

# **GT 4.0 Tech Preview: Dynamic Accounts**

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# GT 4.0 Tech Preview: Dynamic Accounts

## Overview

This component is a **technical preview** (commonly referred to as tech preview) for the GT 4.0 final distribution. As such, this documentation is not part of the GT 4.0 official documentation but is provided by the developer(s) to assist early adopters. This component also has very limited support.



## Note

This component's name has been updated from Workspace Management Services (WMS) to Dynamic Accounts.

Dynamic Accounts allows a Grid client to dynamically create and manage a workspace, currently implemented as a Unix account, on a remote site. The infrastructure is composed of a factory service that allows an authorized Grid client to create individual accounts or groups of accounts, and an account service that allows an authorized Grid client to manage individual account properties, such as account access policy or time to live (TTL). These concepts are represented as WSRF<sup>1</sup> services and implemented using the GT4 implementation of WSRF.

The Dynamic Accounts code consists of a front-end that implements protocols for the creation and management of workspaces and a back-end implementation. Dynamic Accounts creation and management can be implemented in different ways according to site policies and preferences. At this point, our implementation supports two such "back-ends": (1) true dynamic creation using the Unix **adduser** command, and (2) an account pooling implementation based on Andrew McNab's gridmapdir patch and the gLite LCMAPS system.

You can find documentation for Dynamic Accounts [here](#)<sup>2</sup>.

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<sup>1</sup> <http://www.globus.org/wsrfl/>

<sup>2</sup> [http://dev.globus.org/wiki/Incubator/Dynamic\\_Accounts](http://dev.globus.org/wiki/Incubator/Dynamic_Accounts)

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# Chapter 1. GT 4.0 Component Fact Sheet: Dynamic Accounts (Contribution)

## 1. Brief component overview



### Note

This component's name has been updated from Workspace Management Services (WMS) to Dynamic Accounts.

Dynamic Accounts allows a Grid client to dynamically create and manage a workspace, currently implemented as a Unix account, on a remote site. The infrastructure is composed of a factory service that allows an authorized Grid client to create individual accounts or groups of accounts, and an account service that allows an authorized Grid client to manage individual account properties, such as account access policy or time to live (TTL). These concepts are represented as [WSRF](#)<sup>1</sup> services and implemented using the GT4 implementation of WSRF.

The Dynamic Accounts code consists of a front-end that implements protocols for the creation and management of workspaces and a back-end implementation. Dynamic Accounts creation and management can be implemented in different ways according to site policies and preferences. At this point, our implementation supports two such "back-ends": (1) true dynamic creation using the Unix **adduser** command, and (2) an account pooling implementation based on Andrew McNab's gridmapdir patch and the gLite LCMAPS system.

You can find documentation for Dynamic Accounts [here](#)<sup>2</sup>.

## 2. Summary of features

Features new in release GT 4.0:

- Authorized client can create and manage accounts dynamically.
- The service accepts VOMS credentials; attributes from VOMS credentials can be used for authorization as well as customization of accounts.
- Account assignment is authorized based on access control lists (ACLs) which can be DN-based or attribute-based.
- The account assignment back-end is implemented using an account pool: [LCMAPS](#)<sup>3</sup> implementation is currently our primary account pooling implementation but we also support independent account pools and accounts created dynamically as needed.
- The account assignment back-end implements highly configurable account management including a modifiable account recycling process and account quarantine.

Other Supported Features

- None.

Deprecated Features

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<sup>1</sup> <http://www.globus.org/wsrp/>

<sup>2</sup> [http://dev.globus.org/wiki/Incubator/Dynamic\\_Accounts](http://dev.globus.org/wiki/Incubator/Dynamic_Accounts)

<sup>3</sup> <http://www.dutchgrid.nl/DataGrid/wp4/lcmaps/>

- None.

## 3. Backward compatibility summary

Protocol changes since GT version 3.2:

- N/A as this is a new component.

