



Harmony Data Transfer

Prerequisites

Software versions

- Columbus v2.4 or higher
- Harmony v3.5 or higher

Network configuration

- TCP ports 80 and 8081 must be open on both the Columbus server and Harmony client machine.

Configuring the Columbus Server

Tomcat

The tomcat6 service on the Columbus server must be running. To start the service, connect to the Columbus server (via PuTTY/Terminal) as the 'columbus' user and issue the following command:

```
$ sudo /etc/init.d/tomcat6 start
```

Name Resolution

For the online transfer to be successful the Columbus server must be able to translate the Harmony computer name (e.g. 'orpt1234') into an IP address, i.e. you must be able to successfully ping the Harmony workstation by its hostname from the Columbus server.

```
$ ping -c3 hostname
```

There are two ways to achieve this:

- i) Add a DNS record for the Harmony workstation so that hostname to IP translation is successful between the Columbus server and Harmony workstation. This is the preferred solution because the connection would survive IP changes, but it is a job for local IT. It may also be necessary to add a search clause in the `/etc/resolv.conf` file so that the domain name in question can be resolved e.g. 'revvity.com'.
- ii) Add a line to the `/etc/hosts` file on the Columbus server which lists the IP address and hostname of the Harmony workstation. The Harmony workstation must have a static IP address if using this method.

Note: *The name resolution checks the `/etc/hosts` entries first and then the DNS server second.*

The workflow below details method ii), describing how to edit the `/etc/hosts` file on the Columbus server using the VIM text editor. You can use whichever text editor you feel most comfortable with, or even edit the file using a Windows based text editor via the WinSCP interface (whilst logged in as the root user).

1. Find the IP address of the Harmony workstation

- While on the Harmony PC, select the Windows 'Start' menu and into the search bar type `cmd.exe` then hit enter
- Once the command processor executable launches, type `ipconfig` at the prompt and hit enter
- Make a note of the IP address. Usually this is the IPv4 address.

2. Find the Hostname of the Harmony workstation

- At the command processor prompt, type `hostname` and hit enter
- Make a note of the hostname

3. Edit the `/etc/hosts` file

Connect to the Columbus server (via PuTTY/Terminal) as the 'columbus' user and issue the following command:

```
$ sudo vim /etc/hosts
```

- a) select the 'i' key to enter INSERT mode
- b) use the arrow keys on the keyboard to navigate to the bottom of the file and on a new line enter the IP address of the Harmony workstation followed by the hostname (these entries should be TAB separated)
- c) save the changes and exit the text editor by using the following keystroke combination (omitting the spaces)...

```
esc : w q !
```

(esc = escape key)

...now hit the enter key.

See below an example of how the new line should appear after editing.

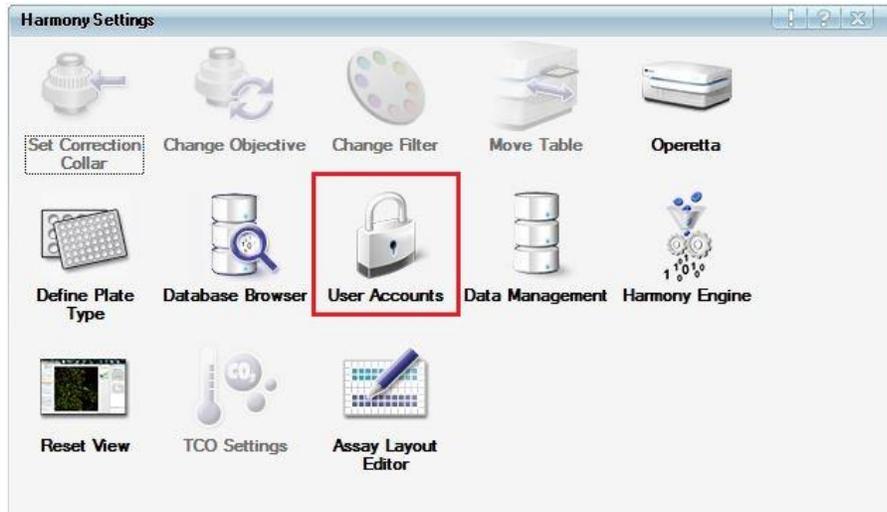
```
[root@BigRed ~]# vim /etc/hosts
127.0.0.1    localhost.localdomain  localhost.localdomain  localhost4      localhost4.localdomain4 localhost
160.84.173.102 BigRed          BigRed
160.84.173.80  oprt1234
```

4. Confirm that the hosts entry is working by successfully pinging the Harmony workstation by its Hostname from the Columbus server:

```
$ ping -c3 oprt1234
```

Configuring Harmony

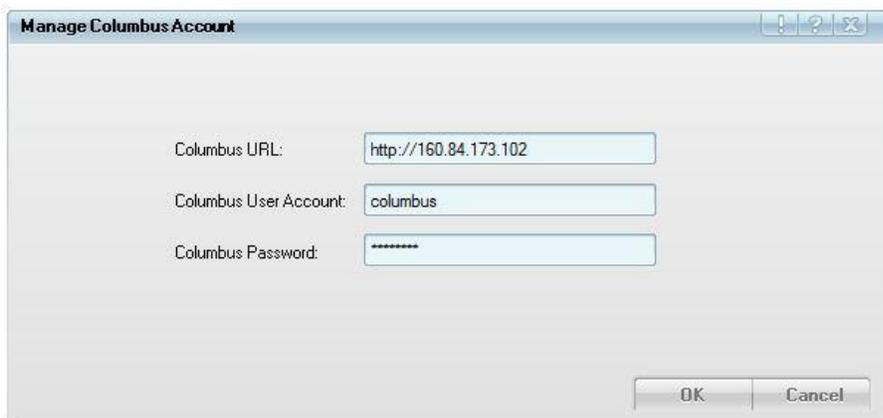
1. Log in to Harmony using the user account you wish to use to when transferring data to Columbus.
2. Select 'Settings' and click on 'User Accounts'.



