

VAMDC Registry Portal

Proof of Concept

Registry

- VAMDC Registry is available at
 - http://msslxv.mssl.ucl.ac.uk/vamdc_registry/main/index.jsp
- Registry can be browsed for registered resources
 - http://msslxv.mssl.ucl.ac.uk/vamdc_registry/main/browse.jsp
- Registry has built in Query support
 - http://msslxv.mssl.ucl.ac.uk/vamdc_registry/main/xquerysearch.jsp
- Registry can also navigated in tree format
 - http://msslxv.mssl.ucl.ac.uk/vamdc_registry/main/tree-branch.jsp

Registry

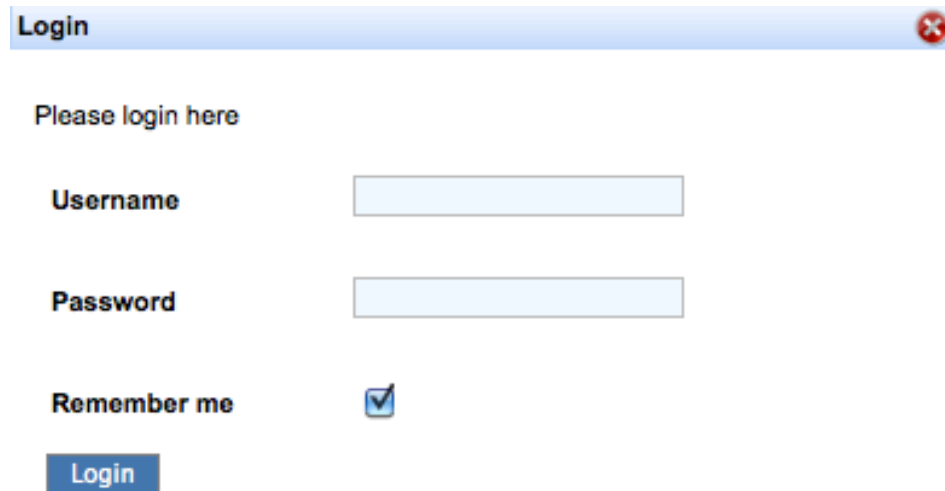
- Registry is for Node Administrator
- Registry is not meant for End Users
 - Lacks in interactive interaction
 - Everything is complicated XML
 - XML itself is tightly coupled with rigid schema structure
- Registry lacks in top level Filters
 - Impossible to extract information from XML
 - Requires advanced expertise in XML, XML Schema and Xquery
 - http://msslxv.mssl.ucl.ac.uk/vamdc_registry/main/xqueryresults.jsp

VAMDC Registry Browser Portal

- Registry Browser a layer on top of Registry
 - Query Registry for registered resources
 - Display extracted information from XML
 - Provides navigation to drill down resources
- Registry Browser provides User Interface
 - Create interactive interface on top of each resource
 - View underlying data structure of registered Databases
 - Supports TAP Query submission
 - Supports Get/POST TAP Query submission

VAMDC Portal Interface: Login

- Login Interface

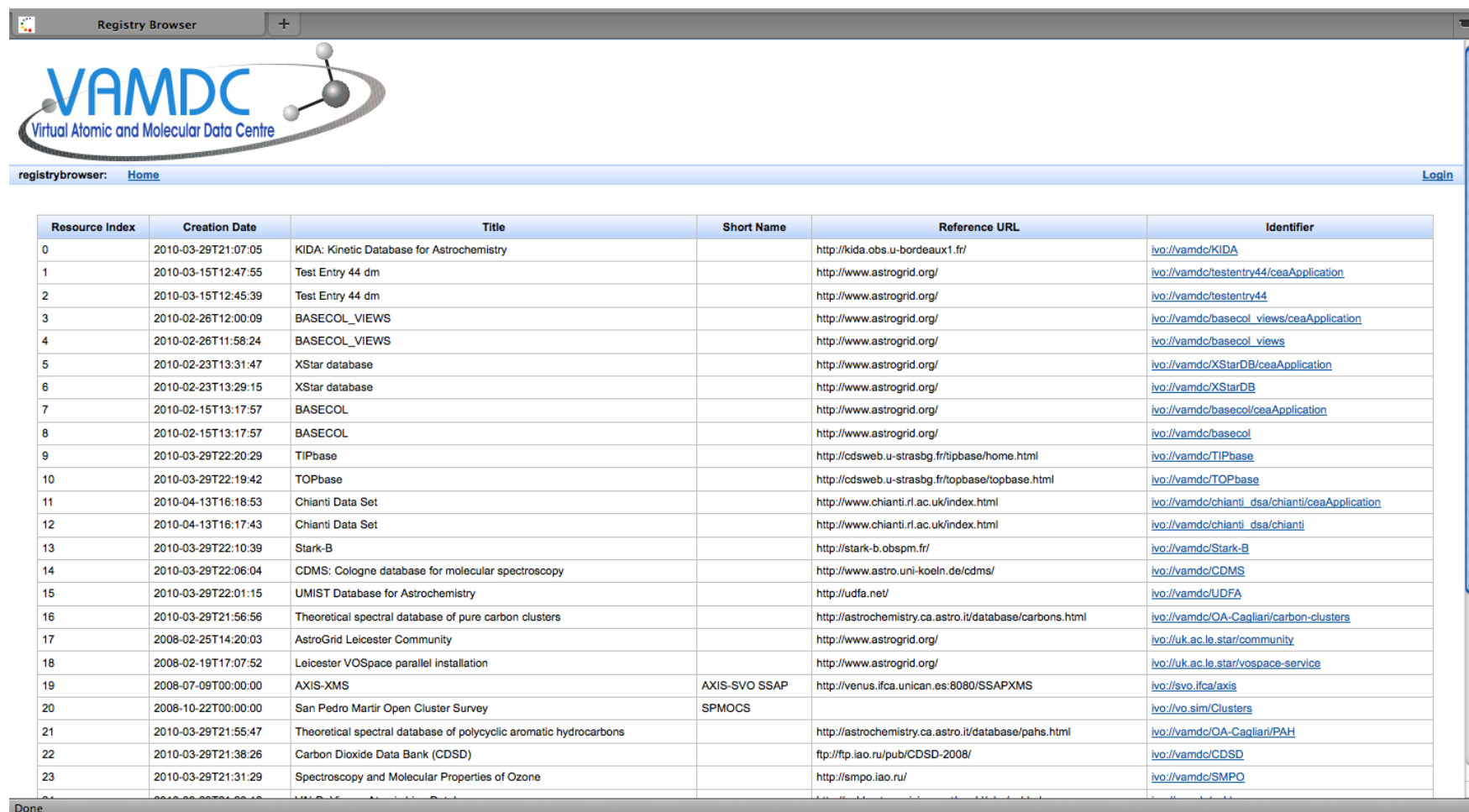


The screenshot shows a web browser window titled "Login" with a red close button in the top right corner. Below the title bar, the text "Please login here" is displayed. There are two input fields: "Username" and "Password", both with light blue borders. Below the "Password" field is a "Remember me" checkbox, which is checked. At the bottom of the form is a blue "Login" button.

- Simple Username/Password with embedded database
- Architecture is flexible can be coupled with AstroGrid Community
- Easy to integrate with other security paradigms like PKI or Keberos Ticketing Server.

VAMDC Portal Interface

- Main Browser



The screenshot shows the VAMDC Registry Browser interface. At the top, there is a logo for VAMDC (Virtual Atomic and Molecular Data Centre) and a navigation bar with a 'Home' link. Below the navigation bar is a table listing various resources. The table has six columns: Resource Index, Creation Date, Title, Short Name, Reference URL, and Identifier. The table contains 23 rows of data, each representing a different resource. The resources include databases like KIDA, BASECOL, XStar, TIPbase, TOPbase, CDMS, and UMIST, as well as specific data sets like Chianti and Stark-B. The table is scrollable, and the bottom of the interface shows a 'Done' button.

