# Continuous Integration with CruiseControl.Net

**Part 2**

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## CruiseControl.Net Web Dashboard

In part 1 of Continuous Integration with CruiseControl.Net [Part1] I described creating a simple, but effective, continuous integration configuration for Aeryn [Aeryn] using CruiseControl.Net.

Another feature of CruiseControl.Net [CCNet] is the Web Dashboard. The documentation describes the Dashboard as follows: "The CCNet Web Dashboard Application is used for reporting a wide range of information. At one end of the scale it reports summary details of all projects in your organisation and at the other it can give specific metric output for any specific build." Features of the Web Dashboard include:

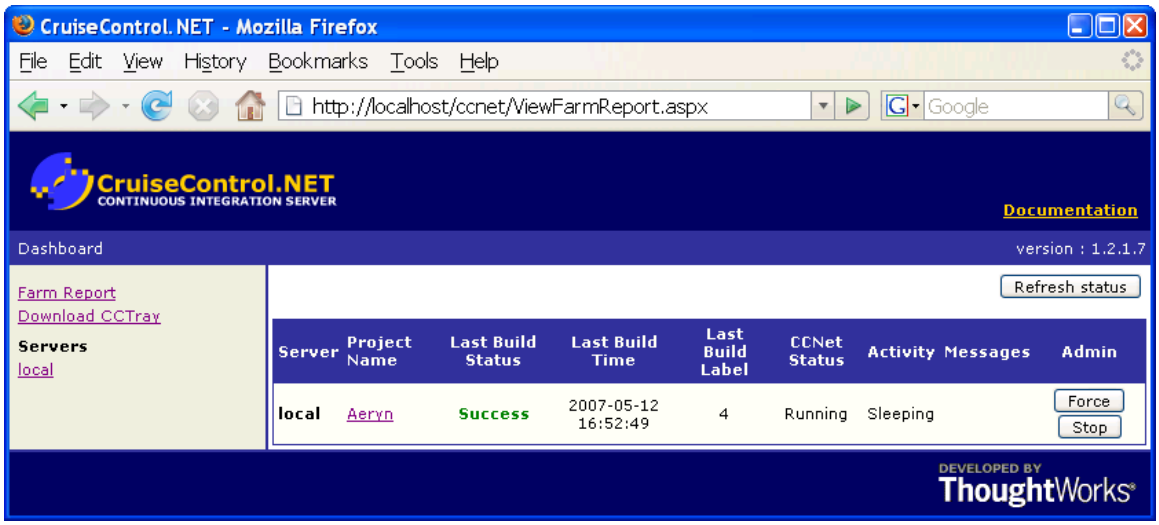
- Multi-project, multi-server support - 1 Web Dashboard deployment can report over all the CCNet projects in your organisation so there is no need for multiple instances of a web application.
- A significant set of 'plugins' to support various reporting and configuration features
- Plugin API supports custom features at various groupings of build, project, etc.
- Plugin API supports a complete code interface, enabling significantly richer plugins than were available with the old Web Application.

In part 2 I am going to look at some of the Web Dashboard features and at getting the standard web interface installed.

## CruiseControl.Net Web Dashboard Features

The Dashboard is accessed via a web browser by specifying the name of the CruiseControl.Net server and the `ccnet` virtual directory (e.g. http://localhost/ccnet/). The Dashboard has four views: Farm, Server, Project and Build. The default view, Farm, is shown below.

The CruiseControl.Net documentation can be access via the link from any view. The location bar near the top of the page shows the user where they are and allows navigation.




CruiseControl.Net Web Dashboard Farm Report

## Farm View

The farm view shows all the projects that are running on the server and their status and allows them to be stopped and started or a build forced.

There is a link to the CCTray installer. This is useful when CruiseControl.Net is first deployed to a team. Each team member should have CCTray installed on their local machine and this is an ideal way to distribute it.

There is also a link to the Server view and the Project view can be accessed by clicking on the project name.

## Server View

The server view gives access to the server logs and server information. Being able to access the server logs via the Dashboard negates the need to go onto the server when configuration and build issues need to be investigated. The Dashboard could be improved by showing the server log in real time.

The server information page lists the servers in the system and the CruiseControl.Net software version.

