



RAYV CHANNEL MONITORING SETUP GUIDE

VERSION 1.0

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INTRODUCTION

The Rayv Channel Monitoring (RVCM) is a monitoring system for the RayV Broadcaster application. Each Broadcaster application needs to be configured to send its monitoring information to RVCM.

RVCM has two major components:

- RVCM Service - listens to incoming messages from the broadcasters. This is a WCF application installed as a Windows Service on the RVCM machine. It can be configured to run automatically or manually via the Services utility in Windows.
- RVCM Management Application – an ASP.net application that is used for viewing the monitoring alerts via Firefox Web browser. This application is running on an IIS Web server. Both are installed on the same machine as the RVCM service.

HARDWARE REQUIREMENTS

- Windows 2003 x64bit Server with quad-core CPU
- 4 GB RAM
- 146GB Raid 1 disk space

NETWORK REQUIREMENTS

- Allow outgoing http (SOAP) traffic on port 80 from all your RayV Broadcasters to RVCM server.
- Allow incoming http (SOAP) traffic on port 80 on your RVCM server.
- Allow http traffic to the RVCM Web admin workstation on port 8080 (a different port can be configured).
- For remote control only (not mandatory): allow incoming TCP traffic from RVCM machine to any of your broadcaster instances using a different port. See page 14.

PRE-REQUISITE SOFTWARE REQUIREMENTS

For running RVCM, the following pre-requisite software components need to be installed on the RVCM machine:

- Microsoft .Net 3.5 framework with Service Pack 1.
- Microsoft SQL Server (or SQL Express) 2008 edition.
- Microsoft IIS Web platform.
- Firefox 3.6.8 or higher, for accessing the RVCM Admin UI (only this browser is currently supported).

This documentation will describe how to install and configure RVCM.



INSTALLATION

RVCM SOFTWARE PACKAGE

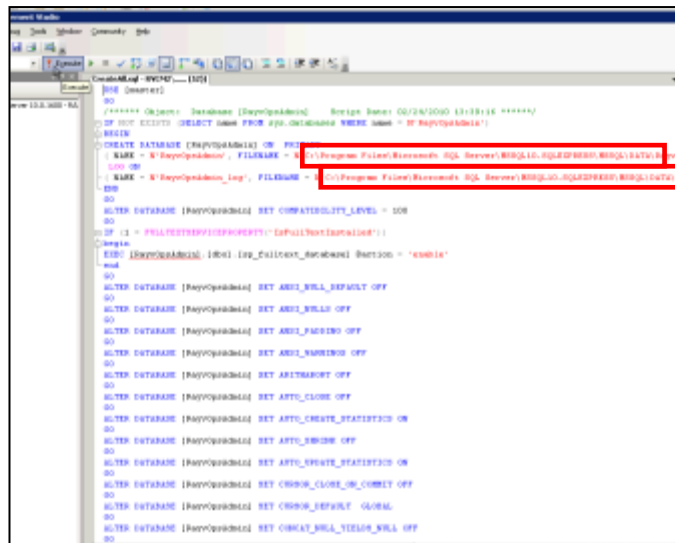
Unzip the RVCM application zip file into a folder on the RVCM machine.
C:\rvcm is used as the default root folder in this installation guide. The package includes the following folders:

- WindowsHost - the RVCM Windows service application
- RVCMSite - the RVCM Web admin. application
- SQL - the .sql scripts to execute on the SQL dB
- SenderTest - a test project to confirm the RVCM configuration.

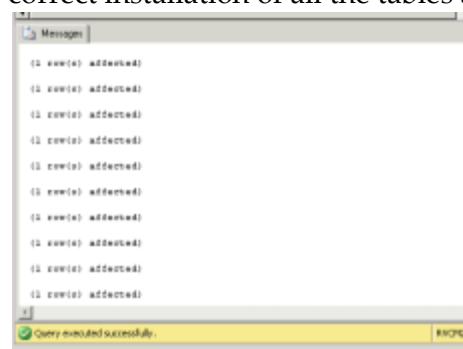
NOTE if you have chosen to install RVCM not under the default directory, you will need to modify the configuration files under .../RVCMSite/web.config, .../WindowsHost/Log4Net.config accordingly.

