

Subversion Integration

With the popular Subversion Source Control Management tool, users will find a flexible interface to integrate with their ExtraView bug-tracking system.

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Introduction

ExtraView is provided with a powerful API and Command Line Interface that allows it to be integrated with a wide range of source control management (SCM) as well as with testing tools. The ExtraView API supports searches and queries as well as the addition, update, and deletion of issues via direct commands and URL requests. API commands may be directly invoked (typed at a command line or typed in the URL field on any browser), invoked within a scripting language or compiled code, or invoked through a link or script within another product. To the degree that another tool can invoke a command, or link to a URL, it may be integrated with ExtraView. The scripts showcased in this document are available free of charge to all ExtraView customers.

At ExtraView, we have found that most SCM integration implementations require, at minimum, the following:

1. **Command Line Interface** – users are not forced to use the ExtraView web-based interface
2. **Scriptable commands** – all commands must be scriptable from languages such as Perl, Python, Batch, Shell Script, make, or your other favorite script language
3. **Single-line commands** – one command should simultaneously check in your changes *and* should update the tracking system issue, complete with diffs if these are required to be stored in the tracking system
4. **Customization** – a fully scriptable API for the bug tracker is needed, that allows further customization and integration opportunities, at the CLI or the web-interface level.

It is especially important to note that ExtraView's integration with Subversion can be customized to suit your precise requirements. ExtraView does not mandate a fixed integration, but is an open solution that can be adapted simply for your needs.

The following is a simple Subversion integration scenario where source control work is done at the command line (many of these steps may be automated via scripting or direct calls from the web-based interface). Though this scenario assumes a Microsoft Windows

interface UNIX, Linux and web interfaces are also supported. The scenario is as follows:

- Some files are detected that have bugs
- An ExtraView issue is created against the bugs
- The files with the bugs are checked out from Subversion and edited
- With a single command, the files are checked in to Subversion and the ExtraView issue is updated with the pertinent details.

Following is a step-by-step example of this scenario. Though overly simplified, the basic elements of integration are made clear.

Subversion is invoked at the command line

```
C:\tmp\project>svn log flavors.txt
-----
r37 | daniel | 2007-04-10 10:29:28 -0700 (Tue, 10 Apr 2007) | 3 lines
New files
-----

C:\tmp\project>svn log colors.txt
-----
r37 | daniel | 2007-04-10 10:29:28 -0700 (Tue, 10 Apr 2007) | 3 lines
New files
-----

C:\tmp\project>svn cat flavors.txt
vanilla
peppermint
yellow
chocolate

C:\tmp\project>svn cat colors.txt
red
blue
majenta
```

Create the defect in ExtraView

This is entered in ExtraView via the CLI, Web interface, or through API integration with another tool. This step is not shown in detail, but the details of the issue will include these fields:

```
Bug # 10470
Title: Misspellings
Description: misspellings in flavor and color; misplaced color
```

From the command line, the user can confirm the details of the issue in ExtraView.

```
C:\ExtraView\Perl\evapi\bat>evget 10470
Assigned To: George Miller
Date Created: 4/10/07 10:47 AM
Description: misspellings in flavor and color; misplaced color
ID #: 10470
Last Changed By: Bill Smith
Last Modified: 4/10/07 11:05 AM
Originator: Bill Smith
Priority: P 4
Privacy: Private
Product: Tracker
Status: New
Title: Misspellings
```

Edit each file, repairing the defects

```
C:\tmp\project>vim flavors.txt
vanilla
peppermint
chocolate

C:\tmp\project>vim colors.txt
red
blue
yellow
magenta

C:\tmp\project>svn status
M      colors.txt
M      flavors.txt
```

