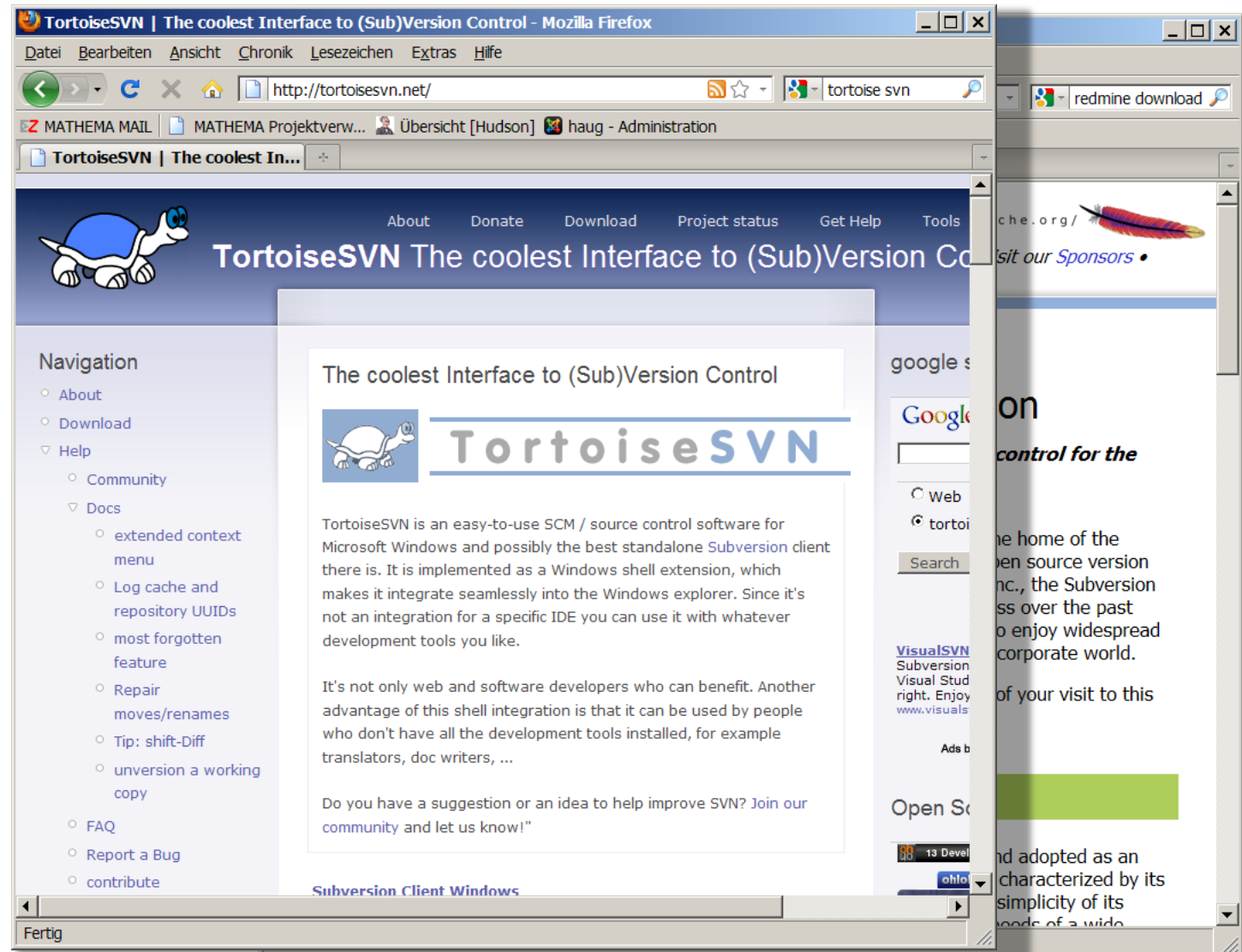


SUBVERSION®



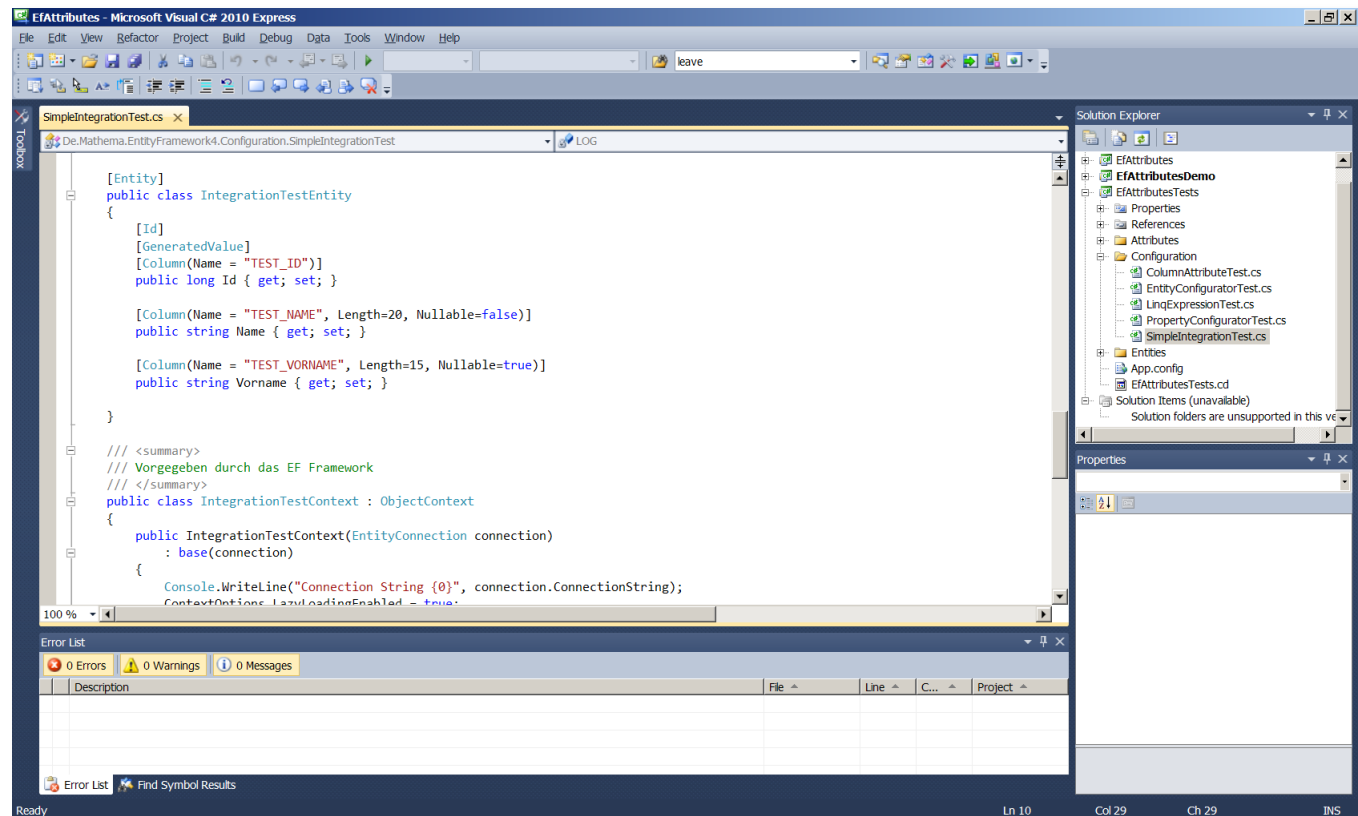
■ Subversion

■ www.visualsvn.com





- Visual Studio 2010 Express
- <http://www.microsoft.com/germany/express/>
- Frei verfügbar
- Keine Plugins möglich





■ Visual Studio 2010 Express



Stabilität



Resolve namespaces/ refactoring



UI Designer



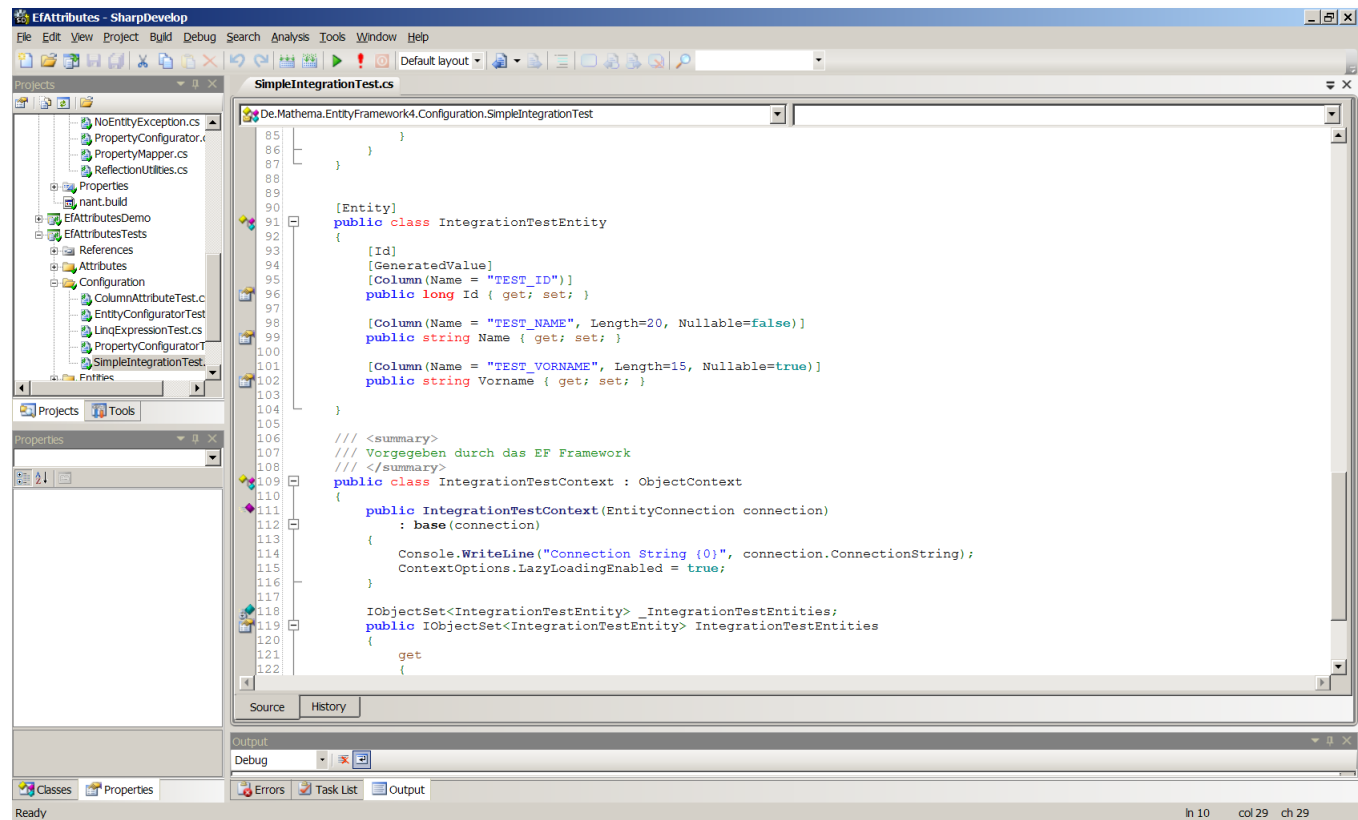
Unit Testing



Subversion Unterstützung



- Sharp Develop 4.0 Beta 3
- <http://www.icsharpcode.net/opensource/sd>
- Frei verfügbar
- Plugins möglich
- Integriert mit SVN