CONFIGURING THE RVCM DATABASE

1. Launch the SQL Server management Studio and log in
2. From The main menu/toolbar select "Open file" and choose the file that is located under C:\rvcm\sql\createAll.sql.
3. Look for 'NAME = N'RayvOpsAdmin' and 'NAME = N'RayvOpsAdmin_log' at the beginning of the script, and in the value FILENAME change the path c:\Program Files\Microsoft SQL Server\MSSQL10.SQLEXPRESS\MSSQL\DATA\ to the full path of the DATA folder of your installed MS SQL server (see image below).



- Click on the **! Execute** Button to execute the script.
- When the scrip has finished running you will see a message approving the correct installation of all the tables and procedures



Installing the RVCM Service

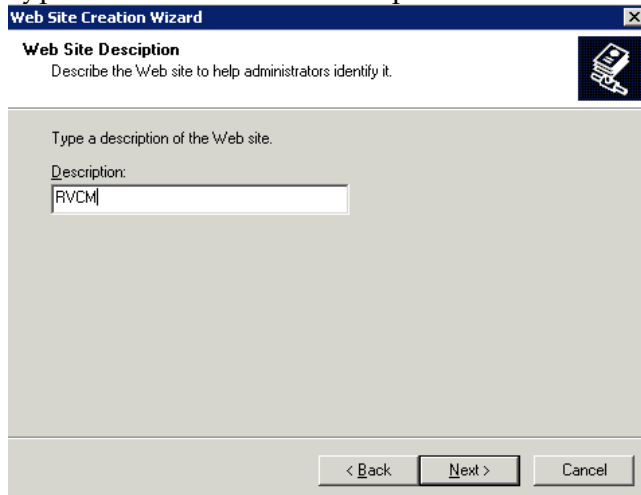
1. **IMPORTANT:** prior to installing the RVCN Service, there is a need to configure the “Connection String” of the database to point to the actual RVCN machine and dB instance. There are 2 steps to perform:
 - a. Under the registry key "HKEY_LOCAL_MACHINE\Software\RayV\RVCN" create a string value "Database" and set it to the correct connection string, for example "Data Source=NYCRVCN01\SQLEXPRESS;Initial Catalog=RayvOpsAdmin;Integrated Security=True". While `NYCRVCN01` is the machine name where RVCN and the SQL servers will be installed and `SQLEXPRESS` is the dB instance name that can be removed if you are using the default MS SQL installation and not SQL Express. If your MS SQL installation does not use the default dB instance value, please change this value to your custom SQL dB instance name.

- b. This connection string's data source value mentioned above also appears in RVCN configuration files as `connectionString="Data Source=RVCN\SQLEXPRESS` and also needs to be changed before you can start RVCN installation process. As above, RVCN is the machine name where RVCN and the SQL servers will be installed and `\SQLEXPRESS` is the dB instance name that can be removed if you are using the default MS SQL installation and not SQL Express. If your MS SQL installation does not use the default dB instance value, please change this value to your custom SQL dB instance name. The connection string value is present in the following RVCN configuration files:
 - ... \WindowsHost\RVCNWindowsHost.exe.config
 - ... \WindowsHost\app.config
 - ... \RVCNSite\Web.config.
2. To register the RVCN service as a Windows service, the command tool *InstallUtil.exe* located under `c:\Windows\Microsoft.NET\Framework\v2.0.50727` should be used.
3. The batch file *InstallService.bat* in the RVCN WindowsHost Directory can be used to run this utility as follows:
 - a. Open a command prompt and direct it to the root folder (`c:\rvcm`)
 - b. Enter "installService.bat" and press enter.
 - c. The service should be installed successfully.
 - d. Open the Window Services utility and make sure the RVCN service appears there.
4. After the service has been installed you can run it by clicking on the "run" button on the services toolbar. If the service was installed correctly then it will start to run and writes its logs to `C:\logs\CMLog.txt`.
5. Locate this file and ensure the following line appears: "Starting the Channel Monitoring Service Hosting On Windows".