Check in the changes and update ExtraView

Note that a single command passes arguments and values to Subversion, yet also updates ExtraView.

```
C:\tmp\project>svn commit -m "corrected misspellings and misplaced
color for Bug Id: 10470"
Sending      colors.txt
Sending      flavors.txt
Transmitting file data ..
Committed revision 38.

C:\tmp\project>more C:\subversion_integration.log
Tue Apr 10 11:10:04 2007 -- start pre-commit
pre-commit args: /svnrepository 37-1
log message: corrected misspellings and misplaced color for Bug Id:
10470

exit code: 0
```

```

bug id: 10470
evget output for bug 10470:
    Assigned To: George Miller
    Category:
    Comments:
    Date Created: 4/10/07 10:47 AM
Date of Last Status Change: 4/10/07 10:47 AM
    Days Open: 0
    Days in Status: 0
    Description: misspellings in flavor and color; misplaced color
    ID #: 10470
    Last Changed By: Bill Smith
    Last Modified: 4/10/07 11:05 AM
    Module:
Needs Doc Change: No
    Notes:
    Occurrence:
Operating System:
    Originator: Bill Smith
    Platform:
    Priority: P 4
    Privacy: Private
    Product: Tracker
    Release Found:
    Release Notes:
    Repeating Rows:
    Reproducible:
    Resolution:
    SCM Job:
    Severity:
    Status: New
    Test Case:
    Title: Misspellings

Tue Apr 10 11:10:05 2007 -- end pre-commit
Tue Apr 10 11:10:05 2007 -- start post-commit
post-commit args: /svnrepository 38
commit info: daniel
2007-04-10 11:10:05 -0700 (Tue, 10 Apr 2007)
60
corrected misspellings and misplaced color for Bug Id: 10470

author: daniel
datestamp: 2007-04-10 11:10:05 -0700 (Tue, 10 Apr 2007)
log message: corrected misspellings and misplaced color for Bug Id:
10470
bug id: 10470
diff: Modified: colors.txt
=====
--- colors.txt 2007-04-10 17:29:28 UTC (rev 37)
+++ colors.txt 2007-04-10 18:10:05 UTC (rev 38)
@@ -1,3 +1,4 @@
    Red

blue

```

```

-majenta
+yellow
+magenta

Modified: flavors.txt
=====
--- flavors.txt 2007-04-10 17:29:28 UTC (rev 37)
+++ flavors.txt 2007-04-10 18:10:05 UTC (rev 38)
@@ -1,4 +1,3 @@
   vanilla
   peppermint
-yellow
-chocolate
+chocolate

evupload output: uploaded

evupdate output:
Tue Apr 10 11:10:08 2007 -- end post-commit

```

Check the history within Subversion

```

C:\tmp\project>svn log flavors.txt
-----
r38 | daniel | 2007-04-10 11:10:05 -0700 (Tue, 10 Apr 2007) | 1 line
corrected misspellings and misplaced color for Bug Id: 10470
-----
r37 | daniel | 2007-04-10 10:29:28 -0700 (Tue, 10 Apr 2007) | 3 lines

New files
-----
C:\tmp\project>svn log colors.txt
-----
r38 | daniel | 2007-04-10 11:10:05 -0700 (Tue, 10 Apr 2007) | 1 line
corrected misspellings and misplaced color for Bug Id: 10470
-----
r37 | daniel | 2007-04-10 10:29:28 -0700 (Tue, 10 Apr 2007) | 3 lines

New files
-----

```

Check the changes in ExtraView

This can be done from the web interface or from the CLI. The example shows the check being performed from the CLI.

```

C:\ExtraView\Perl\evapi\bat>evfiles 10470
Date Created  File Size Owner          Name          Description
=====
2007-04-10    517 SCM Daemon    diff864.txt   Revision 38
committed by daniel on 2007-04-10 11

```

The diffs can be checked from the web interface or the CLI. The example shows the check being performed from the CLI

```
C:\ExtraView\Perl\evapi\bat>evdownload 10470 diff864.txt

C:\ExtraView\Perl\evapi\bat>type diff864.txt
Modified: colors.txt
=====
--- colors.txt 2007-04-10 17:29:28 UTC (rev 37)
+++ colors.txt 2007-04-10 18:10:05 UTC (rev 38)
@@ -1,3 +1,4 @@
   red
   blue
-magenta
+yellow
+magenta

Modified: flavors.txt
=====
--- flavors.txt 2007-04-10 17:29:28 UTC (rev 37)
+++ flavors.txt 2007-04-10 18:10:05 UTC (rev 38)
@@ -1,4 +1,3 @@
   vanilla
   peppermint
-yellow
-chocolate
+chocolate
```

More information on how to integrate Subversion with ExtraView can be found in supporting documentation that includes:

- The [ExtraView Administration Guide](http://www.extraview.com/supportcenter.htm) available from the ExtraView Support Center at <http://www.extraview.com/supportcenter.htm>
- The [ExtraView API and CLI Guide](http://www.extraview.com/supportcenter.htm) available from the ExtraView Support Center at <http://www.extraview.com/supportcenter.htm>
- Direct calls to the ExtraView API may be made from any program or script that supports HTTP requests or "URL GETS". Use of direct ExtraView API calls obviates the need for (and benefits of) the ExtraView CLI
- The [Version Control with Subversion](http://svnbook.red-bean.com) is downloadable from <http://svnbook.red-bean.com>