API changes since GT version 3.2:

- N/A

Exception changes since GT version 3.2:

- N/A

Schema changes since GT version 3.2:

- N/A

## 4. Technology dependencies

Dynamic Accounts depends on the following GT components:

- Java WS Core

Dynamic Accounts depends on the following 3rd party software:

- [LCMAPS](#)<sup>4</sup> (only for the LCMAPS back end)
- Java VOMS parsing libraries from the gLite cvs. A binary can be downloaded separately, see the administrator's guide.

## 5. Tested platforms

Tested Platforms for Dynamic Accounts

- Linux

## 6. Associated standards

Associated standards for Dynamic Accounts:

- [WSRF](#)<sup>5</sup>

## 7. For More Information

Click [here](#)<sup>6</sup> for more information about this component.

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<sup>4</sup> <http://www.dutchgrid.nl/DataGrid/wp4/lcmaps/>

<sup>5</sup> <http://www.globus.org/wsrfl/>

<sup>6</sup> [http://dev.globus.org/wiki/Incubator/Dynamic\\_Accounts](http://dev.globus.org/wiki/Incubator/Dynamic_Accounts)

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# Chapter 2. GT 4.0.8 Incremental Release Notes: Dynamic Accounts

## 1. Introduction

These release notes are for the incremental release 4.0.8. It includes a summary of changes since 4.0.7, bug fixes since 4.0.7 and any known problems that still exist at the time of the 4.0.8 release. This page is in addition to the top-level 4.0.8 release notes at <http://www.globus.org/toolkit/releasenotes/4.0.8>.



### Note

The name of this component has been updated to Dynamic Accounts from Workspace Management Services (WMS).

For release notes about 4.0 (including feature summary, technology dependencies, etc) go to the [WMS 4.0 Release Notes](#)<sup>1</sup>.

## 2. Changes Summary

No changes have been made since the previous release.

## 3. Bug Fixes

No bug fixes have been made since the previous release.

## 4. Known Problems

- The `LeasedAccountsResource` implementation will quarantine an account if the expiration script fails for any reason; but currently we provide no user friendly mechanism for manually un-quarantining the account when the situation is cleared by an administrator. We are planning to release an update shortly.

## 5. For More Information

Click [here](#)<sup>2</sup> for more information about this component.

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<sup>1</sup> [http://www.globus.org/toolkit/docs/4.0/techpreview/wms/WMS\\_Release\\_Notes.html](http://www.globus.org/toolkit/docs/4.0/techpreview/wms/WMS_Release_Notes.html)

<sup>2</sup> [http://dev.globus.org/wiki/Incubator/Dynamic\\_Accounts](http://dev.globus.org/wiki/Incubator/Dynamic_Accounts)

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# Chapter 3. GT 4.0.7 Incremental Release Notes: Dynamic Accounts

## 1. Introduction

These release notes are for the incremental release 4.0.7. It includes a summary of changes since 4.0.6, bug fixes since 4.0.6 and any known problems that still exist at the time of the 4.0.7 release. This page is in addition to the top-level 4.0.7 release notes at <http://www.globus.org/toolkit/releasenotes/4.0.7>.



### Note

The name of this component has been updated to Dynamic Accounts from Workspace Management Services (WMS).

For release notes about 4.0 (including feature summary, technology dependencies, etc) go to the [WMS 4.0 Release Notes](#)<sup>1</sup>.

## 2. Changes Summary

No changes have been made since the previous release.

## 3. Bug Fixes

No bug fixes have been made since the previous release.

## 4. Known Problems

- The `LeasedAccountsResource` implementation will quarantine an account if the expiration script fails for any reason; but currently we provide no user friendly mechanism for manually un-quarantining the account when the situation is cleared by an administrator. We are planning to release an update shortly.

## 5. For More Information

Click [here](#)<sup>2</sup> for more information about this component.