Resource Index	Creation Date	Title	Short Name	Reference URL	Identifier
0	2010-03-29T21:07:05	KIDA: Kinetic Database for Astrochemistry		http://kida.obs.u-bordeaux1.fr/	ivo://vamdc/KIDA
1	2010-03-15T12:47:55	Test Entry 44 dm		http://www.astrogrid.org/	ivo://vamdc/testentry44/ceaApplication
2	2010-03-15T12:45:39	Test Entry 44 dm		http://www.astrogrid.org/	ivo://vamdc/testentry44
3	2010-02-26T12:00:09	BASECOL_VIEWS		http://www.astrogrid.org/	ivo://vamdc/basecol_views/ceaApplication
4	2010-02-26T11:58:24	BASECOL_VIEWS		http://www.astrogrid.org/	ivo://vamdc/basecol_views
5	2010-02-23T13:31:47	XStar database		http://www.astrogrid.org/	ivo://vamdc/XStarDB/ceaApplication
6	2010-02-23T13:29:15	XStar database		http://www.astrogrid.org/	ivo://vamdc/XStarDB
7	2010-02-15T13:17:57	BASECOL		http://www.astrogrid.org/	ivo://vamdc/basecol/ceaApplication
8	2010-02-15T13:17:57	BASECOL		http://www.astrogrid.org/	ivo://vamdc/basecol
9	2010-03-29T22:20:29	TIPbase		http://cdsweb.u-strasbg.fr/tipbase/home.html	ivo://vamdc/TIPbase
10	2010-03-29T22:19:42	TOPbase		http://cdsweb.u-strasbg.fr/topbase/topbase.html	ivo://vamdc/TOPbase
11	2010-04-13T16:18:53	Chianti Data Set		http://www.chianti.rl.ac.uk/index.html	ivo://vamdc/chianti_dsa/chianti/ceaApplication
12	2010-04-13T16:17:43	Chianti Data Set		http://www.chianti.rl.ac.uk/index.html	ivo://vamdc/chianti_dsa/chianti
13	2010-03-29T22:10:39	Stark-B		http://stark-b.obspm.fr/	ivo://vamdc/Stark-B
14	2010-03-29T22:06:04	CDMS: Cologne database for molecular spectroscopy		http://www.astro.uni-koeln.de/cdms/	ivo://vamdc/CDMS
15	2010-03-29T22:01:15	UMIST Database for Astrochemistry		http://udfa.net/	ivo://vamdc/UDFA
16	2010-03-29T21:56:56	Theoretical spectral database of pure carbon clusters		http://astrochemistry.ca.astro.it/database/carbons.html	ivo://vamdc/OA-Cagliari/carbon-clusters
17	2008-02-25T14:20:03	AstroGrid Leicester Community		http://www.astrogrid.org/	ivo://uk.ac.le.star/community
18	2008-02-19T17:07:52	Leicester VOSpace parallel installation		http://www.astrogrid.org/	ivo://uk.ac.le.star/vospace-service
19	2008-07-09T00:00:00	AXIS-XMS	AXIS-SVO SSAP	http://venus.ifca.unican.es:8080/SSAPXMS	ivo://svo.ifca/axis
20	2008-10-22T00:00:00	San Pedro Martir Open Cluster Survey	SPMOCS		ivo://vo.sim/Clusters
21	2010-03-29T21:55:47	Theoretical spectral database of polycyclic aromatic hydrocarbons		http://astrochemistry.ca.astro.it/database/pahs.html	ivo://vamdc/OA-Cagliari/PAH
22	2010-03-29T21:38:26	Carbon Dioxide Data Bank (CDSD)		ftp://ftp.iao.ru/pub/CDSD-2008/	ivo://vamdc/CDSD
23	2010-03-29T21:31:29	Spectroscopy and Molecular Properties of Ozone		http://smmpo.iao.ru/	ivo://vamdc/SMPO

- Filtering of resources based on user criteria
- Grouping of resources based on similarity

Typical Registry Interface

Browse Registry

Find IVORNs including:

Title	Type	Authority ID	Resource Key	Updated	Actions
	vg:Registry	vamdc	org.astrogrid.registry.RegistryService	2009-12-17T11:46:55	View , XML , Edit
	vr:Organisation	vamdc	organisation	2009-12-17T11:46:55	View , XML , Edit
	vg:Authority	vamdc	null?!	2009-12-17T11:46:55	View , XML , Edit
Test title	vr:Resource	vamdc	testgenericresource	2010-03-29T22:22:29	View , XML , Edit
voparis registry	vg:Registry	obspm.fr	org.astrogrid.registry.RegistryService	2008-05-19T16:17:03	View , XML , Edit
CASU publishing registry	vg:Registry	uk.ac.cam.ast	org.astrogrid.registry.RegistryService	2007-12-12T16:39:39	View , XML , Edit
Sternberg Astronomical Institute Catalog Access Services Publishing Registry	vg:Registry	astronet.ru	cas/registry	2006-06-16T23:19:02	View , XML , Edit
MSSL Publishing Registry	vg:Registry	mssl.ucl.ac.uk	org.astrogrid.registry.RegistryService	2007-01-24T15:02:29	View , XML , Edit
Methane line lists	vr:Service	vamdc	dijon-methane-lines	2010-03-29T21:18:14	View , XML , Edit
VALD: Vienna Atomic Line Database	vr:Service	vamdc	vald	2010-03-29T21:29:03	View , XML , Edit
Spectroscopy and Molecular Properties of Ozone	vr:Service	vamdc	SMPO	2010-03-29T21:31:29	View , XML , Edit
Carbon Dioxide Data Bank (CDSD)	vs:DataCollection	vamdc	CDSD	2010-03-29T21:44:42	View , XML , Edit
Spectroscopic properties of PAHs and carbon clusters	vr:Service	vamdc	spec-PAH-ccluster	2010-03-29T21:52:48	View , XML , Edit
Theoretical spectral database of polycyclic aromatic hydrocarbons	vr:Service	vamdc	OA-Cagliari	2010-03-29T21:56:17	View , XML , Edit
Theoretical spectral database of polycyclic aromatic hydrocarbons	vr:Service	vamdc	OA-Cagliari/PAH	2010-03-29T22:00:07	View , XML , Edit
SIM Virtual Observatory	vg:Authority	vo.sim	null?!	2009-02-15T12:00:00	View , XML , Edit
San Pedro Martir Open Cluster Survey	vs:CatalogService	vo.sim	Clusters	2009-02-15T12:00:00	View , XML , Edit
IFCA SVO	vg:Authority	svo.ifca	null?!	2009-02-15T12:00:00	View , XML , Edit
AXIS-XMS	vs:CatalogService	svo.ifca	axis	2009-11-23T09:52:22Z	View , XML , Edit
LEDEN Database	vg:Authority	Leden	null?!	2009-06-25T12:57:22Z	View , XML , Edit
Espadons/NARVAL legacy database	vs:CatalogService	Leden	ssap/castor	2009-06-25T12:57:51Z	View , XML , Edit
Leicester VOSpace parallel installation	vr:Service	uk.ac.le.star	vospace-service	2008-03-27T12:48:57	View , XML , Edit
AstroGrid Leicester Community	vr:Service	uk.ac.le.star	community	2008-08-11T16:30:55	View , XML , Edit
Theoretical spectral database of pure carbon clusters	vr:Service	vamdc	OA-Cagliari/carbon-clusters	2010-03-29T21:59:32	View , XML , Edit
UMIST Database for Astrochemistry	vr:Service	vamdc	UDFA	2010-03-29T22:04:44	View , XML , Edit
CDMS: Cologne database for molecular spectroscopy	vr:Service	vamdc	CDMS	2010-03-29T22:09:52	View , XML , Edit
Stark-B	vr:Service	vamdc	Stark-B	2010-03-29T22:14:33	View , XML , Edit
Chianti Data Set	vs:CatalogService	vamdc	chianti_dsa/chianti	2010-04-13T16:19:19	View , XML , Edit
Chianti Data Set	cea:CeaApplication	vamdc	chianti_dsa/chianti/ceaApplication	2010-04-13T16:18:53	View , XML , Edit

- Navigation: BASECOL_Views

- List of resources at the nodes

VAMDC Portal Interface

- Navigation: Selection of individual resource

Registry Browser



registrybrowser: [Home](#) [Login](#)

Index	Type	Role	Version	Access URL	Security Method
0	ParamHTTP		1.0	http://vamdc.eu:8080/DSA_basecol_views/TAP	Execute Query Browse to External Link




registrybrowser: [Home](#) [Login](#)

Index	Type	Role	Version	Access URL	Security Method
0	WebBrowser		1.0	http://smo.iio.ru/	Browse to External Link



VAMDC Portal Interface

- Registry Browser understands various resources/interfaces:
 - TAP Interface
 - CEA Applications
 - WebBrowser
 - ParamHTTP
- Displays corresponding interface
 - TAP: Query Submission Interface
 - WebBrowser/ParamHTTP: Redirection
 - CEA Applications: Interface with input/output parameters

Typical TAP Interface

TAP controls

+

AstroGrid

AstroGrid DSA/catalog

AstroGrid DSA/catalog service

AstroGrid | Latest DSA/catalog

Installation notes

- [Welcome page](#)
- [Documentation index](#)
- [Release notes](#)
- [Version information](#)

Self-tests

- [Apache Axis self-check](#)
- [Initial properties check](#)
- [Installation self-test](#)
- [CEA interface self-test](#)
- [SQL syntax test \(SLOW!\)](#)

Public metadata

- [VOSI resources](#)

