

A Write API for GOCDDB

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Dashboard GOCDB-Requirements

GOCDB-Requirements

#	Subject Requestors	Status Created	Queue Told	Owner Last Updated	Priority Time Left	Category (level 1)	Category (level 2)	Requestor (level 1)	Requestor (level 2)	Requestor (level 3)	Non-Functional Tag	Technology Tag	Custo Tag
11020	Request for a write API to POST updates to Sites/Services for semi-static/dynamic data. david.meredith@stfc.ac.uk	open 8 days ago	requirements	davidm 7 days ago	0	Operational Tools	GOCDB (Operational Tools)	Community	High-Energy Physics (Community)				
10845	Request to re-classify downtime status (un/scheduled) according to DT duration david.meredith@stfc.ac.uk	new 6 weeks ago	requirements	davidm 6 weeks ago	0	Operational Tools	GOCDB (Operational Tools)	Community	High-Energy Physics (Community)				
10716	Enforce default paging on selected PI queries david.meredith@stfc.ac.uk	new 7 weeks ago	requirements	Nobody 7 weeks ago	0	Operational Tools	GOCDB (Operational Tools)	Other			Performance		
10481	Setup email list for user profile and resource request approvers giuseppe.larocca@egi.eu	new 3 months ago	requirements	psolagna 3 months ago	0	Operational Tools	GOCDB (Operational Tools)	EGI Operations					

Ticket 11020 added to the GOCDB requirements tracker – Request for a write API to POST updates to Sites/Services for semi-static/dynamic data.

Requirements for Write API:

- CRUD? CreateReadUpdateDelete (suggest we start with just Update, we can review requirement for Create and Delete later)
- Which GOCDB entities need to be updated? (Site, Service, ServiceEndpoint?)
- Which attributes need to be updated?

The following set of attributes are considered to be sufficient to cover experiment use cases:

Attribute generic name	GLUE 1	GLUE 2	Example
CE endpoint	Included in GlueCEUniqueID	GLUE2EndpointID	ce503.cern.ch:9619
Queue name	Included in GlueCEUniqueID	GLUE2ComputingShareMappingQueue	grid_2nh_atlas
CE type	GlueCEImplementationName	GLUE2EndpointImplementationName	HTCondorCE
CE LRMS type	GlueCEInfoLRMSType	GLUE2ManagerProductName	Condor
Max CPU time	GlueCEPolicyMaxCPUTime	GLUE2ComputingShareMaxCPUTime	2880
Max Wallclock time	GlueCEPolicyMaxWallClockTime	GLUE2ComputingShareMaxWallTime	2880

The IS TF will investigate how to move this information from the BDII to GOCDB/OIM taking the following actions:

- Agree on a naming convention for the attributes (Generic name? GLUE1? GLUE2?)
- Agree on the possible values for type names (CE type and LRMS type. Shall we rely on [GLUE Enumerated types](#)?)
- Identify a set of volunteer sites to define the new attributes in GOCDB and OIM
- Using the web UI, use extension properties to define key/value pairs matching the list of attributes
 - GOCDB: a writeable API has been requested and is under discussion
- Ask AGIS to consume this information from GOCDB/OIM instead of the BDII

After this exercise is carried out, IS TF will be in a position to evaluate whether it's a feasible choice and plan for a wide deployment if necessary.

<https://twiki.cern.ch/twiki/bin/view/EGEE/StopBDII#Computing>

Propose we use Custom Properties to Prototype/Explore the Requirement First

Paste/upload multiple-property template file to service:

Add Service Property

Property Name

Property Value

Add Property

1) Add multiple properties

```
GLUE2EndpointID = somehost.ac.uk
GLUE2ComputingShareMappingQueue = condor_q2d
GLUE2EndpointImplementationName = ARC-CE
GLUE2ManagerProductName = Condor
GLUE2ComputingShareMaxCPUTime = 2880
GLUE2ComputingShareMaxWallTime = 2880
```

Browse... No file selected. Upload

Add Properties

2)

