

lightweight clients for

UNICORE

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gmail, etc

gmail, google maps, google reader

del.icio.us

flickr

backpack

bloglines

technorati

etc



'lightweight'

.... better than heavyweight 😊

Doesn't imply reduced functionality

Agile



We need something to make it easier to build such clients for
UNICORE ...



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DEISA JRA7

“Access to Resources in Heterogeneous Environments”

UNICORE-based Infrastructure

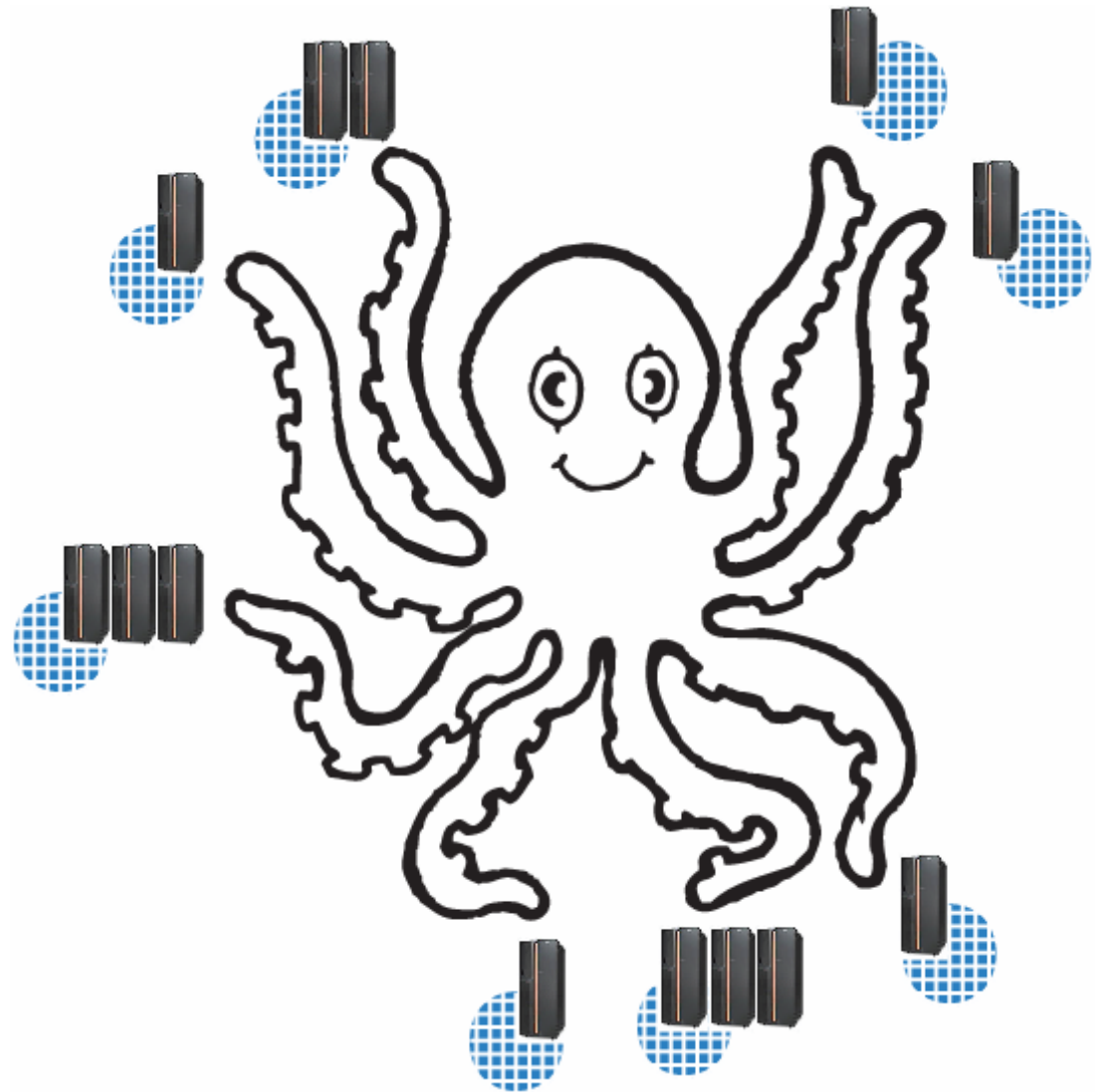
JRA7 to build additional tools for UNICORE

EPCC, CINECA, ECMWF, FZJ



FZJ built something (at a higher level than the arcon library) which makes it easy to write UNICORE client code ...

