



NORDUGRID-TECH-10

7/7/2006

THE SRM PROXY SERVICE

Description and Administrator's Manual

A.Konstantinov*

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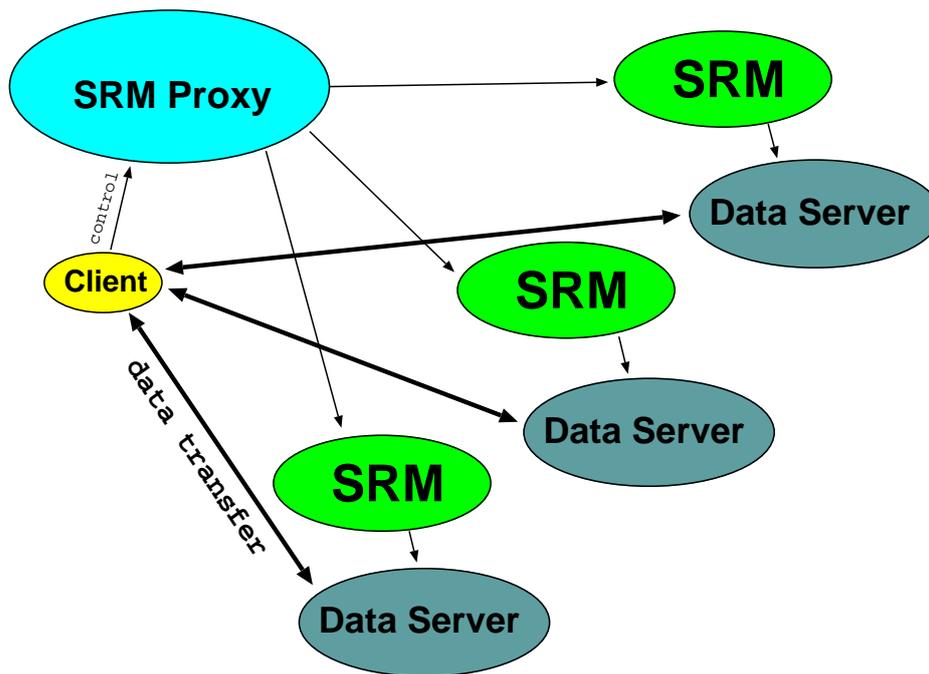


Figure 1: Architecture of Data Storage Infrastructure

1 Introduction

A SRM Proxy provides single entry point for multiple SRM [1] using SRM v1.1 interfaces. It is part of HTTPSD server. So please read this manual first [2].

The SRM Proxy is developed as part of ARC software but can be used independently.

2 Architecture

The SRM Proxy accepts requests from clients and distributes them among SRM services. Then it merges responses and passes result back to client (see fig. 1). For each long-lasting SRM request SRM Proxy keeps a map to associate identifiers of object at remote SRM services with those presented to client.

3 Configuration

The SRM Proxy is part of HTTPSD server and is configured in corresponding section of server's configuration file. It supports following service-specific configuration commands:

- *storage=directory_path* - *directory_path* specifies directory used to store data about request mappings.
- *endpoint =URL* - URL of remote SRM service where SRM Proxy will be dispatching requests to. Do not forget to use URL option *protocols=gssapi* for servers with GSI GSOAP implementation of HTTPg.

4 Setup

After installation following files must be present in installation root:

- *sbin/httpsd*
- *lib/srmproxy.so*
- *sbin/httpsd.sh* (optional)

Edit */etc/arc.conf* (preferred way) or *etc/httpsd.conf* configuration file as described in [3], [2] and Section 3.

Make sure You have valid host certificate and key at */etc/grid-security/host{cert|key}.pem* .

Start HTTPS D by using SysV startup script (*/etc/init.d/httpsd start*) or by simplified startupt script *sbin/httpsd.sh* or directly (*\$NORDUGRID_LOCATION/sbin/httpsd*).

Look at */var/log/httpsd.log* (default log file) for possible errors.

Appendix A. Configuration Example

General configuration part, applies to every service. For more information see [3].

```
[common]
hostname="home.takas.lt"
globus_tcp_port_range="9000,9300"
x509_user_key="/etc/grid-security/hostkey.pem"
x509_user_cert="/etc/grid-security/hostcert.pem"
x509_cert_dir="/etc/grid-security/certificates"
```

Configuration of httpsd server. For more information see [2]. This block defines server which listens on TCP/IP ports 8000 (HTTPg) and 8001 (HTTPS).

```
[httpsd]
logfile= /var/log/httpsd.log
pidfile=/var/log/httpsd.pid
debug=4
gsiport=8000
sslport=8001
```

This shared library contains plugin named “*se*”. It provides SRM Proxy service.

```
plugin=/opt/nordugrid/lib/srmproxy.so
```

Configuration block which activates and defines behavior of “*srmproxy*” service.

```
[httpsd/srmproxy]
```

Path where service can be contacted.

```
path=/srmproxy
```

Mapping information is stored under */tmp/srmproxy*.

```
storage=/tmp/srmproxy
```

SRM requests are dispatched to 3 SRM servers.

```
endpoint=srm://srm1.server.org/srm/managerv1
```

```
endpoint=srm://srm2.server.org:5000;protocol=gssapi/srm/managerv1
```

```
endpoint=srm://srm3.server.org/srm/managerv1
```

References

- [1] Storage Resource Management Working Group. [Online]. Available: <http://sdm.lbl.gov/srm-wg/>
- [2] A. Konstantinov, *The HTTP(s,g) And SOAP Framework*, The NorduGrid Collaboration, NORDUGRID-TECH-9.
- [3] —, *Configuration and Authorisation of ARC (NorduGrid) Services*, The NorduGrid Collaboration, NORDUGRID-TECH-6.