BitCurator Access

bitcurator-access-webtools
Quick Start Guide

Last updated: May 8th, 2018
Release(s): 0.8.2 and later

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About bitcurator-access-webtools

The **bitcurator-access-webtools** service allows users to browse file systems in raw and forensically packaged disk images using a web browser.

It is intended to support access scenarios in libraries, archives, and museums preserving born-digital materials extracted from source media as raw or forensically-packaged disk images.

The software is distributed with a build script to automatically provision and deploy a virtual machine running the service on any host with Vagrant and VirtualBox installed. This document will help you get started.

Getting started

- **Hardware (recommended):**
  - Desktop or laptop with an Intel Core i5 or Core i7 processor (or AMD equivalent) running 64-bit Windows 7/8/8.1/10, Mac OS 10.10 (or newer), or a 64-bit Linux variant.
  - 8GB RAM or more
  - 8GB free hard disk space.

- **Software:**
  - Current release of bitcurator-access-webtools. **Download** the latest release (**.zip** or **.tar.gz** file) from:
    - https://github.com/bitcurator/bitcurator-access-webtools/releases
  - Current release of VirtualBox. **Download and run** the current Windows, Mac, or Linux installer.
    - https://www.virtualbox.org/wiki/Downloads
  - Current release of Vagrant. **Download and run** the current Windows, Mac, or Linux installer (you may need to reboot after installing).
    - https://www.vagrantup.com/

Files and directories in the downloaded release

- Unzipping the package extracts a directory named "bitcurator-access-webtools-X.X.X" (where X.X.X is the release number). Inside the directory are several files and directories, several of which you may wish to modify:

  - **Vagrantfile:** This is the configuration file for Vagrant. By default it assigns 4GB RAM to the VM (**vb.memory = 4096**) and 2 processors to the VM (**vb.cpus = 2**). These are appropriate settings for a host with 8GB RAM and a Core i5 or Core i7 CPU. You may wish to modify these depending on the hardware you are using.

  - **disk-images:** This directory contains some sample raw and E01 disk images. You may wish to remove these, or copy additional disk images to this location.

- **Tip: bca-webtools recognizes E01, AFF, raw (.dd), and ISO disk images. It does not currently support split images.**

Getting started: Adding a Vagrant box

- **You will need a Ubuntu 18.04 Vagrant box in order to build and run bitcurator-access-webtools.**
    - Open a terminal (in OS X or Linux) or a command prompt (Windows).
        - Mac how-to: Click on the Spotlight icon and type **`term`**. Hit enter.
        - Windows how-to: Click on the Start button and type **`cmd`**. Hit enter.
    - Type the following, hit enter, and allow the box to download:
        > **`vagrant box add bento/ubuntu-18.04`**
    - Change directory into bitcurator-access-webtools:
        - If you downloaded the bitcurator-access-webtools package onto your Desktop and extracted it there on a Mac, you would type the following:
            > **`cd /Users/your-user-name/Desktop/bitcurator-access-webtools-X.X.X`**
        - Similarly, on Windows:
            > **`cd \Users\your-user-name\Desktop\bitcurator-access-webtools-X.X.X`**
    - Type the following, hit enter, and wait. Building bitcurator-access-webtools the first time may take up to 30 minutes (you will see a success message in the terminal when it finishes):
        > **`vagrant up`**

Getting started: Navigating to the interface

- In the previous steps, the installation script will provide feedback in the console as it installs each package.

