

Continuous Integration with Roundtable TSMS



Thomas Hansen

Technical and Services Director
appSolutions

Jeff Ledbetter

Product Architect
Tugboat Software

appSolutions
www.app-solutions.com



Tugboat Software



- Progress Technology Alliance Partner
- Roundtable TSMS
- Roundtable Team





appSolutions
www.app-solutions.com

- Tugboat Software Partner
- Roundtable sales, consulting and mentoring
- Progress Software Application and Consulting Partner
- Framework and tools integration with Roundtable
- Products:
 - appSolute Deployment**
Automation and Deployment processing toolkit for Roundtable TSMS
 - appSolute Management**
Change Management integrated with Roundtable TSMS



Session Agenda



- **Manual Processes**
- Software Configuration Management
- Roundtable TSMS
- Automation Strategies
- The Processes
- How We did it
- The Next Step
- Review/Questions



Routine / Manual Processes



- Daily Builds / Compiles
- Code freezes and Baseline Promotions
- Schema Updates
- Deployments

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Software Configuration Management is the discipline of managing the entire life cycle of a software project.



"Software Configuration Management is the heartbeat of any serious software development effort. One would not start mass producing a car without first building a factory and defining the production line. SCM is THE factory for software development. It is the discipline, based on the principles of the manufacturing industry that brings repeatable, high-quality production to your software applications".



*Roundtable TSMS is a team-oriented extension for the OpenEdge Studio and OpenEdge Architect development environments that provides **Software Configuration Management** and developer productivity tools.*

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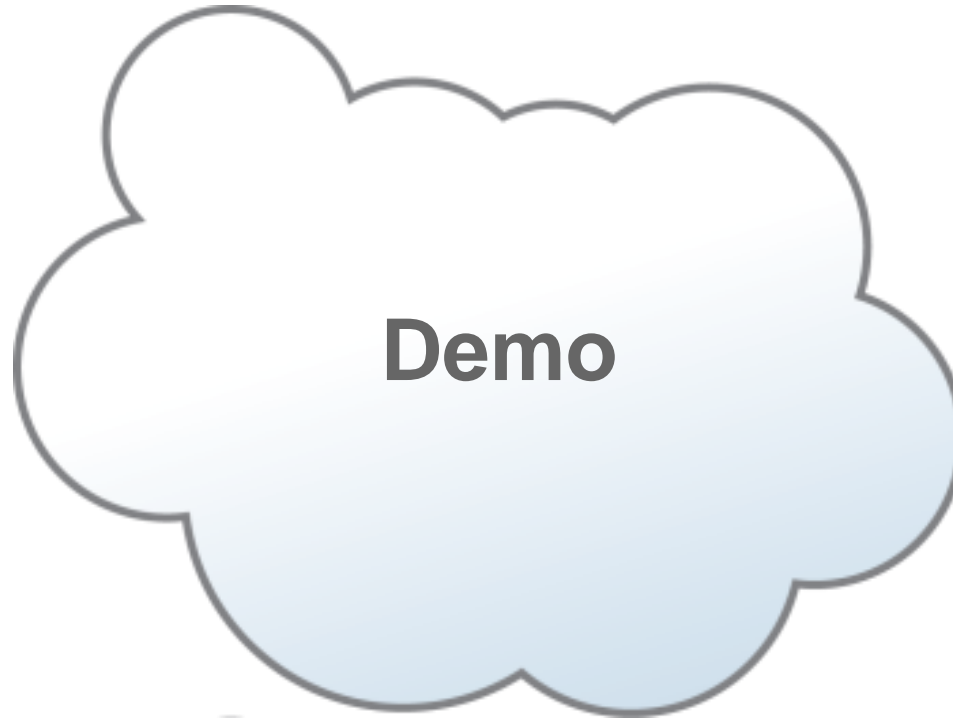


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- Smart Compilation
- Workspace Release Management
- Workspace Imports
- Schema Management
- Deployment Management



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The Need for Automation



- Eliminate manual processes
- Error Reduction
- Environment integrity checking
- Continuous Integration
- Customer Updates
- Iterative Deployments





- Roundtable API
- Roundtable Proxy Layer
- Scripting – Apache Ant & PCT
- Jenkins