■ Sharp Develop 4.0 Beta 3



Stabilität



Resolve namespaces/ refactoring



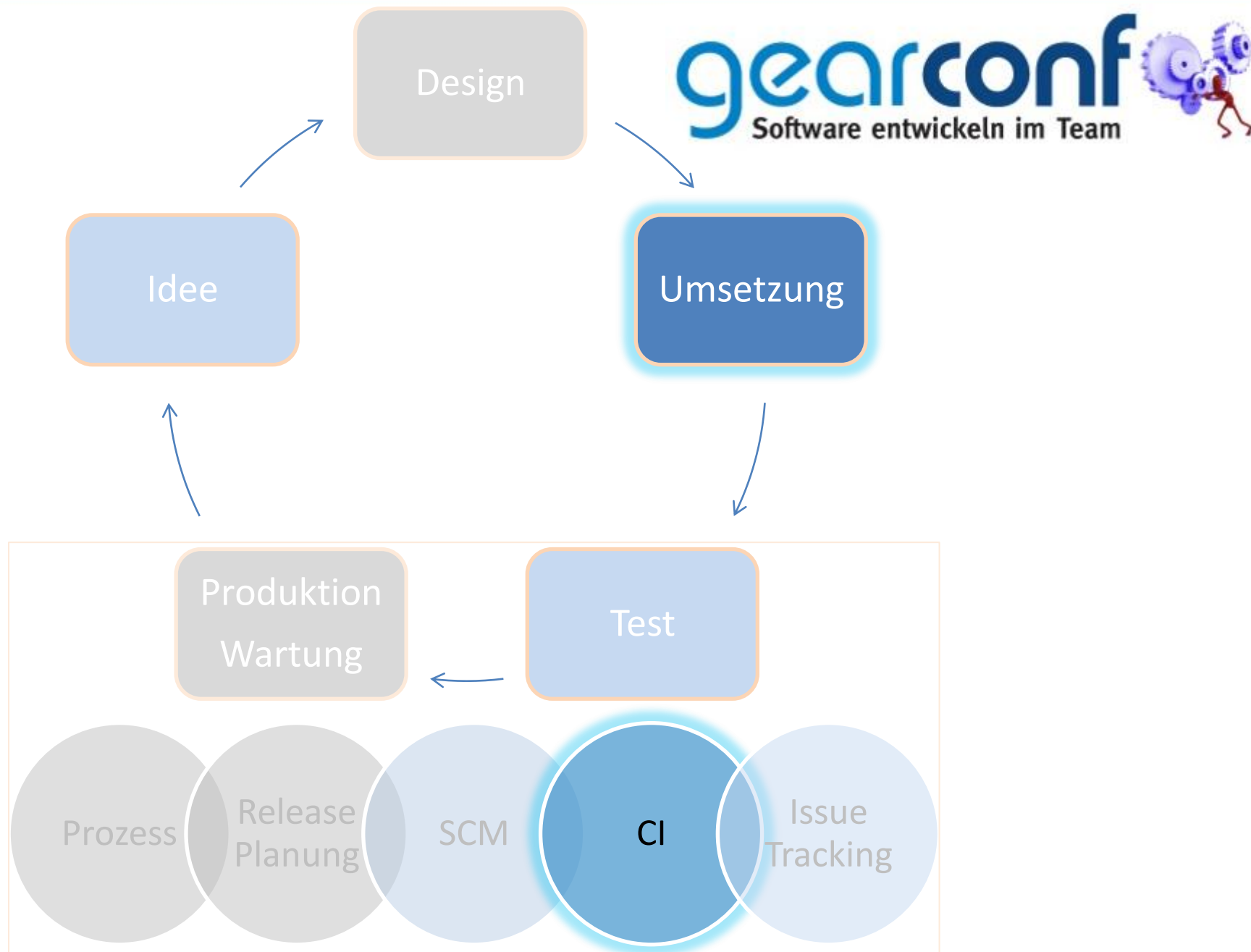
UI Designer



Unit Testing



Subversion Unterstützung





- Ein .Net Build Werkzeug
- <http://nant.sourceforge.net>
- Portierung von Ant
- frei verfügbar
- *Alternative MSBuild*

NAnt Home Page

NAnt is a free .NET build tool. In theory it is kind of like make without make's wrinkles. In practice it's a lot like Ant.

News

NAnt 0.91 Alpha 2 Release August 17, 2010

The final release for NAnt 0.91 Alpha 2 is available NOW !

This release focuses on extending our already strong support for multiple target frameworks, bringing improved flexibility and performance. A number of outstanding issues have been fixed as well.

As of this release, our framework support chart looks like this:

Framework	Target	Runtime
.NET Framework 1.0	✓	✓
.NET Framework 1.1	✓	✓
.NET Framework 2.0	✓	✓
.NET Framework 3.5	✓	✓
.NET Framework 4.0	✓	✓
.NET Compact Framework 1.0	✓	
.NET Compact Framework 2.0	✓	
Mono 1.0 Profile	✓	✓
Mono 2.0 Profile	✓	✓
Mono 3.5 Profile	✓	✓
Moonlight 2.0	✓	
Shared Source CLI 1.0	✓	
Silverlight 2.0	✓	

A complete list of changes and new features is available [here](#).

Tips

For contribution and distribution of non-core tasks, visit the [NAntContrib](#) web site.



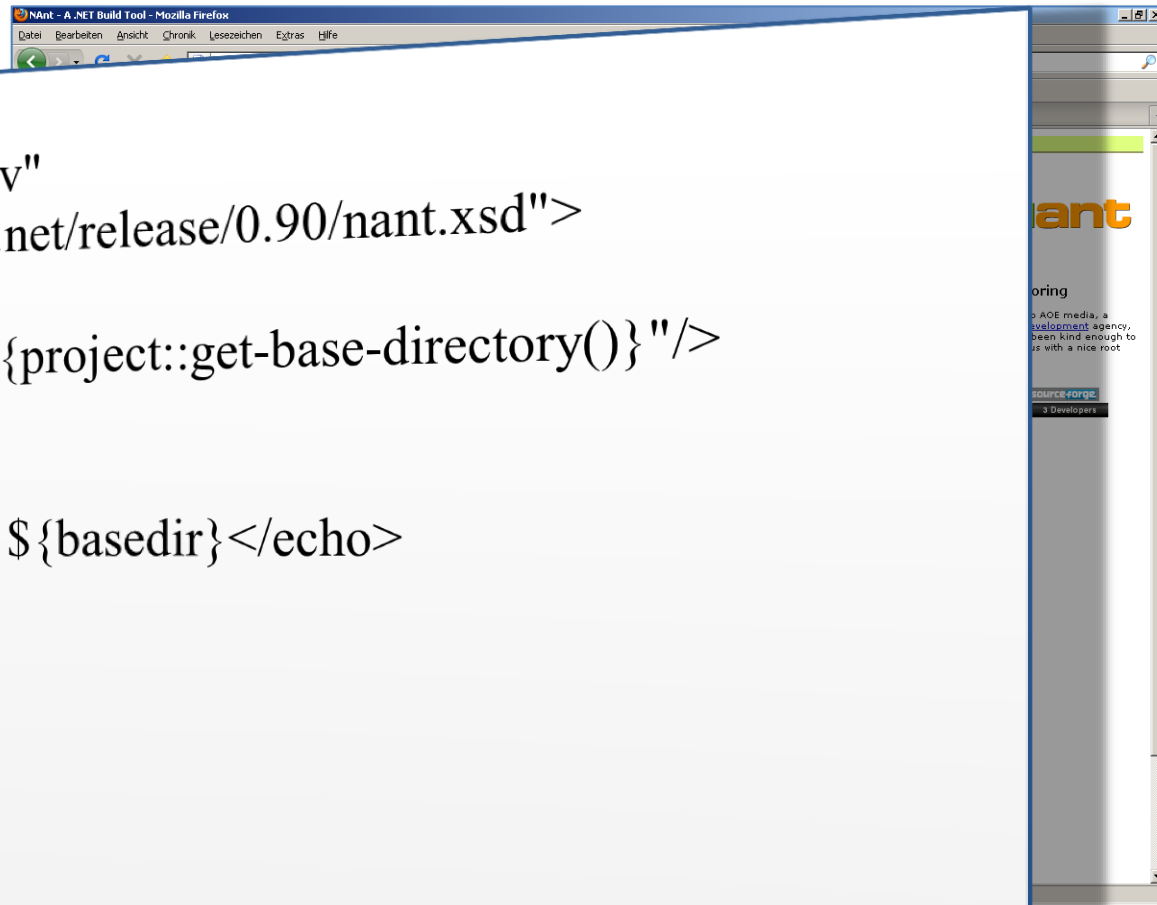
■ Beispiel

```
<?xml version="1.0" ?>
<project name="Demo" default="get-env"
  xmlns="http://nant.sourceforge.net/release/0.90/nant.xsd">

  <property name="basedir" value="${project::get-base-directory()}" />

  <target name="A">
    <echo>Target A, in Verzeichnis ${basedir}</echo>
  </target>

  <target name="B" depends="A" >
    <!-- mache etwas anderes -->
  </target>
</project>
```





■ Tasks

- Werden innerhalb der Targets ausgeführt

■ Task (Auswahl)

- csc, nunit2, echo, copy, exec, mkdir,...

NAnt Home Page

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.NET Framework 1.0	✓	✓
.NET Framework 1.1	✓	✓
.NET Framework 2.0	✓	✓
.NET Framework 2.5	✓	✓

Sponsoring

Thanks to AOE media, a TYPO3 development agency, that has been kind enough to sponsor us with a nice root server.

Documentation

- User Manual
- Reference
 - Tasks
 - Types
 - Functions
 - Filters
- Introduction
- Fundamentals
- Frequently Asked Questions
- External Tools and Extensions
- Links
- Release Notes
- XML Schema
- Wiki

```
<target name="compile" depends="clean" >
  <csc target="library" output="$ {build.dir}/$ {basename}.dll" >
    ...
  </csc>
</target>
```



■ NAnt und .Net 4.0

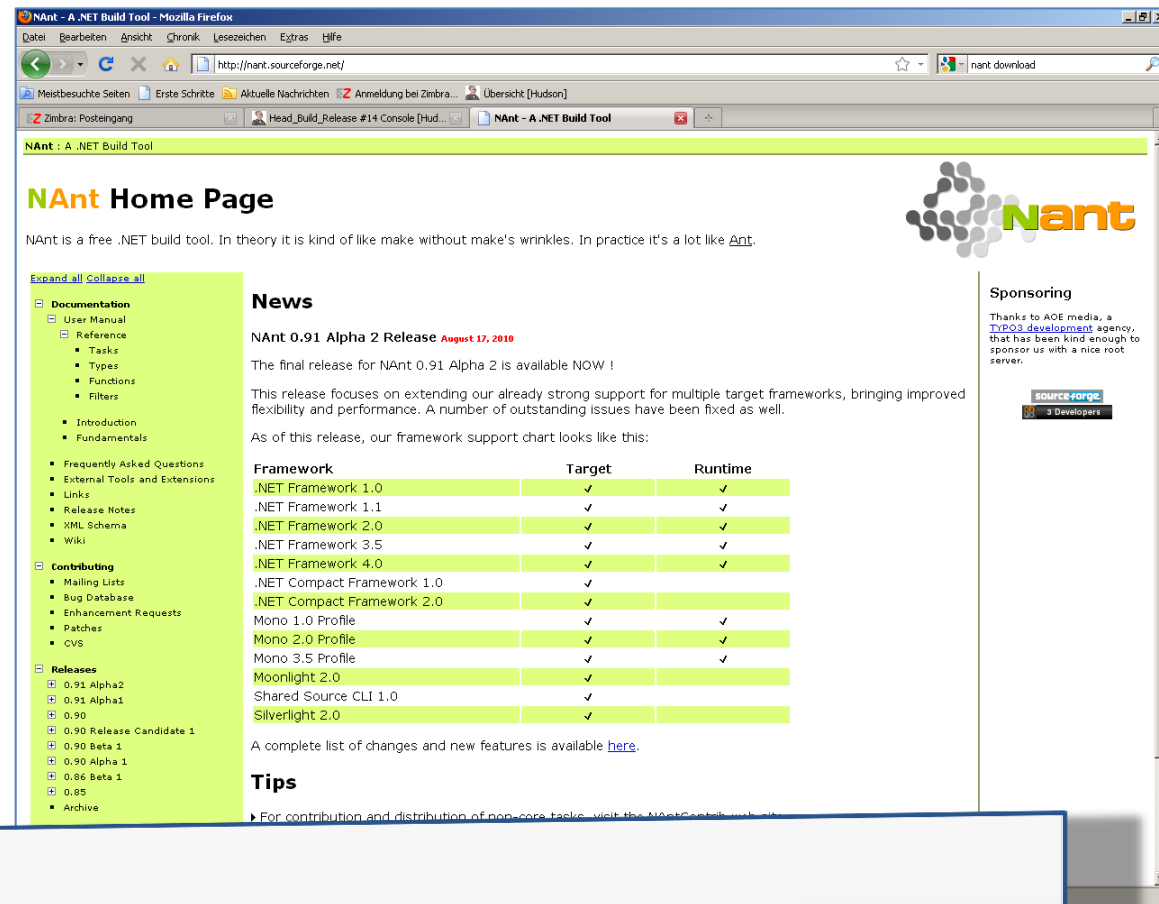
- Erweiterungen an Konfiguration notwendig
(<http://paigecsharp.blogspot.com/2009/08/nant-net-framework-40-configuration.html>)

(Entity Framework 4 benötigt zusätzliche Assemblies)

■ NAnt aufrufen

- NAnt [options] <target>
- Beispiel

```
c:\project\demo>NAnt /f:nant.build clean compile
```

