

USE CASE: LIGO Gravitational Wave Detection

The business pain point

Big science requires collaboration. The search for and experimental measurement of gravity waves is one of the biggest scientific endeavors in recent history^[1]. Sharing observations between different scientific and research groups has proven to be of immense benefit to this effort.

How does this collaboration happen?

It takes place on the Gravitational Waves-Astronomy (GW-A) collaboration platform (gw-astronomy.org) operated by the Leonard E Parker Center for Gravitation, Cosmology and Astrophysics (CGCA) at the University of Wisconsin-Milwaukee.

CGCA operates the GWA platform as part of its membership in the LIGO Scientific Collaboration. Currently, there are over 80 groups of scientists collaborating with the Laser Interferometer Gravitational-Wave Observatory (LIGO) and its Italian-French counterpart Virgo.

How did Cirrus Identity help?

Until Cirrus Identity, the answer to remove access barriers was often a negotiation and an amount of bureaucracy to get a guest identity with an associated federated account at another organization. This can take time, effort, and lead to access issues when this guest access lapses. The GW-A platform needed an “out-of-the-box” federated authentication solution with three criteria:

- Support for Shibboleth
- Available to every sort of user
- Easy to administer and support

More than half of the 200 collaborating scientists are using the Cirrus Gateway to access the collaboration platform to conduct research.

[1] <https://uwm.edu/news/uwms-big-data-helps-findgravitational-waves/>

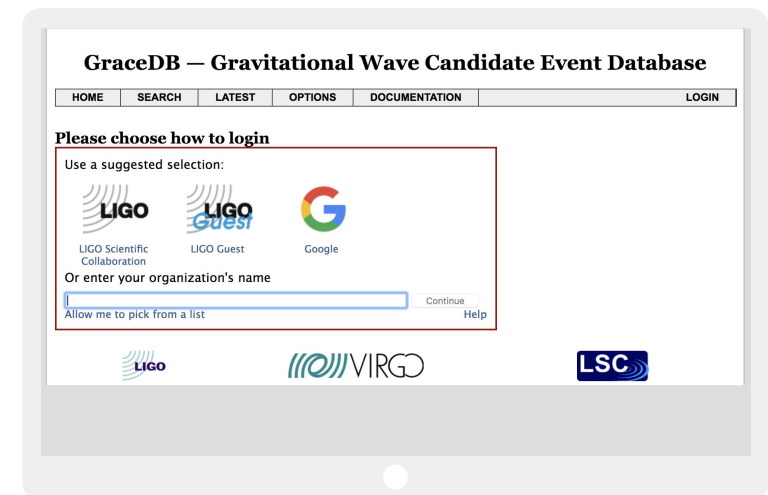
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What do users see?

There are three main functions scientists and researchers perform on the GW-A platform:

- Identity management (who the members are, what collaborations they belong to, roles within collaborations)
- Wiki space
- Mailing lists

For each of these functions, researchers have a federated login to gain access. The Cirrus Gateway has enabled the GW-A platform to allow scientists and researchers that don't have a traditional federated identity from an organization to access these services with their Google Identity.



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For first time users, there is a small wait time for account verification and to grant your identity with appropriate access levels. On each subsequent visit, users login with their Google credentials. The best part is, that by using a Google Identity, researchers and scientists forgo creating yet another username/password to remember/track and keep secure.

The level of effort to integrate the Cirrus Gateway was relatively low. The GW-A platformed was already enabled for federated identity, and a consultant experienced with the GW-A Platform integrated their three collaboration applications with the Cirrus Gateway in one afternoon.

Integration highlights

The Cirrus Identity Gateway is integrated with three components of the GW-A platform:

- Image of FOSWIKI
- Image of CManage
- Image of SYMA

WHY DID YOU GO WITH CIRRUS ID?

“The Gateway Service from Cirrus Identity fits the bill perfectly. And working with the Cirrus Identity team has been great!”

-Warren Anderson