Jenkins

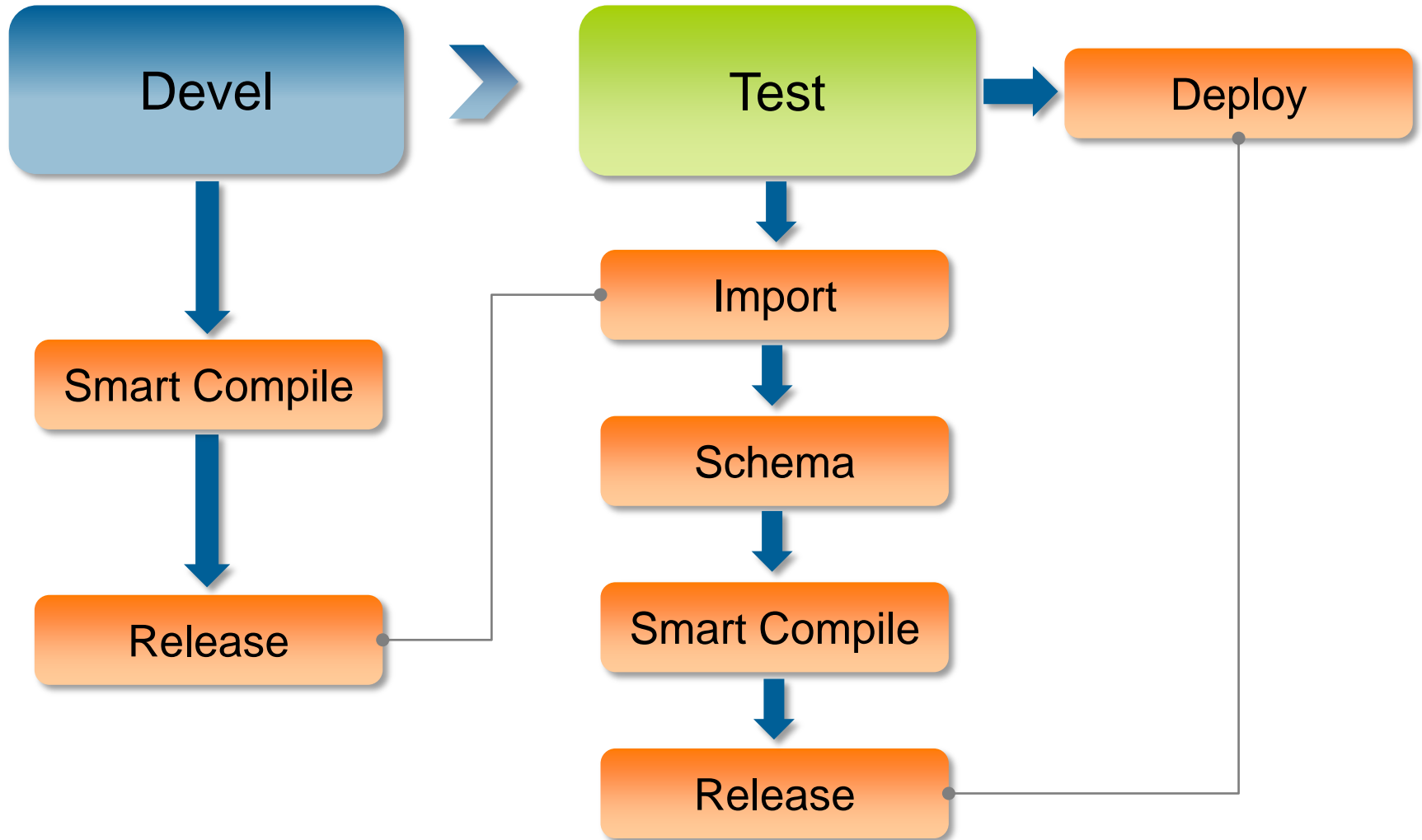
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The Processes