- WLCG could share the template file for all WLCG sites/services

Service: svr009.gla.scotgrid.ac.uk - ARC-CE

System

Host name	svr009.gla.scotgrid.ac.uk
IP Address	130.209.239.9
IP v6 Address	
Operating System	
Architecture	
Contact E-Mail	uki-scotgrid-glasgow@physics.gla.ac.uk

Grid Information

Host DN /C=UK/O=eScience/OU=Glasgow/CN=svr009.gla.scotgrid.ac.uk

URL

Parent Site UKI-SCOTGRID-GLASGOW

Scope Tags atlas, EGI, lhcb, tier2, wlcg

Project Data

Production Level	✓
Beta	✗
Monitored	✓

Service Endpoints (endpoints?)

Name	URL	Interface Name	Edit	Remove
+ Add Endpoint				

Extension Properties Export all properties

Name	Value	Edit	Select All
GLUE2EndpointID	svr009.gla.scotgrid.ac.uk		<input type="checkbox"/>
GLUE2ComputingShareMappingQueue	condor_q2d		<input type="checkbox"/>
GLUE2EndpointImplementationName	ARC-CE		<input type="checkbox"/>
GLUE2ManagerProductName	Condor		<input type="checkbox"/>
GLUE2ComputingShareMaxCPUTime	2880		<input type="checkbox"/>
GLUE2ComputingShareMaxWallTime	2880		<input type="checkbox"/>

+ Add Properties

Select action... Submit

view-source:https://goc.egi.eu/gocdbpi/public/?method=get_service_endpoint&sitename=UKI-SCOTGRID-GLASGOW

visited Getting Started Google Bookmark daveLinux - Google Do...

```
</SERVICE_ENDPOINT>
<SERVICE_ENDPOINT PRIMARY_KEY="2712G0">
  <PRIMARY_KEY>2712G0</PRIMARY_KEY>
  <HOSTNAME>svr009.gla.scotgrid.ac.uk</HOSTNAME>
  <GOCDB_PORTAL_URL>https://goc.egi.eu/portal/index.php?Page_Type=Service&amp;id=271
  <HOSTDN>/C=UK/O=eScience/OU=Glasgow/L=Comperv/CN=svr009.gla.scotgrid.ac.uk</HOSTD
  <BETA>N</BETA>
  <SERVICE_TYPE>ARC-CE</SERVICE_TYPE>
  <HOST_IP>130.209.239.9</HOST_IP>
  <CORE></CORE>
  <IN_PRODUCTION>Y</IN_PRODUCTION>
  <NODE_MONITORED>Y</NODE_MONITORED>
  <SITENAME>UKI-SCOTGRID-GLASGOW</SITENAME>
  <COUNTRY_NAME>United Kingdom</COUNTRY_NAME>
  <COUNTRY_CODE>GB</COUNTRY_CODE>
  <ROC_NAME>NGI_UK</ROC_NAME>
  <URL></URL>
  <ENDPOINTS/>
  <SCOPES>
    <SCOPE>EGI</SCOPE>
    <SCOPE>wlcg</SCOPE>
    <SCOPE>tier2</SCOPE>
    <SCOPE>atlas</SCOPE>
    <SCOPE>lhcb</SCOPE>
  </SCOPES>
  <EXTENSIONS>
    <EXTENSION>
      <LOCAL_ID>222</LOCAL_ID>
      <KEY>GLUE2EndpointID</KEY>
      <VALUE>svr009.gla.scotgrid.ac.uk</VALUE>
    </EXTENSION>
    <EXTENSION>
      <LOCAL_ID>223</LOCAL_ID>
      <KEY>GLUE2ComputingShareMappingQueue</KEY>
      <VALUE>condor_q2d</VALUE>
    </EXTENSION>
    <EXTENSION>
      <LOCAL_ID>224</LOCAL_ID>
      <KEY>GLUE2EndpointImplementationName</KEY>
      <VALUE>ARC-CE</VALUE>
    </EXTENSION>
    <EXTENSION>
      <LOCAL_ID>225</LOCAL_ID>
      <KEY>GLUE2ManagerProductName</KEY>
      <VALUE>Condor</VALUE>
    </EXTENSION>
    <EXTENSION>
      <LOCAL_ID>226</LOCAL_ID>
      <KEY>GLUE2ComputingShareMaxCPUTime</KEY>
      <VALUE>2880</VALUE>
    </EXTENSION>
  </EXTENSIONS>
</SERVICE_ENDPOINT>
```