Roctopus !



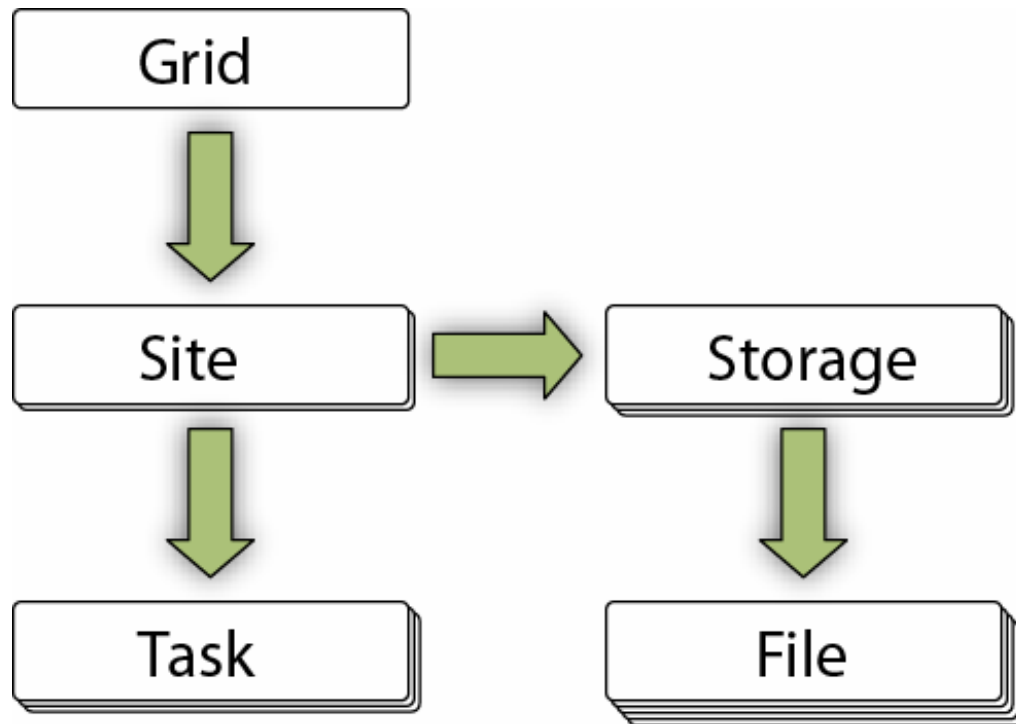
Roctopus

A high-level API for programming Grids

One interface - multiple implementations :->
targets UNICORE 4.x and UNICORE/GS and ...

Basis for clients, agents, portals, frameworks, etc ...





Cookbook

```
Grid grid = RoctopusFactory.getInstance().getGrid( config );
```

```
Site site = grid.locate( .. );
```

```
Task t = site.submit( jobdesc );
```

```
t.registerStatusChangeListener( ... );
```

```
t.start();
```

```
...
```

```
Storage storage = site.getStorage(StorageType.HOME);
```

```
File[] files = storage.ls();
```

```
files[2].importLocalFile("/tmp/data.txt");
```

```
...
```



Makes prototyping of new client ideas much easier.

The remainder of the talk demos these ...



Established Software, New Tools

“You've learned some new ways, even if you haven't given up the old ones.”

- Harmonica, Once upon a time in the West

‘Mash-Ups’

“Open standards allow and promote unexpected forms of innovation.”