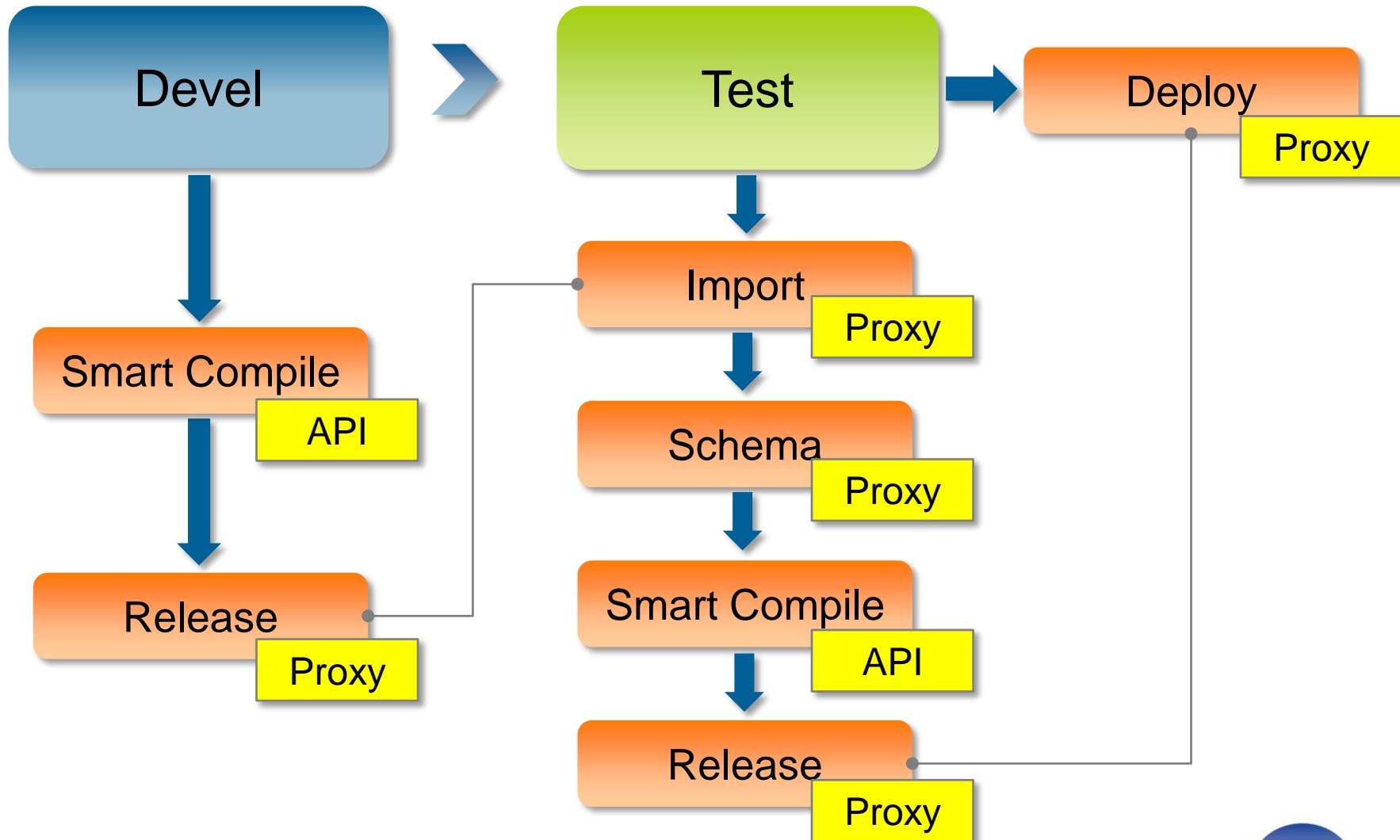
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How We Did It



How We Did It: Extended RTB API



- Extended API created: `appSolute/RTB/ADRTBApi.cls` containing workflows using API and Proxy usage
- Wrapper ABL procedures using Extended API as process building blocks provide “CLI functionality”
- Process steps can be executed from scripts or added as jobs to scheduling tools

How We Did It: API Wrappers



```
/* Standard variable definitions for RTB API usage */  
  
...  
ASSIGN cSessionParam = SESSION:PARAMETER.  
  
ASSIGN  
    gcRTBInstallPath = ENTRY(1, cSessionParam)  
    gcWorkspace      = ENTRY(2, cSessionParam)  
    gcUser           = ENTRY(3, cSessionParam)  
    gcPassword       = ENTRY(4, cSessionParam).  
  
...  
RTBApi1 = NEW appSolute.RTB.ADRTBApi(INPUT SESSION:HANDLE).  
RTBApi1:startAPIs (gcRTBInstallPath, gcWorkspace, gcUser, gcPassword, gcLogFile,  
                    OUTPUT hRTBApi, OUTPUT giSessionID, OUTPUT gcErrorMessages).  
  
...
```

How We Did It: Wrapper Execution



Windows script:

```
prowin32.exe -p appSolute/RTB/adrtb_createrelease.p  
-param "C:\rtb11,dev,user,password,..."
```

How We Did It: Wrapper Execution



Apache Ant script:

```
<PCTRun procedure="appSolute/RTB/Automation/adrtb_createrelease.p"
  dlcHome="${progress.DLC}"
  graphicalMode="true"
  cpstream="iso8859-1"
  failOnError="true"
parameter="${rtb.InstallPath},${input.rtb.release.wspaceId},${input.rtb.user},${
input.rtb.password},${input.rtb.release.releaseNote},${input.rtb.release.OnlyWhe
nNeeded},${input.rtb.release.createReport}">
</PCTRun>
```