To un-install the service, make sure it is not running (click on the stop button on the services window) and then run the "unInstallService.bat" script that is located on the same folder.

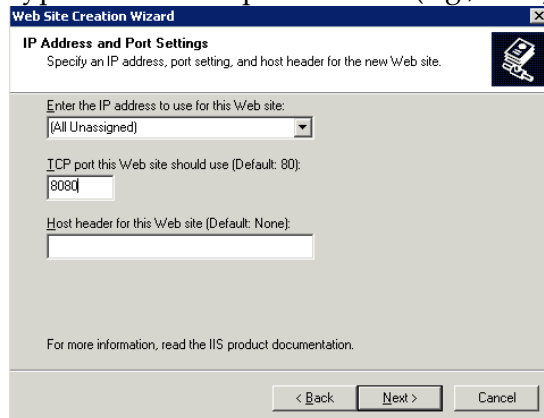
INSTALLING RVCM ADMINISTRATION APPLICATION

1. Type *inetmgr* in Start/Run command box.
2. Select *Create a new Web Site* and follow the step-by-step instructions on your screen.
3. Type the site name and description



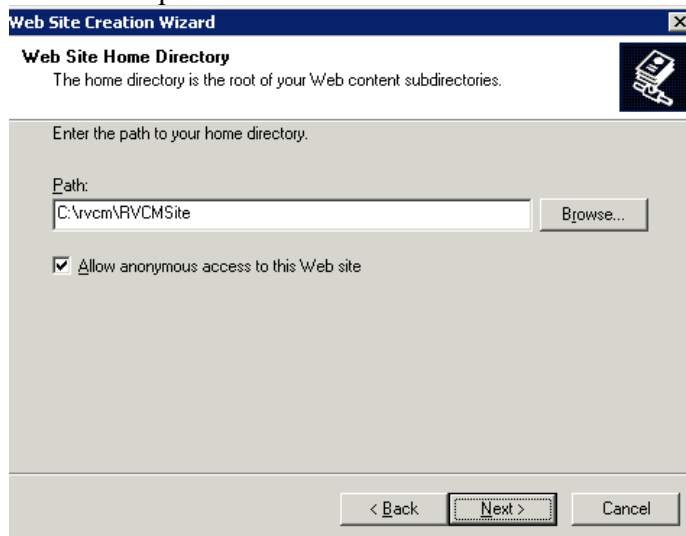
The screenshot shows the 'Web Site Creation Wizard' window, specifically the 'Web Site Description' step. The window title is 'Web Site Creation Wizard'. Below the title bar, the text 'Web Site Description' is followed by the instruction 'Describe the Web site to help administrators identify it.' There is a small icon of a floppy disk with a plus sign. The main area contains the text 'Type a description of the Web site.' followed by a label 'Description:' and a text box containing the text 'RVCM'. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.