3. Log in with the same credentials as in step 1.
4. Select 'Manage Columbus Account'.



5. Fill out the required fields then select 'OK'.



Columbus URL: IP address or hostname of the Columbus server.

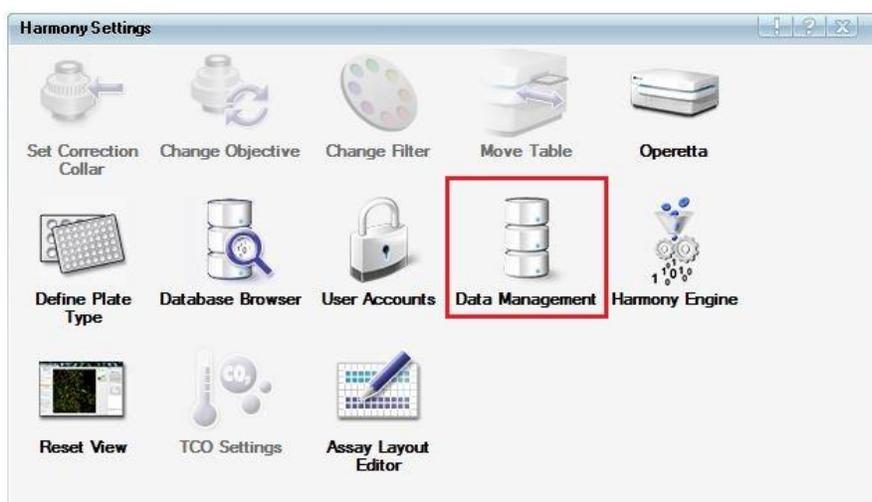
Columbus User Account: Columbus user account that the data will be transferred to.

Columbus Password: Password of the Columbus account that the data will be transferred to.

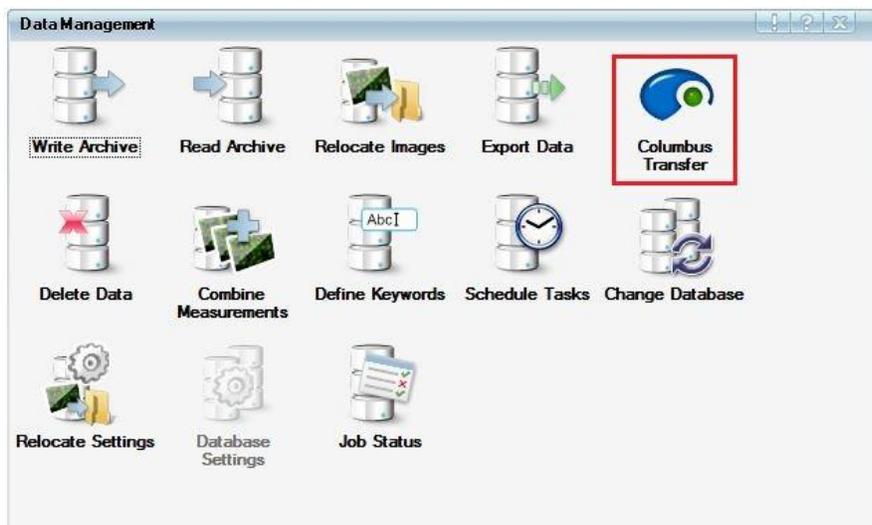
Note: If multiple Harmony user accounts are to be used for data transfer, steps 1-5 must be repeated once for each user account.

Transferring Data

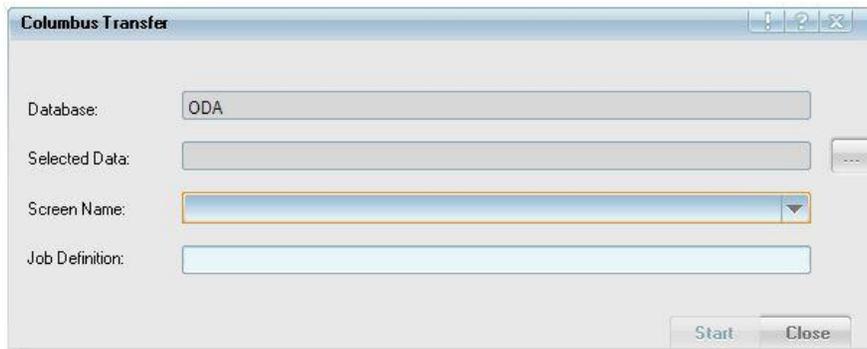
1. Log in to Harmony using the user account you wish to use to when transferring data to Columbus.
2. Select 'Settings' and click on 'Data Management'.



3. Select 'Columbus Transfer'.



- Now choose the data to be transferred and Columbus screen that the data should be transferred to.



- The progress of the transfer can be monitored via the Harmony and/or Columbus Job Status pages.