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Grid Operating System on IPv6

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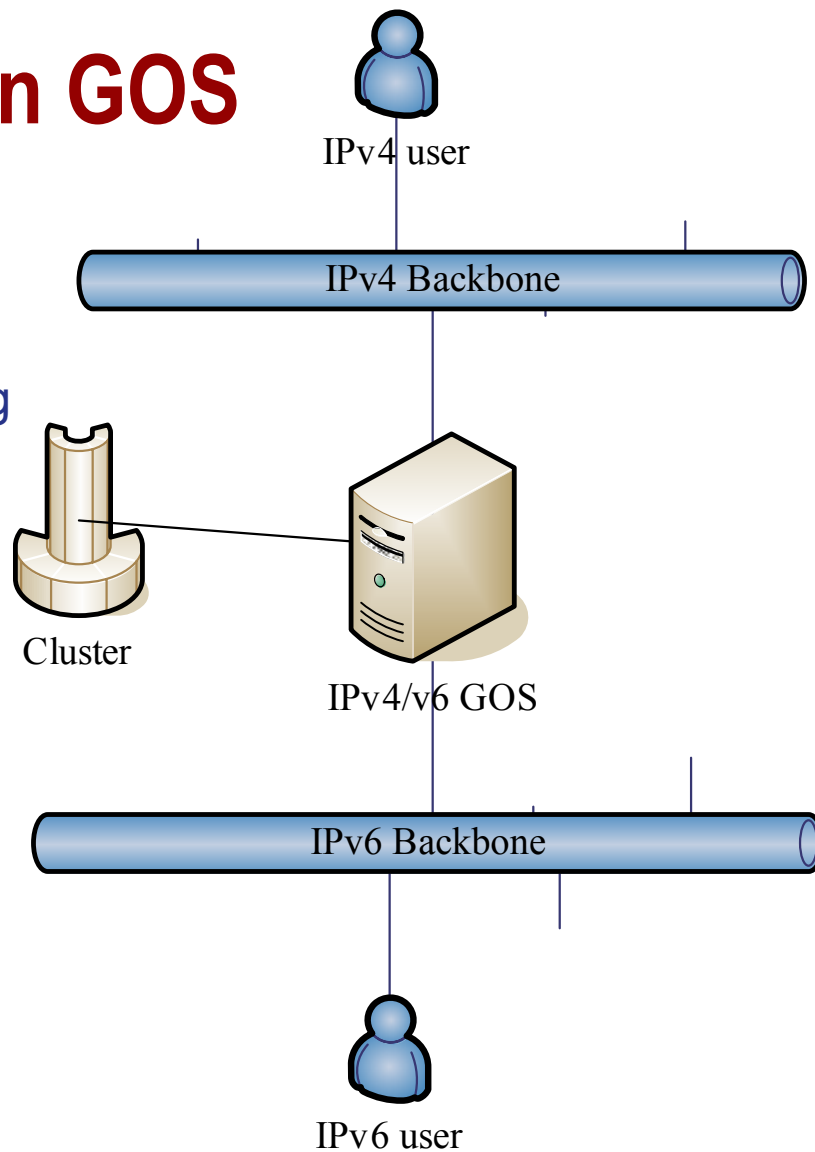
FP6-2004-Infrastructures-6-SSA-026634





IPv6 compatible version GOS

- ▶ Dual stack
- ▶ Double access
- ▶ Migrated from the version running on CNGrid





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▶ **Migration**

- Server
 - Grip, Agora, ums, rms, Router, Hotfile, BatchService, Security, etc.
- Client API
 - Correspond with system service
- Database
 - Mysql→postgresql
- Configure and Manage tools
 - Script for GOS boot, GOS stop , router manage, etc.
- Application layer security
 - X.509