4. Type the site TCP port number (e.g., 8080).

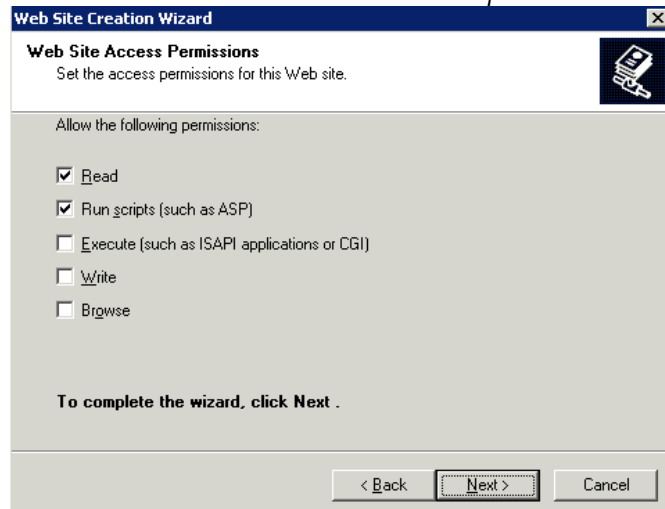


The screenshot shows the 'Web Site Creation Wizard' window, specifically the 'IP Address and Port Settings' step. The window title is 'Web Site Creation Wizard'. Below the title bar, the text 'IP Address and Port Settings' is followed by the instruction 'Specify an IP address, port setting, and host header for the new Web site.' There is a small icon of a floppy disk with a plus sign. The main area contains three sections: 'Enter the IP address to use for this Web site:' with a dropdown menu showing '(All Unassigned)', 'TCP port this Web site should use (Default: 80):' with a text box containing '8080', and 'Host header for this Web site (Default: None):' with an empty text box. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.

5. Choose the path to the RVCMSite folder.



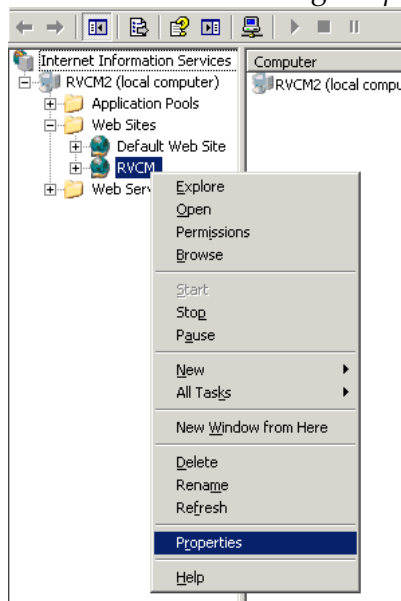
6. In Access Permissions check *Run Scripts*



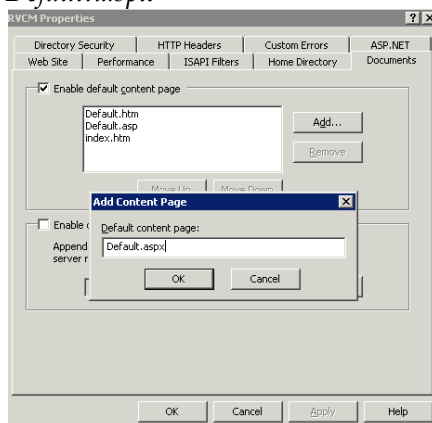
7. Press *Finish* to complete the installation.