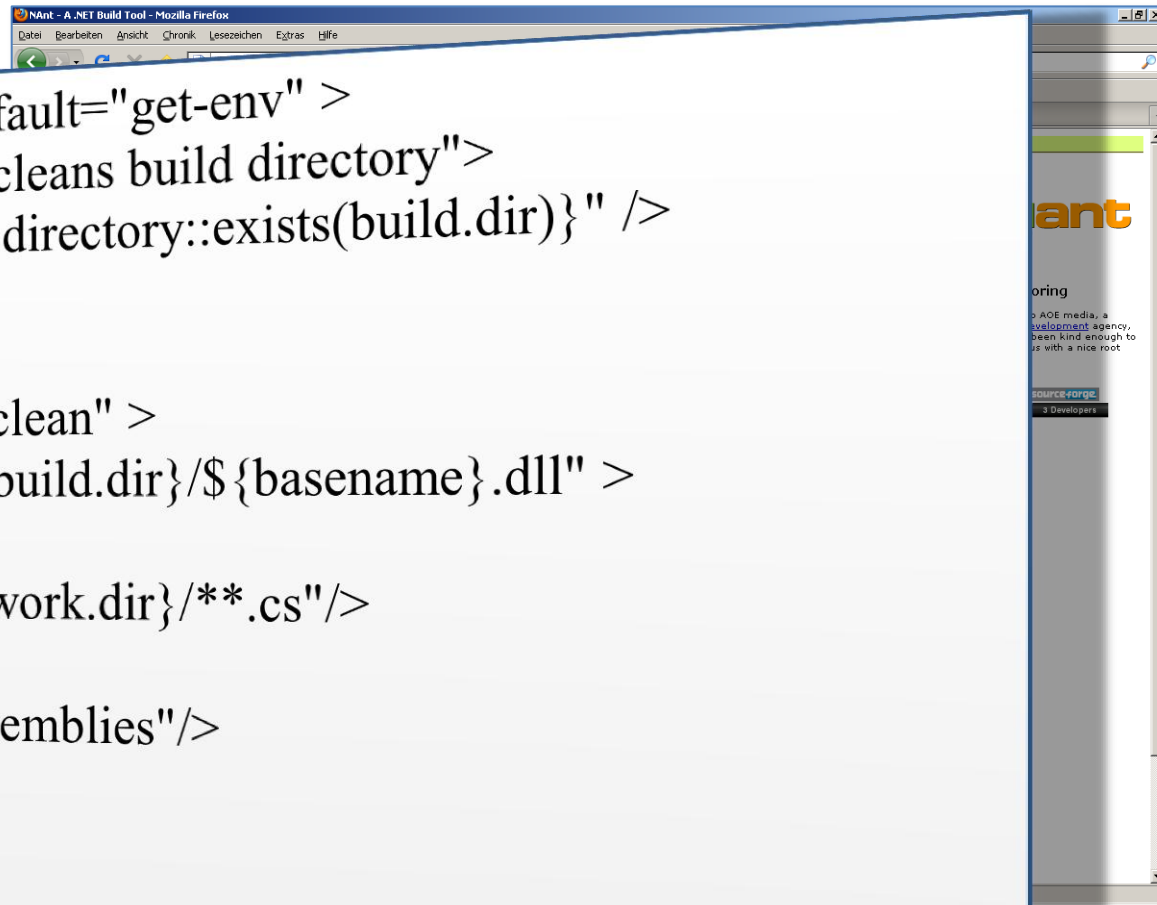




■ Beispiel

```
<project name="Attributes4Entities" default="get-env" >
  <target name="clean" description="cleans build directory">
    <delete dir="${build.dir}" if="${directory::exists(build.dir)}" />
  </target>

  <target name="compile" depends="clean" >
    <csc target="library" output="${build.dir}/${basename}.dll" >
      <sources>
        <include name="${framework.dir}/**/*.cs"/>
      </sources>
      <references refid="system.assemblies"/>
    </csc>
  </target>
</project>
```





- Kontinuierliches Integrationswerkzeug

- <http://www.hudson-ci.org/>

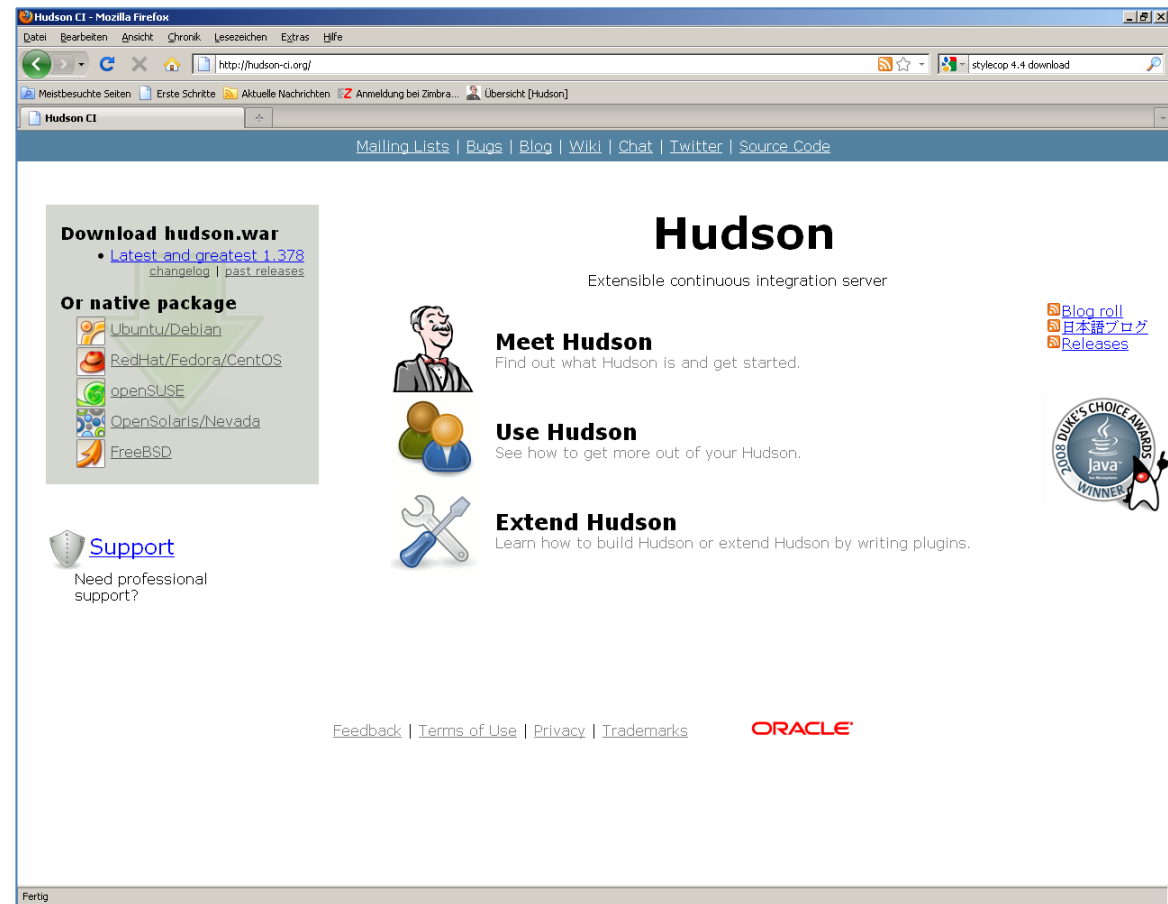
- Frei verfügbar

- In Java implementiert

- Erweiterbar



<http://martinfowler.com/articles/continuousIntegration.html>





■ .Net Plugins

Update Center [Hudson] - Mozilla Firefox

http://172.20.200.1:8080/pluginManager/installed

MATHEMA MAIL | MATHEMA Projektverw... | Übersicht [Hudson] | haug - Administration

Zimbra: Posteingang (19) | Attributes4Entities - MATHEMA... | Attributes4Entities Nightly Buil... | Update Center [Hudson]

Hudson

Hudson » Plugin Manager

[Zurück zur Übersicht](#)

Aktualisierungen Verfügbar **Installiert** Erweiterte Einstellungen

Aktiviert	Name ↓	Version	Previously installed version	Pinned
☒	Hudson CVS Plug-in	1.2		
☒	Email-ext plugin This plugin is a replacement for Hudson's email publisher	2.6		
☒	HTML Publisher plugin This plugin publishes HTML reports.	0.4		
☒	Maven Integration plugin	1.379		
☒	Hudson NAnt Plugin This plugin is a NAnt Builder for building .NET projects.	1.4.1		
☒	NCover plugin This plugin publishes NCover coverage reports.	0.3		
☒	Hudson NUnit plugin This plugin transforms NUnit test reports so they can be recorded by Hudson's JUnit features.	0.10		
☒	Hudson Redmine plugin This plugin integrates Redmine project management into Hudson.	0.8		
☒	Hudson SSH Slaves plugin	0.13		
☒	Hudson Subversion Plug-in	1.17		
☒	Hudson ViewVC plugin This plugin integrates ViewVC browser interface for CVS and Subversion to Hudson. Entries in change logs will by hyperlinked to the specified files/diffs in ViewVC.	1.3		
☒	Hudson Violations plugin This plugin does reports on checkstyle, pmd, cpd, fxcop, pylint, jcReport, and findbugs violations.	0.7.6		

Erzeugung dieser Seite: 05.10.2010 22:17:02 [Hudson ver. 1.379](#)

Suchen: [Abwärts](#) [Aufwärts](#) [Hervorheben](#) ☐ Groß-/Kleinschreibung [Ausdruck nicht gefunden](#)



■ Source Code Management konfigurieren

Attributes4Entities Nightly Build Config [Hudson] - Mozilla Firefox

Build-Verlauf (Trend)

#	Time
#83	05.10.2010 21:36:12
#82	05.10.2010 00:01:47
#81	04.10.2010 00:01:47
#80	03.10.2010 00:01:47
#79	02.10.2010 00:01:47

Source-Code-Management

☐ Keines
☐ CVS
☒ Subversion

Module

Repository URL:

Lokales Modulverzeichnis (optional):

Weiteres Modul hinzufügen...

Update-Kommando verwenden ☐

Zurücksetzen (revert) ☐

Repository Browser:

Erweitert...

Build-Verlauf (Trend)

#	Time
#55	13.09.2010 00:01:11
#54	12.09.2010 00:01:11

Source Code Management System abfragen

Buildverfahren



■ Build Auslöser

nightly

Build-Auslöser

☐ Starte Build, nachdem andere Projekte gebaut wurden.

☒ Builds zeitgesteuert starten

Zeitplan

☐ Source Code Management System abfragen

SCM Abfrage
(CI-Build)

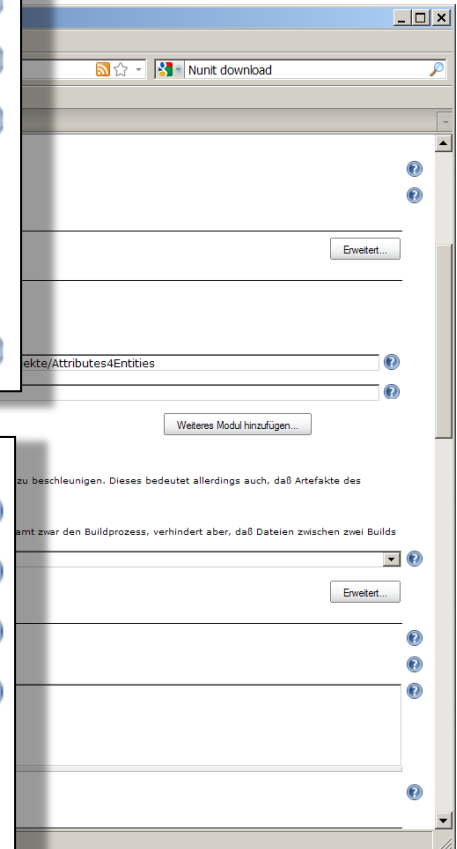
Build-Auslöser

☐ Starte Build, nachdem andere Projekte gebaut wurden.

☐ Builds zeitgesteuert starten

☒ Source Code Management System abfragen

Zeitplan



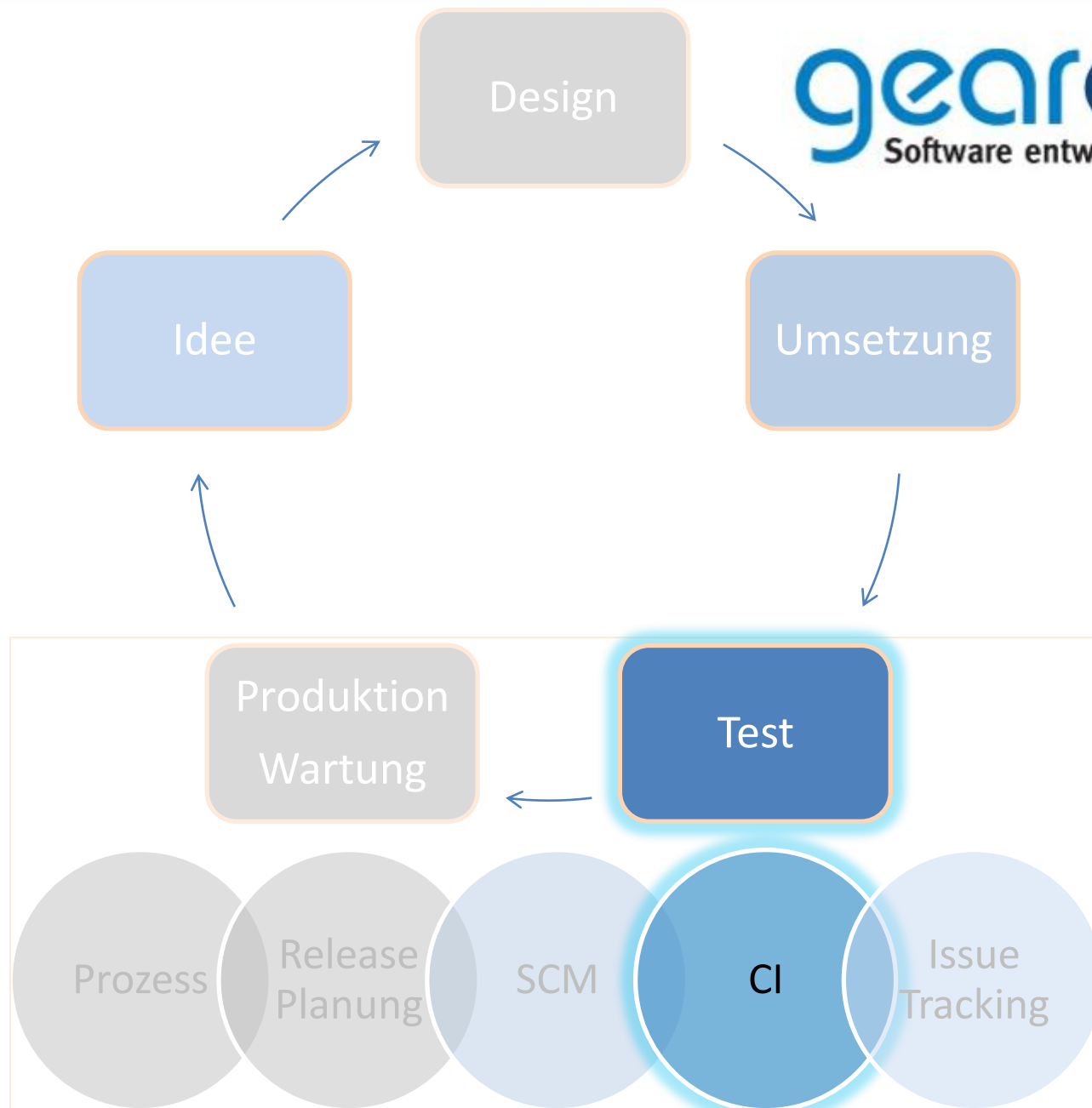


■ NAnt in Hudson ausführen

The screenshot displays the Hudson web interface for configuring a build job. A modal dialog titled "Buildverfahren" is open, showing the following configuration:

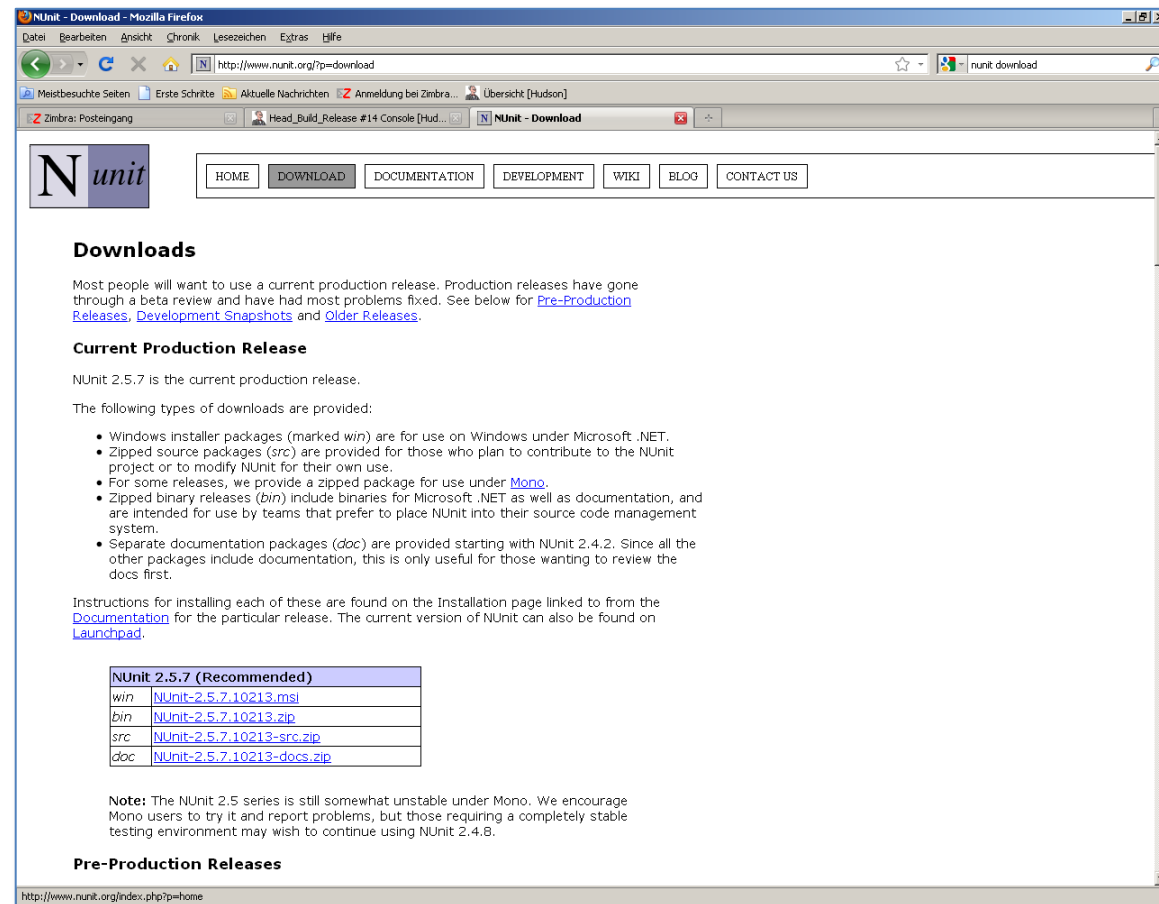
- Execute NANT build** (checkbox checked)
- NAnt Version**: DEFAULT_NANT
- Nant Build File**: EF_Attributes\projects\nant.build
- Targets**: clean compile

Buttons "Erweitert..." and "Löschen" are visible at the bottom right of the dialog. The background shows the "Attributes4Entities Nightly Build Config" page with a list of build history entries on the left and configuration options on the right.





- Nunit
- www.nunit.org
- Version 2.5.7
- Frei verfügbar





■ Nunit Beispiel

```
using NUnit.Framework;

[TestFixture]
public class DemoTest {
    private IRechner rechner;

    [SetUp]
    public void Setup() {
        rechner = new Rechner();
    }

    [TearDown]
    public void TearDown() {
        rechner = null;
    }
}
```



■ Nunit Beispiel

```
using NUnit.Framework;

[TestFixture]
public class DemoTest {
    // ...

    [Test]
    public void pruefeAddition() {
        Assert.AreEqual(4,                // Erwartungswert
                        rechner.Addiere(1,3), // OUT
                        "Das Additionsergebnis ist falsch ");
    }
}
```




■ Nunit Beispiel

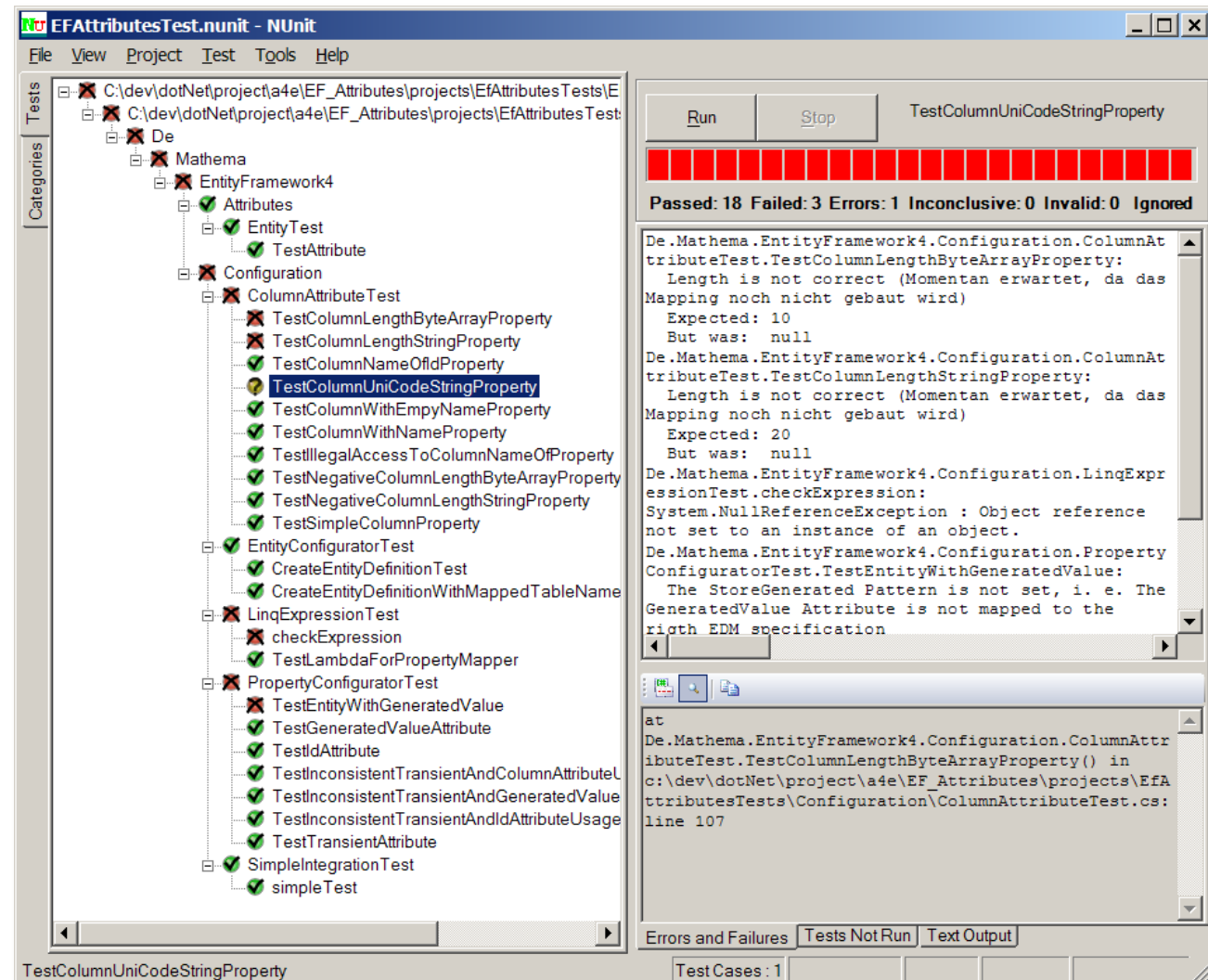
```
using NUnit.Framework;

[TestFixture]
public class DemoTest {
    // ...

    [Test]
    public void pruefeDivisionDurchNull() {
        Assert.Throws<DivisionDurchNullException>(() => rechner.Dividiere(10,0));
    }
}
```



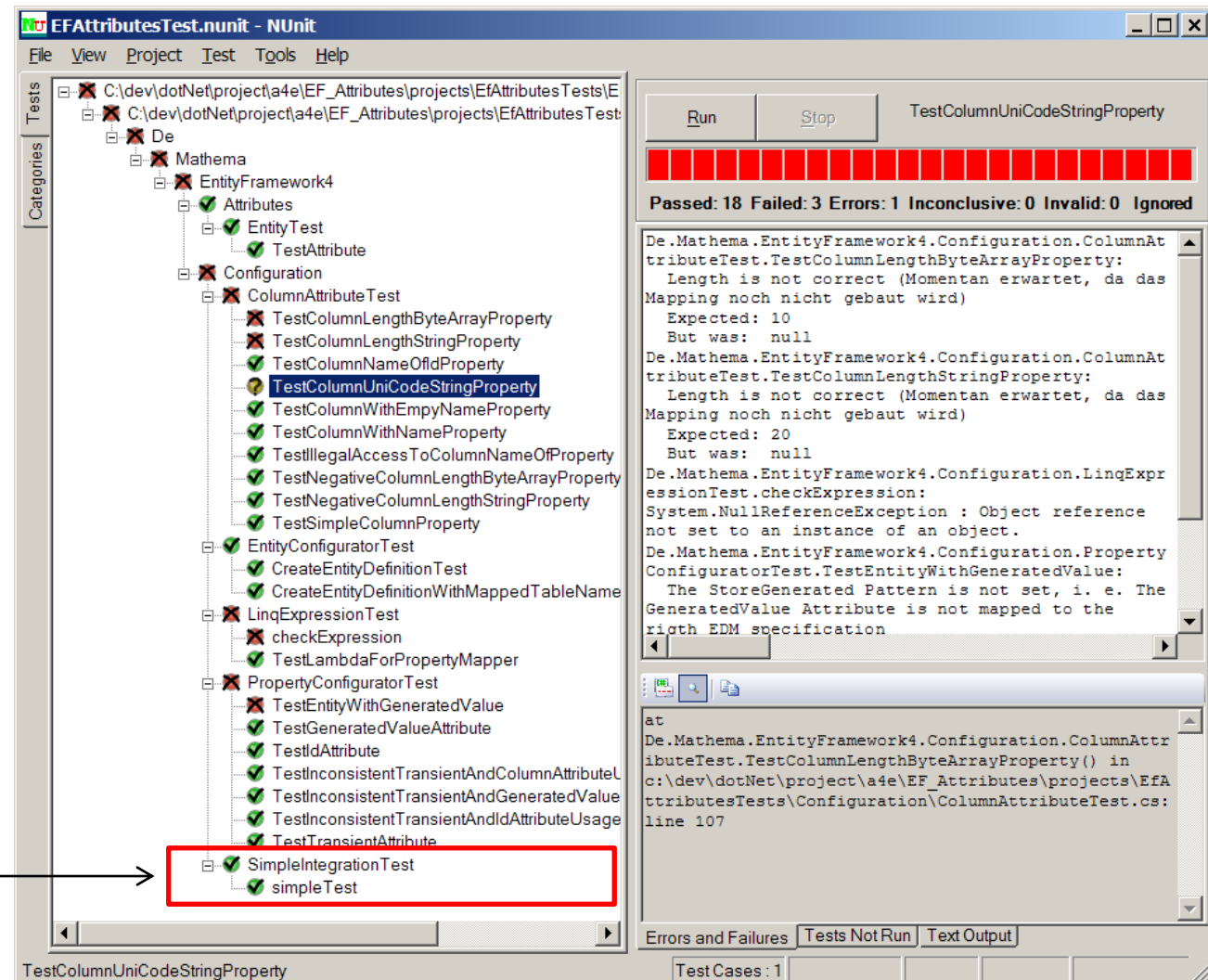
- Tests ausführen
 - Nunit.exe
 - Nunit-console.exe