- Once the virtual machine has been provisioned, open a web browser on your host and navigate to:

   `127.0.0.1:8080`
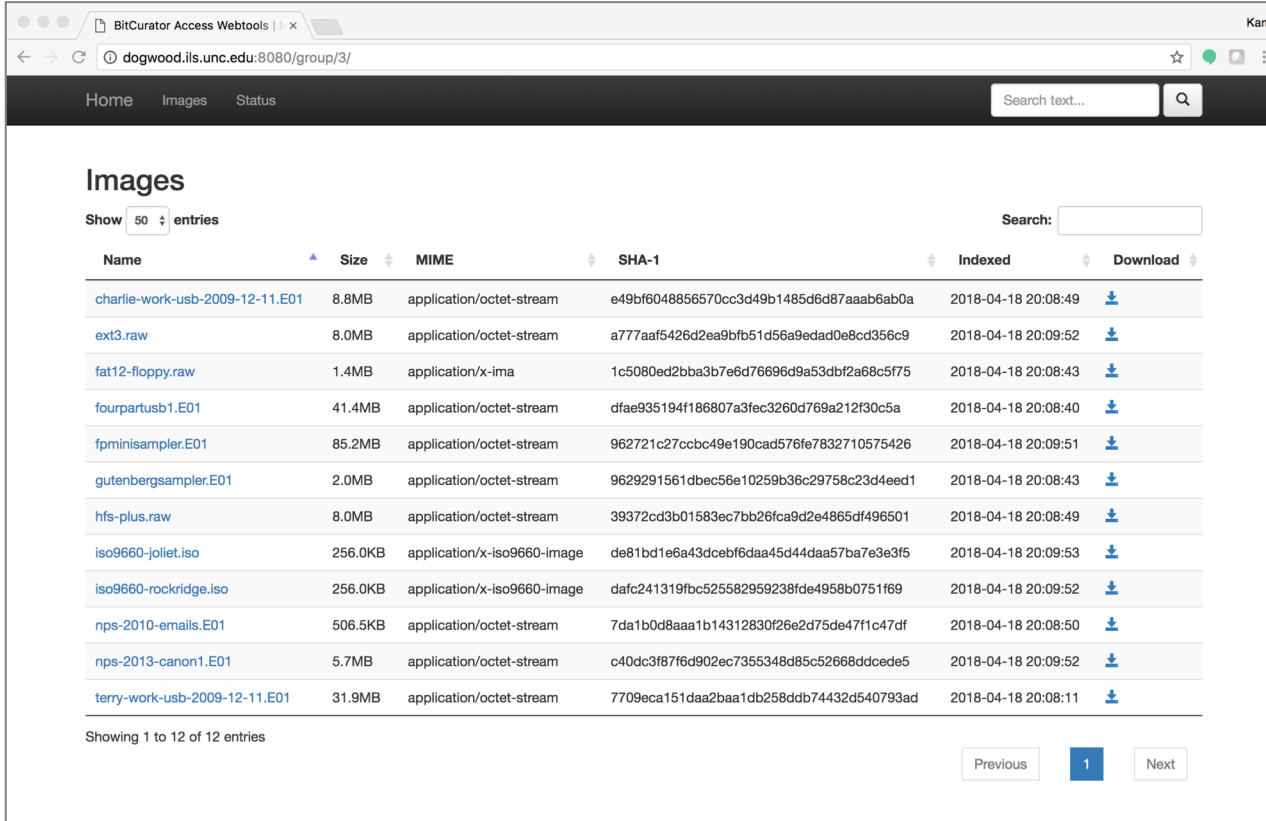
   At this point you should see the bitcurator-access-webtools service running.