8. Configure the default RVCM Web admin application page by right clicking on the RVCM site and choosing *Properties*

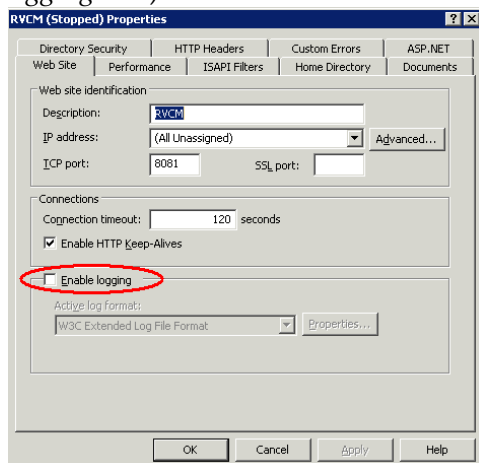


9. Open the *Documents* tab and press *Add*. Enter the name of the first page *Default.aspx*

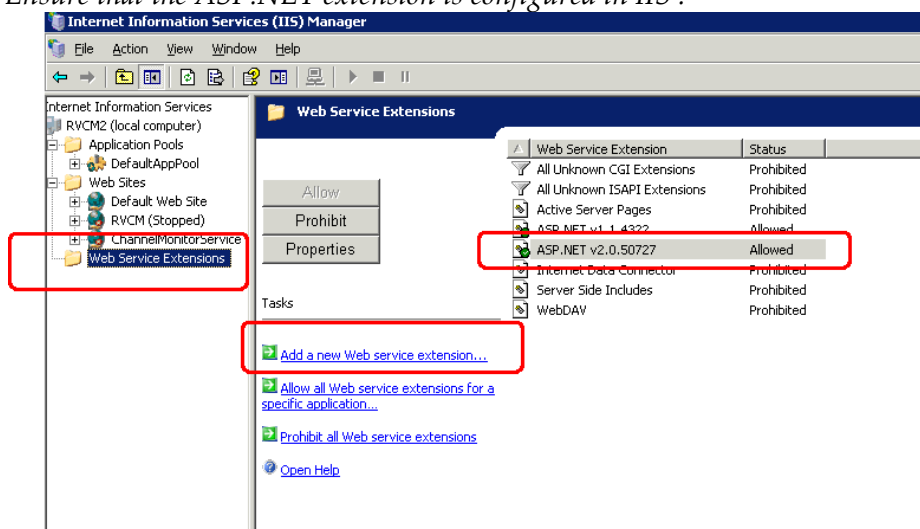


10. Remove all the other items in the list.

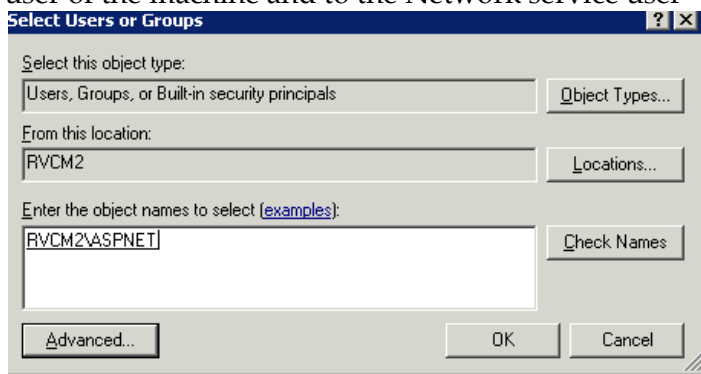
11. Make sure the site is configured to allow anonymous login (uncheck the *Enable logging* box).



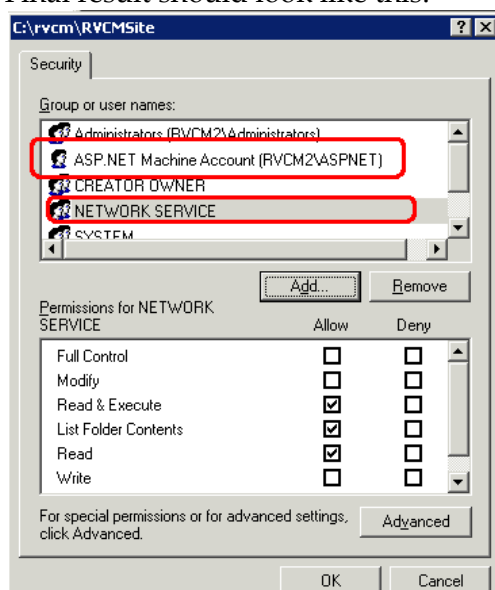
12. Ensure that the ASP.NET extension is configured in IIS :



