

baltrad



Training workshop: Operational procedures

Daniel Johnson, SMHI

Radisson Blu Hotel Latvija, Riga, 9 June 2011



Outline

1. Setup composite product in RAVE
2. Distribute product via SCP
3. Reporting issues: Request Tracker



Setup composite product

Create Adaptor

RAVE:

- URI: 'http://localhost:8085/RAVE'

Create Route

Swedish composite:

- Areaid: 'swegmaps_2000'
- Interval: 5 [minutes]
- Timeout: 60 [seconds]
- Sources: 'sekir', ... , 'sekr'



Baltrad | Create ada... x

localhost:8080/BaltradDex/createadaptor.htm?

Baltrad Data Exchange System

Advanced weather radar network for the **Baltic Sea Region**

[Help](#) | [Log out](#)

Create adaptor

Create an adaptor. Depending on type of adaptor, different choices will be available. However, right now, you are only able to choose XMLRPC.

Name

Type

URI

Timeout

Local node

- Status
- Data sources
- System messages

Data Exchange

- Connect to node
- Subscriptions
- Delivery register

Data Processing

- Adaptors
- Routes
- Schedule

Administration

- Configuration
- Node properties

[Security](#) | [Terms And Conditions](#) | [Contact](#)

v0.7.0.ec6

Baltrad | Create route x

localhost:8080/BaltradDex/compositeroute_create.htm

Create route

Create a Composite routing rule.

Name

Author

Active

Description

Scan based

Recipients

- RAVE
- RAVE_test

Areaid

Interval

Timeout

Sources

- searl
- sease
- sevil
- sevar
- seang
- sekk

Local node

- Status
- Data sources
- System messages

Data Exchange

- Connect to node
- Subscriptions
- Delivery register

Data Processing

- Adaptors
- Routes
- Schedule

Administration

- Configuration
- Node properties

Setup composite – background

Area id:s - baltrad/rave/config/*_areas.xml

```
<area id="swegmaps_2000">
  <description>SWERAD, Google Maps, 2 km</description>
  <areadef>
    <arg id="pcs">gmaps</arg>
    <arg id="xsize" type="int">1022</arg>
    <arg id="ysize" type="int">1916</arg>
    <arg id="scale" type="float">2000</arg>
    <arg id="extent" type="sequence">971337.728807, 7196461.17902, 3015337.72881,
11028461.179</arg>
  </areadef>
</area>
```

Distribute product

Create routing script (Groovy)

- Formalities
- Destination
- Filters
- Messages



Distribution script - formalities

```
package eu.baltrad.beast.rules.groovy;
```

```
import java.io.File;  
import java.io.IOException;  
import java.net.URI;
```

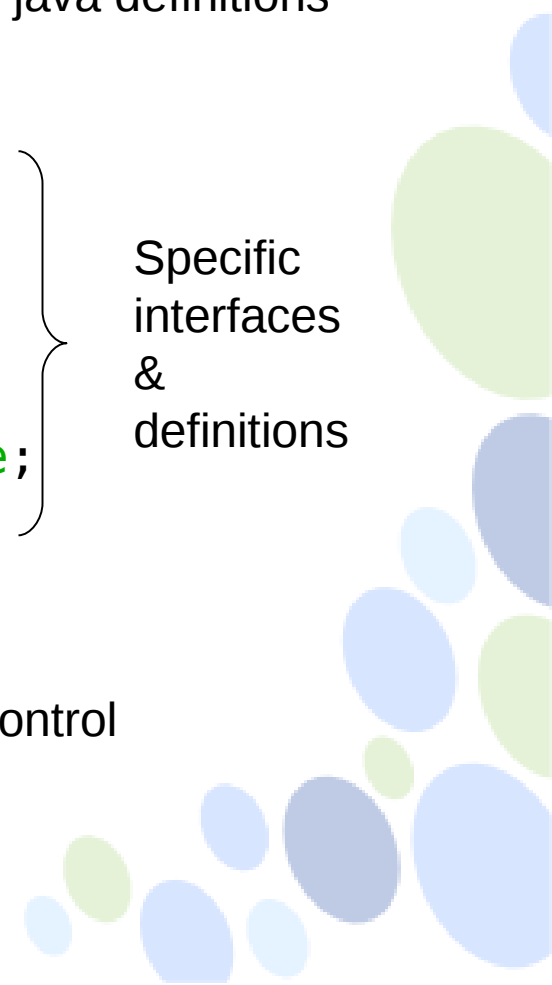
} Basic java definitions

```
import eu.baltrad.beast.db.AttributeFilter;  
import eu.baltrad.beast.db.CombinedFilter;  
import eu.baltrad.beast.db.IFilter;  
import eu.baltrad.beast.net.FileUploader;  
import eu.baltrad.beast.message.IBltMessage;  
import eu.baltrad.beast.message.mo.BltDataMessage;  
import eu.baltrad.beast.rules.IScriptableRule;
```