- Tests ausführen
 - Nunit.exe
 - Nunit-console.exe

Integrationstest
verwendet SQL Server 2008 R2
Express



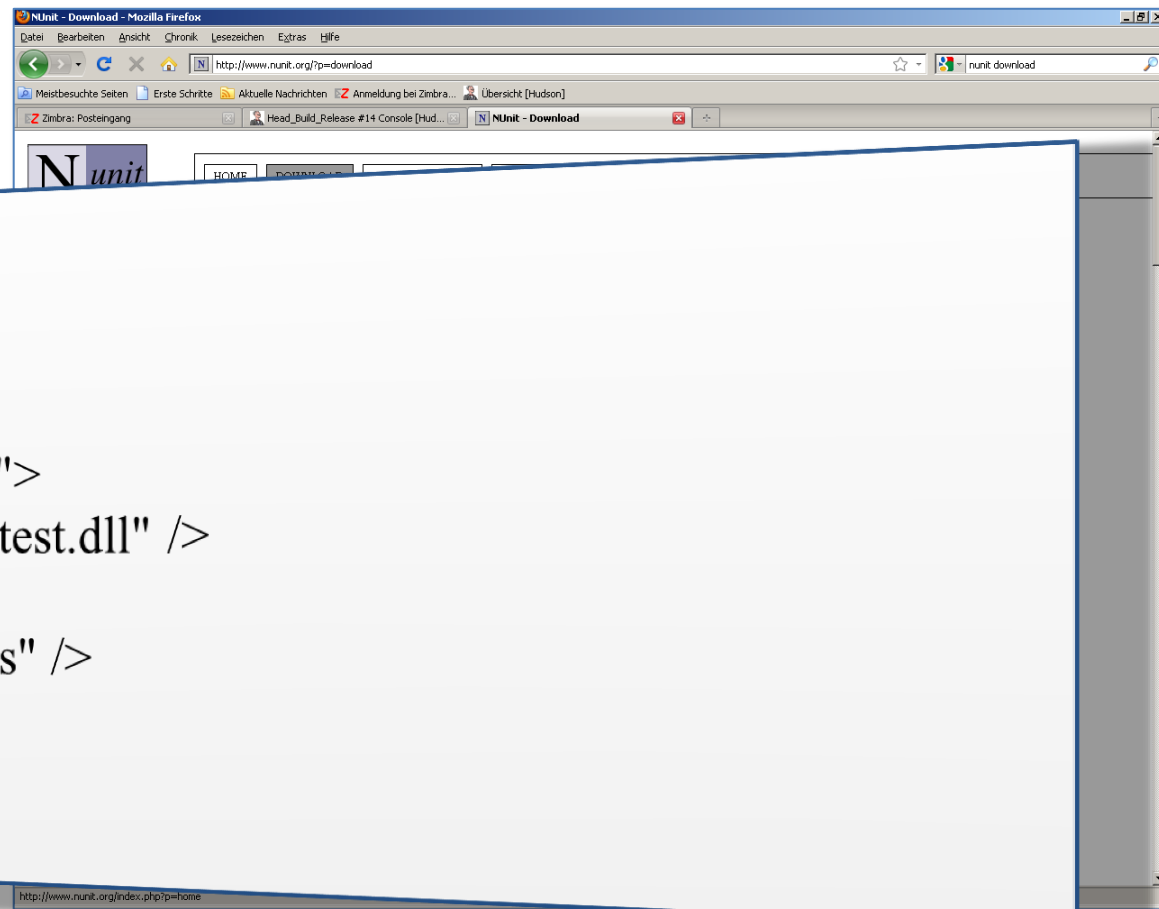


- Nunit in NAnt ausführen

- Nunit2 Target

```
<target name="test" depends="test">
  <nunit2>
    <formatter type="Plain" />
    <test>
      <assemblies basedir="${test.dir}">
        <include name="${basename}-test.dll" />
      </assemblies>
      <references refid="test.assemblies" />
    </test>
  </nunit2>
</target>
```

- Funktioniert nicht mit da Nunit 2.2.8 in NAnt

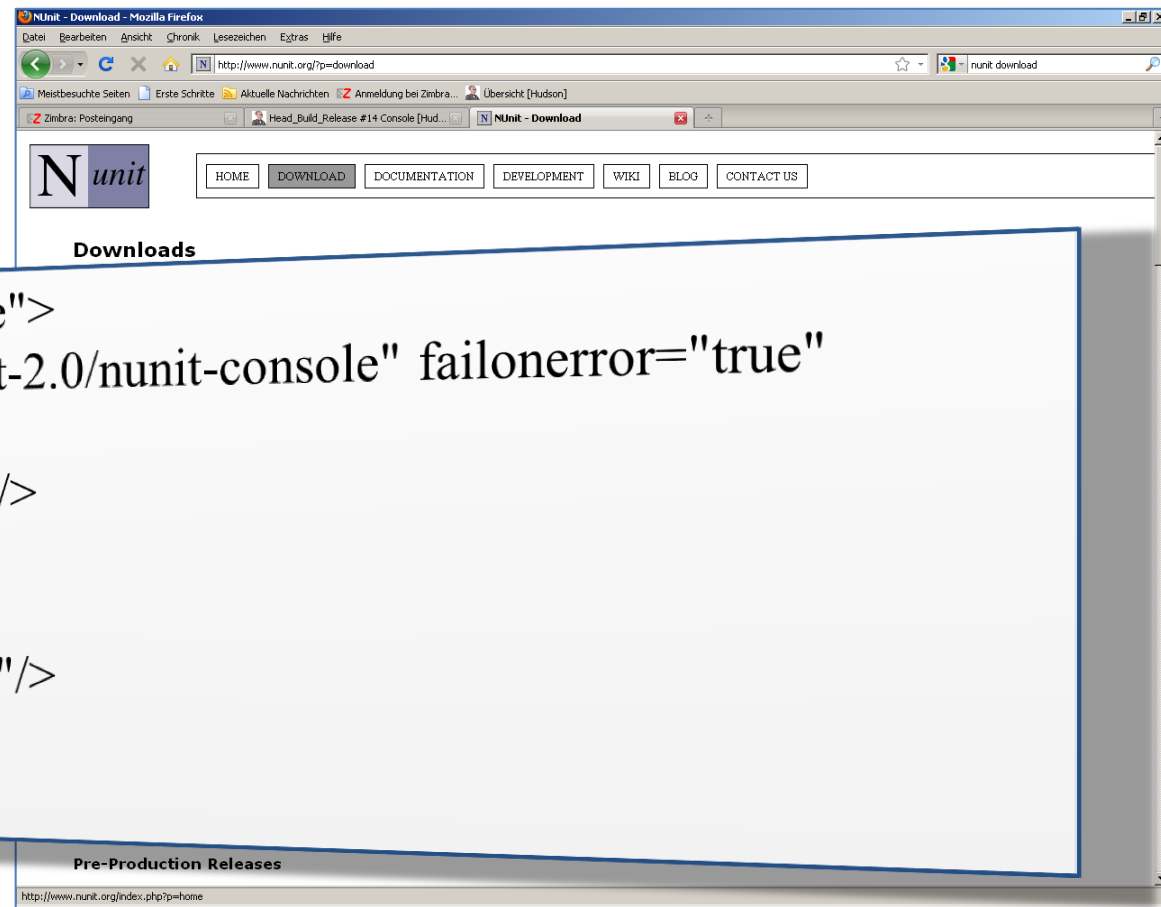




■ Nunit in NAnt ausführen

■ exec-Variante

```
<target name="test" depends="compile">
  <exec program="${nunit-dir}/bin/net-2.0/nunit-console" failonerror="true"
    workingdir="${basedir}">
    <arg value="${NUnit.Projectfile}"/>
    <arg value="/labels"/>
    <arg value="/nologo"/>
    <arg value="/xml=../log/Nunit.xml"/>
  </exec>
</target>
```





- Nunit in Hudson veröffentlichen
 - Nunit Plugin notwendig

Attributes4Entities Nightly Build Config [Hudson] - Mozilla Firefox

URL: [http://172.20.200.1:8080/job/Attributes4Entities Nightly Build/configure](http://172.20.200.1:8080/job/Attributes4Entities%20Nightly%20Build/configure)

☐ Fingerabdrücke von Dateien aufzeichnen, um deren Verwendung zu verfolgen

☒ Publish HTML reports

HTML directory to archive: Index page[s]: Report title: Keep past HTML reports: ☒

☐ Publisher NCover HTML report

☒ Publish NUnit test result report

Test report XMLs:

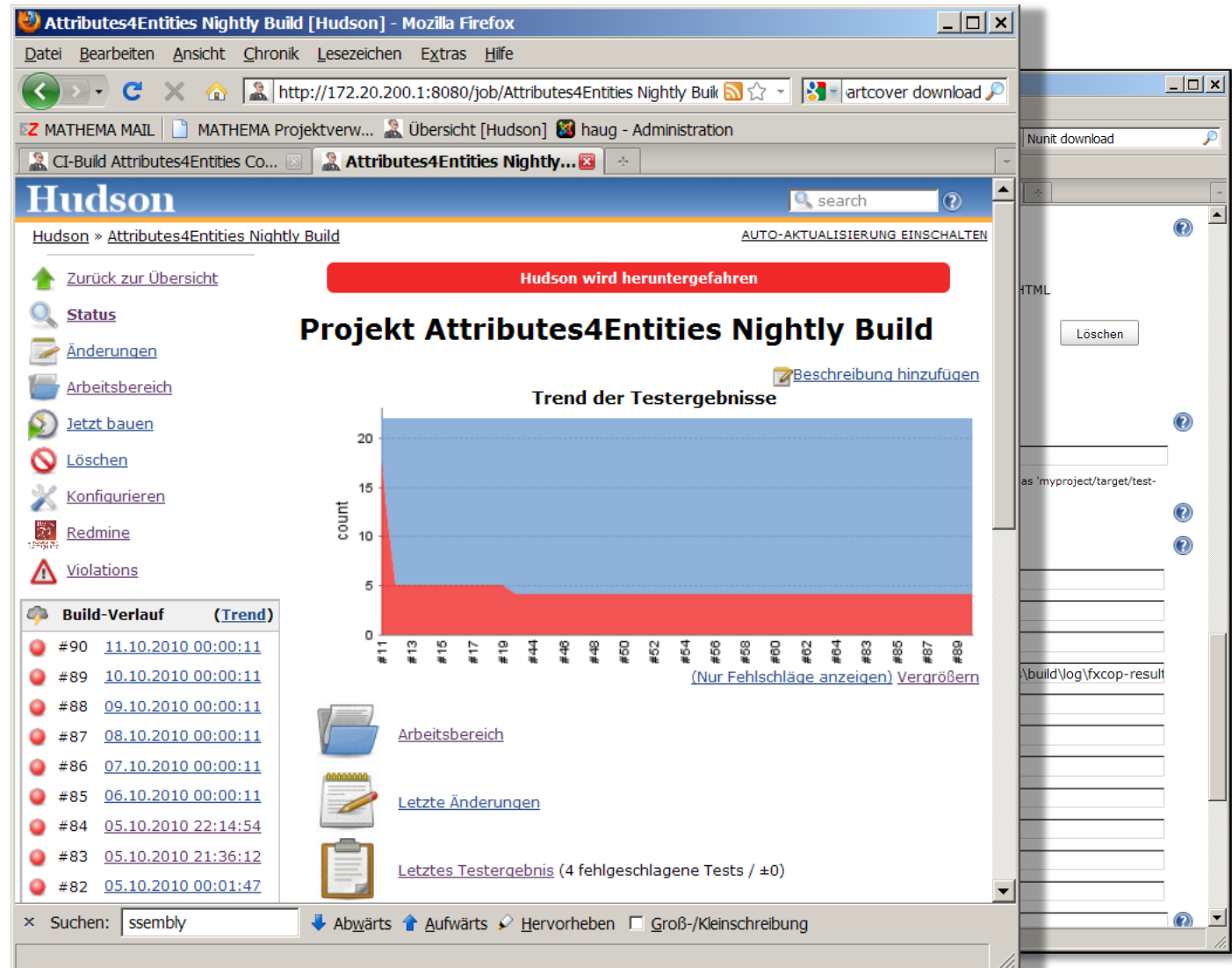
Fileset 'includes' setting that specifies the generated raw XML report files, such as 'myproject/target/test-reports/*.xml'. Basedir of the fileset is the workspace root.

fxcop	10	999	999	Attributes4Entities\EF_Attributes\projects\build\log\fxcop-result
gendarme	10	999	999	
jcreport	10	999	999	
jslint	10	999	999	
pmd	10	999	999	
pylint	10	999	999	
simian	10	999	999	
stylecop	10	999	999	
Per file limit	100			

Fertig



- NUnit in Hudson
 - Auf Projekt Ebene ist der Trend gezeigt





- NUnit in Hudson
 - Auf Build Ebene die Tests

The screenshot shows the Hudson web interface in a Mozilla Firefox browser. The page title is 'Attributes4Entities Nightly Build #90 Testergebnis [Hudson]'. A red banner at the top indicates 'Hudson wird heruntergefahren'. Below this, the 'Testergebnisse' section shows 'Fehlschläge (±0)' with a progress bar. To the right, it says 'Tests (±0)' and 'Dauer: 13 Sekunden'. A link 'Beschreibung hinzufügen' is also present. The 'Alle fehlgeschlagenen Tests' section is empty. The 'Alle Tests' section contains a table with the following data:

Package	Dauer	Fehlgeschlagen	(Diff.)	Übersprungen	(Diff.)	Summe	(Diff.)
De.Mathema.EntityFramework4.Attributes	47 ms	0		0		1	
De.Mathema.EntityFramework4.Configuration	13 Sekunden	4		0		21	

At the bottom, it says 'Erzeugung dieser Seite: 11.10.2010 23:33:13' and 'Hudson ver. 1.379'. The browser's search bar at the bottom contains the text 'Suchen: ssembly'.



