

King's College London : Wohl Cellular Imaging Centre

Opera Phenix Archive Writing

How to write an archive and not lose your data

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18/02/2020

Why Read This?

More than one person has managed to not be able to reliably save their data from the Opera Phenix as an archive

Archives are a proprietary storage solution for the software package Harmony and store the data and all the metadata in a manner that allows you to put the data back in to the Harmony

Why is this important?

You may want to reanalyze data at a later date or simply store the data long term with all the options that Harmony allows. If you 'Export' the data it cannot be re-imported.

What do I need to do?

Follow this short guide on how to perform and verify your archives are sound.

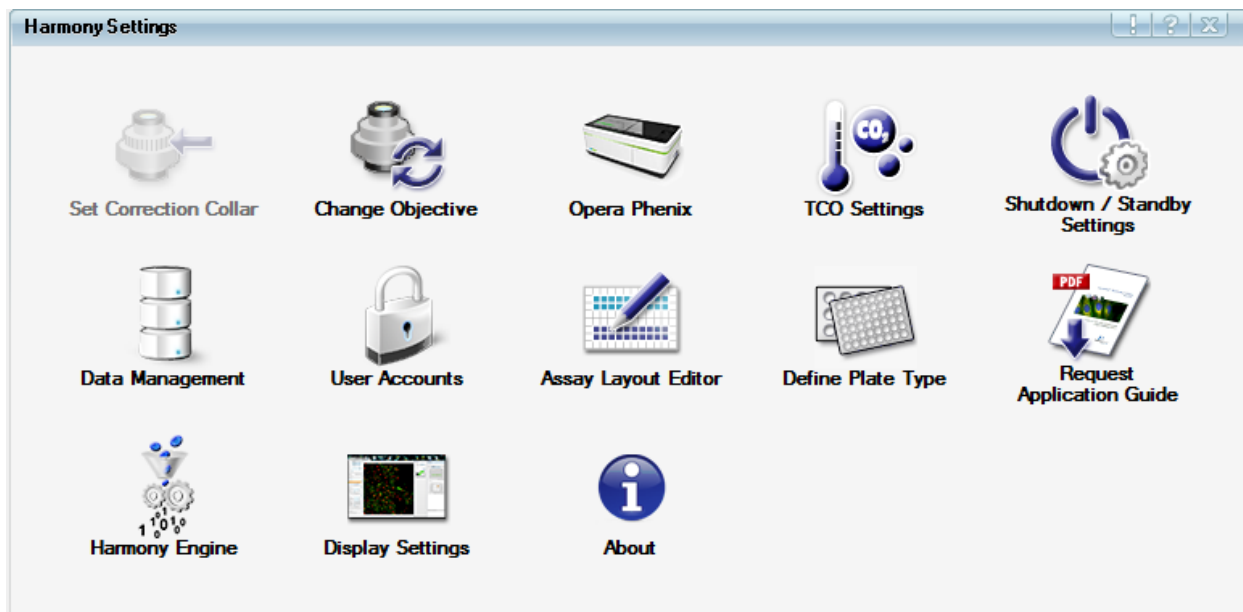
Book time on one of the workstations and use those.

Writing a Harmony Archive Successfully.

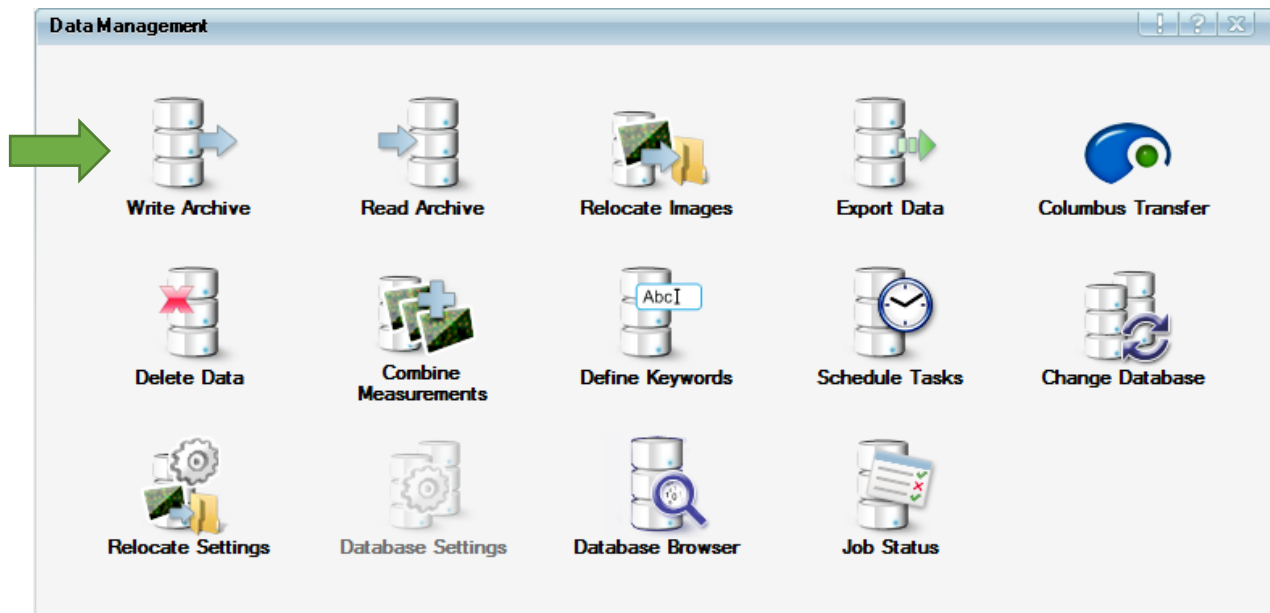
Writing an Archive

When you are on an analysis workstation (you will be charged for time on the Phenix computer)