- The Economist, Sept 2005



Roctopus's Garden

Playground command line environment for UNICORE

Built on top of Roctopus

UNIX-like organisation of files in UNICORE

Lives in a local daemon

(solves the repeated password and slow JVM startup time issues)



```
roger@zam439: /home/roger
[roger@zam439]::~{~}$ uls
ssl://zam461.zam.kfa-juelich.de:9100/AVANT
ssl://zam031.zam.kfa-juelich.de:4014/Linux-zam461
ssl://zam031.zam.kfa-juelich.de:4016/zam777
ssl://zam177.zam.kfa-juelich.de:4005/JUMP
ssl://zam439:4005/u2
ssl://zam439:4004/u1
[roger@zam439]::~{~}$ ucd ssl://zam439:4004/u1/home
[roger@zam439]::~{~}$ uexec sleep.xml
submitted
[roger@zam439]::~{~}$ ups -l
ssl://zam439:4004/u1 1750424334 SUCCESSFUL sleep
ssl://zam439:4004/u1 1750424391 EXECUTING sleep
[roger@zam439]::~{~}$ ups -l
ssl://zam439:4004/u1 1750424334 SUCCESSFUL sleep
ssl://zam439:4004/u1 1750424391 SUCCESSFUL sleep
[roger@zam439]::~{~}$ uls -l
-rw-      2044 07-21-05 15:56 ssl://zam439:4004/u1/home/.bashrc
-rw-       414 07-21-05 15:56 ssl://zam439:4004/u1/home/.bash_profile
drwx     4096 09-06-05 09:51 ssl://zam439:4004/u1/home/d1/
drwx     4096 09-06-05 09:59 ssl://zam439:4004/u1/home/d2/
drwx     4096 09-06-05 11:17 ssl://zam439:4004/u1/home/abc/
-rw-       23 10-07-05 10:11 ssl://zam439:4004/u1/home/TESTFILE
-rw-       23 10-07-05 10:11 ssl://zam439:4004/u1/home/TESTFILE2
-rw-       12 10-07-05 12:53 ssl://zam439:4004/u1/home/TESTFILE3
[roger@zam439]::~{~}$
[roger@zam439]::~{~}$
[roger@zam439]::~{~}$
```



Good for ...

Quick access

Basis for CRON jobs, health monitors, etc ...

Dirty filtering / workflow



Grid Slave

Local 'agent'

Always on

Doing things for you on the Grid

.... however ...