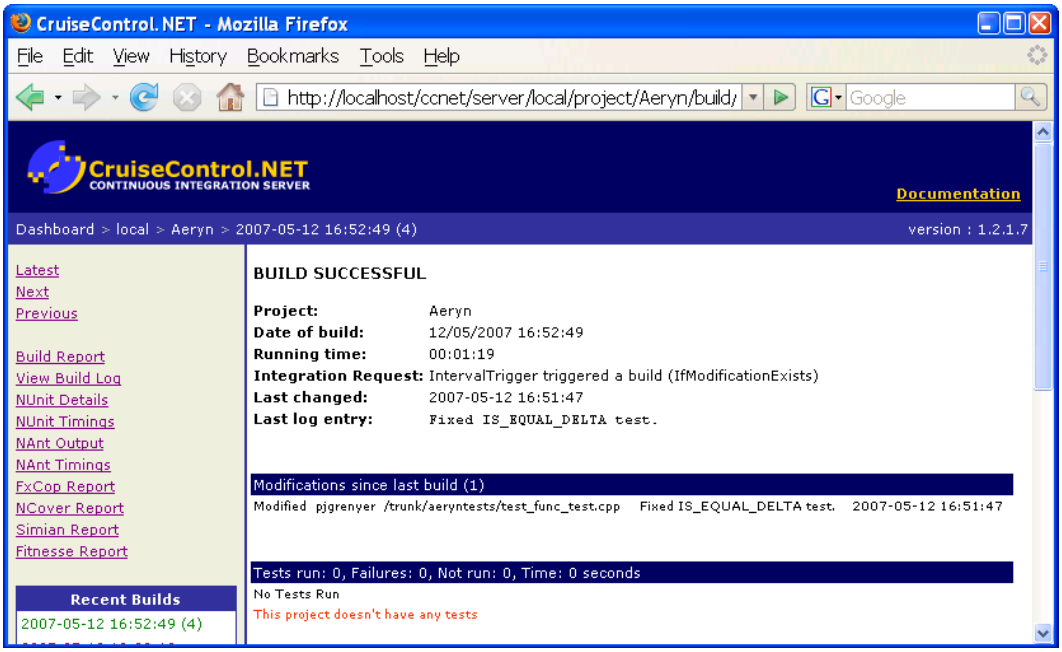
## Project View

The project view is accessed by clicking on a project name from the Farm view. It gives a list of all the recent builds for the project. Successful builds are colour coded green and unsuccessful builds are colour coded red.

There are links to the most recent build report, the project statistics (if they have been implemented), the server log and the project configuration from `ccnet.config`.

## Build View

The Build view is by far the most useful view. Primary it shows the results of latest builds. This is especially useful if for some reason emails are not being sent out or if emails have been deleted and previous build results need to be checked as the build report shows exactly the same information as generated by the email publisher.




Build Report

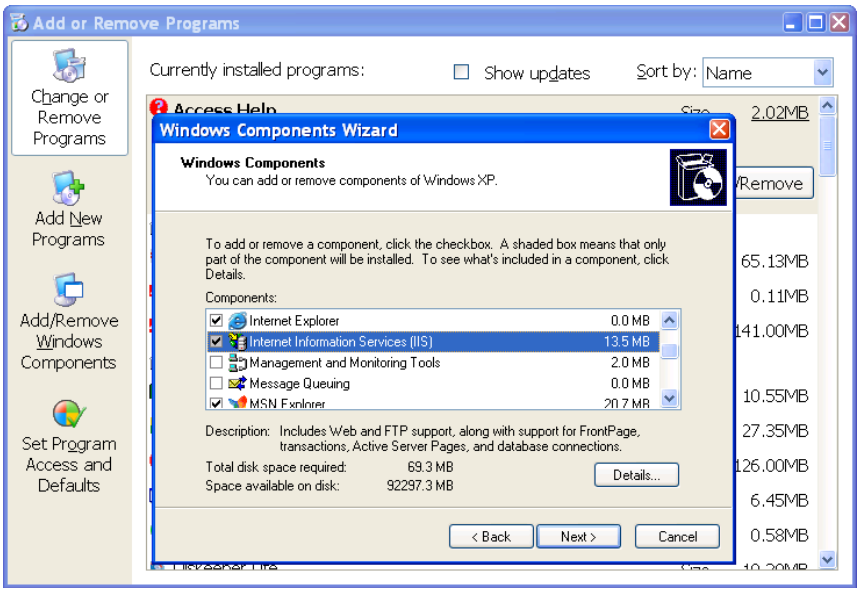
Some of the other features of the build view are the build log, which shows the output from the build. The NUnit details and timings which show the results from running any NUnit tests and the output and timings for any NAnt builds. There is also support for third party analysis tools such as FXCop [FXCop] and NCover [NCover] that I intend to cover in future articles.