Server administration

- [Generate template metadoc](#)
- [View metadata table](#)
- [Manage registrations](#)
- [View server status](#)
- [View job database](#)

Service fingerprints

- [General service fingerprint](#)
- [CEA interface fingerprint](#)
- [Axis Webservice WSDLs](#)

Self-query interface

- [Run an ADQL/xml query](#)
- [Run a cone search](#)
- [Run a multiple cone search](#)
- [TAP queries](#)

TAP controls

Post a new query

Typical TAP Interface

New TAP query

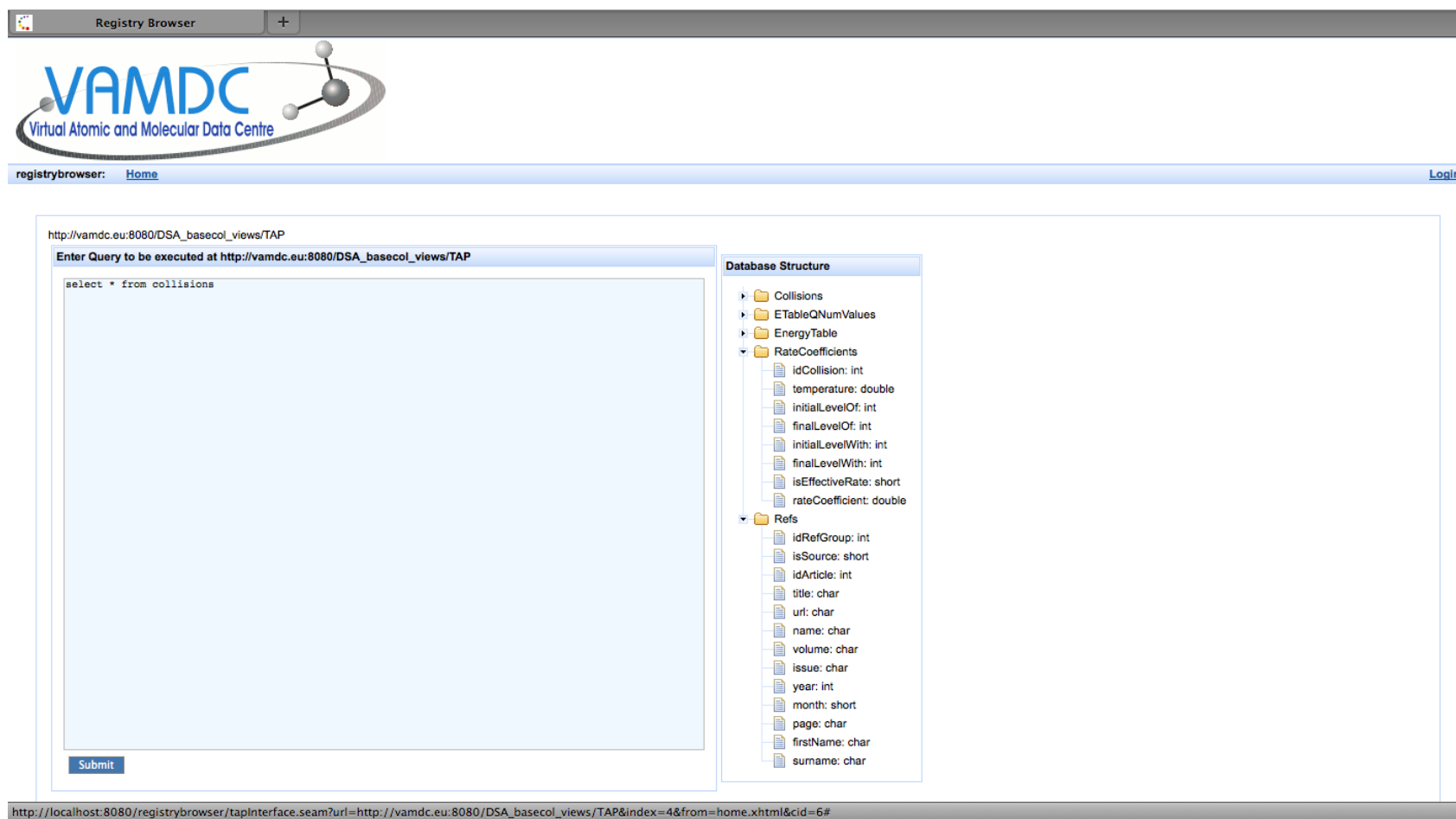
This form composes and submits an ADQL query for asynchronous execution by TAP.



Submit Query

VAMDC Portal Interface

- TAP Interface



The screenshot displays the VAMDC Portal TAP Interface. At the top, a browser window titled "Registry Browser" shows the VAMDC logo (Virtual Atomic and Molecular Data Centre) and a "Login" link. Below the header, the URL `http://vamdc.eu:8080/DSA_basecol_views/TAP` is visible. The main interface is divided into two sections. On the left, a text area for entering queries contains the text `select * from collisions`, with a "Submit" button below it. On the right, a "Database Structure" panel lists the database schema:

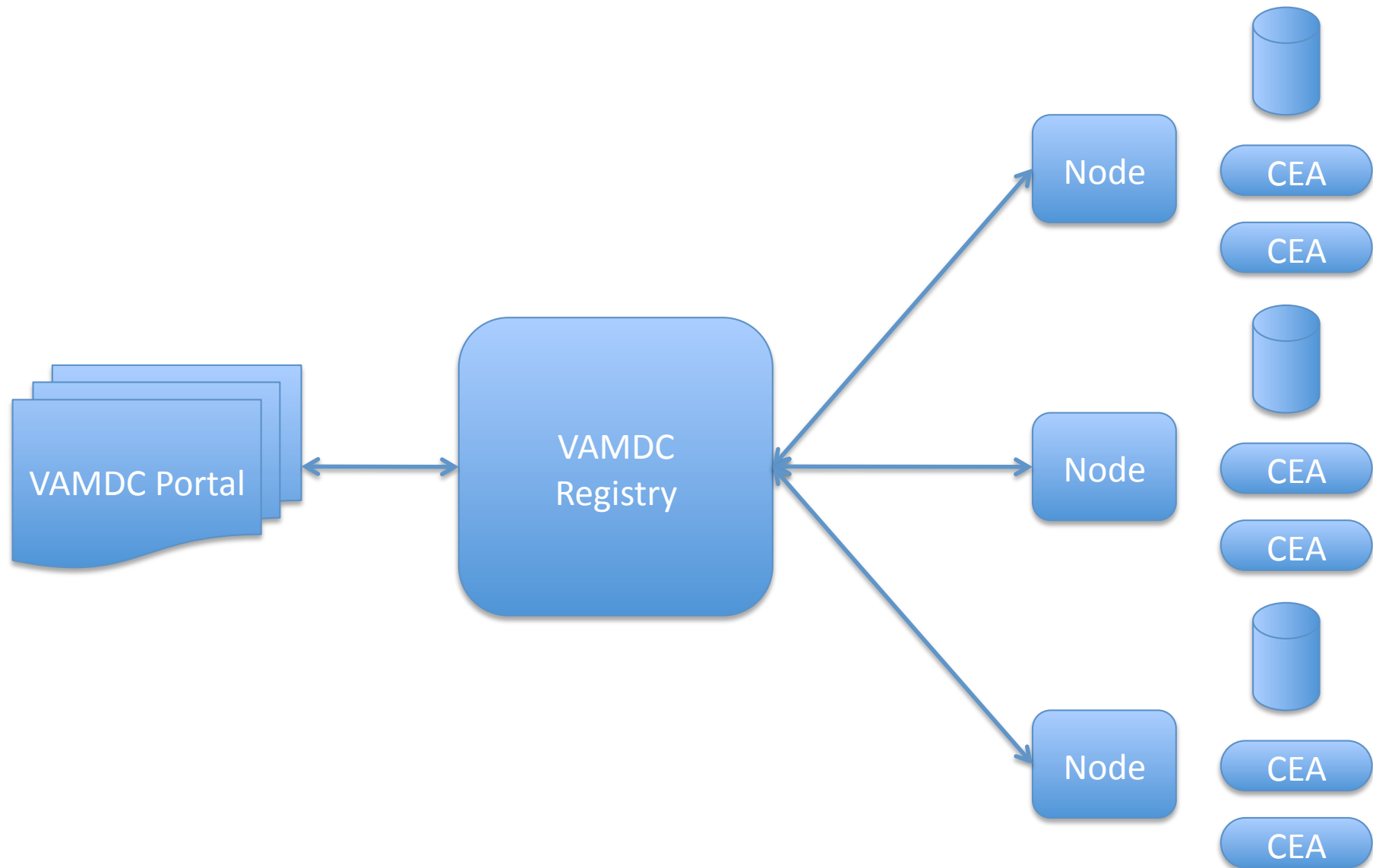
- Collisions
- ETableQNumValues
- EnergyTable
- RateCoefficients
 - idCollision: int
 - temperature: double
 - initialLevelOf: int
 - finalLevelOf: int
 - initialLevelWith: int
 - finalLevelWith: int
 - isEffectiveRate: short
 - rateCoefficient: double
- Refs
 - idRefGroup: int
 - isSource: short
 - idArticle: int
 - title: char
 - url: char
 - name: char
 - volume: char
 - issue: char
 - year: int
 - month: short
 - page: char
 - firstName: char
 - surname: char

The bottom of the browser window shows the full URL: `http://localhost:8080/registrybrowser/tapInterface.seam?url=http://vamdc.eu:8080/DSA_basecol_views/TAP&index=4&from=home.xhtml&cid=6#`.