Start by heading to the Phenix Settings Menu

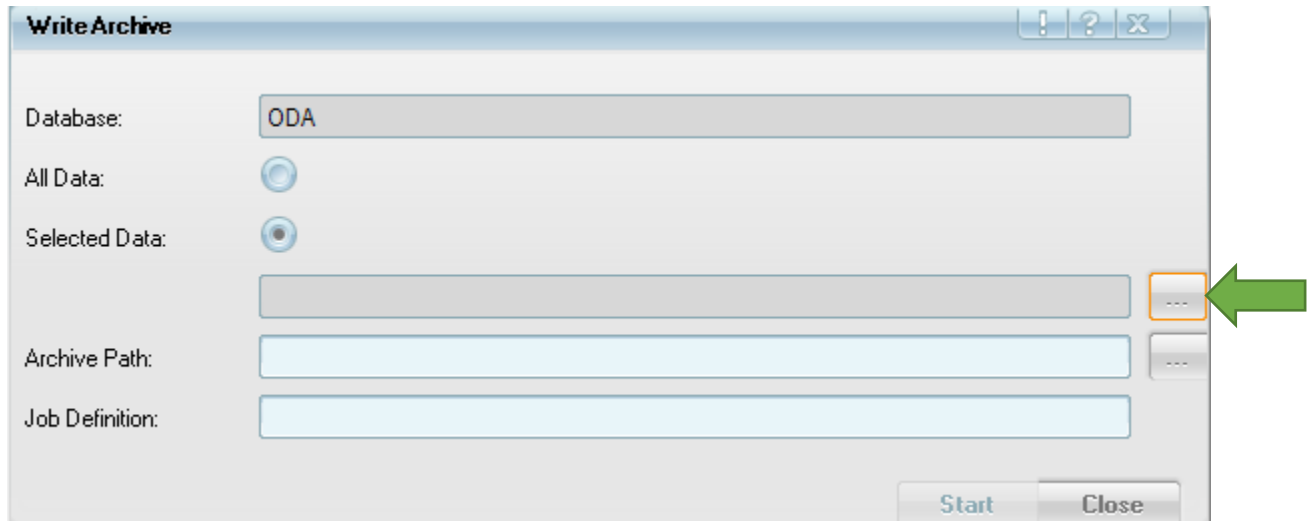


Select the Data Management menu



Writing a Harmony Archive Successfully.

Now Select the Write Archive Menu



Click on the dialogue button for the selected data (green arrow indicates)

First you will want to select which objects/data you want to put in the archive

You can store all Harmony object types – those are

Channels,

Plate type,

Assay Layouts,

Experiments,

Measurements,

Analysis Sequence

Evaluation Results.

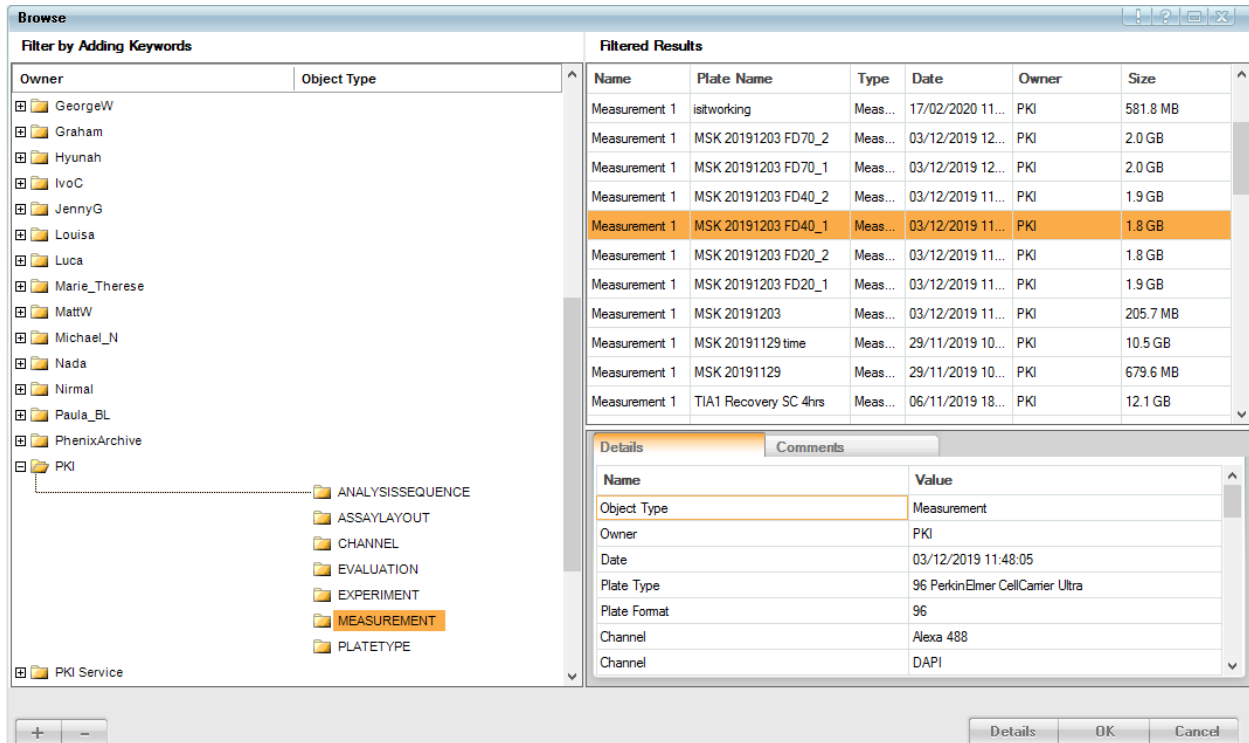
Probably the most important of these is the measurements as these are your image data

Writing a Harmony Archive Successfully.