## Installing Internet Information Services

The Dashboard is implemented in ASP.Net and requires Microsoft's Internet Information Services [IIS] to run on the same machine as CruiseControl.Net. IIS is included as a package with Windows XP Professional, but is not installed by default. It can be installed via the Windows Component Wizard which is opened by pressing the Add/Remove Windows Applications button on the Add or Remove Programs window accessed from the Windows Control Panel. Put a tick in the Internet Information Service (ISS) box and click next. When the setup has finished click Finish.

To test that ISS is installed and working, open a web browser and enter the URL http://localhost/ (you can also use the host name or IP address). If everything has worked a page will be displayed with the message: "Your Web service is now running."

Windows XP Professional includes version 5.1 of IIS. Later versions have a different default page with a similar message.




Windows Component Wizard

Some people consider IIS a security risk so it is important to make sure you are also running the latest Microsoft Windows updates and check with the relevant system administrators before installing it.

## Configuring the Web Dashboard for IIS

If IIS was installed prior to CruiseControl.Net and the default install options were not changed, then the Web Dashboard will already be configured for IIS. If IIS was not already installed or the right install options were not selected, the easiest way to configure the Dashboard is to rerun the CruiseControl.Net installation. This will create the necessary IIS virtual directory.

Start by backing up `ccnet.config` and `ccnet.exe.config` from the CruiseControl.Net `server` directory (usually located in `C:\Program Files\CruiseControl.NET`). The Dashboard only installation should not overwrite the existing configuration, but it is better to make a backup just in case.

1. Run the CruiseControl.Net MSI installer from the CruiseControl.Net website.
2. On the Choose Components screen uncheck CruiseControl.net Server and Examples (leaving only Web Dashboard checked).
3. Leave the Additional Components screen unchanged (ensuring that Create virtual directory for Web Dashboard is ticked).
4. Complete the installation.

To check that the virtual directory has been setup correctly, make sure CruiseControl.Net is running from the command line or as a service (the Dashboard works with either) and then go back to the web browser and enter the URL http://localhost/ccnet/. IIS must be configured for ASP.Net, so this will bring up the source for the default Dashboard ASP page which begins:

```
<!--
Note to people reading source code - CruiseControl.NET includes an HttpHandler
which handles all .aspx requests. This file, default.aspx, should never be
processed by 'normal' ASP.NET and is here just as a page to explain configuration
problems
-->
…
```

There are instructions on the CruiseControl.Net website for manually configuring the Dashboard for IIS, but they're not particularly comprehensive and using the installer is much easier.

## Configuring IIS for .Net

When multiple versions of .Net are installed IIS needs to be configured to use a particular version. To do this open a command prompt and go the directory (e.g. `v2.0.50727`) of the .Net version to be used, which is usually in `C:\WINDOWS\Microsoft.NET\Framework` and type:

```
aspnet_regiis.exe -i
```

`aspnet_regiis.exe` is an ASP.Net registration tool. The `-i` parameter, according to the help, installs Asp.net and updates the scriptmaps at the IIS metabase root and for all scriptmaps below the root. Existing scriptmaps of lower versions are upgraded to the same version.

The Dashboard and ISS configuration is now complete. Going back to the web browser and refreshing or re-entering http://localhost/ccnet/ will bring up the Web Dashboard.

## Acknowledgments

Thank you to Roger Orr for his review.

## References

[Aeryn] http://www.aeryn.co.uk/
[FXCop] http://www.gotdotnet.com/Team/FxCop/
[NCover] http://www.ncover.org
[Part 1] Integration with CruiseControl.Net – Part 1
[IIS] http://www.microsoft.com/windowsserver2003/iis/default.mspx
[CruiseControl.Net] http://ccnet.thoughtworks.com/