

GocDB Extensibility Mechanism

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Presented by John Gordon

- **folksonomy:** “a user-generated system of classifying and organizing online content into different categories by the use of metadata such as electronic tags.”
- A recent feature added to GOCDDB v5.2, called extensions, allows sites to define arbitrary valued tags attached to their site or any of their services.
- If a community of sites collaborate and define standards for the tags and values then that community can classify their sites and services for their own benefit.
- One example relevant to this audience would be services which support a given VO.

Adding Key Value Pairs

- Custom key=value pairs can be added to any Site or Service by users who have necessary roles (e.g. SiteAdmins).

Site Extension Properties 

Name	Value	Edit	Remove
TEST_CHARGE	8		
VO	Atlas		
eg.2	val.2		
eg.3	[value]		

 Add Properties

Service Extension Properties 

Name	Value	Edit	Remove
VO	ngs.ac.uk		
eg.2	val.2		

 Add Property

- A site or service can define multiple key value pairs with the same name, e.g. VO=A, VO=B, VO=C etc.
- Valid key names can be made using any alpha numeric characters and: @ - [] + .
- Valid key values can use any character except for: ` ' " ()
- Allow users to provide URL's and comma separated lists and other complex strings as key values.

- New PI parameter '*extensions*' added to filter the following PI methods by key value pairs:
 - get_site
 - get_site_list
 - get_service_endpoint
- Format of 'extensions' expression is one or more (key=value) pairs enclosed in brackets.
- (K=v) pairs can be optionally prefixed with: AND, OR, NOT.
- AND is assumed if no operator supplied.

AND(key1=val)(key2=va2)**OR**(key3=val3)(key4=val4)**NOT**(key5=val5)

- Users can supply a simple query to filter results by extensions:

- A `get_site` request filtering for a single key value pair:

```
?method=get_site&extensions=(VO=Alice)
```

- Wildcard searches are supported by not supplying a key value:

```
?method=get_site&extensions=(VO=)
```

- Multiple key value pairs can be specified:

```
get_site&extensions=(VO=Alice) (VO=Atlas) (VO=LHCB)
```

- Operators AND, OR, NOT can also be supplied with the query:

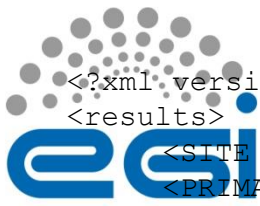
```
get_site&extensions=AND (VO=Alice) (VO=Atlas) OR (VO=CMS) (VO=X) NOT (VO=LHCB)
```

- Extension filtering will work in conjunction with all previously supported filtering parameters:

```
get_site&extensions=OR (VO=Alice) NOT (VO=LHCB) &scope=EGI&roc=NGI_UK
```

- `get_downtime` and new `get_downtime_nested_services` will support the filters '*site_extensions*' and '*service_extensions*'.
- These will allow users to filter downtime results by either service or site extensions or both.

- New `<EXTENSIONS>` element that will nest multiple `<EXTENSION>` elements.
- Each `<EXTENSION>` nests a `<LOCAL_ID>`, `<KEY>`, and `<VALUE>` field to represent the key value data.
- `<LOCAL_ID>` is unique to each key value pair.
- This follows OGF Glue2 XML rendering extensibility mechanism (<http://www.ogf.org/documents/GFD.209.pdf>).



```
<?xml version="1.0" encoding="UTF-8"?>
<results>
  <SITE ID="259" PRIMARY_KEY="458G0" NAME="NGS-HECTOR">
    <PRIMARY_KEY>458G0</PRIMARY_KEY>
    <SHORT_NAME>NGS-HECTOR</SHORT_NAME>
    <OFFICIAL_NAME>HeCTOR, UK National Supercomputing Service </OFFICIAL_NAME>
    <SITE_DESCRIPTION>Pending</SITE_DESCRIPTION>
    <GOCDB_PORTAL_URL>
      https://127.0.0.1/DoctrineP/index.php?Page_Type=Site&pid=259 </GOCDB_PORTAL_URL>
    <HOME_URL>www.hector.ac.uk</HOME_URL>
    <CONTACT_EMAIL>support@hector.ac.uk</CONTACT_EMAIL>
    <CONTACT_TEL>0131-650 5029</CONTACT_TEL>
    <COUNTRY_CODE>GB</COUNTRY_CODE>
    <COUNTRY>United Kingdom</COUNTRY>
    <ROC>NGI_UK</ROC>
    <SUBGRID>NGS</SUBGRID>
    <PRODUCTION_INFRASTRUCTURE>Production</PRODUCTION_INFRASTRUCTURE>
    <CERTIFICATION_STATUS>Uncertified</CERTIFICATION_STATUS>
    <TIMEZONE>UTC</TIMEZONE>
    <CSIRT_EMAIL>helpdesk@hector.ac.uk</CSIRT_EMAIL>
    <DOMAIN>
      <DOMAIN_NAME>hector.ac.uk</DOMAIN_NAME>
    </DOMAIN>
    <EXTENSIONS>
      <EXTENSION>
        <LOCAL_ID>24</LOCAL_ID>
        <KEY>VO</KEY>
        <VALUE>LHCB</VALUE>
      </EXTENSION>
      <EXTENSION>
        <LOCAL_ID>21</LOCAL_ID>
        <KEY>VO</KEY>
        <VALUE>Alice</VALUE>
      </EXTENSION>
    </EXTENSIONS>
  </SITE>
</results>
```

- Released GocDB Version 5.2 with extensions in January.
- For a full set of examples and working links to see the output view the GocDB wiki page for Extensibility Mechanism:
<https://wiki.egi.eu/wiki/GOCDB/Release4/Development/ExtensibilityMechanism>

Proposal: Open Access GOADB Instance

- Read only
- Selected Web portal views only with sensitive information hidden (e.g. emails, IPs?)
- To improve visibility of EGI: allow anyone to browse EGI's NGIs, Sites, available Services etc.
- No authentication, no client certificates
- No login or per-user info (no MySites/Roles/edit)
- No PI

Key=Value pairs added to ServiceGroups ?
Reserved Key=Value pairs ?

Any other requirements on GOCDDB?

Current list is:

[https://wiki.egi.eu/wiki/GOCDDB/Release4/
Development](https://wiki.egi.eu/wiki/GOCDDB/Release4/Development)