VAMDC Portal - Redirection

 russian  english		Spectroscopy & Molecular Properties of Ozone							
Home	Molecule	Energy Levels	Transitions	Spectra Simulation	Experiment	Cross-Sections	Auxiliary data	References	Help
Log In Nick name : Password : Log in New User Forgot password?		General Info						News	
Remarks - You are not obliged to log in the system but the registration allows you to achieve some extra functionality - The registration in the system is free. Just click the button "New user" and fill in the form that appears.		Scope - molecular structure and spectroscopic constants in the ground electronic state - potential function - dipole moment surface - transition moments - vibration and vibration-rotation energies and wavefunctions, isotopic effects - simulated and experimental spectra from MW to Infrared - Downloading results in text format on user's computer and sending them via e-mail. - Gas and/or isotopic species mixture preparation by user (for registered users only). - Saving results on server side and comparison of them (for registered users only). - Uploading of user spectra to sever side and comparison of them to spectra obtained with the system (for registered users only).						04/03/2010 Announcement of ANR research IR position in Reims University More... 17/01/2010 Proceedings of the HighRus-2009 symposium are available now More... 28/12/2009 Spectral line parameters of O ₂ and SO ₂ molecules of HITRAN source correspond to updates of 2009 More...	
Usage agreement Users of this system agree to reference SMPO Information System and the publication on used databases (HITRAN, GEISA etc) in scientific communications if the present resources may be considered as helpful to their investigations.		System developed by - G.S.M.A, Université de Reims, CNRS UMR 8069, Reims, France - L.T.S, Institute of Atmospheric Optics, Russian Academy of Sciences, Tomsk, Russia							
Usage statistics SMPO Information System SMPO Guide		Authors, Contributors, Acknowledgements							

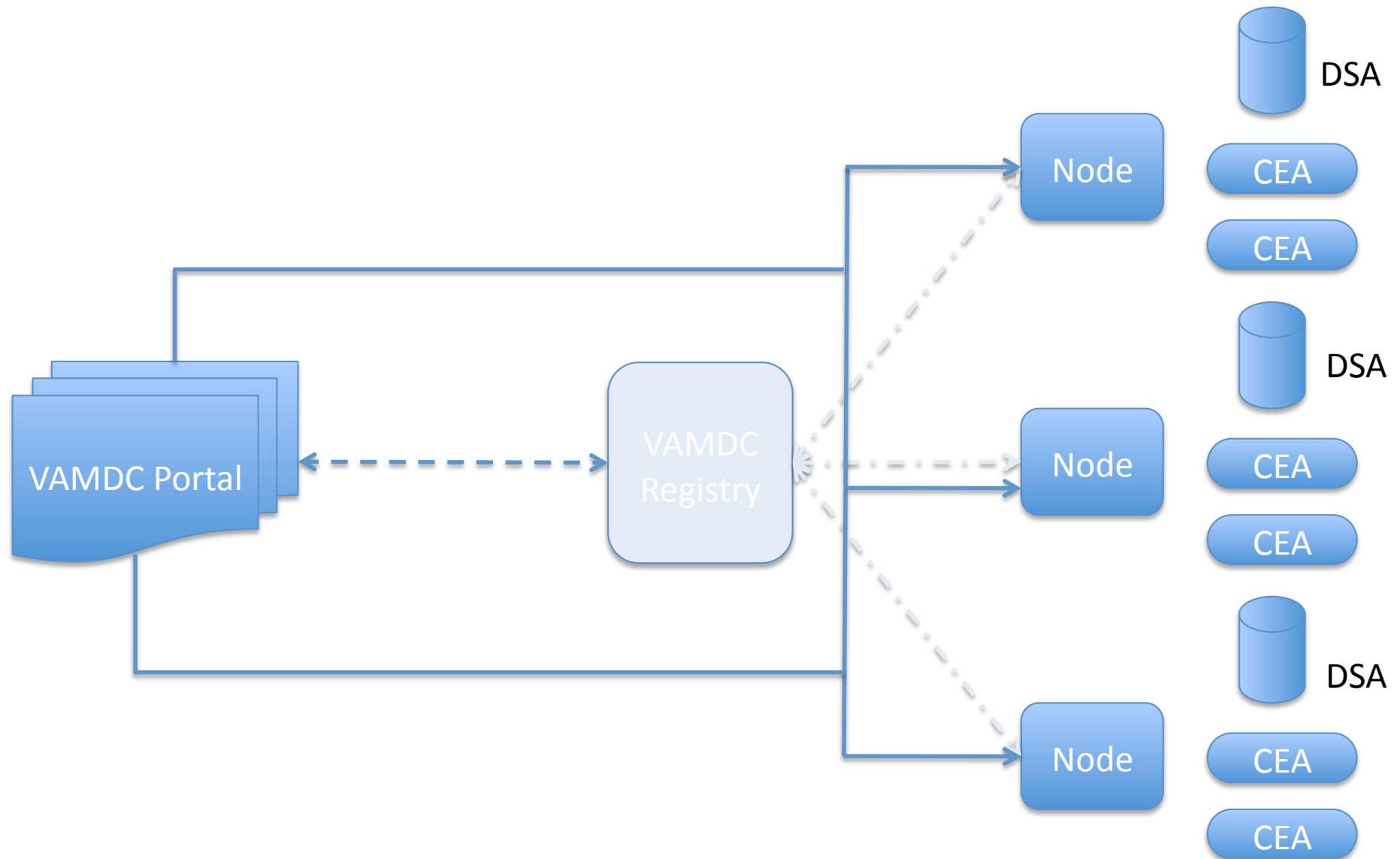
VAMDC Portal Architecture



VAMDC Portal Architecture

- Registry Browser interact with Registry
 - Retrieve information about Nodes/Resources
 - Filter the information in user friendly manner
 - Hide complexities of XML information
 - Auto generation of interface for schema compatible information
 - Unstructured information is redirected to corresponding external links
- Interacts directly with each Node
- TAP Queries are for specific Database