The Object Browser window will appear and you can first navigate this in the left panel

There is an option to choose types of filter for this browser which can be chosen from the plus and minus icon at the bottom

If you deselect everything (from minus) it will not show anything – you will likely want to have Owner as the first layer here so you can find your objects/data



Then select the various objects/data you want to put in to your archive

The platenname will only show if you have the ‘Measurement’ filter selected from the filter panel (this can be quite annoying to start with!)

Add all the items you want but consider how much in terms of file size as this can quickly get too big

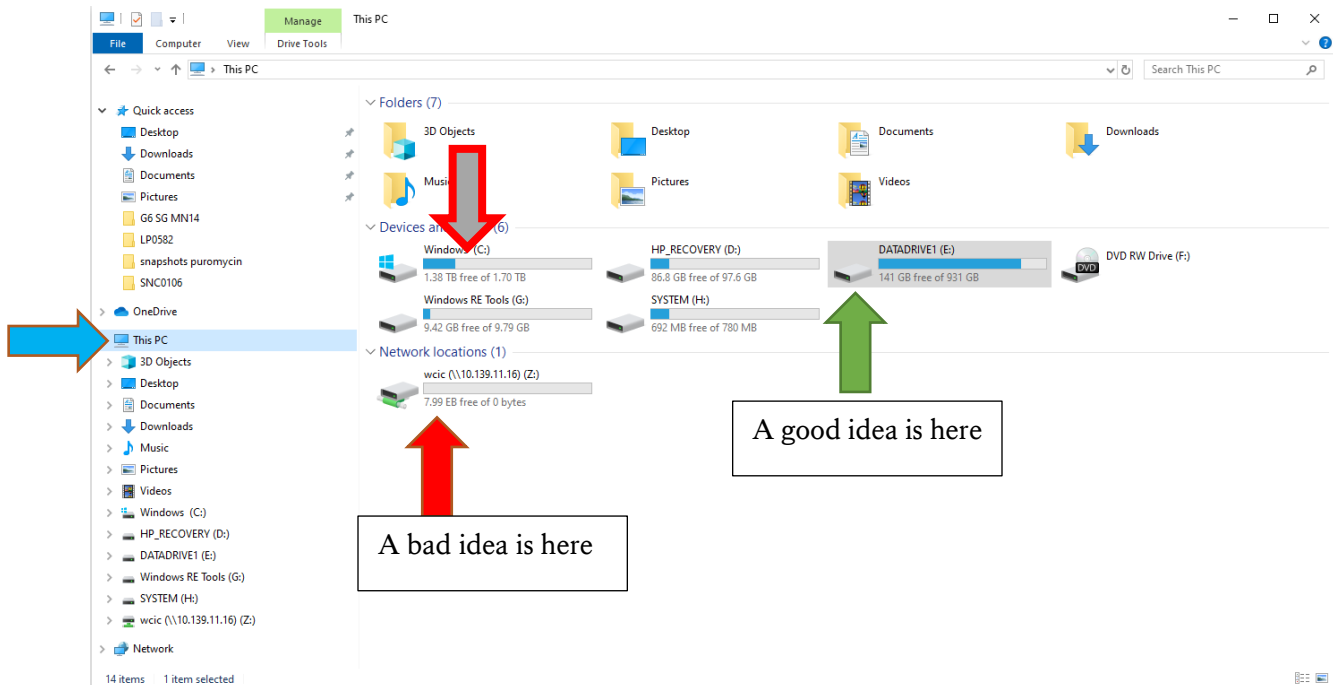
Writing a Harmony Archive Successfully.

You will need to CAREFULLY select the file path

FIRST – you are going to check there is space where you are going to write to

Please check that where you are writing to has space

Open a Normal Windows File explorer window



Please find your way to the “This PC” area (blue arrow) and click on this.

Investigate if the Datadrive (Green arrow) has enough space for your data – if not find something old to delete first.

If you choose to use the local user ‘My Documents’ or ‘Pictures’ folders you will need to be very cautious that the “Windows (C:)” (Grey and Red border Arrow) isn’t going to get totally full when you put your data in these types of folder – if the C drive fills the computer locks up...

It is not recommended to write archives directly to the network drive (Red Arrow) – this is the least reliable place – you will possibly move the archive there afterwards but never write it there.

The network drive may have been given a drive letter but it will be shown as something like wciic(//10.139.11.16)(W:) in the various browsers. You do not want to write the archives directly here.

Both of the Harmony workstations have relatively large data storage drives called Datadrive (Green Arrow). Write your archives in a folder in one of these and you will most likely have a good experience.

Writing a Harmony Archive Successfully.

