raxml-starttree-8.2.11

RAxML Start Tree 8.2.11

raxml-starttree-8.2.11 is an Agave app for using **RAxML** to to generate a random stepwise addition parsimony tree or completely randomized tree for use with ExaML or RAxML. You can choose a more superficial randomized stepwise addition parsimony tree (-X), a standard randomized stepwise addition parsimony tree (-y), or a completely random start tree (-d).

The raxml-starttree-8.2.11 app runs on the Stampede2 supercomputer at the Texas Advanced Computing center. It uses an executable from the RAxML repo, version 8.2.11, built using Makefile.AVX2.gcc. The maximum run time is two hours, but this should be enough to generate a start tree for most input alignments.

Please cite the following paper when using raxml-RFdistance-8.2.11 and RAxML:

A. Stamatakis: "RAxML Version 8: A tool for Phylogenetic Analysis and Post-Analysis of Large Phylogenies". In *Bioinformatics*, 2014, open access.

Quick Start

- To use **raxml-starttree-8.2.11,** upload an alignment file in relaxed PHYLIP or FASTA format.
- **Resources:**
  - RAxML manual

Inputs

raxml-starttree-8.2.11 requires an input alignment file in relaxed PHYLIP or FASTA format. A partition model is not required.

For additional information on this tool, please consult the RAxML manual.

Test Data

Use the alignment file

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as test data. It can be accessed by navigating to:

```
'Community Data'>iplantcollaborative>example_data/RAxML/raxml-starttree
```

Parameters Used in App

When the app is run in the Discovery Environment, use the following parameters with the above input file to get the output provided in the next section below.

- Run the test analysis using the following parameters:
  1. type of start tree: faster random parsimony
  2. substitution model (-m): GRTCAT
  3. Output file base name: 49-1
  4. Random integer to use as random parsimony seed (-p): leave blank to allow the app to generate a random see for you.

Output File(s)

- Expect the following output files:
  - .agave.log: log of activity by the Agave API that ran the app
  - 49: the input alignment
  - 49.reduced: an alignment file with undetermined columns removed
  - **RAxML_parsimonyTree.49-1**: the output of the program. A start tree for further analysis.
  - RAxML_info.49-1: Information about the model and algorithm used and how the program was called.
  - $longrandomstring.err: standard error
  - $longrandomstring.out: standard output

Tool Source

- https://github.com/stamatak/standard-RAxML