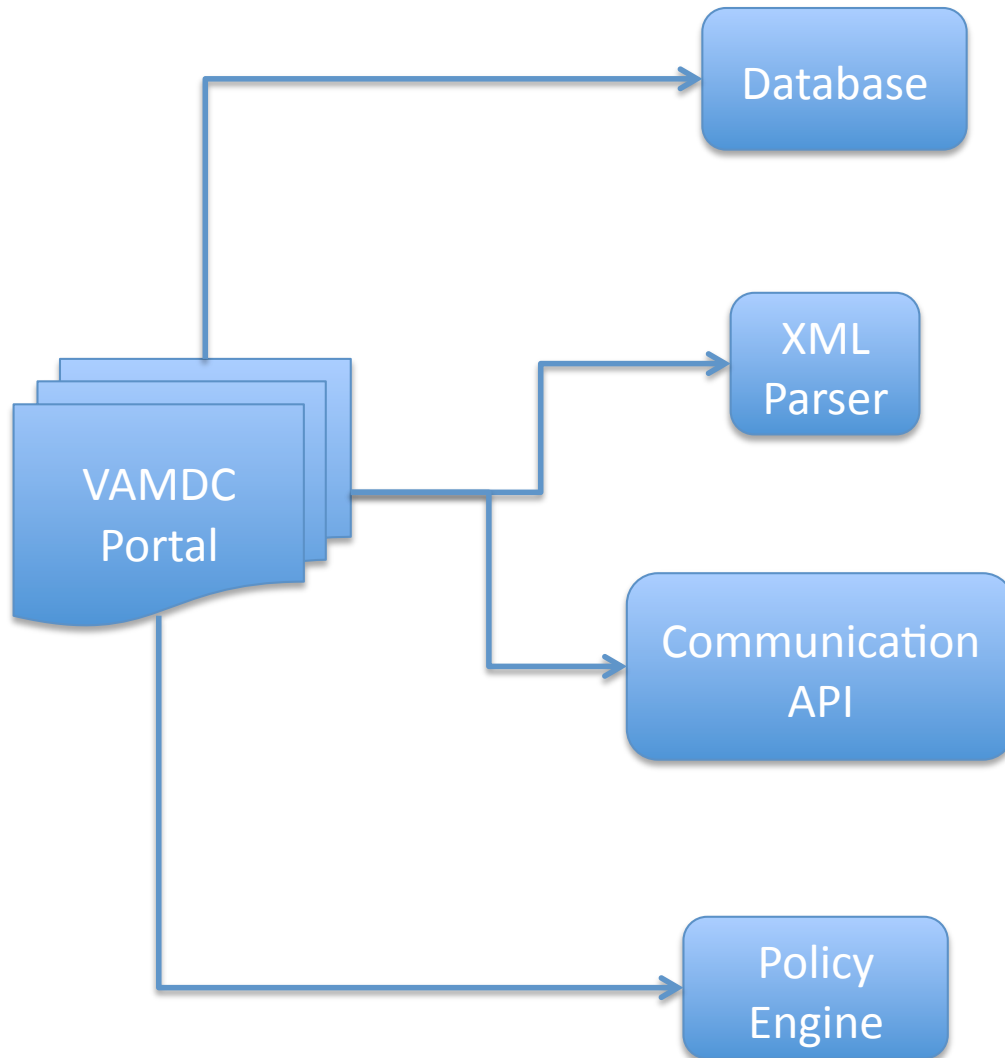
VAMDC Portal Architecture



VAMDC Portal Architecture

- Registry Browser interaction with Nodes
 - Direct interaction with Nodes
 - To query database
 - Display Query Results
 - To submit CEA jobs

VAMDC Portal Architecture



User credentials for secured portal; details of various Registry; and Access Rules.

Currently parse Registry query result to display in user friendly manner

To communicate with Registry and Nodes. Potentially implements any protocol.

By default available in the selected framework.

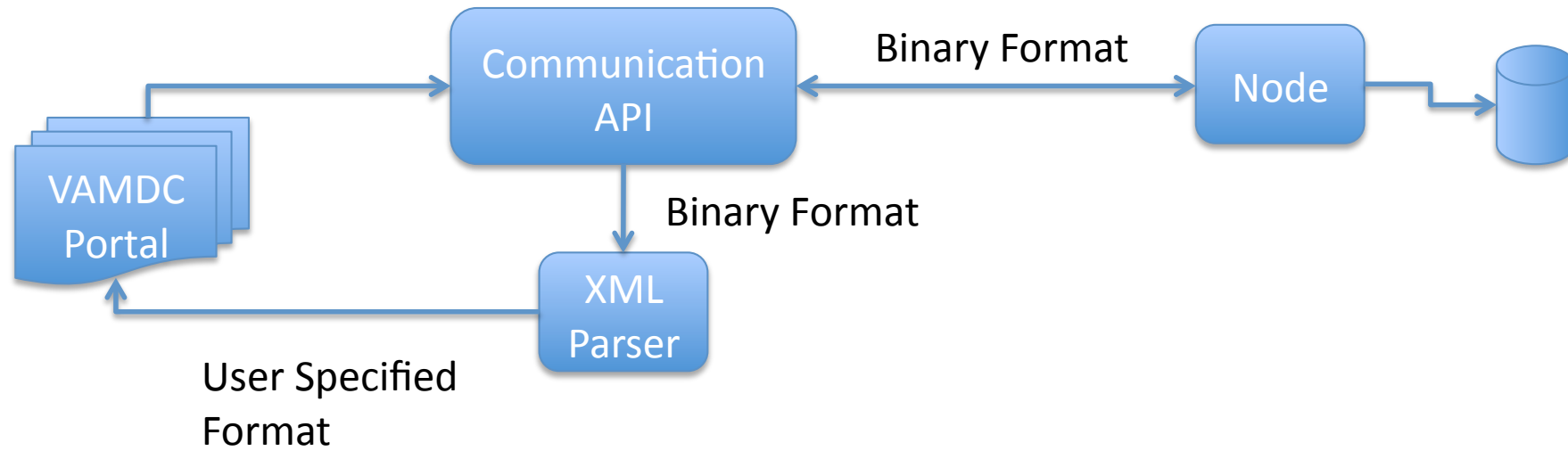
VAMDC Portal Extensibility

- Communication API
 - Server / Client mode
 - Session handling for long running jobs
 - Synchronous/Asynchronous interaction
 - (Potentially) Implements various protocols
 - Database Catalogue
 - TAP
 - XSAM
 - SLAP or any other
 - Service Invocation
 - SOAP
 - REST
 - RMI
 - Binary Format (Byte Level)

VAMDC Portal Extensibility

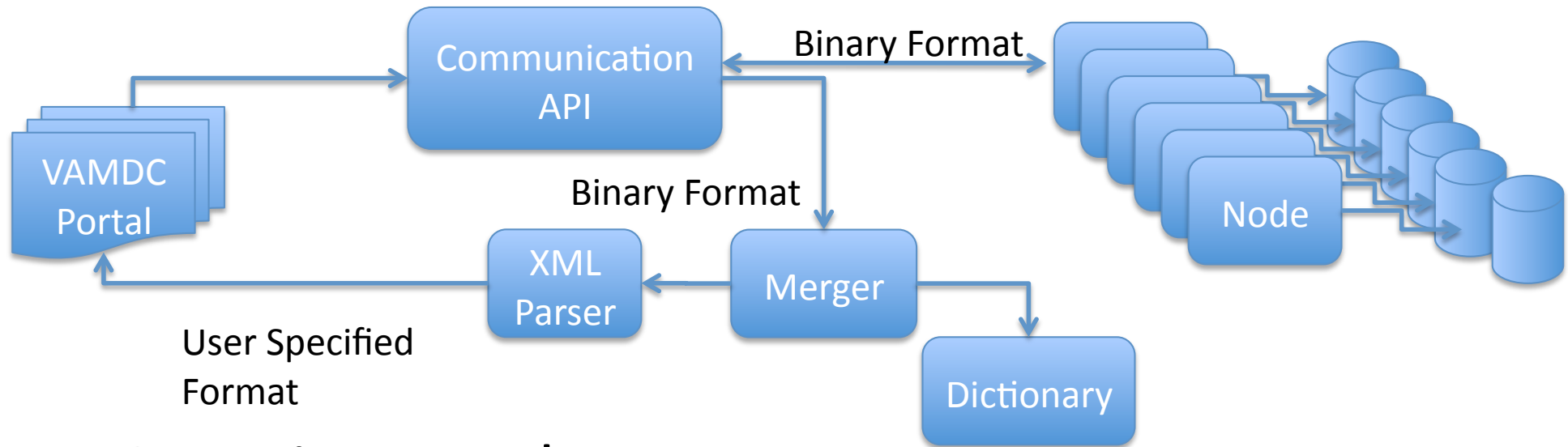
- XML Parser
 - Parse XML response from Registry
 - Validation
 - Xquery/Xpath support
 - XHTML web page creation on fly
 - Java Object-XML mapping
 - XMLBeans (currently used)
 - JAXB (already available with JDK 1.5 +)
 - Castor (personally don't use it)
 - Potentially support for
 - XSAM
 - SLAP
 - ADQL

VAMDC Portal Future Direction



- User Select Query Result Protocol/Format
- Portal-Node communication in binary format
- XML Parser format the query result
 - Creates XHTML for viewing
 - XML, CSV, VOTable for downloading

VAMDC Portal Future Direction



- Generic query language
 - Independent of underlying database
 - Independent of underlying data dictionary
- Broadcast query to each database node
- Merge the query results in one way or another
- Format it in user selected protocol/template

VAMDC Portal Future Direction

- Workflow:
 - Workflow development from registered CEA
 - Drag and Drop support to create workflow
 - Loading existing workflow
 - Updating existing workflow
 - Taverna 2.1 supports various plugins
 - [Remote Workflow execution service plugin](#)
 - [gLite plugin](#)
 - [UseCase plugin](#)
 - Registry of VAMDC workflows
 - Sharing of workflows
 - Evolution of workflows
 - Workflow reusabilit

GRIDCC Web Portal with BPEL Editor

Multipurpose Collaborative Environment
a Virtual Control Room over the Web

[Logout](#)

Benvenuto, Luca De Marco

Aug 24, 2007 - 17:42 CEST

[Home](#) [mceworkflow](#) [ControlRoom](#) [Grid-resources](#)

[Workflow Manager](#) | [Workflow Submission](#)

The screenshot displays the GRIDCC Web Portal's BPEL Editor. The interface is divided into several sections:

- Top Navigation:** Includes a "Workflow Manager" header and a sub-header with links for "Workflow Submission".
- Left Panel (AVAILABLE WORKFLOWS):** Contains a "Refresh list" and "New Workflow" link. Below is a list of workflows: "demo", "Full_OneButtonMachine" (selected), and "Full_FeedbackCorrection". At the bottom are "Edit" and "Delete" buttons.
- Main Editor Area:** Features a toolbar on the left with buttons for "process", "partner...", "variable", "sequence", "invoke", "reply", "receive", "assign", "wait", "while", "flow", "pick", and a "SAVE" button. The main workspace shows a BPEL process diagram for "Full_OneButtonMachine". It includes a "partnerLinks > partnerLinks" section with two entries: "Full_OneButton..." and "IEProvider_PL". Below this is a "variables > variables" section with three entries: "aux_cmd_Initia...", "aux_cmd_Injec...", and "aux_cmd_Start...".
- Right Panel:** Contains an "Add New Web Service" button and a large empty area for additional configuration.

