PhyD3

# Integration guide

## Introduction

PhyD3 is a phylogenetic tree viewer based on D3 generated SVG. Currently it supports the phyloXML format, with custom extentions, allowing for displaying interactive phylogram. Amongst many features, PhyD3 can display tree nodes annotated with charts (i.e. pie chart, multibar chart, binary chart, heatmap) and also domain architecture graph.

## Dependencies

PhyD3 depends on standard Bootstrap and jQuery libraries (not included)

Further dependencies are:

* Blob <https://github.com/eligrey/Blob.js>
* canvas-toBlob <https://github.com/eligrey/canvas-toBlob.js>
* Canvg <https://github.com/gabelerner/canvg>
* ColorBrewer <http://colorbrewer2.org/>
* D3 v3 <https://d3js.org/>
* FileSaver <https://github.com/eligrey/FileSaver.js>
* DataTables <https://datatables.net/>

Those dependencies are included in the *js* folder.

## Structure

PhyD3 consists of JavaScript part and HTML+CSS part. HTML+CSS part contains the user interface. JS part contains the computational logic. Both parts need to be integrated in target website. HTML part can be modified to suite specific needs. JS part can be configured by using the *options* object when instantiating the PhyD3 viewer.

1. HTML part
   1. stylesheets are included in the *css* folder
   2. loading of the phyD3 takes place in *onload* JS handler
2. JS part
   1. Phyd3.phylogram.js – main logic
   2. Phyd3.phyloxml.js – phyloXML parser

## Setup

1. Include the dependencies (JS, CSS) and copy the phyd3-controls div from the HTML file
2. Adjust the options to your needs
3. Point to the phyloXML file to be loaded via d3.xml

## Specs

See *docs/PhyD3.specs.xlsx*