Getting started: Main page
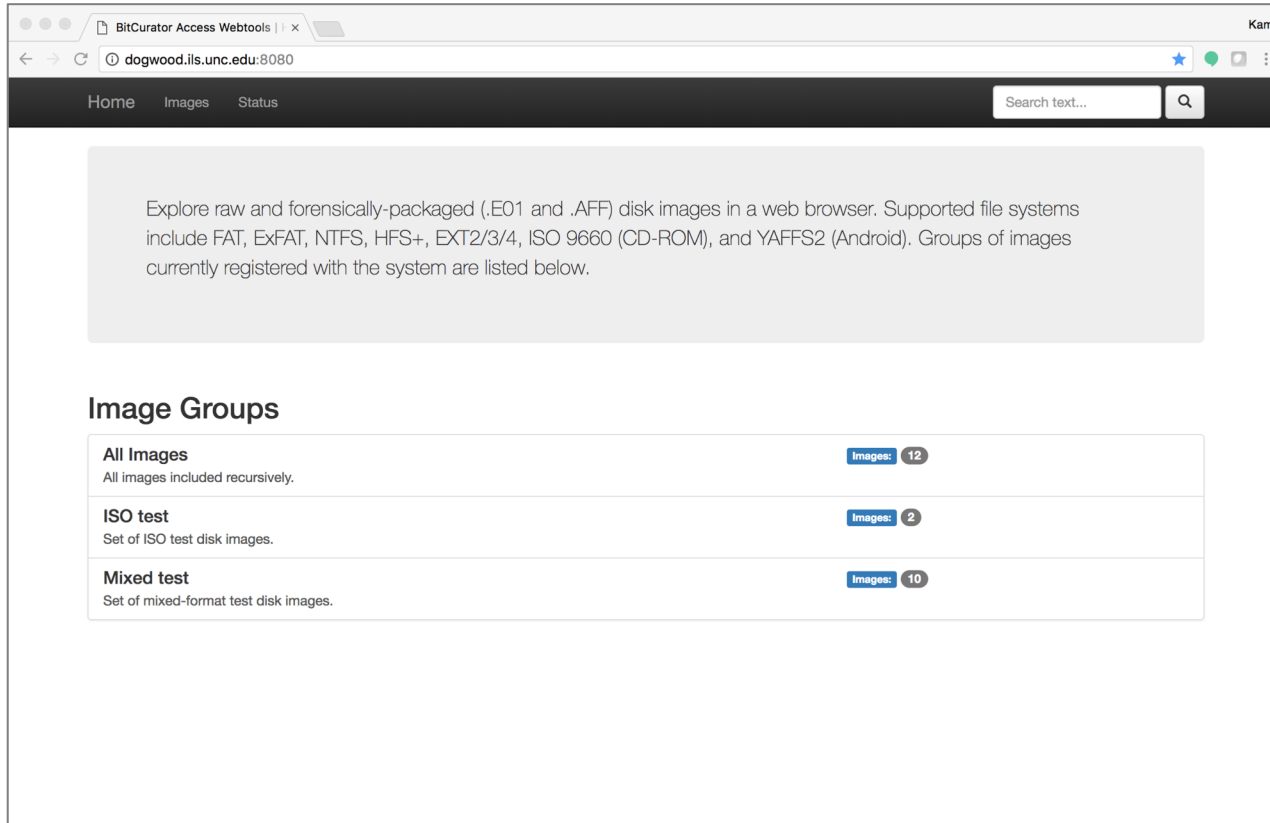
You should see a page similar to the one above at **127.0.0.1:8080**. Disk images groups defined in your **groups.conf** directory should appear in the listing on this page. Click on an individual group to see images associated with that group. In this example, we'll select **"All Images"**.

Getting started: Images in a group

Images associated with the group are displayed (and sortable) by size, MIME type, hash, and time indexed (an indicated time means the full-text indexer has finished processing a particular image). The full image may be downloaded using the **Download** link.

Getting started: Image selection

Select an image. In this example, we've selected **fourpartusb1.E01**. Selecting an image will display a page with basic metadata associated with the forensic container format (if available) and partitions identified within the image.

Getting started: Partition selection

Select a partition. Here, we've selected the first FAT32 partition on **fourpartusb1.E01**. A directory listing is shown for the root directory. Deleted files for which directory entries have been identified will be indicated with a trashbin icon in the **Download** column. Select download arrows to download individual files (as available), or click the filenames themselves for a full-text extraction (when possible).