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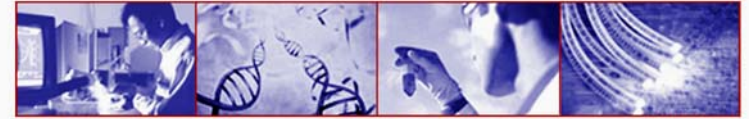
▶ Environment

- OS
 - Windows2003, red hat Linux 9.0
- JRE
 - JDK1.5.0_06
- Database
 - PostgreSQL8.1
- Web Container
 - Tomcat5.0.28
- Soap Engine
 - axis-1.2RC2



► Configure file

```
1 # agora.conf include cs configure, ums configure, rms configure and aa configure!  
2 aa.url=http://[fe80::220:e0ff:fe6d:9d02]:8080/axis/services/AAService  
3 agoralcert=E:/wingos/GOS2/certs/aascert.pem  
4 agoralkey=E:/wingos/GOS2/certs/aaskey.pem  
5 agoraconfig.file=E:/wingos/GOS2/jakarta-tomcat-5.0.28/bin/agora-client-config-sec.wsdd  
6 cs.db.url=jdbc:postgresql://[::1]:5432  
7 cs.db.user=gos6  
8 cs.db.password=p6  
9 cs.db.dbname=cs  
10 pt.rootdir=PT  
11 pt.default=defaultpt  
12 ewSDL.rootdir=ewSDL  
13 proxy.rootdir=proxy  
14 ums.url=http://[fe80::220:e0ff:fe6d:9d02]:8080/axis/services/UMService  
15 ums.timeout=3600000  
16 ums.db.url=jdbc:postgresql://[::1]:5432  
17 ums.db.user=gos6  
18 ums.db.password=p6  
19 ums.db.dbname=ums  
20 rms.url=http://[fe80::220:e0ff:fe6d:9d02]:8080/axis/services/RMService
```



▶ Resource manage

文件(F) 编辑(E) 查看(V) 转到(G) 书签(B) 工具(T) 帮助(H)

← → ↻ × 🏠 [http://\[fe80::220:e0ff:fe6d:9d02\]:8080/portal/app/rms/manage.html](http://[fe80::220:e0ff:fe6d:9d02]:8080/portal/app/rms/manage.html)

📄 Mozilla Firefox 帮助 📄 Mozilla Firefox 中文帮助 📄 Mozilla Firefox 讨论 📄 Mozilla Firefox 中文版 📄 插件

GOS Portal

My Pages **Application** **Grid**

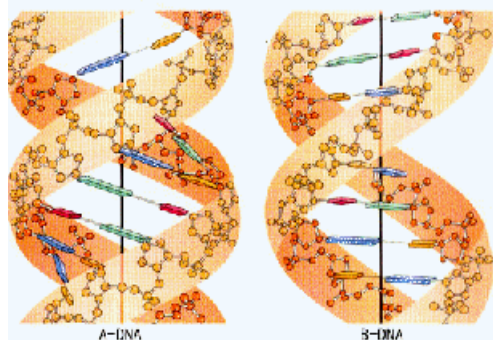
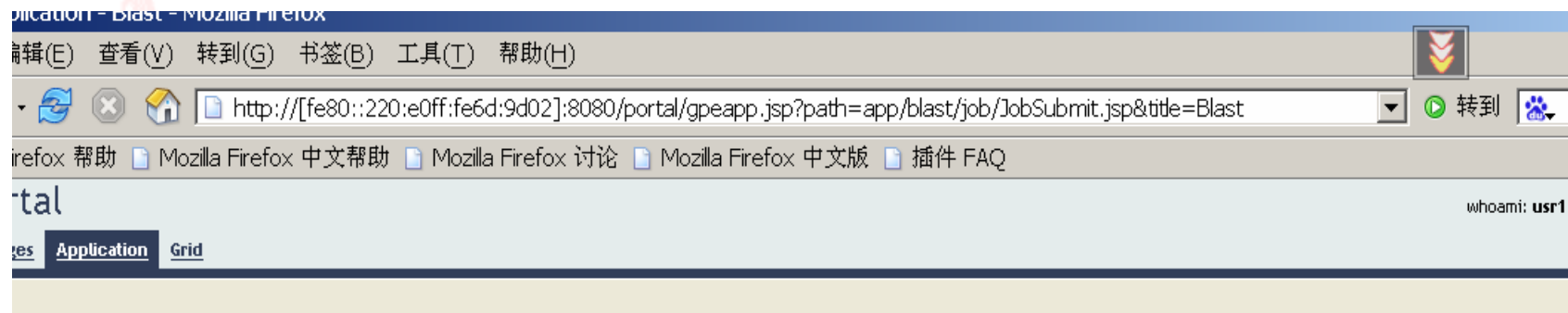
📁 Resource Management