- NUnit in Hudson
 - Auf Klassen Ebene der Fehlschlag / die Fehlschläge

Hudson search

Hudson » Attributes4Entities Nightly Build » #90 » Testergebnis » De.Mathema.EntityFramework4.Configuration » ColumnAttributeTest » TestColumnLengthByteArrayProperty AUTO-AKTUALISIERUNG EINSCHALTEN

[Zurück zum Job](#) Hudson wird heruntergefahren

[Status](#) [Änderungen](#) [Konsolenausgabe \[unformatiert\]](#) [Verlauf](#) [Markiere \("tagge"\) diesen Build](#) [Coverage Report](#) [Testergebnis](#) [Violations](#) [Vorheriger Build](#)

Fehlschlag

De.Mathema.EntityFramework4.Configuration.ColumnAttributeTest.TestColumnLengthByteArrayProperty
(from ColumnAttributeTest)

Schlägt fehl seit 80 Builds (Seit ● #11)
Dauer: 0,92 Sekunden
[Beschreibung hinzufügen](#)

Stacktrace

MESSAGE:
Length is not correct (Momentan erwartet, da das Mapping noch nicht gebaut wird)
Expected: 10
But was: null

+++++
STACK TRACE:
bei
De.Mathema.EntityFramework4.Configuration.ColumnAttributeTest.TestColumnLengthByteArrayProperty()
in c:\dev\build\hudson\jobs\Attributes4Entities Nightly Build\workspace\Attributes4Entities
\EF_Attributes\projects\EF_AttributesTests\Configuration\ColumnAttributeTest.cs:Zeile 107.

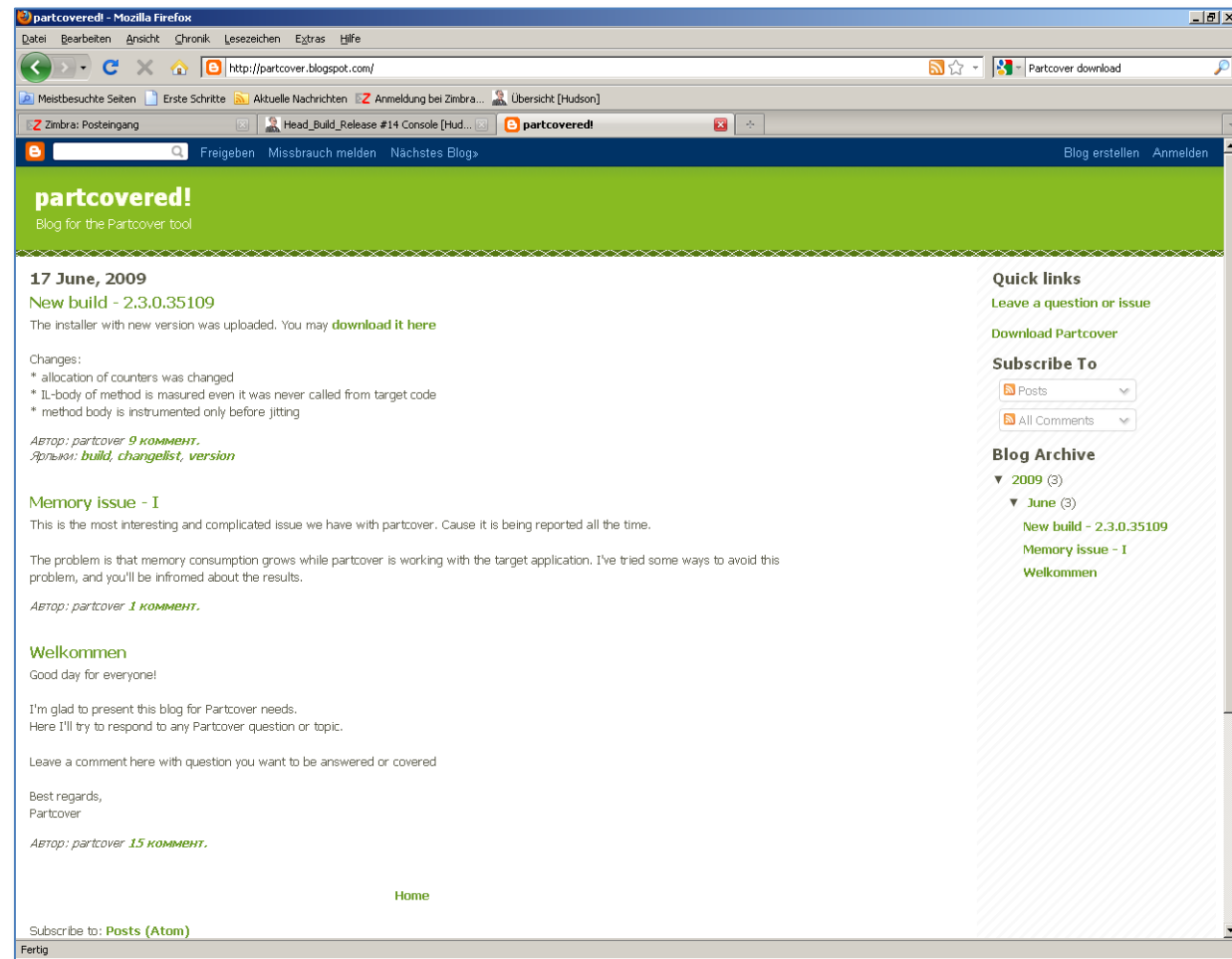
Erzeugung dieser Seite: 11.10.2010 23:35:48 [Hudson ver. 1.379](#)

Suchen: [Abwärts](#) [Aufwärts](#) [Hervorheben](#) ☐ Groß-/Kleinschreibung

partcovered!



- PartCover
- partcover.blogspot.com
- Frei verfügbar
- Hinweis:
Dokumentation ist sehr rudimentär



partcovered!