Ant OpenEdge execution using PCT

<http://code.google.com/p/pct>

Ant script execution

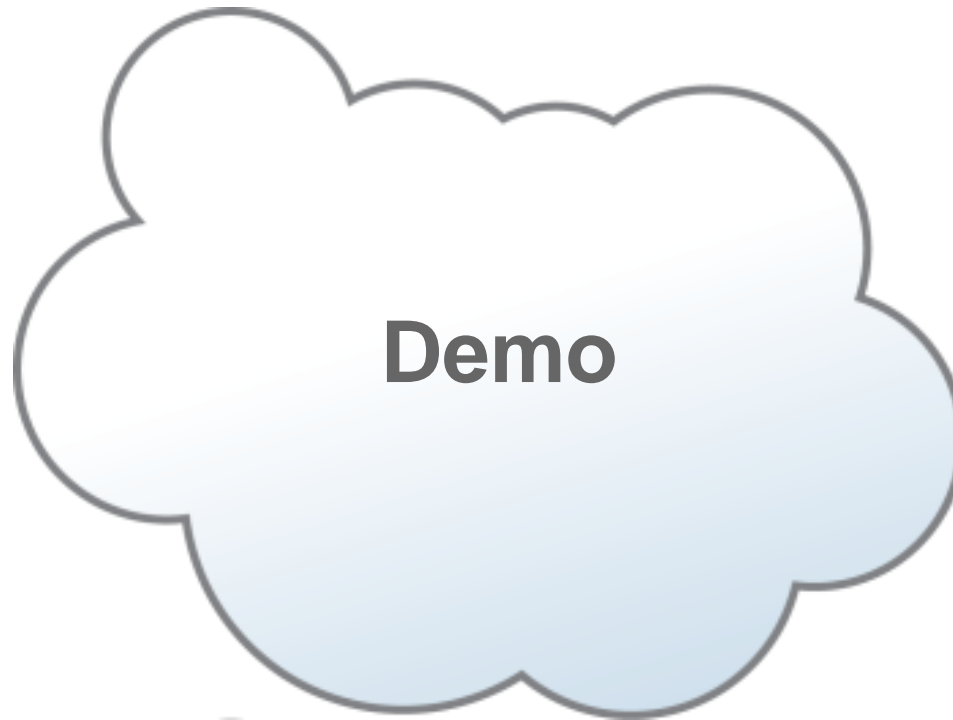


```
ant -file build_rtb_release.xml  
-Dbuild.props=C:/Roundtable/rtbl1eval/config/devel-process.props  
-Dbasedir=D:/oeworkspaces/111/rtb-automation
```

Devel

Release

```
# devel-process.props  
# Properties needed for the ANT process automation  
  
basedir=C:/Roundtable/rtbl1eval/quickstart/demodata/test  
build.root.dir=C:/Roundtable/rtbl1eval/quickstart/demodata/test  
build.script.dir=D:/oeworkspaces/102B/rtb-automation/ant  
  
# Generic RTB properties  
rtb.dbName=rtb  
rtb.lgDbName=rtb  
rtb.dbHostName=localhost  
rtb.dbPort=8800  
rtb.InstallPath=C:/Roundtable/rtbl1eval  
rtb.wspaceId=devel  
rtb.user=sysop  
rtb.password=  
rtb.db.singleUser=false  
  
# RTB Release settings  
rtb.release.wspaceId=${rtb.wspaceId}  
rtb.release.user=${rtb.user}  
rtb.release.password=${rtb.password}  
rtb.release.releaseNote=Auto Release ${start.DSTAMP}  
${start.TSTAMP}  
rtb.release.OnlyWhenNeeded=true  
rtb.release.createReport=true
```

Continuous Integration with Jenkins



- Automate Roundtable functionality
 - Scheduler, Dashboard, Event-based

S	W	Name ↓	Last Success	Last Failure	Last Duration	Console ↓
		Dev Compile	N/A	N/A	N/A	
		Dev release	23 min (#17)	2 days 5 hr (#15)	27 sec	
		Test compile	N/A	N/A	N/A	
		Test deploy	N/A	N/A	N/A	
		Test import	2 days 1 hr (#12)	2 days 5 hr (#2)	4,8 sec	
		Test release	N/A	N/A	N/A	
		Test schema	N/A	N/A	N/A	





