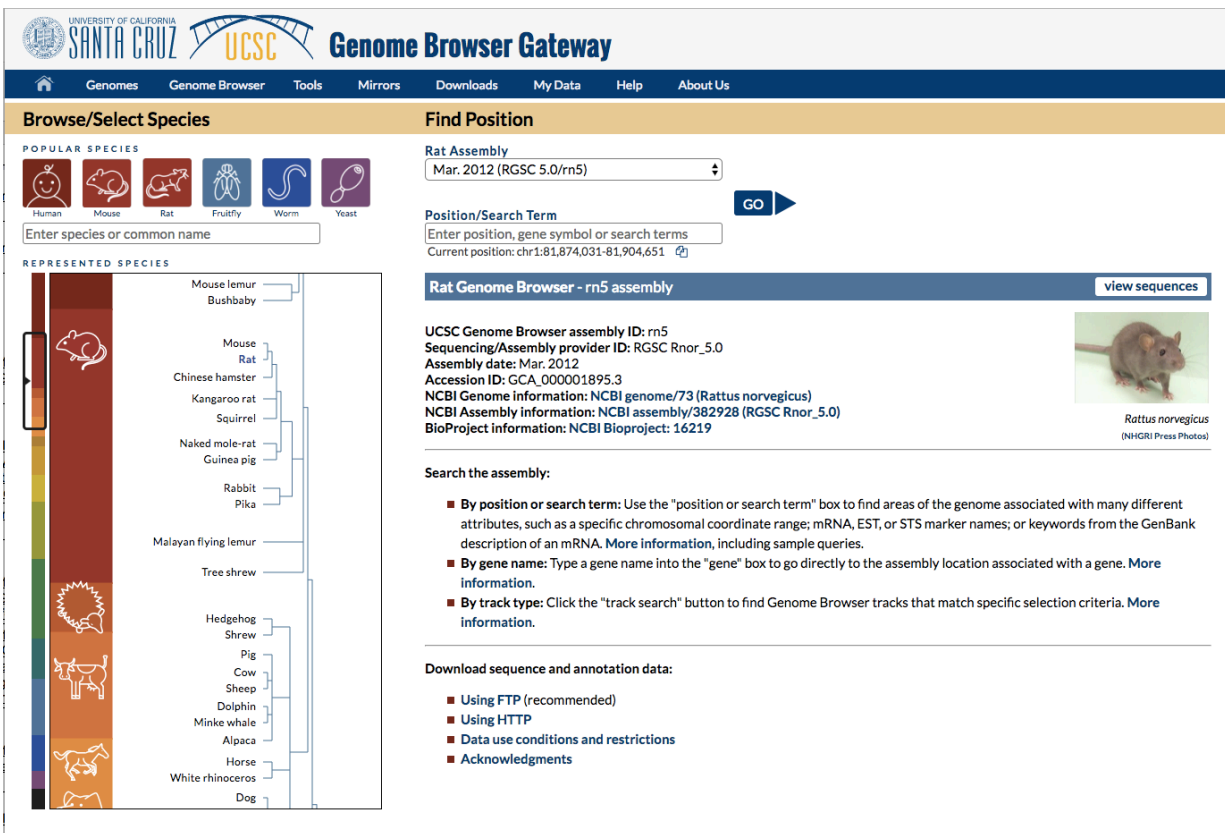


New Genome Browser product gives freedom to easily collaborate in the cloud

January 24 2017



The screenshot shows the UCSC Genome Browser Gateway interface. At the top, there are navigation links: Genomes, Genome Browser, Tools, Mirrors, Downloads, My Data, Help, and About Us. The main content is divided into two sections: 'Browse/Select Species' and 'Find Position'.

Browse/Select Species: This section includes 'POPULAR SPECIES' with icons for Human, Mouse, Rat, Fruitfly, Worm, and Yeast. Below this is a search box 'Enter species or common name'. Underneath is a 'REPRESENTED SPECIES' section with a vertical color bar and a phylogenetic tree listing various species including Mouse lemur, Bushbaby, Mouse, Rat, Chinese hamster, Kangaroo rat, Squirrel, Naked mole-rat, Guinea pig, Rabbit, Pika, Malayan flying lemur, Tree shrew, Hedgehog, Shrew, Pig, Cow, Sheep, Dolphin, Minke whale, Alpaca, Horse, White rhinoceros, and Dog.

Find Position: This section has a 'Rat Assembly' dropdown menu set to 'Mar. 2012 (RGSC 5.0/rn5)'. Below it is a 'Position/Search Term' input box with a 'GO' button. The current position is shown as 'chr1:81,874,031-81,904,651'. Below this is a 'Rat Genome Browser - rn5 assembly' section with a 'view sequences' button. It lists assembly information: UCSC Genome Browser assembly ID: rn5, Sequencing/Assembly provider ID: RGSC Rnor_5.0, Assembly date: Mar. 2012, Accession ID: GCA_000001895.3, NCBI Genome Information: NCBI genome/73 (Rattus norvegicus), NCBI Assembly Information: NCBI assembly/382928 (RGSC Rnor_5.0), and BioProject Information: NCBI Bioproject: 16219. There is also a small image of a rat labeled 'Rattus norvegicus (NHGRI Press Photos)'. Below this is a 'Search the assembly:' section with three bullet points: 'By position or search term', 'By gene name', and 'By track type'. At the bottom is a 'Download sequence and annotation data:' section with four bullet points: 'Using FTP (recommended)', 'Using HTTP', 'Data use conditions and restrictions', and 'Acknowledgments'.

Just launched! Genome Browser in the Cloud (GBiC) introduces more freedom to collaborate, plus faster Genome Browser installations. Credit: UC Santa Cruz Genomics Institute

Until now, genomics research groups working with sensitive medical

data were largely limited to using local Genome Browser installations to maintain confidentiality, complicating data-sharing among collaborators. Today, the Genome Browser group of the UC Santa Cruz Genomics Institute announced they have changed that by launching a new product, Genome Browser in the Cloud (GBiC). GBiC introduces new freedom to collaborate by allowing rapid Browser installation, in any UNIX-based cloud.

Users provide the cloud instance, then install the Genome Browser image and grant access to whomever needs it. GBiC functions the same and is as secure as the public version of the Genome Browser, Genome Browser in a Box (GBiB), or a Genome Browser mirror site. Another GBiC innovation is significantly reduced installation time as compared to earlier Genome Browser versions.

"We are very pleased with how this product facilitates remote collaboration—for example, between a hospital physician, an off-site lab technician and a third-party genomic researcher," said Genome Browser author and Principal Investigator Jim Kent. "Thanks to the efforts of GBiC Engineer Max Haeussler, users also benefit from significantly faster installation time," Kent continued. "What historically took at least a week, now typically is less than an hour," he said.

While the GBiC is intended specifically for cloud-based installations, its functionality is versatile. For most purposes, the GBiC essentially replaces the manual installation process for mirroring the UCSC Genome Browser in multiple environments (cloud servers, dedicated servers, or even a laptop).

Provided by University of California - Santa Cruz

Citation: New Genome Browser product gives freedom to easily collaborate in the cloud (2017,

January 24) retrieved 24 April 2024 from <https://phys.org/news/2017-01-genome-browser-product-freedom-easily.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.