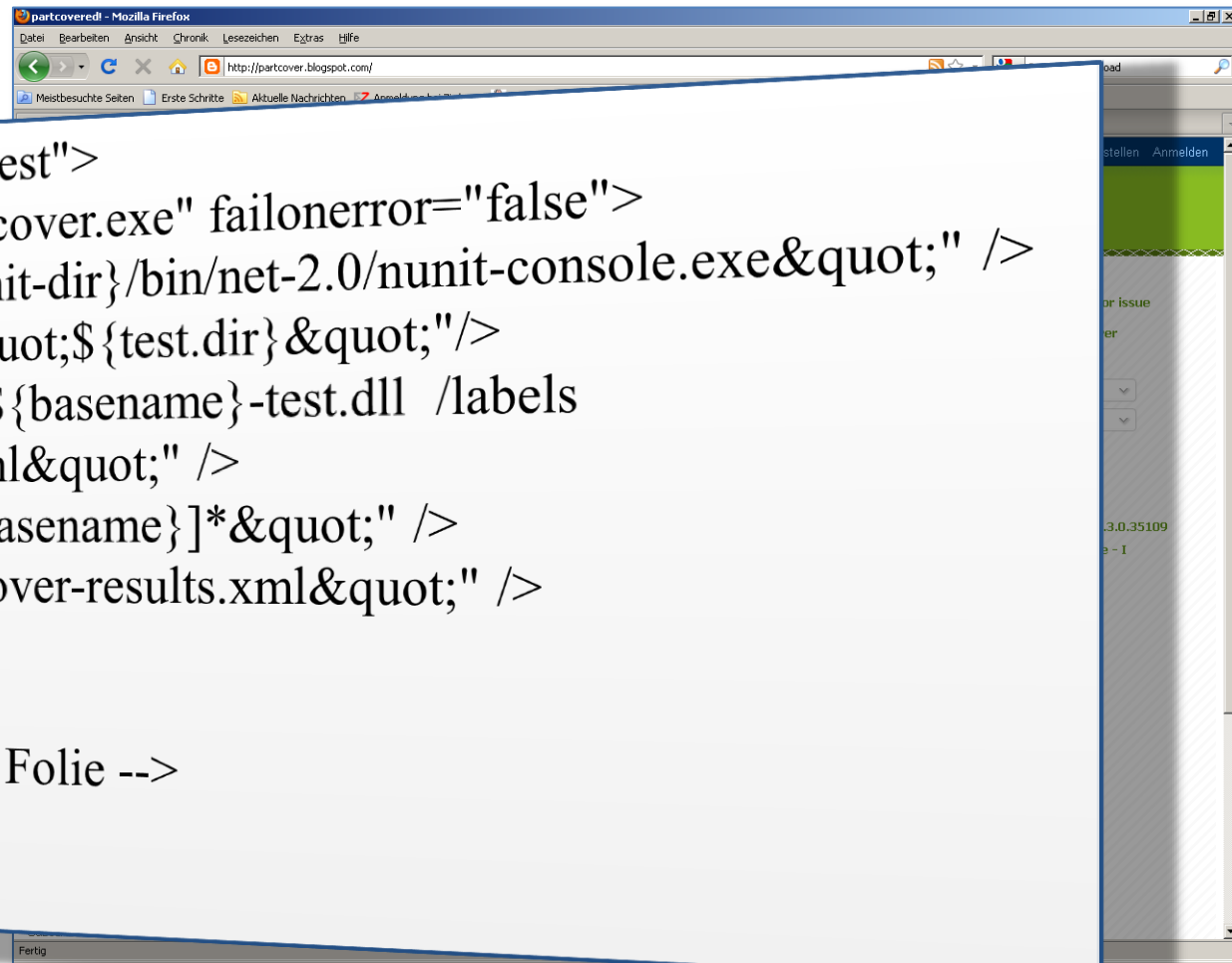


■ PartCover in Nant aufführen

```
<target name="coverage" depends="test">
  <exec program="${partcover}\partcover.exe" failonerror="false">
    <arg value="--target &quot;${nunit-dir}\bin\net-2.0\nunit-console.exe&quot;" />
    <arg value="--target-work-dir &quot;${test.dir}&quot;" />
    <arg value="--target-args &quot;${basename}-test.dll /labels
      /xml=../log/Nunit.xml&quot;" />
    <arg value="--include &quot;[${basename}]*&quot;" />
    <arg value="--output &quot;partcover-results.xml&quot;" />
  </exec>

  <!-- Ergebnisse publizieren nächste Folie -->

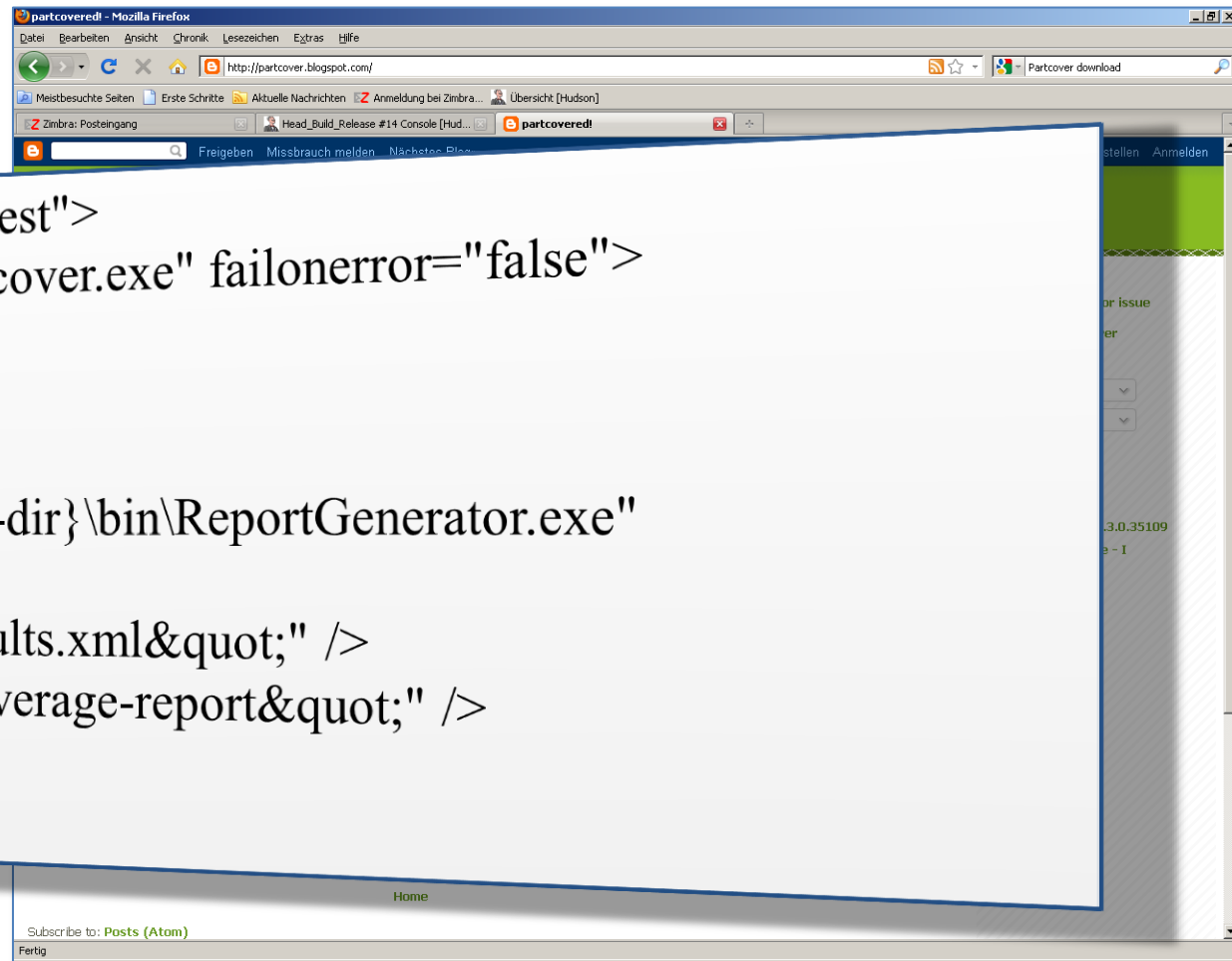
</target>
```



partcovered!



■ PartCover in Nant aufführen



```
<target name="coverage" depends="test">
  <exec program="${partcover}\partcover.exe" failonerror="false">
    ...
  </exec>

  <exec program="${reportgenerator-dir}\bin\ReportGenerator.exe"
    failonerror="false">
    <arg value="\"partcover-results.xml\";" />
    <arg value="\"${log.dir}\coverage-report\";" />
  </exec>
</target>
```

- Report generator plugin notwendig

☒ Publish HTML reports

HTML directory to archive	Index page[s]	Report title	Keep past HTML reports
Attributes4Entitie	index.htm	Coverage Report	☒
Hinzufügen			Löschen

partcovered!

- PartCover Ergebnisse in Hudson



The screenshot shows the Hudson web interface in a Mozilla Firefox browser. The browser's address bar shows the URL: `http://172.20.200.1:8080/job/Attributes4Entities Nightly Build/90`. The page title is "Attributes4Entities Nightly Build #90 [Hudson]".

The Hudson interface displays the following information for Build #90:

- Build #90** (11.10.2010 00:00:11)
- Status: **Build wird heruntergefahren** (Building is being shutdown) - indicated by a red circle icon.
- Build duration: Vor 23 Stunden gestartet, Dauer: 2 Minuten 11 Sekunden.
- Revision: 724, Keine Änderungen.
- Build wurde zeitgesteuert ausgelöst.
- Testergebnis: 4 fehlgeschlagene Tests / ±0. Link: [Zeige alle fehlgeschlagenen Tests >>>](#)

A blue arrow points to the "Coverage Report" link in the left sidebar. The sidebar also includes links for "Zurück zum Job", "Status", "Änderungen", "Konsolenausgabe [unformatiert]", "Markiere ('tagge') diesen Build", "Coverage Report", "Testergebnis", "Violations", and "Vorheriger Build".

At the bottom of the page, it says "Erzeugung dieser Seite: 11.10.2010 23:23:22" and "Hudson ver. 1.379".

partcovered!



■ PartCover Ergebnisse in Hudson

Attributes4Entities Nightly Build #90 [Hudson] - Mozilla Firefox

[Datei](#)
[Bearbeiten](#)
[Ansicht](#)
[Chronik](#)
[Lesezeichen](#)
[Extras](#)
[Hilfe](#)

[http://172.20.200.1:8080/job/Attributes4Entities Nightly Build/90](#)
[artcover download](#)

Mozilla Firefox

[Datei](#)
[Bearbeiten](#)
[Ansicht](#)
[Chronik](#)
[Lesezeichen](#)
[Extras](#)
[Hilfe](#)

[http://172.20.200.1:8080/job/Attributes4Entities Nightly Build/81/Coverage_Report/?](#)
[Nunit download](#)

[MATHEMA MAIL](#)
[MATHEMA Projektver...](#)
[Übersicht \[Hudson\]](#)
[haug - Administration](#)

[http://172.20...rage_Report/?](#)

Summary

Generated on:	04.10.2010 - 00:03
Parser:	PartCover23Parser
Assemblies:	1
Files:	11
Coverage:	91,3 %
Covered lines:	503
Coverable lines:	551
Total lines:	1341

Assemblies

Assembly	Coverage	Visual
Attributes4Entities	91,3 %	
De.Mathema.EntityFramework4.Attributes.ColumnAttribute	100 %	
De.Mathema.EntityFramework4.Attributes.EntityAttribute	0 %	
De.Mathema.EntityFramework4.Attributes.GeneratedValueAttribute	0 %	
De.Mathema.EntityFramework4.Attributes.IdAttribute	0 %	
De.Mathema.EntityFramework4.Attributes.TransientAttribute	0 %	
De.Mathema.EntityFramework4.Configuration.ConfigurationException	100 %	
De.Mathema.EntityFramework4.Configuration.Configurator`1	0 %	
De.Mathema.EntityFramework4.Configuration.Definition.EntityDefinition	74,2 %	
De.Mathema.EntityFramework4.Configuration.Definition.PropertyDefinition	85,7 %	
De.Mathema.EntityFramework4.Configuration.Definition.PropertyMapperEmitter	100 %	
De.Mathema.EntityFramework4.Configuration.EntityConfigurator	94,4 %	
De.Mathema.EntityFramework4.Configuration.EntityMapper	94,5 %	

[Build löschen](#)

Vor 23 Stunden gestartet
 Dauer: 2 Minuten 11 Sekunden

[Beschreibung hinzufügen](#)

23:22 [Hudson ver. 1.379](#)

hreibung

partcovered!



■ PartCover Ergebnisse in Hudson

Back to Attributes4Entities Nightly Build [index](#)

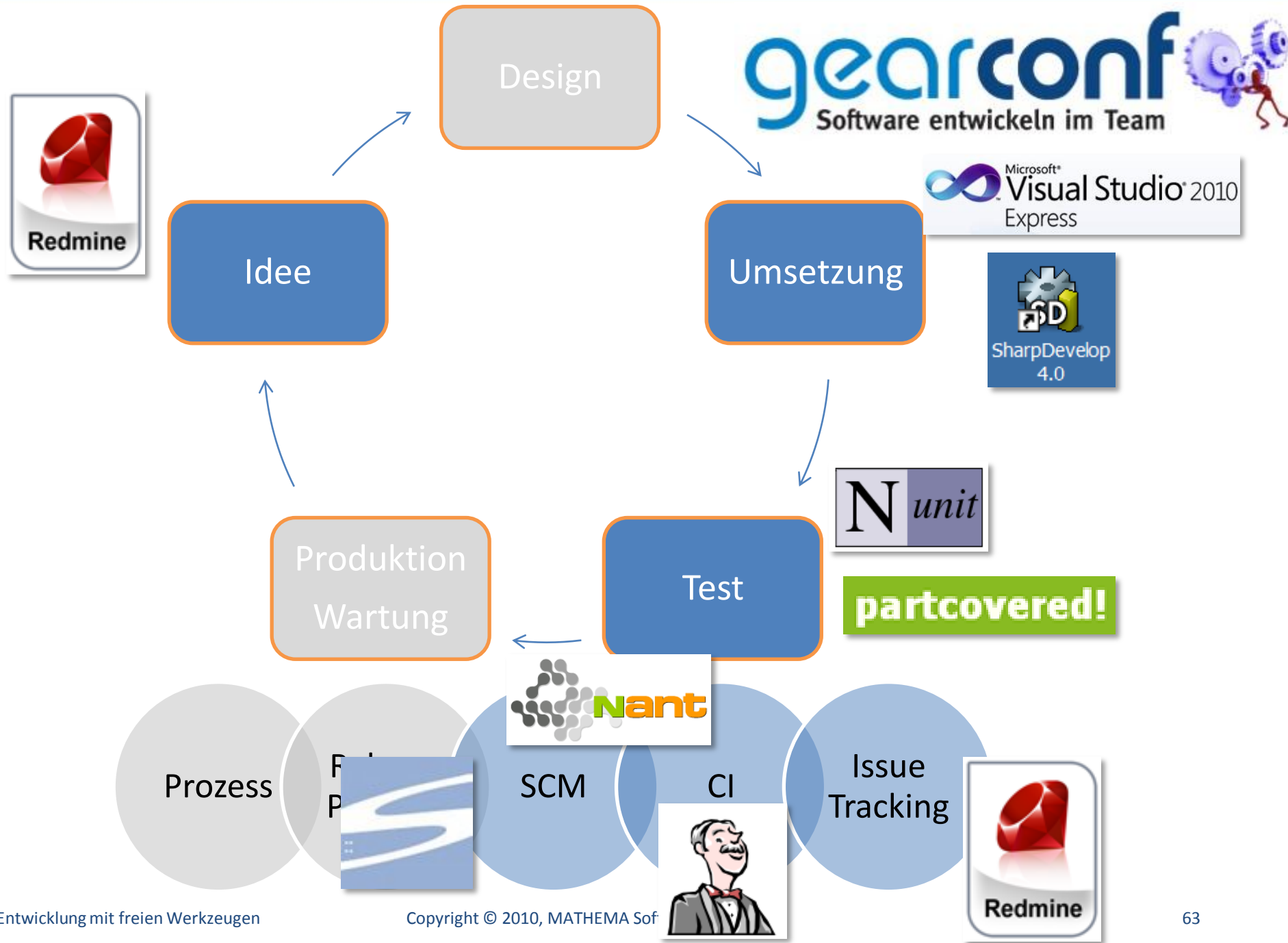
```

2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Text;
5
6 namespace De.Mathema.EntityFramework4.Configuration.Definition
7 {
8     /// <summary>
9     /// Instances of this class "describe" Entity classes and how to map these to Database columns
10    /// </summary>
11    public class EntityDefinition
12    {
13        private string tableName;
14        public string TableName
15        {
16            get
17            {
18                return tableName;
19            }
20            set
21            {
22                if (value == null)
23                {
24                    throw new ArgumentNullException("TableName property must not be null");
25                }
26                tableName = value;

```



- Motivation
- Werkzeuge
- Zusammenfassung





■ Zusammenfassung





- Was fehlt
 - Statische Code Analyse mit Style Cop
 - Metriken
- Wunschliste
 - Gated Checkins
 - Bessere IDEs (Refactoring, Unit-Testing)



Foto: pixelio.de - Olaf Rendler



Vielen Dank

Thomas Haug

Thomas.Haug@mathema.de



■ FXCop

Microsoft FxCop - My FxCop Project [C:\dev\dotNet\project\4e\FE_Attributes\projects\EFAttributesRules.FxCop]

File Edit Project Tools Windows Help

Analyze

Targets Rules

My FxCop Project

- Design Rules
- Globalization Rules
- Interoperability Rules
- Mobility Rules
- Naming Rules
- Performance Rules
- Portability Rules
- Security Rules
- Security Transparency Rules
- Usage Rules

