

# CANARIE Research Software Program Technical Newsletter

June 2014



## New Program Terminology

We've recently augmented the registry at [science.canarie.ca](http://science.canarie.ca) to include platforms as well as services - more on that inside this newsletter. We plan to add support for even more types of research "things" in the future and we needed a name for these things. So, in this newsletter and on the portal, the term "**research resources**" or more simply "**resources**" will be used to collectively refer to all objects in the registry.

## Expanding the definition of a "service"

In response to feedback at the workshop and input from our software advisory committee, we are pleased to announce that we have expanded the definition of a "service" under CANARIE's Research Software program to include 2 new types. Participants in NEP-RPI calls 1 and 2 may choose to adopt any of these three types for services they proposed contributing. And of course, contributions of software components of any type from outside the funded program are always welcome. See page 3 of this newsletter for details.

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Want to contribute  
an article  
describing your  
service or platform  
to this newsletter?

We'd be happy to promote  
your research resource.

Contact us at  
[support@science.canarie.ca](mailto:support@science.canarie.ca)



# Program Updates

## New features added to science.canarie.ca

### Did You Know?

Software contributed by CANARIE, including the reference platform described on this page, can be found in GitHub at

<https://github.com/canarie>

See the “research\_software” and “support\_software” repositories.

### Quick Links

- [science.canarie.ca User's Guide](#)
- [Research Platform Registry](#)

### What's New?

This section describes features that have been added to the Research Software Portal on science.canarie.ca since the last newsletter.

**For details about these or any other Research Software Portal features, please see the science.canarie.ca User's Guide listed in “Quick Links”.**

**Owner Management** – We've added support to allow resource owners to manage their own owner email lists. When a new resource is registered, we will add the first owner email address and then let you manage your resource owners from that point on.

**Platform Registry** – the platform registry, which has similar functionality to the service registry, has been completed and deployed. This includes both the platform list and details pages for each platform. CANARIE reference platforms have also been deployed.

**My Resources** – for those of you who are registered owners of services and/or platforms, we have added a page that lists all the resources you own, with links to the details page for each.

**Service/Platform Base URL** – The base URL for your service or platform is now displayed on the details page (for logged in owners only). This base URL is editable. This is the first step in our move toward allowing resource owners to manage their own content without relying on CANARIE.

**Coming Soon List** – The Coming Soon List is back! We've added a list of research platforms and services that are in active development now to the registry.



# Enhancements to the definition of a “service”

## Why change the definition of a service?

It's not that the definition is changing. Instead, we're expanding the definition to allow more types of research software services to be contributed, while at the same time, reducing the development and maintenance requirements on teams that are not contributing a traditional service. Originally, the program required what we call “Managed Services” – that is, services that are deployed and maintained by the creators and accessed by users through a web services interface. Managed Services definitely have value and we continue to support them.

However, some types of software that are useful to research do not lend themselves to the managed model. Consider the case of a visualization widget written in Javascript. This is certainly a useful research tool, but there would seem to be no advantage in forcing the creators to wrap such a script so that it is accessible through a web services interface. It makes much more sense for potential users to just include the script directly.

Similarly, a service that is accessed via a web services interface should not necessarily be implemented as a Managed Service. Consider the example of a service that implements a virtual file system. The original creators of such a service could host it, but that would mean that users would likely be consuming the storage resources of the creators rather than their

own. In this case, it makes more sense for users to deploy a copy of the service on their own infrastructure.

## Types of Research Software Services

In order to simplify service creation, maintenance and use, we will now be supporting the following types of services.

**Managed Service:** This is the service type where the creator maintains a live instance of the service that is accessed by users via a web services interface.

**Self-Deployed Service:** Like a Managed Service, a Self-Deployed Service is typically accessed through a web services interface. The difference is that users would deploy their own instance of the service rather than using the one provided by the creators. CANARIE asks that the creators of Self-Deployed Services still maintain a live instance so that perspective users can try it out before committing to it.

**Component Service:** A Component Service is a software component that is included in platforms prior to platform deployment. This would include libraries, scripts, and VM images designed to provide a basis for enhancing platform functionality. Although Component Services are typically not stand-alone, CANARIE recommends that contributors of this type of service provide some sort of online demonstration for potential users.



## Enhancements to the definition of a “service” (2)

### How does this affect the service information the CANARIE asks creators to provide?

For Managed Services, nothing will change. For Self-Deployed Services and Component Services, we're asking that the creators still provide a service name, description, category, creator, research subject, support email, tags and version identifier, along with links to release notes, user documentation, support information, source code (optional), a try me or online demo, the service licensing terms and the provenance statement. This is basically all of the information at the top of the service details page above the reliability section. By asking all contributors for this information, we'll maintain a consistent user experience on the portal, regardless of service type.

### Right now, this information comes from the 'Info' packet in the CANARIE service monitoring API. Will I have to implement that API for my Self-Deployed or Component Service?

No, we'll be modifying the portal to allow creators of Self-Deployed and Component Services to enter this information directly. There will be no need to deploy code that can respond to service information polls from the portal at [science.canarie.ca](http://science.canarie.ca).

### What about reliability measurements? How does that work for Self-Deployed Services and Component Services?

Currently the portal polls Managed services every 15 minutes to gauge their availability. This mechanism will not change for Managed Services. For Self-Deployed Services and Component Services, we will poll the

documentation links provided by the creators as a primitive measure of component availability – specifically access to downloadable parts of the service.

If creators of Self-Deployed Services would like us to monitor their demo instances, we're happy to do that as well.

### What about measuring service usage?

Today, the portal polls registered Managed Services for usage information. This information is made available only to service creators to help with resource planning, etc. This type of usage information is not relevant to Self-Deployed Services and Component Services and, in fact, there would be no reasonable way to collect it.

### So you won't be measuring component usage at all?

We will! We will continue to support the service usage API for owners of Managed Services and owners of Self-Deployed Services who are interested in monitoring their demo instances. However, going forward, we will introduce a new type of usage metric. Specifically, we will be measuring how many research platforms each service is used in. A simple API will allow platforms to indicate which service(s) they are incorporating. Details will be released shortly.



# Over the Summer

## science.canarie.ca roadmap

There probably won't be much reading (or possibly writing) of newsletters over the summer, but development of the Research Software portal will continue. Here's what we're planning.

**Portal Notifications** – We'll be adding the ability for the portal to notify users of potential downtime for itself through banner displays. This code will later be modified to allow resource owners to provide notifications to their users via the portal.

**Private Platforms and Services** – Want to test your platform or service for reachability before making it publicly available? We'll be adding a private setting to the portal so that selected resources will only be visible to the owners of those resources.

**Support for the new research service types** – The portal will be modified to support Self-Deployed Services and Component Services. Refer to the previous section for details.

**New methods of measuring service usage** – As part of the support for new types of software services mentioned earlier, we'll be adding different ways of measuring the usage of components to the portal. In particular, we'll be developing an API to allow platforms to tell us which components they are incorporating.

Have a great summer  
everyone!



# Workshop Photos