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<sup>1</sup> [http://www.globus.org/toolkit/docs/4.0/techpreview/wms/WMS\\_Release\\_Notes.html](http://www.globus.org/toolkit/docs/4.0/techpreview/wms/WMS_Release_Notes.html)

<sup>2</sup> [http://dev.globus.org/wiki/Incubator/Dynamic\\_Accounts](http://dev.globus.org/wiki/Incubator/Dynamic_Accounts)

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# Chapter 4. GT 4.0.6 Incremental Release Notes: Dynamic Accounts

## 1. Introduction

These release notes are for the incremental release 4.0.6. It includes a summary of changes since 4.0.5, bug fixes since 4.0.5 and any known problems that still exist at the time of the 4.0.6 release. This page is in addition to the top-level 4.0.6 release notes at <http://www.globus.org/toolkit/releasenotes/4.0.6>.



### Note

The name of this component has been updated to Dynamic Accounts from Workspace Management Services (WMS).

For release notes about 4.0 (including feature summary, technology dependencies, etc) go to the [WMS 4.0 Release Notes](#)<sup>1</sup>.

## 2. Changes Summary

No changes have been made since the previous release.

## 3. Bug Fixes

No bug fixes have been made since the previous release.

## 4. Known Problems

- The `LeasedAccountsResource` implementation will quarantine an account if the expiration script fails for any reason; but currently we provide no user friendly mechanism for manually un-quarantining the account when the situation is cleared by an administrator. We are planning to release an update shortly.

## 5. For More Information

Click [here](#)<sup>2</sup> for more information about this component.

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<sup>1</sup> [http://www.globus.org/toolkit/docs/4.0/techpreview/wms/WMS\\_Release\\_Notes.html](http://www.globus.org/toolkit/docs/4.0/techpreview/wms/WMS_Release_Notes.html)

<sup>2</sup> [http://dev.globus.org/wiki/Incubator/Dynamic\\_Accounts](http://dev.globus.org/wiki/Incubator/Dynamic_Accounts)

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# Chapter 5. GT 4.0.5 Incremental Release Notes: Workspace Management Service (WMS)

## 1. Introduction

These release notes are for the incremental release 4.0.5. It includes a summary of changes since 4.0.4, bug fixes since 4.0.4 and any known problems that still exist at the time of the 4.0.5 release. This page is in addition to the top-level 4.0.5 release notes at <http://www.globus.org/toolkit/releasenotes/4.0.5>.

For release notes about 4.0 (including feature summary, technology dependencies, etc) go to the [WMS 4.0 Release Notes](#)<sup>1</sup>.

## 2. Changes Summary

No changes have been made since 4.0.3.

## 3. Bug Fixes

No bug fixes have been made since 4.0.3.

## 4. Known Problems

- The `LeasedAccountsResource` implementation will quarantine an account if the expiration script fails for any reason; but currently we provide no user friendly mechanism for manually un-quarantining the account when the situation is cleared by an administrator. We are planning to release an update shortly.

## 5. For More Information

Click [here](#)<sup>2</sup> for more information about this component.

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<sup>1</sup> [http://www.globus.org/toolkit/docs/4.0/techpreview/wms/WMS\\_Release\\_Notes.html](http://www.globus.org/toolkit/docs/4.0/techpreview/wms/WMS_Release_Notes.html)

<sup>2</sup> <http://workspace.globus.org>

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# Chapter 6. GT 4.0.4 Incremental Release Notes: Workspace Management Service (WMS)

## 1. Introduction

These release notes are for the incremental release 4.0.4. It includes a summary of changes since 4.0.3, bug fixes since 4.0.3 and any known problems that still exist at the time of the 4.0.4 release. This page is in addition to the top-level 4.0.4 release notes at <http://www.globus.org/toolkit/releasenotes/4.0.4>.

For release notes about 4.0 (including feature summary, technology dependencies, etc) go to the [WMS 4.0 Release Notes](#)<sup>1</sup>.

## 2. Changes Summary

No changes since 4.0.3.

## 3. Bug Fixes

No bug fixes since 4.0.3.

## 4. Known Problems

- The `LeasedAccountsResource` implementation will quarantine an account if the expiration script fails for any reason; but currently we provide no user friendly mechanism for manually un-quarantining the account when the situation is cleared by an administrator. We are planning to release an update shortly.

## 5. For More Information

Click [here](#)<sup>2</sup> for more information about this component.