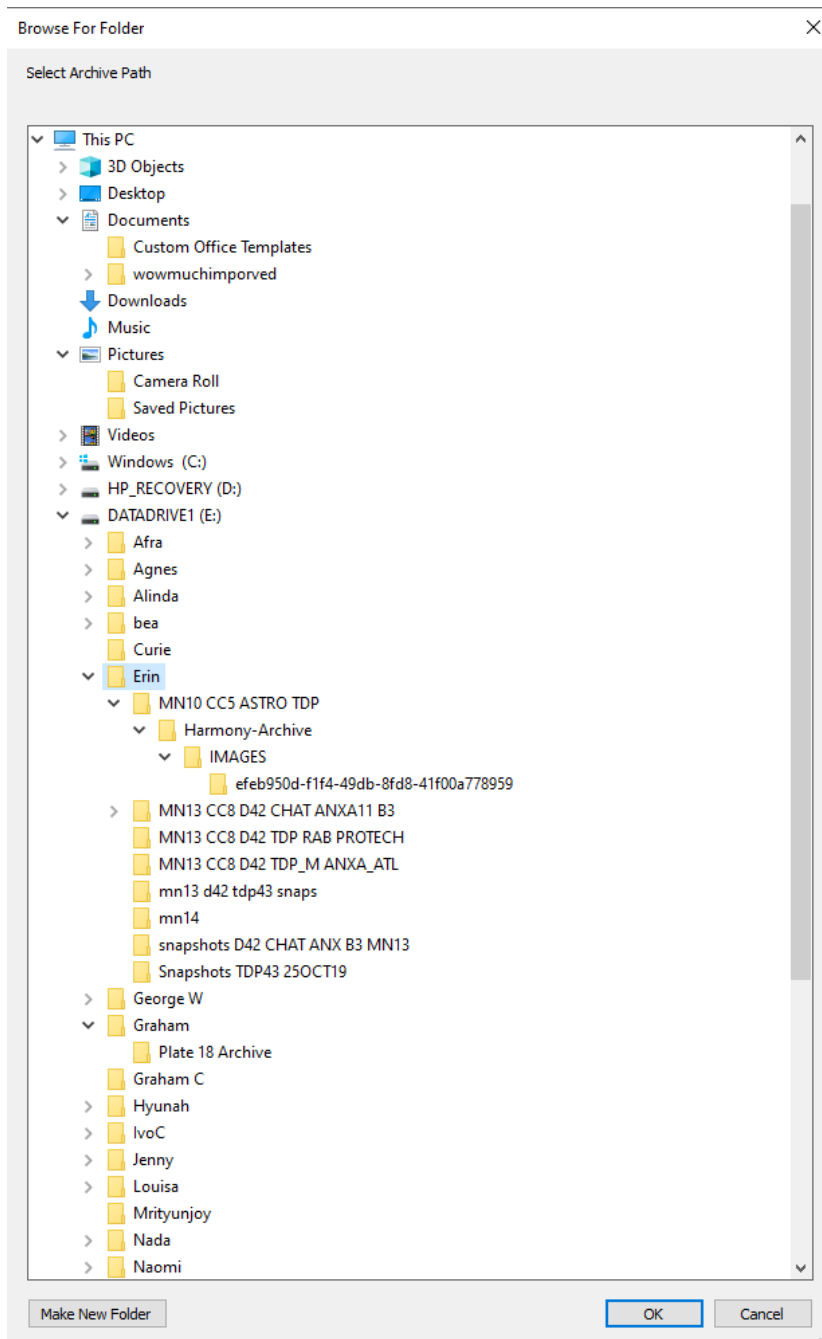
Now select the archive path dialogue (indicated blue arrow)

The screenshot shows a 'Write Archive' dialog box with the following fields and controls:

- Database:** ODA
- All Data:**
- Selected Data:**
- Archive Path:** [Empty text box] [Browse button (indicated by a blue arrow)]
- Job Definition:** [Empty text box]
- Buttons:** Start, Close

Please select the location to write your archive to in the browser that harmony will now present (next page)

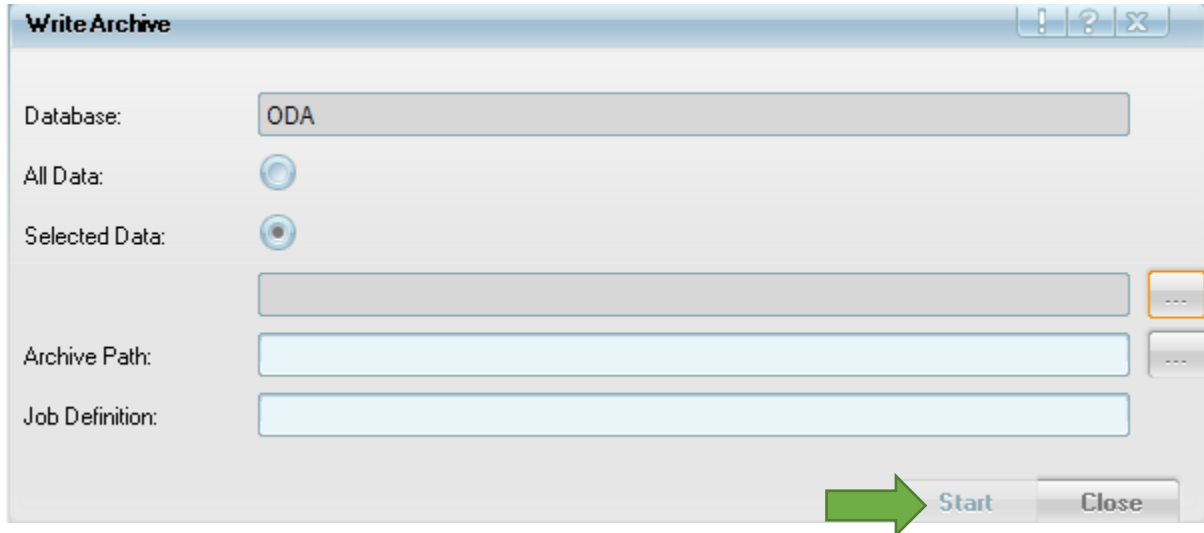
Writing a Harmony Archive Successfully.



Please consider first creating a new folder and naming it what your data contains and then selecting this before going ahead. Harmony will create a folder called 'Harmony-Archive' and this is non-descriptive and you may end up with multiple similarly named folders.

Writing a Harmony Archive Successfully.

