Installing Cyberintegrator

Introduction & Overview

Cyberintegrator (CI) provides the workflow definition and execution components for a simple or complex system. The CI Desktop tool provides a space where users can explore data, various tools and save their activity as an executable and exportable workflow. The Semantic Repository is the data /metadata collection where information about the data, tools and workflows is stored either local or remote. The CI Remote Server provides an environment where workflows can run on demand, based on a cron or event driven based on data collection. In this section we will describe the installation of each of these components and establish a baseline where you can start building simple local workflows to creating a system that will take a CI workflow and run it as a service.

Understanding the base assumptions of CI will help you understand and navigate through the CI environment. CI was created to help define workflows and then run those workflows based on a user or communities needs. For example, Grad Student X has a process that takes data from a microscope, formats the data with their favorite C program and then runs the data through a couple of tools to analyze (Fortran, Java, Matlab) and visualize a result (image, animation, graph, etc...) and then save the result(s) locally or some remote web site. CI was designed to automate this process by allowing the user create a "macro" recording of these step-by-step activities and then save the result as a workflow. After a workflow is defined, the user can run it local or they can run it as a service on a local or remote system. An example of a CI workflow running as a service on a remote system is the NCSA Virtual Sensor service, http://sensorweb-demo.ncsa.uiuc.edu/, created to support the hydrology research community. In this case, a CI workflow runs every 5 minutes, checks for data at the Chicago NEXRAD server to determine a rain event is occurring. If there's no precipitation data then the process goes to sleep for 5 minutes, however if precipitation data exists then the CI server collects the data and initiates all of the local "virtual sensor" workflows to start aggregating data based on their specific geolocation (lat/lon) on the map.

In each of these circumstances the CI desktop was used to create the workflow, the semantic repository was used to collect and store the metadata and data and as an option you can use the CI remote service to execute the workflow based on a time interval, data collection or on demand. At a minimum, you need to install the CI desktop and either connect it to a remote semantic repository or install a repository on your local system.

The Three Components of Cyberintegrator

Cyberintegrator Desktop

Installation

Download the zip or tar.gz file and move it to desired location on your system. Open the archive and it will create a Cyberintegrator folder; inside the folder you'll find the program Cyberintegrator.(exe, .app, .so) which is the main application to run. Double click the file to run the desktop application.

Connecting to a Semantic Repository

Semantic Repository

Installation

CI Remote Service

Installation