Support for various BPEL Activities

The image displays a collage of various BPEL activity configuration dialog boxes, illustrating the software's support for different activities. The dialog boxes include:

- Create New BPEL Process:** Workflow Name: SampleW
- Add New Variable in the BPEL Process:** Variable Name: VCRM_vcrMessageResponseVar, Variable Type: messageType, Variable Type Name: messageType
- Add New Reply Activity in the BPEL Process:** Reply Name: reply, PartnerLink: IEProvider_PL, PortType: No_portType_Found, Operation: No_Operation_Selected, Variable: aux_cmd_LoadCorrections, Fault Name: aux_cmd_Read
- Add New Sequence in the BPEL Process:** Sequence Name: sequence18
- Add New Receive Activity in the BPEL Process:** Receive Name: Wf_Receive, PartnerLink: Full_OFcwithCREAM_Trigger_PL, PortType: wfns:Full_OFcwithCREAMPortType, Operation: call_OFcWithCREAM, Variable: Wf_RequestMessageVar
- Add New Reply Activity in the BPEL Process:** Reply Name: reply, PartnerLink: IEProvider_PL, PortType: No_portType_Found, Operation: No_Operation_Selected, Variable: aux_cmd_RunCorrector, Fault Name: -----
- Add New Receive Activity in the BPEL Process:** Receive Name: Wf_Receive, PartnerLink: Full_OFcwithCREAM_Trigger_PL, PortType: wfns:Full_OFcwithCREAMPortType, Operation: call_OFcWithCREAM, Variable: Wf_RequestMessageVar

On the right side, a vertical list of BPEL activities is shown:

- process
- partnerLink
- variable
- sequence
- invoke
- reply
- receive
- assign
- wait
- while
- flow
- pick
- SAVE

Support for various BPEL Activities

Create New BPEL Process

Workflow Name

Target Namespace

Workflow Type **synchronous**

Add New Variable in the BPEL Process

Variable Name

Variable Type **type**

Variable Type Name

QoS attributes for Instrument Element

Availability Criteria	
Operation	Confidence
Accessibility Criteria	
Operation	Confidence
Reservability Criteria	
Operation	Confidence
Reliability Criteria	
Operation	Confidence
Response Time Criteria	
Operation	Confidence
Worst Response Time	
Operation	Confidence
Best Response Time	
Operation	Confidence
Average Response Time	
Operation	Confidence
Dev ResponseTime Criteria	
Operation	Confidence

Add Copy Activity in the BPEL Process

Copy From

Variable Name

☒ Literal ☐ Query ☐ Part ☐ Expression

Expression

Copy To

Variable Name **Wf_ResponseMessageVar**

☐ Literal Value ☐ XPath query ☒ Variable part

Expression

Add Copy Activity in the BPEL Process

Copy From

Variable Name **aux_use_VCRM**

☒ Literal ☐ Query ☐ Part ☐ Expression

Expression

Copy To

Variable Name **Wf_ResponseMessageVar**

☐ Literal Value ☒ XPath query ☐ Variable part

Expression

QoS attributes for Instrument Element

Method

Input Size

Output Size

IE Endpoint

Manager ID

Token

Add New Invoke Activity in the BPEL Process

Invoke Name

PartnerLink **ASProvider_PL**

PortType

Operation **No_Operation_Selected**

Input Variable **aux_cmd_RunCorrector**

Output Variable

Monitoring Enabled

Add New Wait Activity in the BPEL Process

Wait Name

☐ Wait Until Duration ☒ Wait For Duration

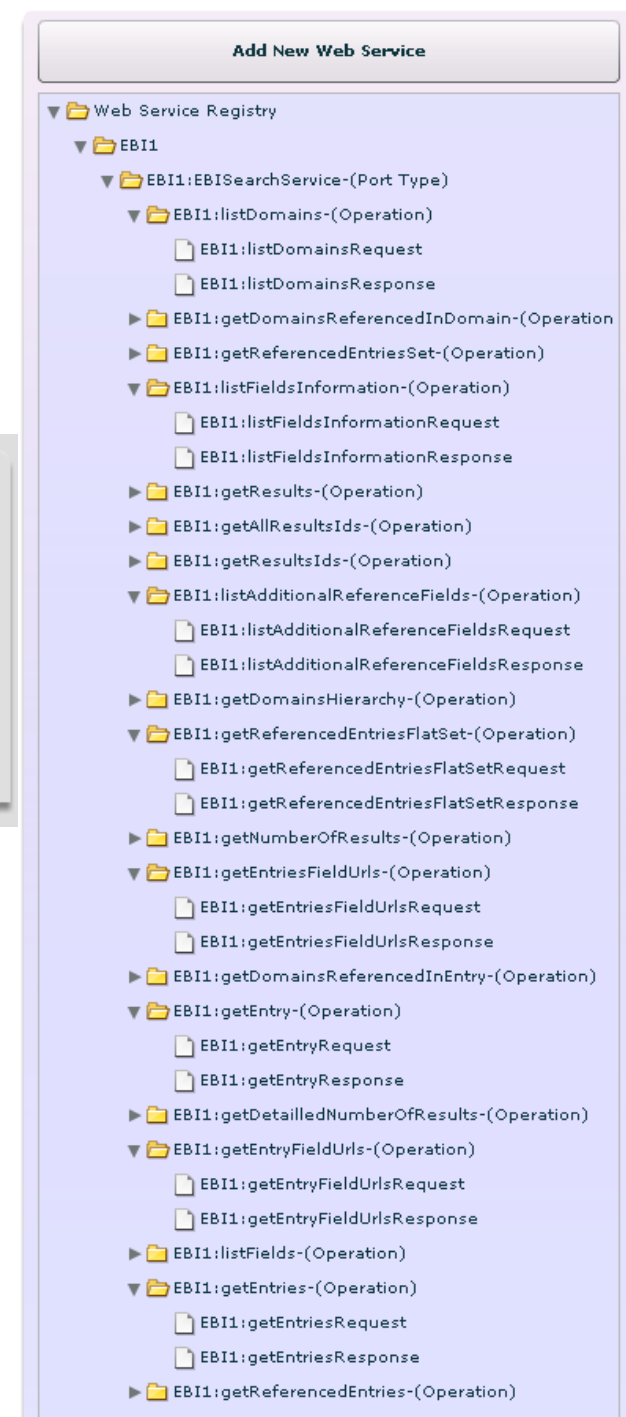
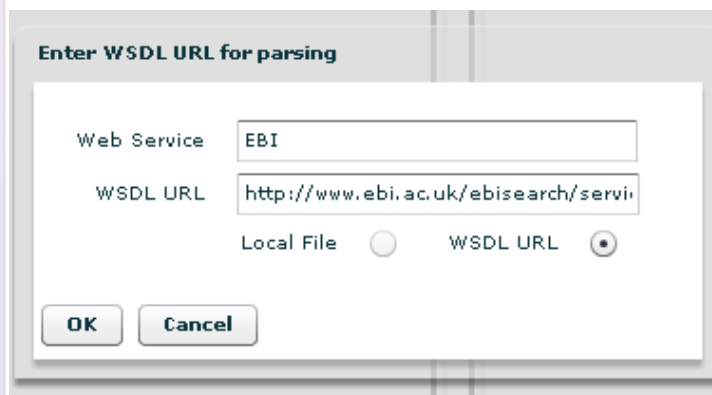
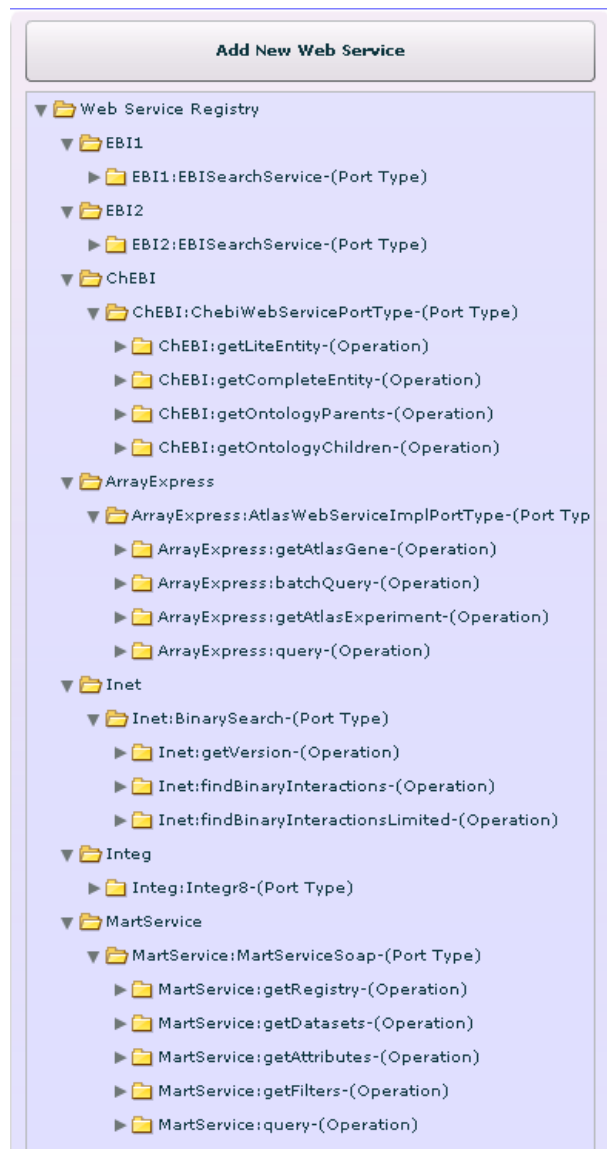
Duration