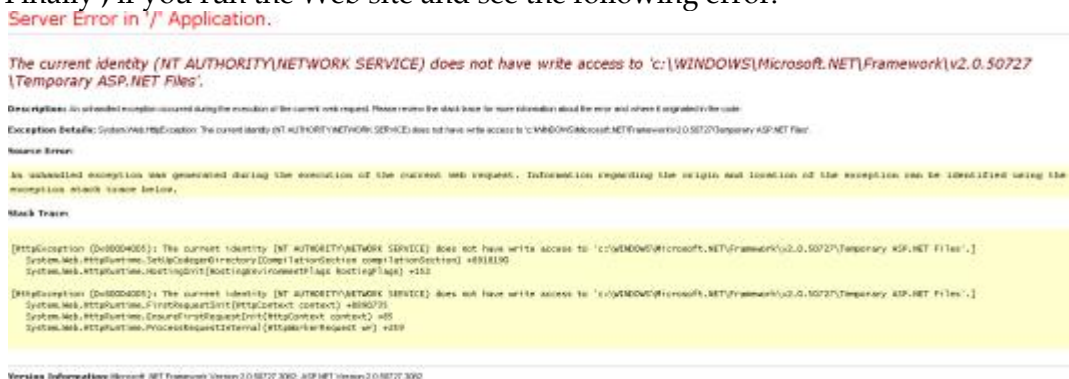
13. If it does not exist ,simply click “Add a new Web Service” and point it to the C:\windows\Microsoft.net\Framework\v2.0.50727\aspnet_isapi.dll
14. You will need to add users and permissions. First, right click on the WebSite and select properties -> Permission. you will need to add permission to the ASP.NET user of the machine and to the Network service user



15. Final result should look like this:



16. Finally , if you run the Web site and see the following error:



17. Then it means that you don't have writing permissions to the
C:\windows\Microsoft.net\Framework\v2.0.50727\Temporary ASP.NET files
Add a permission to the NETWORK_SERVICE user for this directory.
18. After you have completed the RVCN application installation successfully, the
RVCN admin UI can be accessed using FireFox browser at the following URL:
http://<IP address of the RVCN machine >:<configured port>/default.aspx.

NOTE Make sure that in your Firefox browser you are running without a proxy (i.e., in Connection Settings screen accessed via choosing Tools/Options menu, Advanced/Network tabs/Settings button, make sure No Proxy option is checked).



CONFIGURATION TEST

This section describes the steps that need to be performed in order to test the RVCN configuration.

1. Using command prompt, go to and run `c:\rvcm\SenderTest\RVCN_Sender.exe -u <arg> -c <arg> -e <arg> while`
 -u Username. Grouping channels
 -c Comma separated list of channel names to send to
 -e Server URL
 Example: `c:\rvcm\SenderTest\RVCN_Sender.exe -e http://127.0.0.1:8080/channelmonitorservice -u first_bc -c channel1,channel2 -u second_bc -c channel3,channel4`
2. This test simulates Broadcaster data submission from 2 channels every second. Make sure that the calling to the service is successful.
3. You still need to open the dB to make sure that the records were indeed recorded into the dB.

Browse to the site as was configured in the IIS (see section 18 on page 11). Check that the RVCN admin site is up and running.

