# Getting started with Bisque

This document outlines steps needed to get started with Bisque [1].

## 1 Preliminary steps

### 1.1 iPlant account

Use Trellis [4] to create an account and log-in to the dashboard. One of the services listed under "Available services" is Bisque.

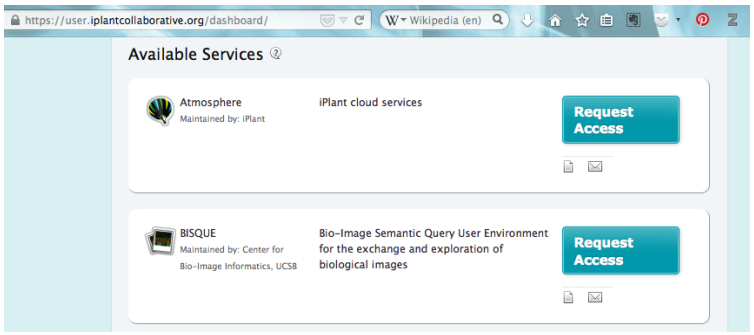


Figure 1: The services available through your Trellis dashboard.

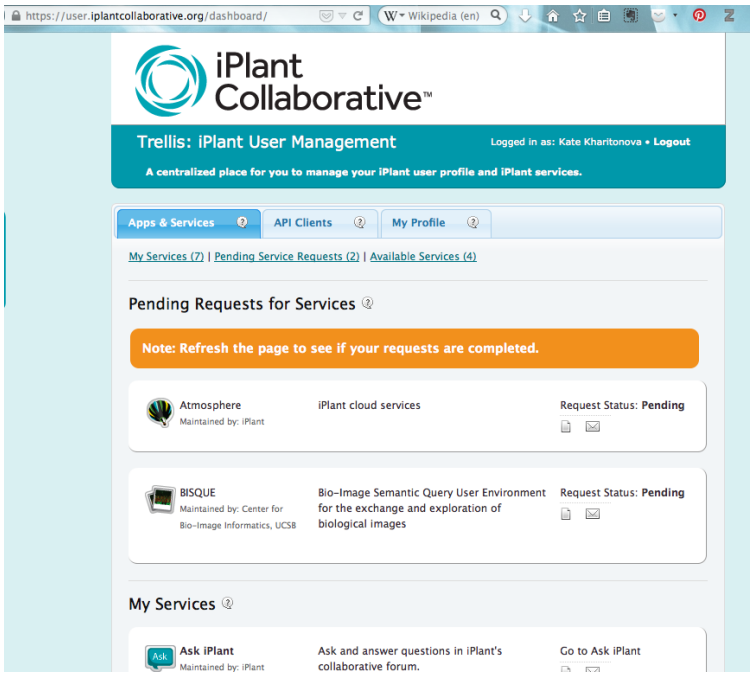


Figure 2: Pending requests.

Once the request is approved, use the "Go to BISQUE" [2] link to access the Bisque database hosted by iPlant.

### 1.2 Analysis code

Select an existing program to turn into a Bisque module. This analysis code can be written in any language, and with the help of the Bisque API, it can be "wrapped" and connected to the Bisque services.

For the purposes of this tutorial, I am using a C++ program that finds points of interest in images. I created an executable binary, which I can run on the command line.

```
./find_points --output-directory=$OUTDIR --has-tip-growth --min-blob-size=5
--max-blob-size=50 --num-threads=8 $INDAT/Pos001_S001_t%02d_z%02d_ch00.tif
```

The above command shows the parameters that are required to run the code: `$OUTDIR` is a path to an output directory, `$INDAT` is a path to where the input files are, with the input file names described using a Unix printf-style pattern.

## 2 Creating a module

### 2.1 Overview of steps

Following a Bisque module creation tutorial [3], below are the steps for setting up a working module:

1. Create a module definition XML
2. Make the module code work with Bisque (either by modifying the module code to use the Bisque API or write a wrapper / conversion glue code)
3. Create a web server or run Engine Server

   Engine Service - write configuration file on how Engine Service will run your code
4. Register module with the Bisque system

## References


[1] Bisque database. http://www.bioimage.ucsb.edu/bisque. 1

[2] Bisque database. http://bisque.iplantcollaborative.org. 1

[3] Bisque module creation tutorial. http://biodev.ece.ucsb.edu/projects/bisquik/wiki/Developer/ModuleSystem/Tutorial. 2

[4] Trellis: iplant user management. https://user.iplantcollaborative.org. 1