How can I use the Containers to create sequences of OBs or linked observations?

Paola Popesso - 2023-04-26 - Comments (0) - How to prepare your observations (Phase 2)

How can I use the Containers to create sequences of OBs or linked observations?

The Phase 2 preparation tool p2 gives the possibility to group, link and concatenate two or more OBs in different types of containers, each with a different purpose. We list here the available types of containers and their properties.

- **Scheduling Containers: Groups**

  A group container is a simple collection of OBs the execution order of which may be influenced by the user through specification of group contribution. Once you place the OBs in a group and one of them is executed then the remaining OBs belonging to the group will be executed preferentially before any other part of the programme.

  The use of group containers may be envisaged by the following examples:

  Groups have an overall priority, which is similar to an OB user priority in the case of independent OBs. In addition, to every OB belonging to a group is given a group contribution value, indicating how much the overall group score is increased by successfully executing that given OB. Once the observations of a given group have started, the group score is increased, thereby increasing the priority of all the OBs in that group, with respect to other independent OBs, or with respect to other scheduling containers that may have the same OB user priority or container user priority. The group priority, as that for independent OB, is a number ranging from 1 to 10, where 1 corresponds to the highest priority.

- The observing programme contains several targets located very close to each other on the sky, and for each target more than one OB is needed. If possible, you want that all observations of a single target are completed before a new target observation is started. This can be achieved by creating a group containing all the OBs for a given target.
- The observing programme contains a target observed repeatedly through many different setups (i.e. filters/grisms). If possible, you want that all observations for a given setup are executed before starting a new one. This can be achieved by creating a group containing all the OBs for a given setup.

You can find here a the tutorial on how to group your OBs.

- **Scheduling Containers: Time-Link**

  The time-link container defines a sequence of OBs that has to be executed in a given order, respecting the relative time intervals specified for each linked OBs.

  There are two kinds of time-link container:

  Because there is a number of rules applied to the OBs belonging to a time-link container we strongly encourage to consult the Service Mode Rules and Recommendations for OBs page section related to Time-linking of OBs before making use of this type of container.

  Time-link containers have an overall priority. The priority is associated only to the container and not to the OBs within that given container. This implies that all the OBs of a given time-link share a unique priority although the sequence of their execution is given by the absolute and relative time intervals.

  Please be also aware that different policies applies to the execution of time critical observations, depending on the fact that an absolute or a relative time-window for the observation is need. Please find here the details of the time-critical OB execution policy.

- OPEN time-link: only the lower limit - earliest after previous - of the separation interval is defined
- CLOSED time-link: both lower - earliest after previous - and upper limit - latest after previous - are defined

You can find here a link on how to create a Time-Link container.

- **Scheduling Containers: Concatenation**

  A concatenation container consists of two or more OBs that must be executed back-to-back without breaks. The sequence of the execution of OBs in a concatenation cannot be specified.

  If the execution of one OB within a concatenation fails, then the whole concatenation fails too and it must be repeated, irrespective whether any other OBs of the concatenation has been successfully executed or not.

  Concatenation containers have an overall priority. The priority is associated only to the container and not to the OBs within that given container. This implies that all the OBs of a given concatenation share a unique priority and there is no possibility to choose the sequence of execution of the OBs.

  The typical use of concatenation may be envisaged in the case of observations of science targets which should be immediately followed by the observations of a calibrator source (i.e. ERIS: science target and PSF calibrator; CRIRES: science target and telluric standard; HAWK-I: science target and photometric standard star, etc.).

You can find here a tutorial on how to create a Concatenation Container.

- Tags
- concatenation
- container
- group
- time-link