- Roundtable specific Source Code Management plugin not necessary

Source Code Management

- CVS
- CVS Projectset
- File System
- None
- Subversion
- Use SCM from another project



- Job execution
 - Scheduled
 - Triggered
 - Manually started

Build Triggers

- Build after other projects are built
- Build periodically
- Build when a URL's content changes
- Build when another project is promoted
- Build when certain files are found
- Poll SCM
- Poll with a Windows Batch Command
- [FSTrigger] - Monitor files
- [FSTrigger] - Monitor folder
- [URLTrigger] - Poll with a URL

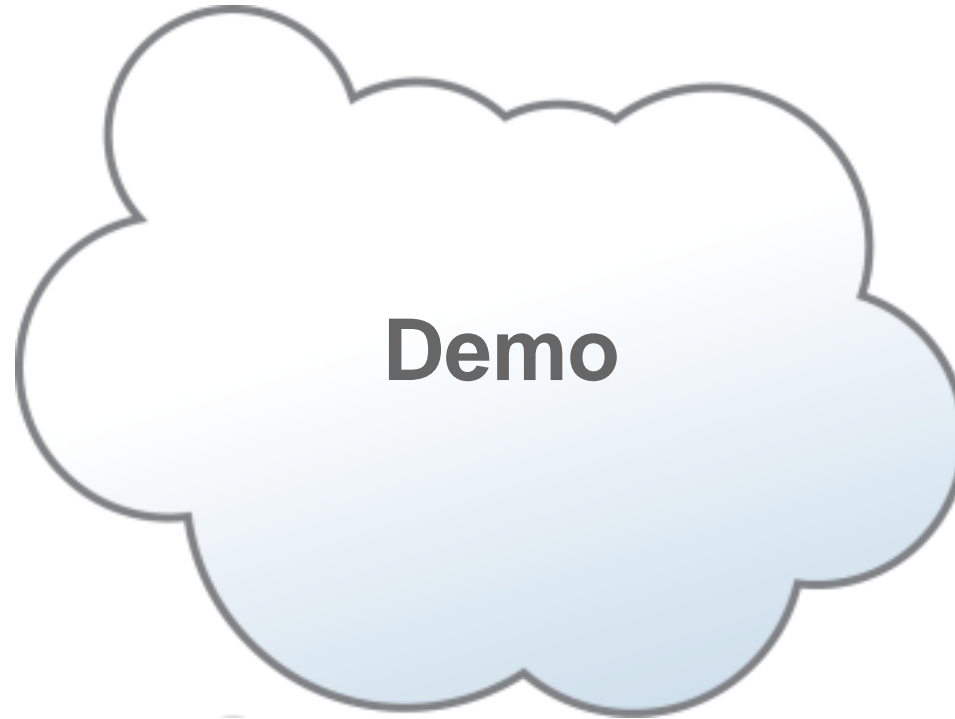


■ Executing Ant scripts

Build

Invoke Ant

Ant Version	<input type="text" value="ant-1.8.4"/>
Targets	<input type="text"/>
Build File	<input type="text" value="D:\oeworkspaces\102B\rtb-automation\ant\build_rtb_release.xml"/>
Properties	<input type="text" value="basedir=D:/oeworkspaces/102B/rtb-automation
build.props=C:/Roundtable/rtb11eval/config/devel-process.props"/>
Java Options	<input type="text"/>



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The Next Step



- Review RTB APIs
- Get started with Apache Ant (1.8.4), PCT and Jenkins
 - <http://ant.apache.org>
 - <http://code.google.com/p/pct>
 - <http://jenkins-ci.org>
- Download the free appSolute RTB Automation Toolkit and get started!

What Did We Learn?



- SCM is a key component of software development
- Roundtable provides SCM for OpenEdge
- Routine processes can be automated
- Third-party tools are available to extend automation beyond Roundtable



Questions





<http://www.roundtable-tsms.com>

Roundtable Sales and Services

http://www.app-solutions.com/EN/services_solutions/solutions/roundtable

appSolutions

www.app-solutions.com

appSolute Deployment

RTB TSMS Automation and Deployment processing
(built with appSolute RTB Automation toolkit)

http://www.app-solutions.com/EN/services_solutions/solutions/appolute_deployment





appSolutions
www.app-solutions.com

Interested in an audit of your Roundtable environment?

Interested in 2-3 day workshops near you on Roundtable Automation and CI in 2013?

Contact your RTB Services representative for more details.