Add New While in the BPEL Process

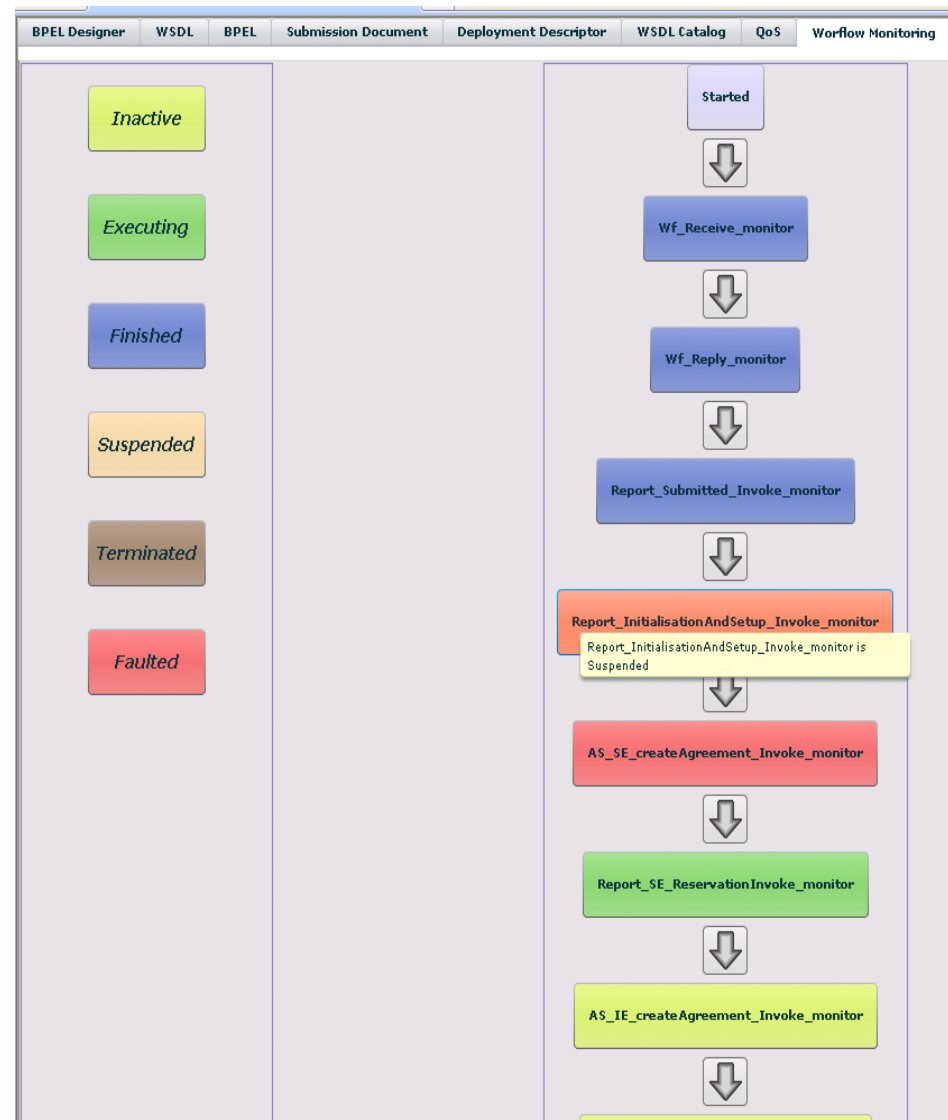
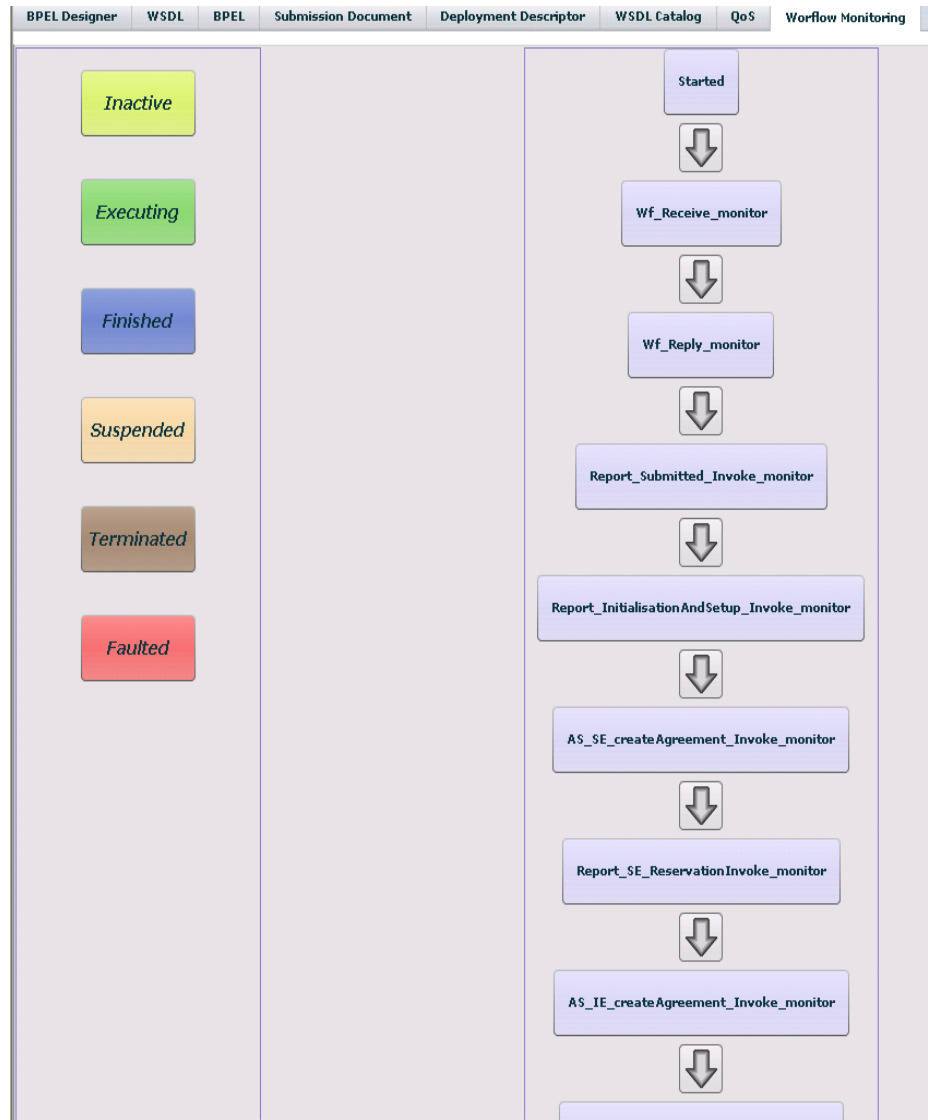
While Name

Condition

Support for WSDL and easy to use Web Service Registry



Runtime Monitoring of Executing Workflow



Standalone Web BPEL Editor

The screenshot displays the Standalone Web BPEL Editor interface. The top menu bar includes options like Favorites, C:\FlexProject\FlexProjects\NewBPELEditor\bin\B..., Page, Safety, and Tools. Below the menu bar, there are tabs for BPEL Designer, WSDL, BPEL, Submission Document, Deployment Descriptor, WSDL Catalog, QoS, and Workflow Monitoring.