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<sup>1</sup> [http://www.globus.org/toolkit/docs/4.0/techpreview/wms/WMS\\_Release\\_Notes.html](http://www.globus.org/toolkit/docs/4.0/techpreview/wms/WMS_Release_Notes.html)

<sup>2</sup> <http://workspace.globus.org>

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# Chapter 7. GT 4.0.3 Incremental Release Notes: Workspace Management Service (WMS)

## 1. Introduction

These release notes are for the incremental release 4.0.3. It includes a summary of changes since 4.0.2, bug fixes since 4.0.2 and any known problems that still exist at the time of the 4.0.3 release. This page is in addition to the top-level 4.0.3 release notes at <http://www.globus.org/toolkit/releasenotes/4.0.3>.

For release notes about 4.0 (including feature summary, technology dependencies, etc) go to the [WMS 4.0 Release Notes](#)<sup>1</sup>.

## 2. Changes Summary

No changes have occurred for the Workspace Management Service (WMS) since 4.0.2 (the Technology Preview 5 release is included).

## 3. Bug Fixes

No bugs have been fixed for Workspace Management Service (WMS) since GT 4.0.2.

## 4. Known Problems

The only known problem for Workspace Service Management (WMS) as of 4.0.3, is the following:

- The `LeasedAccountsResource` implementation will quarantine an account if the expiration script fails for any reason; but currently we provide no user friendly mechanism for manually un-quarantining the account when the situation is cleared by an administrator. We are planning to release an update shortly.

## 5. For More Information

Click [here](#)<sup>2</sup> for more information about this component.

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<sup>1</sup> [http://www.globus.org/toolkit/docs/4.0/techpreview/wms/WMS\\_Release\\_Notes.html](http://www.globus.org/toolkit/docs/4.0/techpreview/wms/WMS_Release_Notes.html)

<sup>2</sup> <http://workspace.globus.org>

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# Chapter 8. GT 4.0.2 Incremental Release Notes: Workspace Management Service (WMS)

## 1. Introduction

These release notes are for the incremental release 4.0.2. It includes a summary of changes since 4.0.1, bug fixes since 4.0.1 and any known problems that still exist at the time of the 4.0.2 release. This page is in addition to the top-level 4.0.2 release notes at <http://www.globus.org/toolkit/releasenotes/4.0.2>.

For release notes about 4.0 (including feature summary, technology dependencies, etc) go to the [WMS 4.0 Release Notes](#)<sup>1</sup>.

## 2. Changes Summary

The following changes have occurred for the Workspace Management Service (WMS) since 4.0.1 (the Technology Preview 5 release is included):

- Added a new database persistence store.
- Added a database based dynamic account implementation called `LeasedAccountsResource`.

## 3. Bug Fixes

No bugs were fixed for Workspace Management Service (WMS).

## 4. Known Problems

As of 4.0.2, the `LeasedAccountsResource` implementation will quarantine an account if the expiration script fails for any reason; but currently we provide no user friendly mechanism for manually un-quarantining the account when the situation is cleared by an administrator. We are planning to release an update shortly.

## 5. For More Information

Click [here](#)<sup>2</sup> for more information about this component.

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<sup>1</sup> [http://www.globus.org/toolkit/docs/4.0/techpreview/wms/WMS\\_Release\\_Notes.html](http://www.globus.org/toolkit/docs/4.0/techpreview/wms/WMS_Release_Notes.html)

<sup>2</sup> <http://workspace.globus.org>

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# Chapter 9. GT 4.0.1 Incremental Release Notes: Workspace Management Service (WMS)

## 1. Introduction

These release notes are for the incremental release 4.0.1. It includes a summary of changes since 4.0.0, bug fixes since 4.0.0 and any known problems that still exist at the time of the 4.0.1 release. This page is in addition to the top-level 4.0.1 release notes at <http://www.globus.org/toolkit/releasenotes/4.0.1>.

For release notes about 4.0 (including feature summary, technology dependencies, etc) go to the [WMS 4.0 Release Notes](#)<sup>1</sup>.