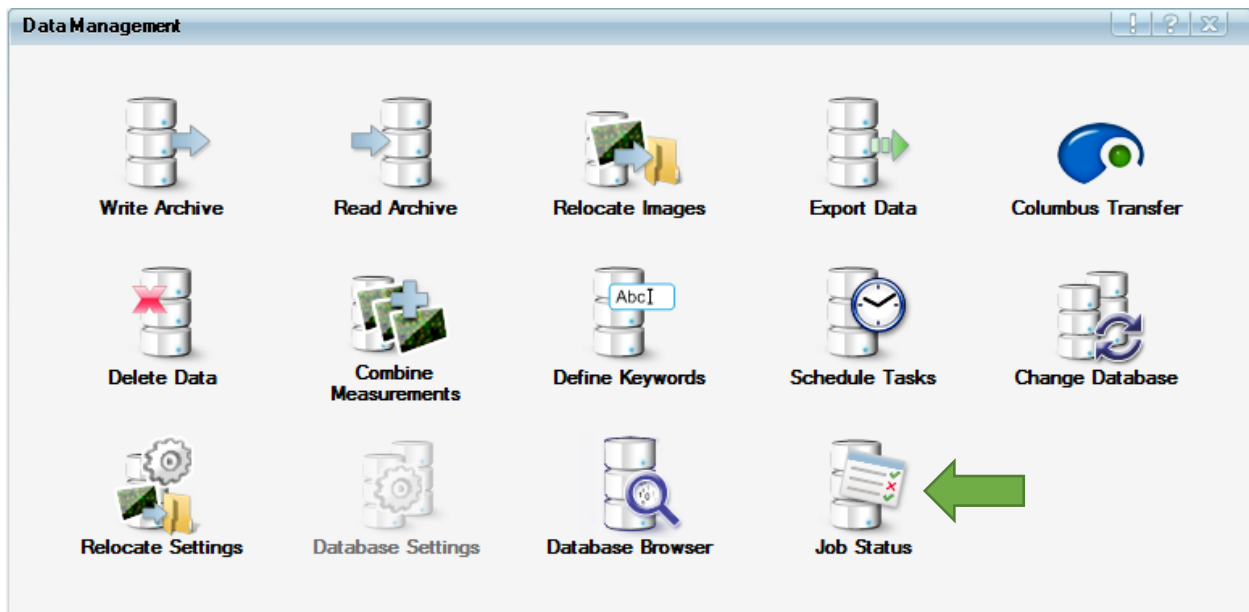
Once you have chosen your archive location then you will be ready to click 'Start'



This will not be 'greyed-out' when it is possible to write the archive.

Secondly – Please check that the process completed without failure

To do this please open the 'Job Status' dialogue from Data Management



Writing a Harmony Archive Successfully.

This will open a window like this

Job Type	Job Definition	Source/Destination	User	Job Size	Progress [%]	Start Date	End Date	Status	Cancel	Job_ID by User ^
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	177.3 GB	100	01/02/2020 21:00	01/02/2020 22:30	Completed	Show Log	Job#_364_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	114.0 GB	100	02/02/2020 21:00	02/02/2020 21:00	Completed	Show Log	Job#_365_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	0 Bytes	100	03/02/2020 21:00	03/02/2020 21:00	Completed	Show Log	Job#_366_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	0 Bytes	100	04/02/2020 21:00	04/02/2020 21:00	Completed	Show Log	Job#_367_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	119.1 MB	100	05/02/2020 21:00	05/02/2020 21:00	Completed	Show Log	Job#_368_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	435.4 MB	100	06/02/2020 21:00	06/02/2020 21:02	Completed	Show Log	Job#_369_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	316.3 MB	100	07/02/2020 21:00	07/02/2020 21:00	Completed	Show Log	Job#_370_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	176.0 MB	100	08/02/2020 21:00	08/02/2020 21:00	Completed	Show Log	Job#_371_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	176.0 MB	100	10/02/2020 09:36	10/02/2020 09:36	Completed	Show Log	Job#_372_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	0 Bytes	100	10/02/2020 21:00	10/02/2020 21:00	Completed	Show Log	Job#_373_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	31.1 GB	100	11/02/2020 21:00	11/02/2020 21:13	Completed	Show Log	Job#_374_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	31.1 GB	100	13/02/2020 11:05	13/02/2020 11:05	Completed	Show Log	Job#_375_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	1.3 GB	100	13/02/2020 21:00	13/02/2020 21:00	Failed	Show Log	Job#_376_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	1.4 GB	100	14/02/2020 21:00	14/02/2020 21:00	Failed	Show Log	Job#_377_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	6.2 GB	100	15/02/2020 21:00	15/02/2020 21:02	Completed	Show Log	Job#_378_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	6.1 GB	100	17/02/2020 09:55	17/02/2020 09:56	Completed	Show Log	Job#_379_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	0 Bytes	100	17/02/2020 21:00	17/02/2020 21:00	Completed	Show Log	Job#_380_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	0 Bytes	100			Waiting	Cancel	Job#_381_PKI
Write Archive	1 item(s) selected	C:\Users\Hamony\Documents	PKI	1.8 GB	1	18/02/2020 13:48		Running	Cancel	Job#_382_PKI

The most recent job should be listed – if it says running then it is still attempting to complete the task.

If multiple tasks have been scheduled then your task may not yet be running and you will need to wait until the previous ones have completed.