} Specific
interfaces
&
definitions

```
import eu.baltrad.fc.DefaultFileNamer;  
import eu.baltrad.fc.FileEntry;  
import eu.baltrad.fc.FileNamer;  
import eu.baltrad.fc.0h5FileMatcher;
```


} File control



Distribution script - destination


```
class MyRule implements IScriptableRule {
    private static File TMPDIR = new
File(System.getProperty("java.io.tmpdir"));
    private FileNamer namer;
    private Oh5FileMatcher matcher;
    private FileUploader uploader;
    private URI dst;
    private IFilter filter;

    MyRule() {
        this.namer = new DefaultFileNamer();
        this.matcher = new Oh5FileMatcher();
        this.uploader = FileUploader.createDefault();
        this.dst = new URI("scp://user@host/directory");
    }
}
```




Distribution script - filters

```
// filter what/source:_name = "ORG:82,CMT:swegmaps_2000"  
List<IFilter> filters = new ArrayList<IFilter>();  
AttributeFilter f = new AttributeFilter();  
f.setAttribute("what/source");  
f.setOperator(AttributeFilter.Operator.EQ);  
f.setValueType(AttributeFilter.ValueType.STRING);  
f.setValue("ORG:82,CMT:swegmaps_2000");  
filters.add(f);
```



```
// filter what/object = "COMP"  
AttributeFilter ef = new AttributeFilter();  
ef.setAttribute("what/object");  
ef.setOperator(AttributeFilter.Operator.EQ);  
ef.setValueType(AttributeFilter.ValueType.STRING);  
ef.setValue("COMP");  
filters.add(ef);
```



```
// filter on both previous filters  
this.filter = new CombinedFilter();  
this.filter.setMatchType(CombinedFilter.MatchType.ALL);  
this.filter.setChildFilters(filters);
```

```
}
```

Distribution script - message

```
@Override
public IBltMessage handle(IBltMessage msg) {
    // check if incoming data message
    if (msg != null && msg instanceof BltDataMessage) {
        // extract FileEntry from the message
        FileEntry entry = ((BltDataMessage)msg).getFileEntry();
        // check if it matches our filter
        if (matcher.match(entry, filter.getExpression())) {
            File src = new File(TEMPDIR, namer.name(entry));
            // write the entry to
            entry.write_to_file(src.toString());
            try {
                uploader.upload(src, dst);
            } catch (IOException e) {
                // upload failed
            } finally {
                src.delete();
            }
        }
        return null;
    }
}
```

The screenshot shows the Baltrad web interface for creating a route. The browser address bar shows `localhost:8080/BaltradDex/groovyroute_create.htm`. The interface is divided into a left sidebar and a main content area.

Left Sidebar:

- Data Exchange**
 - Connect to node
 - Subscriptions
 - Delivery register
- Data Processing**
 - Adaptors
 - Routes
 - Schedule
- Administration**
 - Configuration
 - Node properties

Main Content Area:

- Author:** Daniel Johnson
- Active:**
- Description:** Distribute Swedish composite
- Recipients:** RAVE, RAVE_test
- Script:**

```

// ef.setValueType(AttributeFilter.ValueType.STRING);
// ef.setValue("COMP");
// filters.add(ef);

// filter on both previous filters
this.filter = new CombinedFilter();
this.filter.setMatchType(CombinedFilter.MatchType.ALL);
this.filter.setChildFilters(filters);
}

@Override
public IBltMessage handle(IBltMessage msg) {
    // check if incoming data message
    if (msg != null && msg instanceof BltDataMessage) {
        // extract FileEntry from the message
        FileEntry entry = ((BltDataMessage)msg).getFileEntry();
        // check if it matches our filter
        if (matcher.match(entry, filter.getExpression())) {
            File src = new File(TEMPDIR, namer.name(entry));
            // write the entry to
            entry.write_to_file(src.toString());
            try {
                uploader.upload(src, dst);
            } catch (IOException e) {
                // upload failed
            } finally {
                src.delete();
            }
        }
    }
    return null;
}

```

Reporting issues

Best practical Request Tracker

- Widespread
- Easy-to-use
- Versatile

RT for rt.baltrad.eu

Logged in as dbz | Preferences | Logout

Home

Simple Search

Tickets

Tools

Preferences

Approval

RT at a glance

New ticket in baltrad-node Search...

10 highest priority tickets I own

#	Subject	Priority	Queue	Status
486	Request Report status on blnode start and stop	0	baltrad-node	open

10 newest unowned tickets

#	Subject	Queue	Status	Created	
484	Critical: new threading error in 0.7.0.ec1	baltrad-node	new	11 days ago	Take
478	notify when failing to instantiate groovy script	beast	new	12 days ago	Take
425	allow creating groovy rule when no adaptors defined	beast	new	3 months ago	Take
416	Automatic detection of country	Rave	new	3 months ago	Take
412	incomplete arguments in volume rule interface	beast	new	3 months ago	Take
398	Request email-based notifications	beast	new	3 months ago	Take
397	Request FTP-based file distribution	beast	(pending 1 other ticket)	3 months ago	Take
396	Request SSH-based file distribution	beast	(pending 1 other ticket)	3 months ago	Take
394	Request Node discovery	General	new	3 months ago	Take

Reminders

Quick search

Queue	new	open	stalled
baltrad-node	1	3	0
BaltradDB	1	2	2
BaltradDex	5	9	0
beast	5	3	0
Drain	0	1	0
General	1	2	0
GoogleMapsPlugin	0	0	0
HLHDF	0	0	0
rack	0	1	0
Rave	1	3	0

Dashboards

Refresh

Don't refresh this page.