## 2. Changes Summary

The following changes have occurred for the Workspace Management Service (WMS) since 4.0.0 (the tech\_preview\_4 release is included):

- Persistence was added, workspaces persist after container reboots
- (optional) support for multiple workspaces per credential was added
- The service will no longer compile without a separate download (see admin guide)
- A queryPDP for use with other services (e.g., GRAM) was added
- A banlistPDP was added for the workspace service itself, which allows a site to ban particular DNs and attributes (as well as ban clients from adding these entities to workspace access and management policies)

## 3. Bug Fixes

No bugs were fixed for Workspace Management Service (WMS).

## 4. Known Problems

No problems are known to exist for the Workspace Management Service (WMS) at the time of the 4.0.1 release.

## 5. For More Information

Click [here](#)<sup>2</sup> for more information about this component.

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<sup>1</sup> [http://www.globus.org/toolkit/docs/4.0/techpreview/wms/WMS\\_Release\\_Notes.html](http://www.globus.org/toolkit/docs/4.0/techpreview/wms/WMS_Release_Notes.html)

<sup>2</sup> <http://www.mcs.anl.gov/workspace>

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# Chapter 10. GT 4.0 Release Notes: the Workspace Management Service

## 1. Component Overview



### Note

This component's name has been updated from Workspace Management Services (WMS) to Dynamic Accounts.

Dynamic Accounts allows a Grid client to dynamically create and manage a workspace, currently implemented as a Unix account, on a remote site. The infrastructure is composed of a factory service that allows an authorized Grid client to create individual accounts or groups of accounts, and an account service that allows an authorized Grid client to manage individual account properties, such as account access policy or time to live (TTL). These concepts are represented as [WSRF](#)<sup>1</sup> services and implemented using the GT4 implementation of WSRF.

The Dynamic Accounts code consists of a front-end that implements protocols for the creation and management of workspaces and a back-end implementation. Dynamic Accounts creation and management can be implemented in different ways according to site policies and preferences. At this point, our implementation supports two such "back-ends": (1) true dynamic creation using the Unix **adduser** command, and (2) an account pooling implementation based on Andrew McNab's gridmapdir patch and the gLite LCMAPS system.

You can find documentation for Dynamic Accounts [here](#)<sup>2</sup>.

## 2. Feature Summary

Features new in release GT 4.0:

- Authorized client can create and manage accounts dynamically.
- The service accepts VOMS credentials; attributes from VOMS credentials can be used for authorization as well as customization of accounts.
- Account assignment is authorized based on access control lists (ACLs) which can be DN-based or attribute-based.
- The account assignment back-end is implemented using an account pool: [LCMAPS](#)<sup>3</sup> implementation is currently our primary account pooling implementation but we also support independent account pools and accounts created dynamically as needed.
- The account assignment back-end implements highly configurable account management including a modifiable account recycling process and account quarantine.

Other Supported Features

- None.

Deprecated Features

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<sup>1</sup> <http://www.globus.org/wsrp/>

<sup>2</sup> [http://dev.globus.org/wiki/Incubator/Dynamic\\_Accounts](http://dev.globus.org/wiki/Incubator/Dynamic_Accounts)

<sup>3</sup> <http://www.dutchgrid.nl/DataGrid/wp4/lcmaps/>

- None.

## 3. Technology Dependencies

Dynamic Accounts depends on the following GT components:

- Java WS Core

Dynamic Accounts depends on the following 3rd party software:

- LCMAPS<sup>4</sup> (only for the LCMAPS back end)
- Java VOMS parsing libraries from the gLite cvs. A binary can be downloaded separately, see the administrator's guide.

## 4. Supported Platforms

Tested Platforms for Dynamic Accounts

- Linux

## 5. Backward Compatibility Summary

Protocol changes since GT version 3.2:

- N/A as this is a new component.

API changes since GT version 3.2:

- N/A

Exception changes since GT version 3.2:

- N/A

Schema changes since GT version 3.2:

- N/A

## 6. For More Information

Click [here](#)<sup>5</sup> for more information about this component.

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<sup>4</sup> <http://www.dutchgrid.nl/DataGrid/wp4/lcmaps/>

<sup>5</sup> <http://www.mcs.anl.gov/workspace>