

# The DAS/2 Protocol

## Contents

- [1 About DAS/2](#)
  - ◆ [1.1 DAS/2 History](#)
- [2 DAS/2 Clients](#)
- [3 DAS/2 Servers](#)
- [4 DAS/2 Validation Suite](#)
- [5 Publishing, Discovering, and Registering DAS/2 sources](#)
- [6 Global Sequence Identifiers](#)
- [7 Feedback and Bug Reports](#)
- [8 CVS Access](#)

## About DAS/2

DAS/2 is intended to be a more flexible and powerful version of the original [DAS/1](#) specification. It was built to address the needs of distributing massive genomic data sets derived from high density microarray applications and Next (and Next Next) Generation Sequencing. Unlike DAS/1, DAS/2 does not require data exchange through text based XML but allows for data distribution using any text or binary format. The two versions are not natively compatible. The DAS/2 code base consists of:

1. DAS/2 Specification:
  - ◆ [DAS/2.0 specification](#) (stable)
  - ◆ [DAS/2.1 specification](#) (under development)
2. (Inactive ?) [A publicly accessible DAS/2 server implementation](#) (open source code available from the [GMOD project](#))
3. [The GenoViz open-source DAS/2 client implementation](#)
4. [An open-source client library and server validation suite](#)

See [DAS/2#CVS Access](#) for details on retrieving code related to these projects.

## DAS/2 History

DAS/2 diverged from [DAS/1](#) as a result of a variety of [RFCs \(Requests for Comment\)](#) posted on the DAS mailing list from users and implementers of the DAS spec over the first several years after DAS was originally introduced. As of November 2006, the [retrieval portion of the DAS/2 spec](#) has stabilized. Implementers and service providers can rely on this for their DAS/2-based development efforts.

Work on what became the DAS/2.0 specification "officially" began in July 2004 when funding was awarded for a 2-year NIH grant for DAS/2 development ([abstract](#), [full proposal](#)). The grant was subsequently extended, and the grant funding period ended October 2007 ([final progress report](#)). Participating in the DAS/2 grant were Affymetrix, Cold Spring Harbor Lab, the European Bioinformatics Institute/Sanger Center, and Dalke Scientific.

## DAS/2

Given that the DAS/2 specification is not backward compatible with the DAS/1 version, existing DAS software will continue to support DAS/1. A DAS proxy server is in development that will permit a DAS/1 server to be accessed by DAS/2 clients.

## DAS/2 Clients

The following software packages support the client-side DAS/2 API for interacting with DAS/2-compliant servers:

- IGB - Integrated Genome Browser - a DAS/2 reference implementation

- GBrowse - Generic Genome Browser
- caBIO Infrastructure Objects (*confirm this*)

## DAS/2 Servers

The following software packages operate as servers capable of providing data in response to queries conforming with the DAS/2 protocol:

## DAS/2

- [Affymetrix Public DAS/2 server](#)
- [Huntsman Cancer Institute's DAS/2 server](#)
- [HCI's GenoPub DAS/2 GUI](#) (**login:** guest, **pw:** guest) - A Flex/MySQL web application for organizing, annotating, and authorizing genomic annotations for distribution using the GenoViz DAS/2 server

- [Biopackages DAS/2 server](#) - (inactive?) a DAS/2 reference implementation

## DAS/2 Validation Suite

See [Das2Validation](#).

## Publishing, Discovering, and Registering DAS/2 sources

Currently, the [DasRegistry](#) does not support DAS/2 services.

As a temporary fix, download the 'das2Registry.xml' file from the [GenoViz Project](#), add an entry, and email it back to [GenoViz](#) or [BioDas](#). If you have access to the GenoViz SVN, modify it directly.

## Global Sequence Identifiers

See [GlobalSeqIDs](#)

## Feedback and Bug Reports

A general forum for advice on DAS/2-related issues is the [discussion list](#).

To submit or view bug reports in DAS/2-related software, use one of the links below, depending on the affected component.

- DAS/2 Specification:
  - ◆ <http://bugzilla.open-bio.org/>
- Reference Server (GMOD Project - select category 'DAS2'):
  - ◆ [http://sourceforge.net/tracker/?group\\_id=27707&atid=391291](http://sourceforge.net/tracker/?group_id=27707&atid=391291)
- Reference Client (IGB) - select category 'DAS':
  - ◆ [http://sourceforge.net/tracker/?group\\_id=129420&atid=714744](http://sourceforge.net/tracker/?group_id=129420&atid=714744)
- Validation Suite (Dasypus):
  - ◆ [https://sourceforge.net/tracker/?group\\_id=138271&atid=740641](https://sourceforge.net/tracker/?group_id=138271&atid=740641)

## CVS Access

There are separate repositories for the DAS/2 specification, DAS/2 client and server reference implementations, and the validation suite. These are for developers only since they do not represent stable releases and may contain modifications that contain bugs. The one exception is the schema for the retrieval portion of the DAS/2 spec, which is now stable.

- DAS/2 spec:
  - ◆ `:pserver:cvs@cvs.biodas.org:/home/repository/biodas`  
   ◆ (login password="cvs", directory=das/das2, XML schema for retrieval spec:  
   das2\_schemas.rnc)
- [DAS/2 Client reference implementation](#) ("IGB")
- [DAS/2 Server reference implementation](#) (see das2 package)
- [DAS/2 validation suite](#) ("Dasypus")

See <http://www.biodas.org/www.open-bio.orghttp://www.biodas.org/wiki/SourceCode> for general pointers about anonymous access to [open-bio.org](#)-hosted source code.