Quick ticket creation

Descriptive subject

Select Queue (project), Owner: “Nobody ...”

Specific report, one issue – one ticket

The screenshot shows the baltrad web interface. On the left is a navigation menu with 'Tools', 'Preferences', and 'Approval'. The main content area is divided into several sections:

- 10 highest priority tickets I own** (with an 'Edit' button)
- 10 newest unowned tickets** (with an 'Edit' button)
- Bookmarked Tickets** (with an 'Edit' button)
- Quick ticket creation** (with a 'Create' button)
 - Subject:
 - Queue: **baltrad-node** (dropdown)
 - Owner: **dbz** (dropdown)
 - Requestor: **dbz@baltrad.eu** (text)
 - Content:
- Reminders** (with an 'Edit' button)
- Quick search** (with an 'Edit' button)

Queue	new	open	stalled
baltrad-node	1	3	0
BaltradDB	1	2	2
BaltradDex	5	9	0
beast	5	3	0
Drain	0	1	0
General	1	2	0
GoogleMapsPlugin	0	0	0
HLHDF	0	0	0
rack	0	1	0
Rave	1	3	0
- Dashboards** (with an 'Edit' button)
- Refresh** (with a dropdown menu set to 'Don't refresh this page')

Quick search

Search ticket #, eg. “#123”

Search queue, eg. “beast”

Logged in as dbz | Preferences | Logout

New ticket in baltrad-node Search...

Priority Queue Status

Priority	Queue	Status
0	baltrad-node	open

Reminders

Quick search

Queue	new	open	stalled
baltrad-node	1	3	0
BaltradDB	1	2	2

Approval

baltrad.eu/Search/Simple.html?q=beast

Logged in as dbz | Preferences | Logout

Found 8 tickets

New Search · Edit Search · Advanced · Show Results · Bulk Update · Graph

Spreadsheet · RSS · iCal · Editable text

#	Subject	Status	Created	Queue	Told	Owner	Last Updated	Priority	Time Left
376	data availability statistics dbm@baltrad.eu	open	4 months ago	beast	4 months ago	sernes	4 months ago	0	
391	generic filtering engine dbm@baltrad.eu	open	3 months ago	beast	4 weeks ago	Nobody	4 weeks ago	0	
396	Request: SSH-based file distribution dbm@baltrad.eu	new	3 months ago	beast	6 weeks ago	Nobody	6 weeks ago	0	
397	Request: FTP-based file distribution dbm@baltrad.eu	open	3 months ago	beast	3 months ago	Nobody	3 weeks ago	0	
398	Request: email-based notifications dbm@baltrad.eu	new	3 months ago	beast	2 months ago	Nobody	3 months ago	0	
412	incomplete arguments in volume rule interface dbm@baltrad.eu	new	3 months ago	beast	3 months ago	Nobody	3 months ago	0	
425	allow creating group rule when no adapters defined	new		beast		Nobody		0	

Query Builder

“Tickets” -> “New Search”

Select attributes, eg.: 'Id greater than 400',
'Queue is beast', and 'Status is resolved'

Add these terms and Search!

The image shows two overlapping screenshots of the baltrad web application. The left screenshot displays the 'Query Builder' interface with the following criteria:

- id: greater than 400
- Subject: matches
- Queue: is beast
- Status: is resolved
- Owner: is
- Requestor Email: matches

The right screenshot shows the search results page, titled 'Found 14 tickets'. The results are displayed in a table with the following columns: #, Subject, Requestors, Status, Created, Queue, Told, Owner, Last Updated, Priority, and Time Left.

#	Subject	Requestors	Status	Created	Queue	Told	Owner	Last Updated	Priority	Time Left
407	add database storable AttributeFilter	sander@baltrad.eu	resolved	3 months ago	beast	sermes	sermes	3 months ago	0	
409	add database storable CombinedFilter	sander@baltrad.eu	resolved	3 months ago	beast	sermes	sermes	3 months ago	0	
411	enable checking if IFilter is valid	sander@baltrad.eu	resolved	3 months ago	beast	sermes	sermes	3 months ago	0	
433	add FTPClient interface and implementation	sander@baltrad.eu	resolved	2 months ago	beast	sermes	sermes	2 months ago	0	
436	Disabled route runs anyway	dbm@baltrad.eu	resolved	2 months ago	beast	sermes	sermes	2 months ago	0	
437	don't catch java.lang.Error instances	sander@baltrad.eu	resolved	2 months ago	beast	Nobody	Nobody	7 weeks ago	0	