The main workspace is divided into three sections:

- Left Panel:** A vertical toolbar containing buttons for process, partnerLink, variable, sequence, invoke, reply, receive, assign, wait, while, flow, pick, and SAVE. Below these are buttons for XPathRef, CPUSpeed, Reliability, MaxDuration, and StorageSpace.
- Center Panel:** A diagram of a BPEL process. It starts with a **while > CREAM_PollStatus_WhileLoop** block, followed by a **sequence > CREAM_PollStatus_MiniSeque...** block. Inside the sequence, there is a **CREAM_JobS...** block, an **assign > CREAM_Set...** block containing a **copy** block, another **assign > CREAM_Job...** block containing a **copy** block, a **scope > scope1** block, a **switch > switch5** block, and an **otherwise > otherwise6** block. The switch contains two cases: **case > case7** (with an **assign > Increase_P...** block and a **copy** block) and **case > case8**.
- Right Panel:** A section titled **Add New Web Service** showing a tree view of the **Web Service Registry**. The tree includes folders for **EBI1**, **EBI2**, **EBI3**, **EBI4**, and **MartService**. Each folder contains specific web service operations and responses.

Example of BPEL & WSDL Script in the BPEL Editor

```
BPESL Designer  WSDL  BPESL  Submission Document  Deployment Descriptor  WSDL Catalog  QoS  Workflow Monitoring

<from query="/hdns:TriggerID/hdns:part1" variable="Global_TriggerID"/>
<to query="/wsa:EndpointReference/wsa:ReferenceProperties/hdns:TriggerID/hdns:part1" variable="AS_EndpointRef"/>
</copy>
<copy>
  <from variable="AS_EndpointRef"/>
  <to partnerLink="ASProvider_PL"/>
</copy>
</assign>
<assign name="Init_EndpointRefs-IE">
  <copy>
    <from>
      <wsa:EndpointReference xmlns:s="http://gladgw.lnl.infn.it:2002/rcms/services/IEService">
        <wsa:Address/>
        <wsa:ServiceName PortName="IEService">s:InstrumentElementWSService</wsa:ServiceName>
        <wsa:ReferenceProperties>
          <!-- Custom elements defined here will be mapped to the SOAP Header -->
          <hdns:TriggerID>
            <hdns:part1>changeme</hdns:part1>
            <hdns:part2>changeme</hdns:part2>
          </hdns:TriggerID>
        </wsa:ReferenceProperties>
      </wsa:EndpointReference>
    </from>
    <to variable="IE_EndpointRef"/>
  </copy>
  <copy>
    <from part="IE_URL" variable="Wf_RequestMessageVar"/>
    <to query="/wsa:EndpointReference/wsa:Address" variable="IE_EndpointRef"/>
  </copy>
  <copy>
    <from query="/hdns:TriggerID/hdns:part1" variable="Global_TriggerID"/>
    <to query="/wsa:EndpointReference/wsa:ReferenceProperties/hdns:TriggerID/hdns:part1" variable="Global_TriggerID"/>
  </copy>
  <copy>
    <from variable="IE_EndpointRef"/>
    <to partnerLink="IEProvider_PL"/>
  </copy>
</assign>
<assign name="Init_EndpointRefs-VCRM">
  <copy>
    <from>
      <wsa:EndpointReference xmlns:s="http://www.elettra.trieste.it/gridcc/vcrmessages">
        <wsa:Address>changeme</wsa:Address>
        <wsa:ServiceName PortName="VCRMService">s:VCRMService</wsa:ServiceName>
        <wsa:ReferenceProperties>
          <!-- Custom elements defined here will be mapped to the SOAP Header -->
          <hdns:TriggerID>
            <hdns:part1>changeme</hdns:part1>
            <hdns:part2>changeme</hdns:part2>
          </hdns:TriggerID>
        </wsa:ReferenceProperties>
      </wsa:EndpointReference>
    </from>
```

```
BPESL Designer  WSDL  BPESL  Submission Document  Deployment Descriptor  WSDL Catalog  QoS  Workflow Monitoring

<wsdl:definitions targetNamespace="http://gridcc.org/workflows/Full/FeedbackCorrection/CREAM" xmlns:tns="http://gridcc.org/workflows/Full/FeedbackCorrection/CREAM"
xmlns:hdtms="http://gridcc.org/wsd/workflows/headerTypes" xmlns:plnk="http://schemas.xmlsoap.org/ws/2003/05/partner-link/" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:dans="http://agent.delegation.security.wfms.gridcc.org" xmlns:creamapins="http://glite.org/ce/creamapi/ws" xmlns:lbs="http://glite.org/wsd/services/lb" xmlns:
xmlns:vcrms="http://www.elettra.trieste.it/gridcc/vcrmessages" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
<wsdl:import namespace="http://plumcake.grid.elettra.trieste.it:8088/rcms/services/IEService" location="project:/Full_FeedbackCorrection_withCREAM/wsd/IEService.wsdl"/>
<wsdl:import namespace="http://agent.delegation.security.wfms.gridcc.org" location="project:/Full_FeedbackCorrection_withCREAM/wsd/DelegationAgent.wsdl"/>
<wsdl:import namespace="http://glite.org/wsd/services/lb" location="project:/Full_FeedbackCorrection_withCREAM/wsd/LB.wsdl"/>
<wsdl:import namespace="http://glite.org/ce/creamapi/ws" location="project:/Full_FeedbackCorrection_withCREAM/wsd/CREAM.wsdl"/>
<wsdl:import namespace="http://glite.org/ar/agreementService/20070309/1" location="project:/Full_FeedbackCorrection_withCREAM/wsd/agreementService.wsdl"/>
<wsdl:import namespace="http://www.elettra.trieste.it/gridcc/vcrmessages" location="project:/Full_FeedbackCorrection_withCREAM/wsd/VCRMService.wsdl"/>
<wsdl:types>
  <xsd:schema xmlns="http://www.w3.org/2001/XMLSchema">
    <xsd:import namespace="http://schemas.xmlsoap.org/ws/2003/03/addressing" schemaLocation="http://schemas.xmlsoap.org/ws/2003/03/addressing/">
  </xsd:schema>
  <xsd:schema targetNamespace="http://gridcc.org/wsd/workflows/headerTypes">
    <xsd:element name="TriggerID">
      <xsd:complexType>
        <xsd:sequence>
          <xsd:element name="part1" type="xsd:string"/>
          <xsd:element name="part2" type="xsd:string"/>
        </xsd:sequence>
      </xsd:complexType>
    </xsd:element>
    <xsd:element name="SimpleTriggerID" type="xsd:string"/>
  </xsd:schema>
</wsdl:types>
<wsdl:message name="Full_OFCwithCREAMRequestMessage">
  <!-- parameter 0 -->
  <wsdl:part name="FreePart" type="xsd:string"/>
  <!-- parameter 1 -->
  <wsdl:part name="AS_URL" type="xsd:string"/>
  <!-- parameters 2-6 -->
  <wsdl:part name="CREAM_URL" type="xsd:string"/>
  <wsdl:part name="CREAMDelegation_URL" type="xsd:string"/>
  <wsdl:part name="DA_URL" type="xsd:string"/>
  <wsdl:part name="DelegationID" type="xsd:string"/>
  <wsdl:part name="JDL" type="xsd:string"/>
  <!-- parameters 7-17 -->
  <wsdl:part name="IE_URL" type="xsd:string"/>
  <wsdl:part name="username" type="xsd:string"/>
  <wsdl:part name="password" type="xsd:string"/>
  <wsdl:part name="IMID_PositionMonitors" type="xsd:string"/>
  <wsdl:part name="IMID_Correctors" type="xsd:string"/>
  <wsdl:part name="IMID_CorrectorCE" type="xsd:string"/>
  <wsdl:part name="IE_fileURL1" type="xsd:string"/>
  <wsdl:part name="IE_fileURL2" type="xsd:string"/>
  <wsdl:part name="IE_misc1" type="xsd:string"/>
  <wsdl:part name="IE_misc2" type="xsd:string"/>
  <wsdl:part name="CorrectorsLoopCount" type="xsd:string"/>
  <!-- parameters 18-22 -->
  <wsdl:part name="VCRM_URL" type="xsd:string"/>
  <wsdl:part name="VCRM_application" type="xsd:string"/>
  <wsdl:part name="VCRM_id" type="xsd:string"/>
```

VAMDC Portal: Miscellaneous

- VODesktop supports single Registry
- VAMDC Portal supports multiple Registries
 - Public Registry
 - Private Registry
 - Development Registry
- Possibility to mix and match applications from various Registry
- Logging Facilities
- Statistical reports of VAMDC resource usage
- Traceability