**Performing Static Analysis on the Server With the Help of PVS-Studio**

**Installing software**

To do the static analysis on the server using PVS-Studio, you should install the following programs and components:

* **PVS-Studio** - static code analyzer for C, C++ and C# programs.
* **CruiseControl** - a tool for the automaton of processes on the server
* **IncrediBuild** – software for running the project analysis on multiple computers in multiple threads. This software significantly increases the analysis speed.
* **Python** - convenient high-level scripting language,
* **PVS-Config** - a folder with configuration files, scripts and utilities needed for the analysis.

Detailed description of PVS-Studio, CruiseControl, IncrediBuild, Python installation process can be found in the internet.

Installing PVS-Config:

* unpack the archive into the folder C:\PVS-Config,
* create symbolic links using the script Make%Server%Symlinks.bat.

**Static analysis with the help of PVS-Studio**

The simplest way to do the analysis is to run the PVS-Studio plugin in the Visual Studio. To do this it is necessary to execute in the terminal a command of such a kind:

devenv.exe %Project% /command "PVSStudio.CheckSolution Win32|Release|%PlogFile%|||SuppressAll"

Detailed description of this method is given in the document: <http://www.viva64.com/en/d/0001/>.

But the practice showed that it is not enough for big projects: Analysis would randomly crash after a few hours of work. Therefore special scripts and utilities were deloped:

* PVS-Analyse.bat - restart and time control,
* SlnSplitter.py - splitting of solutions,
* PlogCombiner.exe - combining plog-files.

**PVS-Studio Setup**

PVS-Studio settings are located in the file: "%appdata%\Roaming\PVS-Studio\Settings.xml". This allows you to change the settings depending on the type of analysis (such as x 86, x 64, IncrediBuild) by means of creating a copy with the replacement of this file.

To reduce the number of similar files we developed XML Patcher utility. It creates a new XML file from an XML- template with minor changes.

**CruiseControl**

CruiseControl allows you to automate the analysis run on the server. To simplify the debugging process some CruiseControl tasks were moved to batch files.

# Using PVS-Studio with continuous integration systems is described in the document: <http://www.viva64.com/en/d/0006/>.

**IncrediBuild**

IncrediBuild is used to speed up the workflow.

**PVS-Studio Reports**

Initially the general report was created by the PlogConverter inutility, that was then sent to the specified e-mail addresses with the help of sendEmail utility.

Now PlogConverter allows you not only to have a general report, but also to send individual e-mails to the authors of the bugs. Too see the list of command line parameters type in the terminal the following command: «PlogConverter.exe –help».