# Getting started: Full-text file view
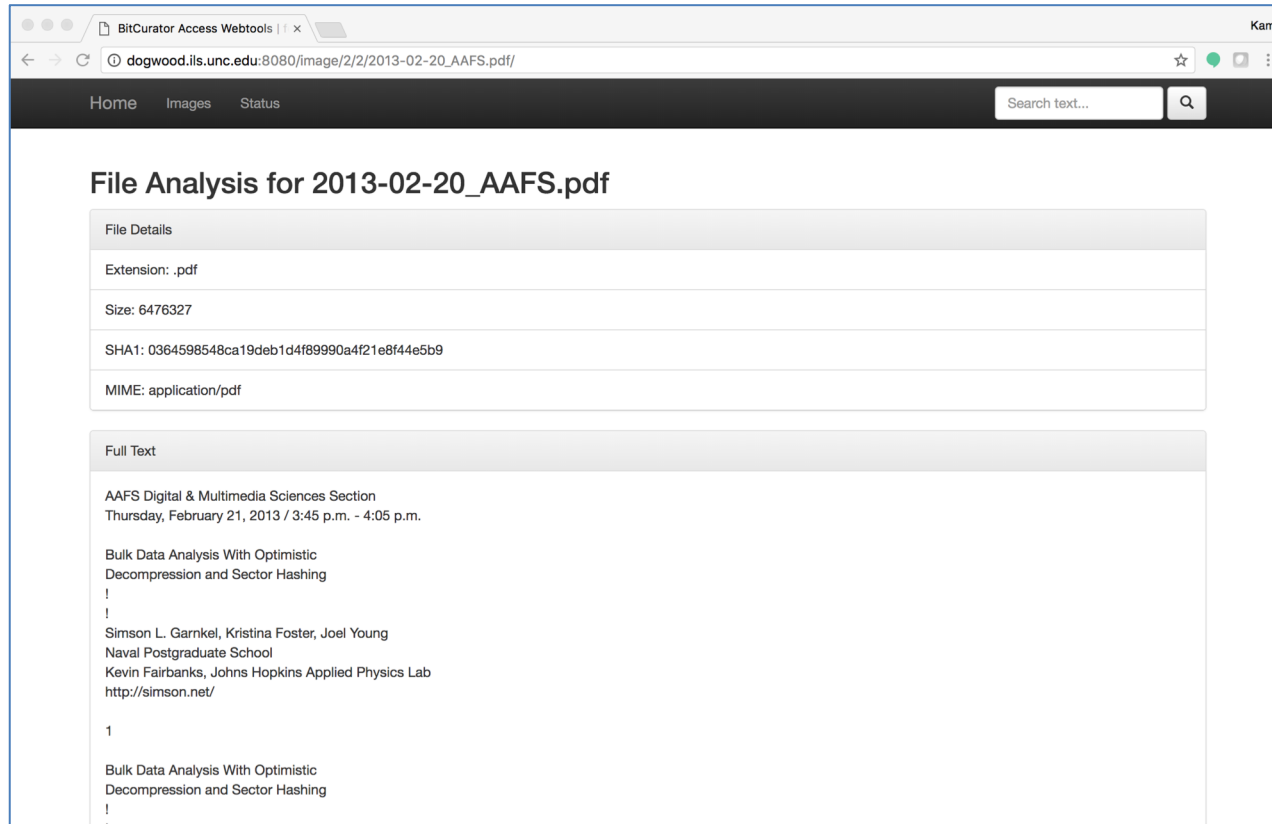
Click on an individual file name. In this example, we've selected **2013-02-20_AAFS.pdf**. The server uses a text extraction library to present a full-text view of the file contents.

Halting and restarting the service from the host

- You may wish to stop the virtual machine instance between sessions. You can do this by typing:

  vagrant halt

  in the same directory in the terminal or command window you opened earlier (if you closed it, open a new window and navigate to the bitcurator-access-webtools directory as per the earlier instructions before entering this command)

- You can completely delete the virtual machine by typing:

  vagrant destroy

  in the bitcurator-access-webtools directory.

- You can type **vagrant up** at any time in this directory to bring the service up again. If you have not run the **vagrant destroy** command, the service should boot in less than a minute. If you have run the **vagrant destroy** command, the virtual machine will be rebuilt from scratch.

