

The Configuration of Delta-view

Configuring Physical View

Physical View is comprised by several text configuration files. You can edit these files by using a text editor.

This following part discusses something about manual editing of Physical View configuration files.

There is a main configuration file of Physical View, *physical.conf* which contains one or more *Data source-specific* configuration files that define the options needed to create a specific physical view browser.

physical.conf

When you installed HicP, it was a configuration file *physical.conf* which located in the root directory with default data sources, including their names and their source-specific configuration files.

Here is the default **physical.conf**:

```
[dataset.test]
name=TestData
conf=conf/physical/imr90.conf
```

Each data source begins with a unique dataset name which enclosed in square brackets. Any name is allowed, provided that it does not contain newlines.

Each data source has **name** and **conf** options. The first provides a human-readable description of the source; this description will appear in the menu offered to the user in the navigation bar. The **conf** option indicates the location of the configuration file for this data source. Relative paths are interpreted relative to *physical.conf*. Note: there are no blank spaces around name and conf paired values.

Data Source Configuration Files

Each data source has a configuration file listed in the main *physical.conf* configuration file. This configuration file defines the tracks to show.

The following shows a basic data source configuration file:

```
chroms=/circosweb/json/species/human_refseq.json
organism=hg19

##track
[imr10k]
glyph_type=3dmodel
storage=json
file=/circosweb/json/physical/GSE43070/{refseq}/batch.xyz_text
color=white
line_width=1
key=imr10k
category=HiC
```

Each data source configuration file must contain “chroms” option which described the reference organism. The annotated information can be started with “#”.

The following part describes the track definition of each data source configuration file.

Track Definitions

To add tracks to a data source, you will create a series of one or more track definition stanzas.

A typical track definition looks like this:

```
[imr10k]
glyph_type=3dmodel
storage=json
file=/circosweb/json/physical/GSE43070/{refseq}/batch.xyz_text
color=white
key=imr10k
category=HiC

[GSE63525_HUVEC_combined_Interaction]
glyph_type=peak
organism=hg19
storage=mysql
bin=-1
file=tb_GSE63525_HUVEC_interaction
color=red
key=GSE63525_HUVEC_combined_Interaction
category=GSE63525_HUVEC_combined

[GSE63525_HUVEC_combined_TAD]
glyph_type=tad
organism=hg19
storage=GFF3
file=/share/disk1/work/bioinformatics/tangbx/webdb/circosweb_publish/circosweb/data/GSE63525_3dmap/HUVEC_combined/tadtree/{refseq}/tad.gff3
key=GSE63525_HUVEC_combined_TAD
category=GSE63525_HUVEC_combined
```

This track is named "imr10k". The feature data is stored in a “file” option. The glyph type “3dmodel” is used to display the feature as a 3D space structure, and the atom is drawn with a background color of white and the connected line is drawn with 1 pixel. The human-readable key

“imr10k” printed at the bottom of "HiC" (“imr10k” must be a unique identification in the whole data source.)

Track key can contain any character. The mark “{refseq}” refers to the chromosome of organism which can be filled by the web site automatically.

The meaning of each track field is described as follows:

These options control the rendering of features onto the Physical View web page, including their shape and color.

glyph_type

This controls the glyph (graphical icon) that is used to represent the feature.

The “3dmodel” glyph will render the feature data as a 3D space structure;

The “sphere” glyph will render the feature data as a sphere with connected line, while the “line” glyph will render the feature data a line model.

The “gene” glyph will render the feature data as a colored line labeled around the sphere.

The “circle” glyph will render the feature data as a colored circle line around the sphere.

The “peak” glyph will render the feature data as a dashed line to connect two spheres.

The “tad” glyph will render the feature data as a shadowed color around the sphere.

storage

This controls the file format of feature data. For “3dmodel” glyph, the file format can be “xyz” and “json” .

Other glyphs support “GFF3” and “mysql” format.

file

This controls the data storage format of feature data. For “GFF3” format, it is an absolute directory for the file, while for “mysql” format, it is the mysql table name which stores the feature data.

color

This controls the background color of the glyph. Any color definition is available, such as white, #ffffff

organism

This controls the organism of the feature data.

key

This option controls the descriptive key that is shown in the left track menu of physical view page. It is shown as a checkbox that allows users to switch tracks on and off.

category

This option allows you to group tracks into different groups on the physical view display. For example, if you wanted several tracks to be in a separate group called "Hi-C", you would add this to each of the track definitions:

```
category = Hi-C
```