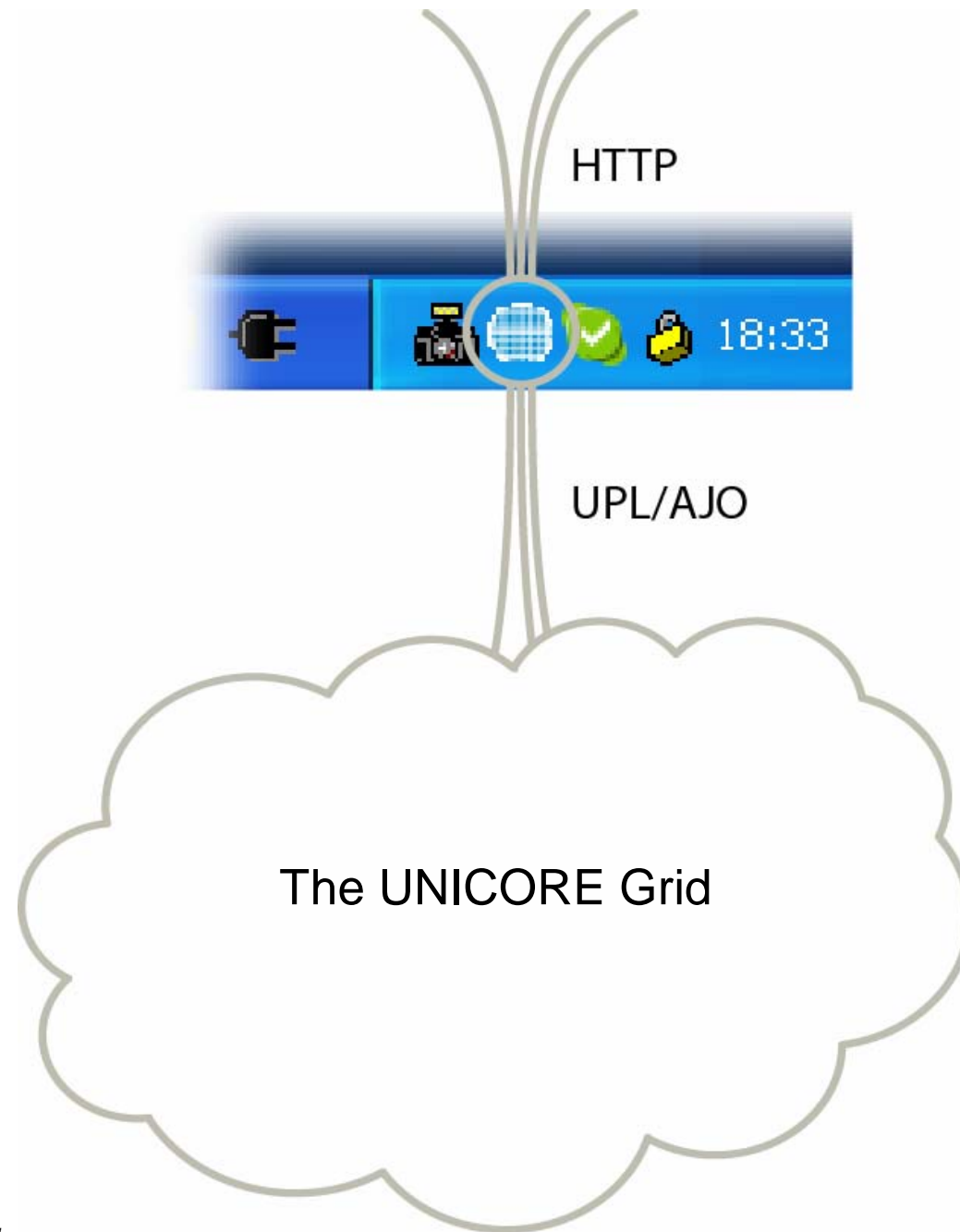


Google Desktop Search

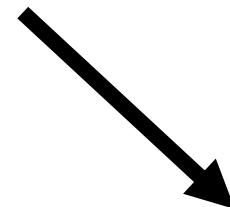
<http://localhost:4664/>

What about using HTTP for a UNICORE agent ?





Look into the System tray



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WWW

http initially for scientists to distribute their results.

Now http (HTTP POST) is used within the middleware !

But, the collaborative aspect is lost ...

(can't cut and paste an EPR into your browser)



What about binding to an non-localhost address, and switch on HTTPS for authentication ...

Becoming the “*Ultimate* Portal Toolkit for UNICORE” !



Gmail

<http://gmail.google.com>



*Roger Menday
Forschungszentrum Jülich*



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[Sent Mail](#)

[Drafts \(6\)](#)

[All Mail](#)

[Spam \(2\)](#)

[Trash](#)

[Contacts](#)

▼ [Labels](#)

reggae-lossless (30)

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Give Google Mail
to:

[Send invite](#) 100 left

[preview invite](#)

▼ [UNICORE](#)

(0) AVANT

(0) Linux-zam461

(0) zam777

(1) JUMP

(2) u2

(1) u1

Select: All, None, Read, Unread, Starred, Unstarred

- ★ r.menday (2) > notification - site :ssl://zam031.zam.kfa-juelich.de:4014/Linux-zam461
- ★ me > http://userscripts.org/scripts/source/801.user.js - http://userscripts.c
- ★ roger menday
- ★ me, Stewart
- ★ pdfonline
- ★ Jason Fries
- ★ roger menday
- ★ r.menday (2)
- ★ r.menday
- ★ roger menday
- ★ me
- ★ me
- ★ autoreply
- ★ Economic
- ★ Yadnem
- ★ me
- ★ Sticklet
- ★ Economic
- ★ me, r.menday
- ★ Palm S
- ★ me, Cater
- ★ Kerstin
- ★ me



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Forschungszentrum Jülich

Summary

Once you make your data easily
(but securely) accessible –



The sky's the Limit !!