Job Type	Job Definition	Source/Destination	User	Job Size	Progress [%]	Start Date	End Date	Status	Cancel	Job_ID by User ^
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	177.3 GB	100	01/02/2020 21:00	01/02/2020 22:30	Completed	Show Log	Job#_364_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	114.0 GB	100	02/02/2020 21:00	02/02/2020 21:00	Completed	Show Log	Job#_365_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	0 Bytes	100	03/02/2020 21:00	03/02/2020 21:00	Completed	Show Log	Job#_366_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	0 Bytes	100	04/02/2020 21:00	04/02/2020 21:00	Completed	Show Log	Job#_367_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	119.1 MB	100	05/02/2020 21:00	05/02/2020 21:00	Completed	Show Log	Job#_368_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	435.4 MB	100	06/02/2020 21:00	06/02/2020 21:02	Completed	Show Log	Job#_369_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	316.3 MB	100	07/02/2020 21:00	07/02/2020 21:00	Completed	Show Log	Job#_370_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	176.0 MB	100	08/02/2020 21:00	08/02/2020 21:00	Completed	Show Log	Job#_371_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	176.0 MB	100	10/02/2020 09:36	10/02/2020 09:36	Completed	Show Log	Job#_372_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	0 Bytes	100	10/02/2020 21:00	10/02/2020 21:00	Completed	Show Log	Job#_373_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	31.1 GB	100	11/02/2020 21:00	11/02/2020 21:13	Completed	Show Log	Job#_374_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	31.1 GB	100	13/02/2020 11:05	13/02/2020 11:05	Completed	Show Log	Job#_375_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	1.3 GB	100	13/02/2020 21:00	13/02/2020 21:00	Failed	Show Log	Job#_376_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	1.4 GB	100	14/02/2020 21:00	14/02/2020 21:00	Failed	Show Log	Job#_377_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	6.2 GB	100	15/02/2020 21:00	15/02/2020 21:02	Completed	Show Log	Job#_378_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	6.1 GB	100	17/02/2020 09:55	17/02/2020 09:56	Completed	Show Log	Job#_379_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	0 Bytes	100	17/02/2020 21:00	17/02/2020 21:00	Completed	Show Log	Job#_380_PKI
Relocate Images	movedata, repeated daily at 21:...	\\10.139.11.16\wcic\Opera_Phenix\OperaPhenix...	PKI	0 Bytes	100			Waiting	Cancel	Job#_381_PKI
Write Archive	1 item(s) selected	C:\Users\Hamony\Documents	PKI	1.8 GB	100	18/02/2020 13:48	18/02/2020 13:50	Completed	Show Log	Job#_382_PKI

If your job reaches 100% and says completed and not failed then you can progress to the next step.

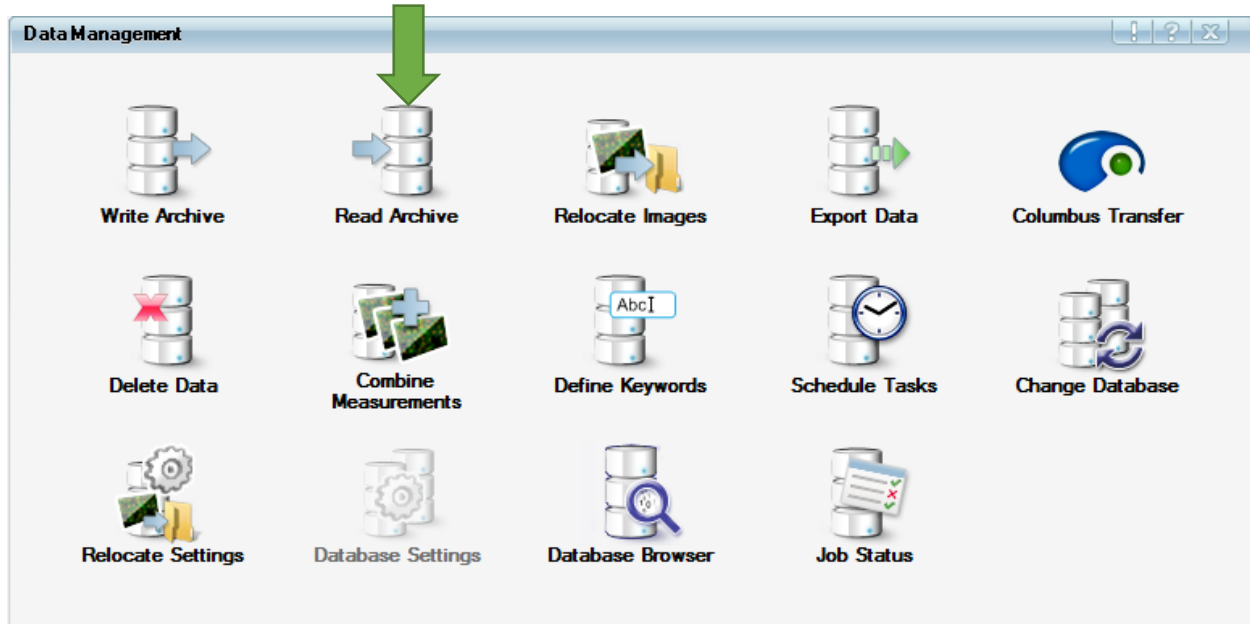
Writing a Harmony Archive Successfully.

Writing a Harmony Archive Successfully.

