ENViz 1.x User Readme

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Installing ENViz

1. For analysis of larger data sets, we recommend that ENViz is installed on Windows systems with 64-bit OS, and at least 8 Gb of memory (other OS' may work fine with similar configurations).
2. The ENViz plugin is compatible with Cytoscape 2.8.3+ releases. If you need Cytoscape, download and install the latest Cytoscape 2.8.x release from http://cytoscape.org.
3. Install the GPML & ENViz plugins:
    a. Run Cytoscape and perform *Plugins->Manage Plugins*
    b. In the dialog that appears, expand *Available for Install->Online data import*
    c. Select GPML-Plugin v1.4 (or later) and click the Install button.
    d. In the dialog, expand *Available for Install->Integrated Analysis*
    e. Select the latest version of ENViz and click the Install button
    f. Exit Cytoscape
4. If necessary, increase Cytoscape's heap memory to at least 2048Mb (or possibly 4096 Mb). For instructions, see How to increase memory for Cytoscape.

Running ENViz

1. Restart Cytoscape.
2. Start ENViz by clicking *Plugins->ENViz->Start ENViz*
   You can change it so ENViz always starts when you run Cytoscape by adding the property ENViz.ImmediatelyStartENViz set to "true" (see ENViz Configuration, below).

Using ENViz

If you need help using ENViz, you can get at the user tutorial from within Cytoscape by clicking on *Plugins->ENViz->Help.* You can obtain the dataset used in the tutorial by clicking on *Plugins->ENViz->Sample Dataset.*

ENViz Configuration

You can control various aspects of ENViz behavior by setting Cytoscape-based properties read by the ENViz app. Following is a description of these properties:

ENViz.ImmediatelyStartENViz--a boolean value that specifies if ENViz should be started when Cytoscape is started (default false). When false, you will need to use the Plugins->ENViz->Start ENViz menu item to start ENViz. When true, the equivalent of clicking the Start ENViz menu item is performed after the ENViz app is loaded into Cytoscape.

ENViz.NumberOfEdgesToAutoLoad--an integer value (default: 11) specifying the maximum number of Networks that will be created and tiled when coloring by pivots and connecting edges, such as when you double-click on pivot nodes and connecting edges in an enrichment network.

ENViz.OldDataFileHandling--specifies if the previous versions of GO data files should be deleted after a new version of a GO data file is downloaded (default: leaveOldVersions). A value of *deleteOldVersions* will cause ENViz to delete previous copies of the GO data files. A value of *leaveOldVersions* will cause older GO data files to be left but uniquely renamed.

ENViz.ReadTimeout--an integer timeout time, in seconds, used to download new GO data files (default: 30). When downloading a new GO Data file, if no response is received within the specified time, the download will fail and ENViz will continue to use the previous version of the GO data file, if available.

ENViz.UseSpectrumModeling--a boolean value specifying whether spectrum modeling should be used for GO, Pathway, and Generic enrichment data to produced better initial enrichment low and high values for coloring nodes (default: true). If false, no modeling is performed. If true, the first time you visualize a GO analysis results file, both cumulative enrichment and enrichment values will be modeled and the Coloring Controls for GO enrichment and cumulative Enrichment will be updated. The first time you visualize a pathway or generic analysis results file, cumulative enrichment will be modeled and the Cumulative Enrichment coloring controls will be updated. For details on how the low and high coloring values are computed, see the Color Controls section of the ENViz Tutorial (available from Plugins->ENViz->Help).

After the first time spectrum modeling is performed, the saved values for coloring are used

Migrating Configuration Files From Older Versions of ENViz

ENViz uses two configuration files that store information about your default settings and information about the analysis results files you've visualized. These files are:

archive-props.json - values specific to visualized analysis results archive files such as display cutoff and enrichment coloring low-high values.

general-props.json - various default values for analysis input/output directories, initial enrichment coloring, default organism and correlation method.

The first time a new version of ENViz is run, it will attempt to copy older config files to the new version. However, there are situations where you may need to manually copy them. This can be done by copying:

~/.cytoscape/2.8/plugins/ ENViz-<prev-version>/*.json -->
~/.cytoscape/2.8/plugins/ENViz-<new-version>/

Where your previous version of ENViz was <prev-version>, your new version is <new-version>, '~' represents your home directory, and '*' represents all .json files.

Location of Data Files

When ENViz does GO visualization and GO annotation generation, it downloads some large GO related files (updated once a month). These files are found in:

~/.cytoscape/2.8/plugins/ENViz-<version>/data/go/

Depending on your ENViz property settings, old data files may be saved. Files in this directory may be removed at any time--ENViz will download them again when needed.