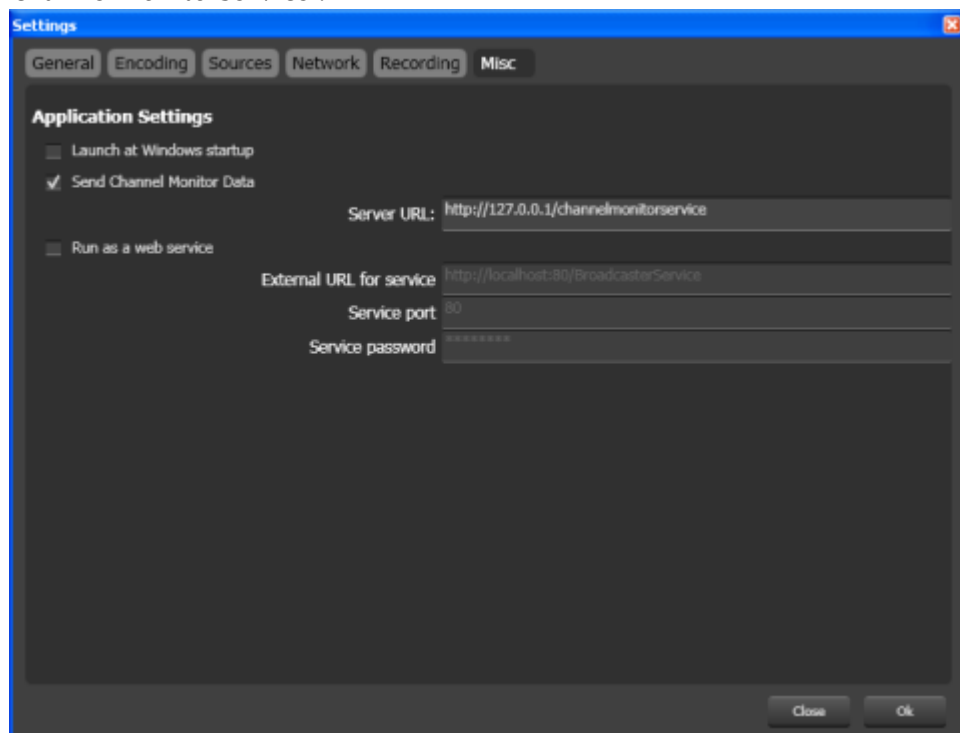
Channel Name	Status	Joined	Total Upload	Video Bitrate	Video Fps	Audio Bitrate	Audio Fps	Total CPU	Memory	Last Message
engrpat7_ua	Connected	true	73	14	48	0	0	35	182	Thursday, August 05, 2010 11:09:21.
engrpat6_ua	Connected	true	508	427	25	46	43	14	249	Thursday, August 05, 2010 11:09:23.
mnus_aydanc	Connected	true	41	21	25	0	0	49	240	Thursday, August 05, 2010 11:09:21.
obadencbd	Connected	true	995	624	29	63	43	43	179	Thursday, August 05, 2010 11:09:23.
daupatrickb_og_3r	Connected	true	750	690	29	63	43	21	375	Thursday, August 05, 2010 11:09:23.
foroccer3	Connected	true	154	52	34	75	43	10	371	Thursday, August 05, 2010 11:09:24.
trypolina	Connected	true	570	186	25	63	43	54	264	Thursday, August 05, 2010 11:09:21.
foroccer4	Connected	true	121	25	29	75	43	36	331	Thursday, August 05, 2010 11:09:24.
chliblagv	Connected	true	1025	948	25	96	43	46	593	Thursday, August 05, 2010 11:09:24.
campop	Connected	true	477	229	24	56	42	46	458	Thursday, August 05, 2010 11:09:23.

BROADCASTER CONFIGURATION

SENDING DATA FROM RAYV BROADCASTER TO RVCN

Configure your broadcasters to send data to RVCN as follows:

1. From the Broadcaster *View* menu choose *Settings*.
2. Choose *Misc* tab.
3. Check the *Send Channel Monitor Data* box and type 'http://<RVCN server IP
4. address>/channelmonitorservice'. Note: please do not change the value 'channelmonitorservice'.



CONFIGURE THE BROADCASTER FOR RVC REMOTE CONTROL

If you are logged in to RVC as administrator (username and password to be provided by RayV), you can control the broadcaster restarts via RVC admin UI.

To configure your broadcasters to enable RVC remote control you need to do the following:

1. From the Broadcaster View menu choose Settings.
2. Choose Misc tab.
3. Check the *Run as web service* box and type the following:
 - a. In the *External URL for Service* field type: 'http://<RVC server IP address>:<RVC port>/BroadcasterService'.
Note: please do not change the value 'BroadcasterService'.
 - b. In the *Service port* field type the TCP port you have opened for incoming traffic between RVC machine and the broadcaster machine (needs to be configured in your Firewall, see page 2).
 - c. In the *Service password* type the password that you need to set in the web.config file of the RVC admin application. Using notepad, open the web.config file, look for the field 'controlPassword' and change its value to a password of 8 characters. This password needs to be configured on any of your broadcasters you would like to control via RVC.