Active Excluded In Project Excluded In Source Absent

Le...	Fix Category	Certainty	Rule	Item
✖	Breaking	85%	Identifiers should be cased correctly	De.Mathema.EntityFramework4.Entities
⚠	Breaking	50%	Avoid namespaces with few types	De.Mathema.EntityFramework4.Entities
✖	Breaking	75%	Identifiers should not contain type names	De.Mathema.EntityFramework4.Entities.Valid
✖	Breaking	85%	Identifiers should be cased correctly	De.Mathema.EntityFramework4.Entities.Valid
✖	Breaking	75%	Identifiers should not contain type names	De.Mathema.EntityFramework4.Entities.Valid
⚠	Breaking	50%	Properties should not return arrays	De.Mathema.EntityFramework4.Entities.Valid
✖	Breaking	85%	Identifiers should be cased correctly	De.Mathema.EntityFramework4.Entities.Valid
✖	Breaking	75%	Identifiers should not contain type names	De.Mathema.EntityFramework4.Entities.Valid
⚠	Breaking	50%	Properties should not return arrays	De.Mathema.EntityFramework4.Entities.Test
✖	Breaking	50%	Properties should not return arrays	De.Mathema.EntityFramework4.Entities.Test
✖	Breaking	85%	Identifiers should be cased correctly	De.Mathema.EntityFramework4.Attributes
✖	Breaking	85%	Identifiers should be cased correctly	De.Mathema.EntityFramework4.Configuration
✖	Breaking	90%	Static holder types should not have constructors	De.Mathema.EntityFramework4.Configuration.Refi
✖	Breaking	85%	Identifiers should be cased correctly	De.Mathema.EntityFramework4.Configuration.Refi
⚠	Breaking	75%	Avoid unsealed attributes	De.Mathema.EntityFramework4.Attributes.Transier
⚠	Breaking	75%	Avoid unsealed attributes	De.Mathema.EntityFramework4.Attributes.EntityAl
⚠	Breaking	75%	Avoid unsealed attributes	De.Mathema.EntityFramework4.Attributes.IdAttrib
⚠	Breaking	75%	Avoid unsealed attributes	De.Mathema.EntityFramework4.Attributes.Column
⚠	Breaking	75%	Avoid unsealed attributes	De.Mathema.EntityFramework4.Attributes.General
✖	Breaking	85%	Identifiers should be cased correctly	De.Mathema.EntityFramework4.Configuration.Defi
⚠	Breaking	50%	Avoid namespaces with few types	De.Mathema.EntityFramework4.Configuration.Defi
⚠	Breaking	50%	Properties should not return arrays	De.Mathema.EntityFramework4.Configuration.Defi
⚠	Breaking	50%	Properties should not return arrays	De.Mathema.EntityFramework4.Configuration.Defi
⚠	Depends on Fix	95%	Mark members as static	De.Mathema.EntityFramework4.Attributes.E
⚠	Depends on Fix	95%	Review unused parameters	De.Mathema.EntityFramework4.Attributes.E
⚠	Depends on Fix	95%	Review unused parameters	De.Mathema.EntityFramework4.Configuration.Defi
⚠	Depends on Fix	95%	Review unused parameters	De.Mathema.EntityFramework4.Configuration.Defi
⚠	Non Breaking	95%	Assemblies should have valid strong names	attributes4entities-test.dll

Ready

```

.class De.Mathema.EntityFramework4.Entities.ValidTestEntity
{
    Attributes : Count == 1 (AttributeNodeCollection)
    {
        [De.Mathema.EntityFramework4.Attributes.EntityAttribute()]
    }
    BaseClass : System.Object (ClassNode)
    BaseType : System.Object (TypeNode)
    ConsolidatedTemplateArguments : <null> (TypeNodeCollection)
    ConsolidatedTemplateParameters : <null> (TypeNodeCollection)
}
    
```

Output Properties



■ FXCop

Microsoft FxCop - My FxCop Project [C:\dev\dotNet\project\4e\EF_Attributes\projects\EFAttributesRules.FxCop]

File Edit Project Tools Windows Help

Analyze

Targets Rules

Active Excluded In Project Excluded In Source Absent

Le...	Fix Category	Certainty	Rule	Item
✖ Breaking		75%	Identifiers should not contain type names	De.Mathema.EntityFramework4.Entities.ValidTestEn
✖ Breaking		85%	Identifiers should be cased correctly	De.Mathema.EntityFramework4.Entities.ValidTestEn
✖ Breaking		75%	Identifiers should not contain type names	De.Mathema.EntityFramework4.Entities.ValidTestEn
⚠ Breaking		50%	Properties should not return arrays	De.Mathema.EntityFramework4.Entities.ValidTestEn
✖ Breaking		85%	Identifiers should be cased correctly	De.Mathema.EntityFramework4.Entities.ValidTestEn
✖ Breaking		75%	Identifiers should not contain type names	De.Mathema.EntityFramework4.Entities.ValidTestEn

1 message(s) selected

Warning, Certainty 50, for PropertiesShouldNotReturnArrays

```
{
  Target      : #SparseColumnDefinitionProperty (IntrospectionAccessorizedTargetMember)
  Resolution  : "Change 'ValidTestEntity.SparseColumnDefinitionProperty'
                to return a collection or make it a method."
  Help        : http://msdn.microsoft.com/library/0fss9skc(VS.100).aspx (String)
  Category    : Microsoft.Performance (String)
  CheckId     : CA1819 (String)
  RuleFile    : Performance Rules (String)
  Info        : "Properties that return arrays are prone to code inefficiencies.
                Consider using a collection or making this a method.
                See the design guidelines for more information."
  Created     : 05.10.2010 11:27:56 (DateTime)
  LastSeen    : 05.10.2010 11:27:56 (DateTime)
  Status      : Active (MessageStatus)
  Fix Category : Breaking (FixCategories)
}
```

Output Properties



■ FXCop in Hudson ausführen

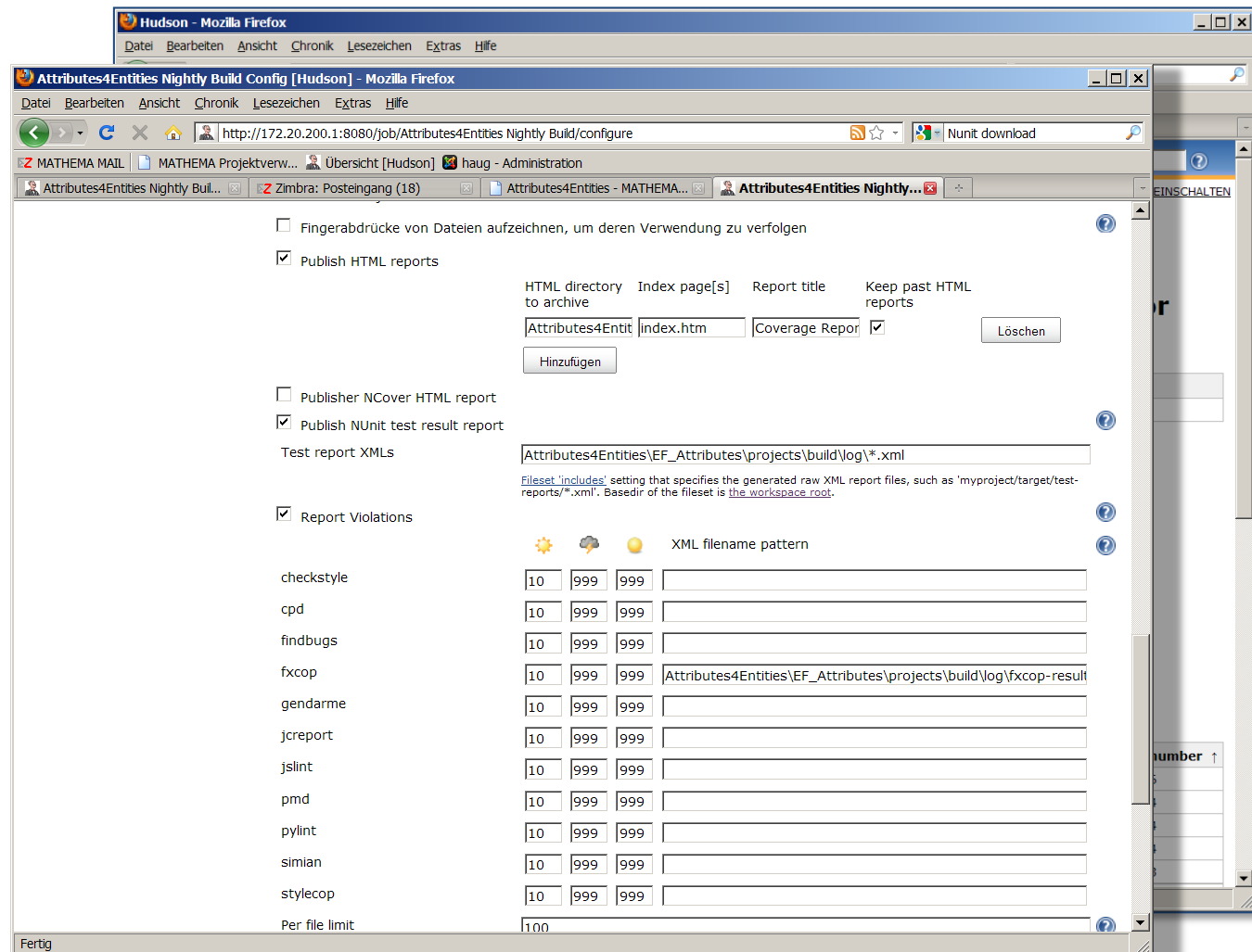
```
<target name="fxcop" depends="test, copy-dlls-test">
  <exec program="${fxcop-dir}\FxCopCmd.exe" failonerror="false">
    <arg value="/project:${fxcop.project.name}" />
    <arg value="/forceoutput" />
    <arg value="/summary" />
    <arg value="/out:${log.dir}/fxcop-results.xml" />
  </exec>
</target>
```

filename	l	m	h	number ↑
De.Mathema.EntityFramework4.Entities.ValidTestEntity	0	6	0	6
De.Mathema.EntityFramework4.Configuration.ConfigurationException	0	4	0	4
De.Mathema.EntityFramework4.Configuration.Definition.EntityDefinition	0	1	3	4
De.Mathema.EntityFramework4.Configuration.Definition.PropertyDefinition	0	2	2	4
Attributes4Entities/EF_Attributes/projects/EfAttributesTests/Configuration/UnqExpressionTest.cs	0	3	0	3



- FxCop in Hudson

- Ergebnisse mit Violations Plugin veröffentlichen





■ Überblick

Hudson - Mozilla Firefox

http://172.20.200.1:8080/job/Attributes4Entities Nightly Build/78/violations/?

MATHEMA MAIL MATHEMA Projektver... Übersicht [Hudson] haug - Administration

Hudson

Hudson » Attributes4Entities Nightly Build » #78

[Zurück zum Job](#)

[Status](#)

[Änderungen](#)

[Konsolenausgabe \[unformatiert\]](#)

[Markiere \("tagge"\) diesen Build](#)

[Coverage Report](#)

Violations

[Vorheriger Build](#)

[Nachfolgender Build](#)

Violations Report

/job/Attributes4Entities%20Nightly%20Build/78 for build 78

Type	Violations	Files in violation
fxcop	64	33

fxcop

filename	l	m	h	number ↑
De.Mathema.EntityFramework4.Entities.ValidTestEntity	0	6	0	6
De.Mathema.EntityFramework4.Configuration.ConfigurationException	0	4	0	4
De.Mathema.EntityFramework4.Configuration.Definition.EntityDefinition	0	1	3	4
De.Mathema.EntityFramework4.Configuration.Definition.PropertyDefinition	0	2	2	4
Attributes4Entities/EF_Attributes/projects/EfAttributesTests/Configuration/LinqExpressionTest.cs	0	3	0	3



■ Klassendetails

Hudson - Mozilla Firefox

http://172.20.200.1:8080/job/Attributes4Entities Nightly Build/78/violations/file/De.Mathema.

MATHEMA MAIL MATHEMA Projektverw... Übersicht [Hudson] haug - Administration

Hudson

search

Attributes4Entities Nightly Build » #78

AUTO-AKTUALISIERUNG EINSCHALTEN

ob

abe [unformatiert]

gge") diesen Build

port

ild

r Build

 **De.Mathema.EntityFramework4.Entities.ValidTestEntity**

fxcop 6 violations

0		IdentifiersShouldNotContainTypeNames - Consider replacing the language-specific data
0		IdentifiersShouldNotContainTypeNames - Consider replacing the language-specific data
0		IdentifiersShouldNotContainTypeNames - Consider replacing the language-specific data
0		IdentifiersShouldBeCasedCorrectly - Correct the casing of 'bool' in member name 'Valid'
0		IdentifiersShouldBeCasedCorrectly - Correct the casing of 'int' in member name 'ValidTe
0		PropertiesShouldNotReturnArrays - Change 'ValidTestEntity.SparseColumnDefinitionProp

Erzeugung dieser Seite: 04.10.2010 22:55:45 [Hudson ver. 1.369](#)



■ Klassendetails mit Erläuterung

Hudson - Mozilla Firefox

http://172.20.200.1:8080/job/Attributes4Entities Nightly Build/78/violations/file/De.Mathema.

MATHEMA MAIL MATHEMA Projektver... Übersicht [Hudson] haug - Administration

Hudson

Attributes4Entities Nightly Build » #78

AUTO-AKTUALISIERUNG EINSCHALTEN

De.Mathema.EntityFramework4.Entities.ValidTestEntity

fxcop 6 violations

Severity	Class	Detail
0	IdentifiersShouldNotContainTypeNames	Consider replacing the language-specific data
0	IdentifiersShouldNotContainTypeNames	Consider replacing the language-specific data
0	IdentifiersShouldNotContainTypeNames	Consider replacing the language-specific data
0	IdentifiersShouldNotContainTypeNames	Consider replacing the language-specific data
0	IdentifiersShouldNotContainTypeNames	Consider replacing the language-specific data
0	IdentifiersShouldNotContainTypeNames	Consider replacing the language-specific data

Erzeugung dieser Seite: 04.10.2010 22:55:45 Hudson ver. 1.369