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S3IT

# Take-home messages from each training day

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*S3IT: Services and Support for Science IT*

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# Recap of Day 1

1. `SessionBasedScript` is the “engine” to run GC3Pie workflows and task collections.
2. A script must be fed a list of tasks to execute by the `new_tasks()` method.
3. GC3Pie code runs unmodified on different computational resources.

## Recap of Day 2

1. Utility commands `gsession` and `ginfo` help inspect a running session. To debug problems, start with running the session-based script with maximum verbosity: `--verbose --verbose --verbose`
2. Command-line argument and option processing is defined through methods `setup_args` and `setup_options` of the `SessionBasedScript`
3. Use `requested_cores`, `requested_memory`, `requested_walltime` to specify environmental requirements of each task.

## Recap of Day 3

1. Post-processing can be done:
  - in the `terminated()` method of the `Application` (or `Task`) class, or
  - globally in the `after_main_loop()` method of the `SessionBasedScript` class.
2. Exit code and termination status inspection.

## Recap of Day 4

1. Applications can be composed into workflows using “task collections”:
  - `SequentialTaskCollection` is for a series of tasks that should be executed *in the order given*
  - `ParallelTaskCollection` is for tasks with no inter-dependency (so, all potentially running at the same time)
2. task collections are tasks themselves, so collections can be nested to create any kind of directed graph
3. `StagedTaskCollection` is for creating processing pipelines where all the steps are *known before runtime*

## Recap of Day 5

- ▶ `ParallelTaskCollection` is for sets of tasks that can all execute in parallel — with no inter-dependency or communication.
- ▶ `DependentTaskCollection` is for tasks whose dependencies are known before runtime
- ▶ The `next()` method of `SequentialTaskCollection` can be used to create “dynamic” sequences that change while running.

## ...and after the course?

All VMs to be deleted Monday morning.  
So, **copy all data you want to save** today!

Your account will be removed  
from the training project on Science Cloud.  
(Any other project membership stays.)

For all things GC3Pie: visit our offices (Y11 F 66)  
or **send email to [help@s3it.uzh.ch](mailto:help@s3it.uzh.ch)**.

## ...and after the course?

You're very welcome to keep asking questions!

- ▶ on the mailing-list:  
[gc3pie@googlegroups.com](mailto:gc3pie@googlegroups.com)
- ▶ or through the forum web interface:  
<https://groups.google.com/d/forum/gc3pie>
- ▶ and on the GC3Pie chat room:  
<http://gitter.im/gc3pie/chat>



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