- 🌐 Root[reload]
- 📁 agora1
 - 📁 eres://agora1:AccountService
 - 📁 eres://agora1:BatchService
 - 📁 vres://a67acb97797e4300808439c5c42f04bb:977ede191359c71d922055715cb579af
 - 📄 <http://10.0.2.229:8080/axis/services/gos/BatchService>
 - 📁 vres://a90038e0c00f024832a72f07f5800d59:925679327a9339e0f95ddf169160333d
 - 📄 [http://\[fe80::210:dcff:fe4f:aa8e\]:8080/axis/services/gos/BatchService](http://[fe80::210:dcff:fe4f:aa8e]:8080/axis/services/gos/BatchService)
 - 📁 eres://agora1:DataService
 - 📁 vres://a67acb97797e4300808439c5c42f04bb:3d926c00292c7c961f9eca64e0ea8fe2
 - 📄 [http://\[fe80::210:dcff:fe4f:aa8e\]:8080/axis/services/vegads](http://[fe80::210:dcff:fe4f:aa8e]:8080/axis/services/vegads)
 - 📁 eres://agora1:MetaService
 - 📁 vres://a67acb97797e4300808439c5c42f04bb:f7d8889820947c0f4ee098e0aef6b827
 - 📄 [http://\[fe80::210:dcff:fe4f:aa8e\]:8080/axis/services/vegafs](http://[fe80::210:dcff:fe4f:aa8e]:8080/axis/services/vegafs)
 - 📁 eres://agora1:PingServiceNoSec
 - 📁 eres://agora1:PingServiceSec



Laboratory test

▶ BLAST On IPv6



BLAST是“Basic Local Alignment Search Tool”的缩写。它是一个用来比对生物序列的一级结构(如不同序列或不同基因的DNA序列)的算法。已知一个包含若干序列的数据库，BLAST搜索可以让研究者在其中寻找与其感兴趣类似的序列。例如如果某种非人动物的一个以前未知的基因被发现，研究者一般会在人类基因组中做一个BLAST搜索是否包含类似的基因(通过序列的相似性)。BLAST算法以及实现它的程序由美国国家生物技术信息中心(NCBI)研制。

研究者利用BLAST来解决的其他问题有：

- 哪个细菌物种包含与氨基酸序列已知的某蛋白质有亲缘关系的蛋白质？
- 被测序的一段DNA来自哪里？
- 何种基因编码的蛋白质表现出刚刚被确定的某种结构或结构模体？等等。



IPv6 backbone test

- ▶ **Two IPv6 version GOS are running on CNGI(China Next Generation Internet,IPv6 Backbone)**
 - NIC of BUAA (Beihang University)
 - NIC of XJTU (Xi'an Jiao Tong University)

<http://202.112.132.136:8080/portal/grid/login.html>

[Http://\[2001:da8:ae:200:20a:ebff:fe2e:4d05\]:8080/portal/grid/login.html](Http://[2001:da8:ae:200:20a:ebff:fe2e:4d05]:8080/portal/grid/login.html)

User/pass:

usr1/usr1

resourcemanager/resourcemanager

policymanager/policymanager