Additional resources
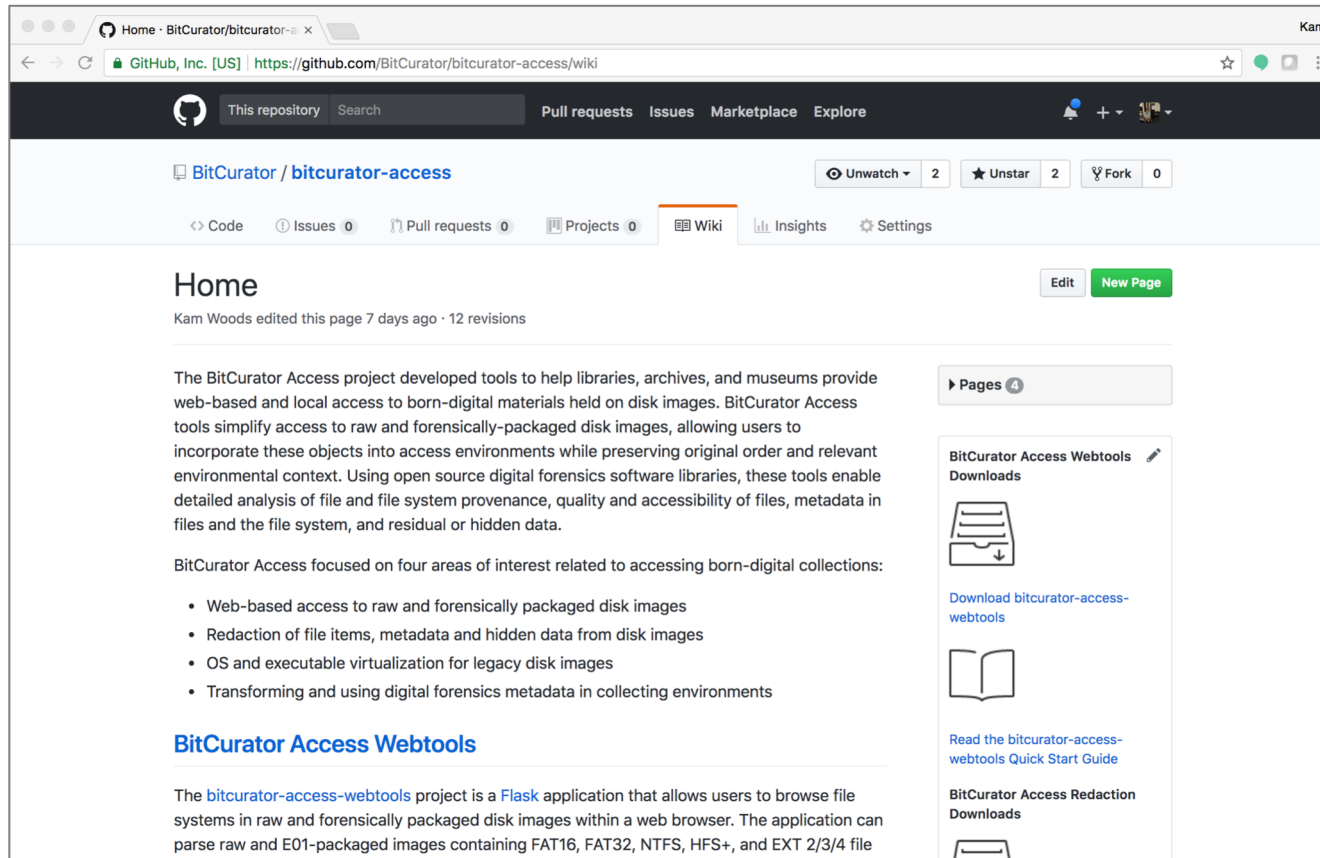
More detailed information can be found on the project wiki at https://github.com/BitCurator/bitcurator-access/wiki.

Source code and releases can be found on GitHub at https://github.com/bitcurator/bitcurator-access-webtools.