Custom properties are then available for those services via the API and UI

Services

All Services in GOCDB

Filter (clear)

Service Type: Service Types NGI: (all)

Search for text in Hostname or Service Description:

Production Service: (all) Monitored Service: (all) Site Certification: (all)

Service Scopes: EGI, wlcg Scope match: all (selected tags are AND'd)

Service Extension Name: GLUE2EndpointID Extension Value:

Include Closed Sites:

4 Services (Showing 4)

Hostname	Host Site	Scope(s)
svr009.gla.scotgrid.ac.uk	UKI-SCOTGRID-GLASGOW	EGI, atlas, lhcb, tier2, wlcg
svr010.gla.scotgrid.ac.uk	UKI-SCOTGRID-GLASGOW	EGI, atlas, lhcb, tier2, wlcg
svr011.gla.scotgrid.ac.uk	UKI-SCOTGRID-GLASGOW	EGI, atlas, lhcb, tier2, wlcg
svr019.gla.scotgrid.ac.uk	UKI-SCOTGRID-GLASGOW	EGI, atlas, lhcb, tier2, wlcg

Write API to Update/Add Custom Properties

- Proposal 1: Add a write API methods to POST properties to a specified Site, Service, ServiceEndpoint, e.g.
 - ‘/gocdbpi/site/<siteId>/updateCustomProps’
 - ‘/gocdbpi/service/<serviceId>/updateCustomProps’
 - ‘/gocdbpi/serviceEndpoint/<servEndpId>/updateCustomProps’
- Proposal 2: To secure the methods, allow SiteAdmins to create/manage their own API Keys via the portal UI
 - Existing SiteAdmins create keys in portal UI.
 - API keys can be viewed/revoked in portal UI.



SiteAdmin creates API Keys for their resources (Site/Services):

Manage API Keys for: <mySiteAndServices>

```
API_KEY1 = MzRVU1BWWUFURThLWDE4MEIDTFVUMDNDTzpQSHozZitnMzNiNFpHc1R
API_KEY2 = MzaaadklfjoLOAFAlajfapwealuialafkLUI3OAIIDNAFLI2Pladjfaodiajldkfjaldfj
```

No file selected.

View API Keys for: <mySiteAndServices>

Name	Value	Edit	Select All
API_KEY1	MzRVU1BWWUFURThLWDE4MEIDTFVUMDNDTzpQSHozZitnMzNiNFpHc1R		<input type="checkbox"/>
API_KEY2	MzaaadklfjoLOAFAlajfapwealuialafkLUI3OAIIDNAFLI2Pladjfaodiajldkfjaldfj		<input type="checkbox"/>

Only users with permissions will be able to manage/view the API Keys in the UI

Sample Curl Client Access (not implemented yet!)

```
curl -X POST
https://goc.egi.eu/gocdbpi/service/1234/updateCustomProps
-H "Content-Type: application/json"
-d '{"GLUE2EndpointID":"some.endpoint.ac.uk",
"GLUE2ManagerProductName":"Condor"}' } POST
-H "Authorization: Basic \      props
MzRVU1BwVUFURThLWDE4ME1DTFVUMDNDTzpQSHozZitnMzNiNFpHc1R"
```

API Key passed as
HTTP BASIC header

Server checks the API Key against the keys registered to
that Site/Service.

Considerations

- Examples shown just for custom properties
- Could extend for actual Site/Service/Endpoint attributes later on (if required, will need to add new attribute types to Site/Service/Endp instead of relying on custom props)
- Increased server load – may need to scale up (to monitor/test)
- Timescales ~ 3mths for 1st MVP - Requires new developer to get up to speed (DM stepping down and providing oversight role only)