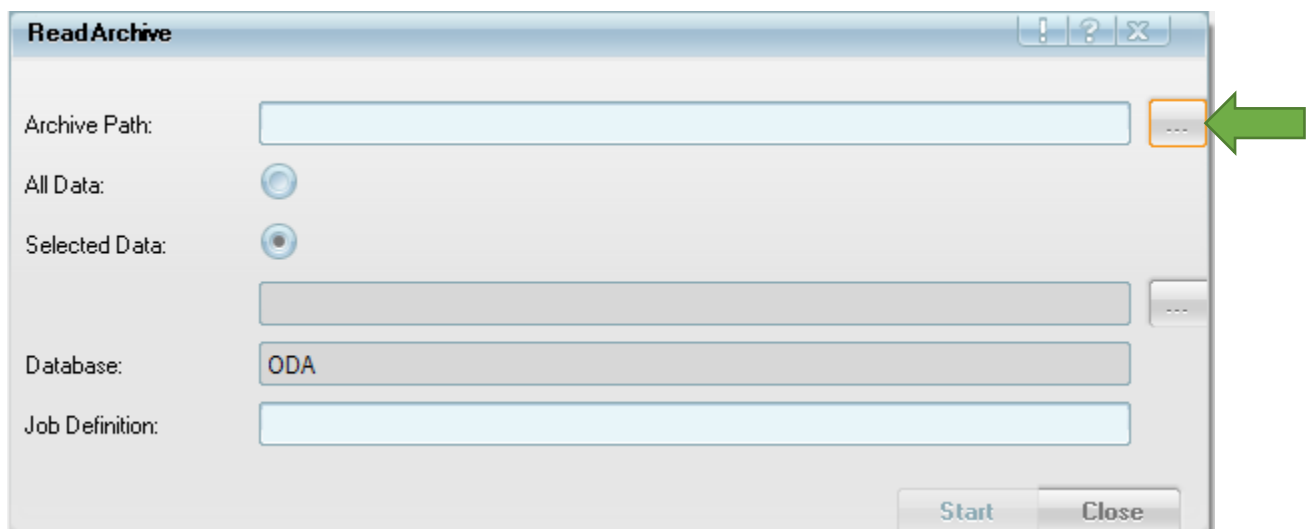
Thirdly – Verify that your archive will read correctly

Before you assume the archive is completed and not corrupted please attempt to read the archive to check this is the case.

Open the Read Archive menu from the Data Management menu



And select the Archive Path dialogue button (green arrow)

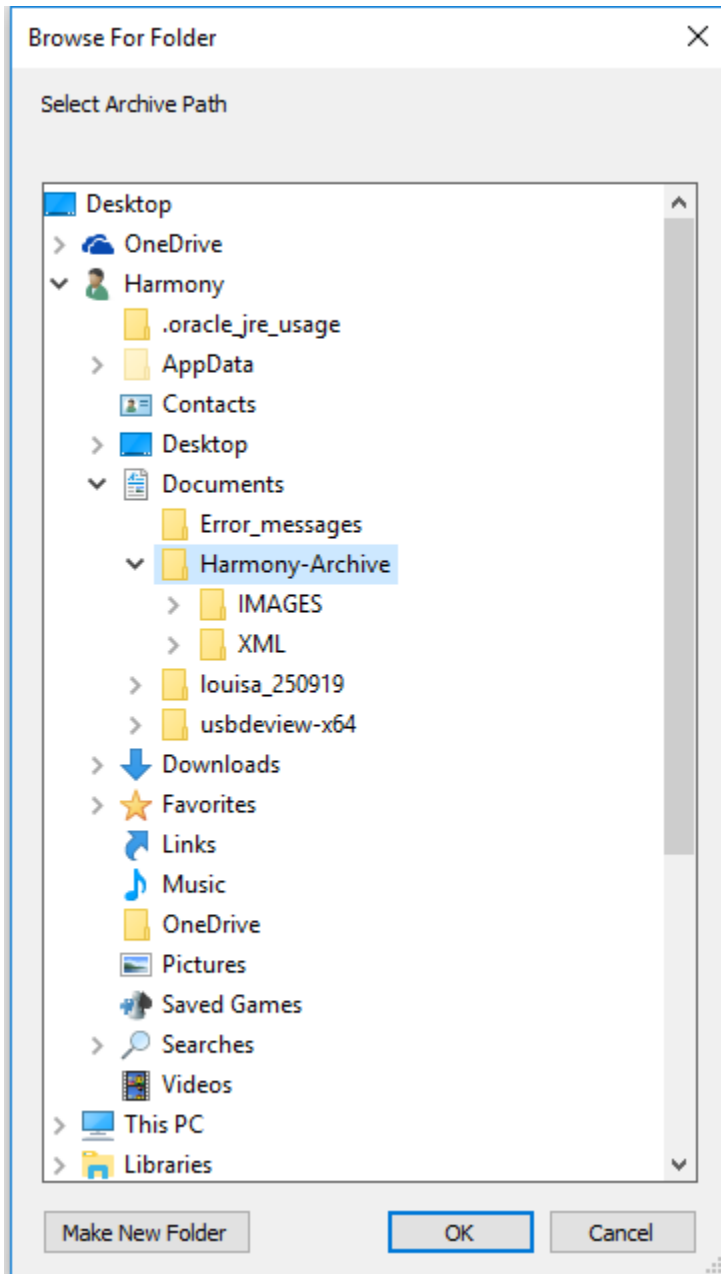


You will now see a file browser like when you selected to write the archive

Writing a Harmony Archive Successfully.

Writing a Harmony Archive Successfully.

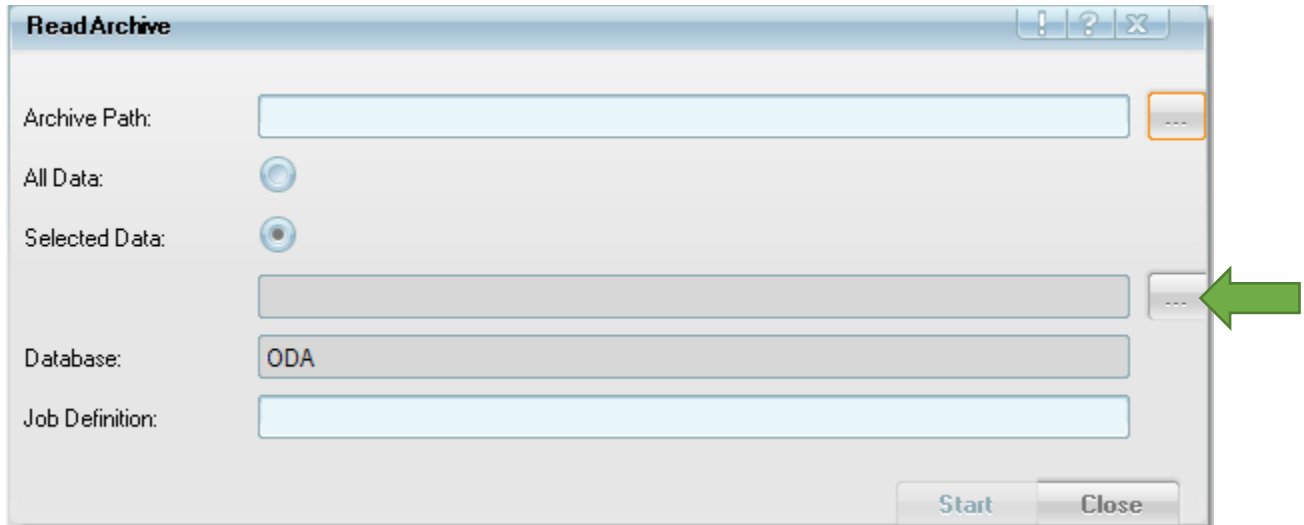
You will need to select the Path to the folder named 'Harmony-Archive' that you just wrote to – the folder called Harmony-Archive should highlight blue as shown in the below graphic



Choose the folder and click on OK

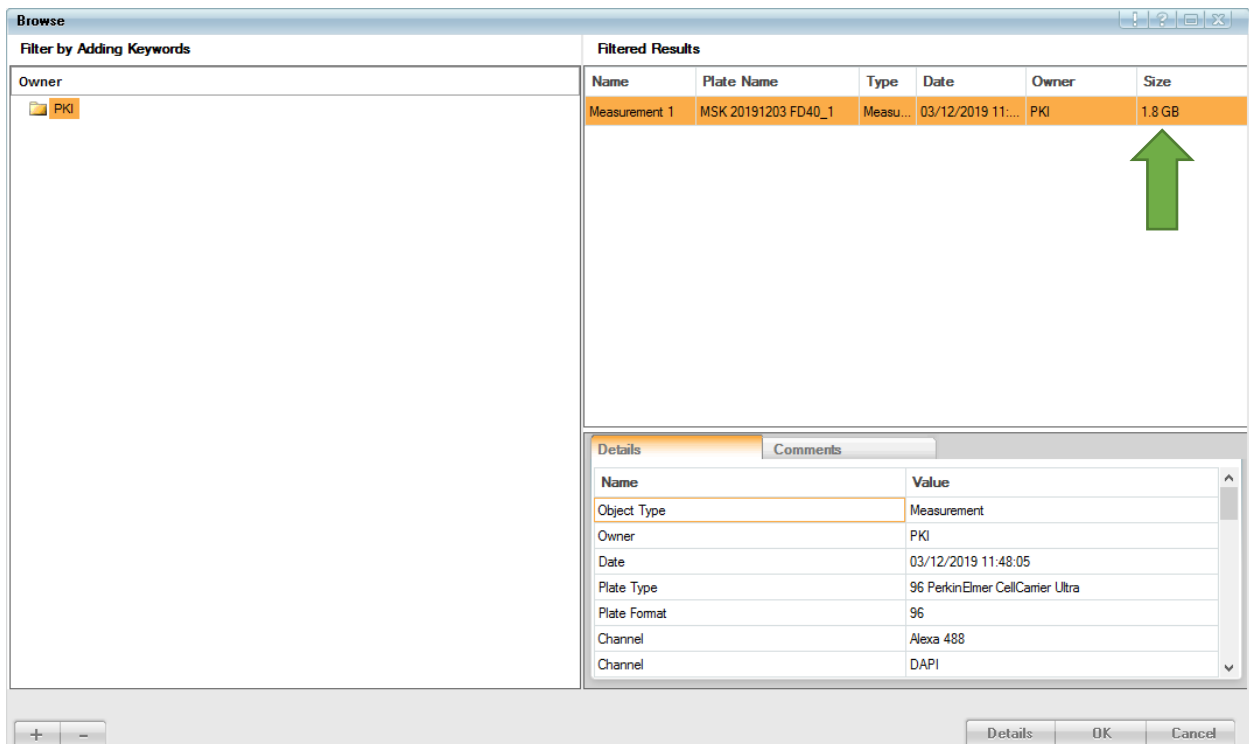
Writing a Harmony Archive Successfully.

Now you can open the selected data dialogue (green arrow)



And the read archive object browser will open

Here you should be able to see the same objects that you wrote and that they are of the same correct size and you chose when you selected them to write the archive



Writing a Harmony Archive Successfully.

If this doesn't show you the same sized measurement as you put in it didn't work.

Best practices are to regularly perform these steps with each experiment you do – if you are not able to follow these steps then please find your nearest WCIC staff member to give you some guidance.

We recommend that you move your data to a secure location immediately once you have written your archive and once you have ensured it is somewhere safe that you then delete the copy on the workstation so it is not accessible to others.

Please do not forget that you are responsible for the data storage and that the microscope facility cannot store your data in the long term on any microscope computer, workstation or our network storage. These are all considered to be temporary locations for data and no guarantee is provided to you securely storing your data in the long term from the microscopy facility.