

# The ECAR webservice

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### **What is ECAR?**

ECAR is a secure SOAP webservice interface to query the [LFC](#) server POSIX ACL-like access authorization mechanism. By a call to ECAR's `canAccess` method, a client can discover if a Grid user (identified by certificate subject DN and a list of [VOMS](#) FQANs) can open a "logical file name", stored on a [LFC](#) catalog.

ECAR was conceived as a means of propagating authorization information from an [LFC](#) server to a [StoRM](#) SRM server; this way, authorization information can be centrally managed in the LFC metadata catalog and propagated to the servers where data is actually stored. The `storm-authz-ecar` package implements this policy system for the [StoRM](#) SRM server.

ECAR comprises: [ecar-server](#) the server program, that actually responds to web service requests (over SSL-secured https channel); [ecar-client](#) a command-line client, that can be used to test the service or to implement simple scripts to query the ECAR server.

### **Features**

- all communication is secure and encrypted with SSL.
- support HTTP keep-alive for avoid SSL handshake overhead in case of multiple requests.
- easy to install
- precompiled binaries for Scientific Linux CERN 3.0.5 and Debian 3.1 (sarge).

### **Security implications**

The ECAR server needs to have sufficient privileges to query the [LFC](#) server for the ACL of any file it is requested. Therefore, the ECAR server should run with `root` privileges on the same host where the [LFC](#) server is running.[#1] If a request is processed, for access to a file whose the ECAR server cannot read, an error is returned to the ECAR webservice client.

[2] The `root` user on the local host is not required by LFC to present Grid credentials, and may perform any operation on the [LFC](#) catalog.

The ECAR server will *never* change an ACL or other metadata in the LFC namespace; all ECAR accesses to LFC namespace are *read-only*.

## **Further information**

Some resources are available online:

### *ecar-server*

Man page for the `ecar-server` program.

### *ecar-client*

Man page for the `ecar-client` command-line test client.

### *`storm-authz-ecar`*

An "AuthorizationSource" class to make the StoRM SRM server a client of the ECAR service; this way, authorization information can be centrally managed in the LFC server and propagated to the SRM servers on the SEs.

## **Download & Install**

### **Source code**

You can download the ECAR source code from the EGRID CVS and Subversion repository at <http://www.egrid.it/cvs/products/ecar/?root=svn> .

### **RPM packages / Scientific Linux CERN**

You can download `.rpm` packages (tested on Scientific Linux CERN 3.0.5) from <http://www.egrid.it/download/rpm/RPMS.egrid>

The EGRID `apt` repository is kept up-to-date with the latest precompiled binary package of ECAR; you can install ECAR from the repository with the following procedure:

1. add the EGRID repository to your APT repository list:

```
echo http://www.egrid.it/download/rpm \  
>> /etc/apt/sources.list.d/egrid.list  
apt-get update
```

2. install ECAR:

```
apt-get install ecar
```

3. start the ECAR server process:

```
service ecar start
```

4. configure ECAR to run after every reboot:

```
chkconfig --add ecar  
chkconfig ecar on
```

### **Debian packages / Debian 3.1 (sarge)**

Download `.deb` packages (install on Debian sarge) from <http://www.egrid.it/download/deb>

The EGRID `apt` repository is kept up-to-date with the latest precompiled binary package of ECAR; you can install ECAR from the repository with the following procedure:

1. add the EGRID repository to your APT repository list:

```
echo http://www.egrid.it/download/deb \  
>> /etc/apt/sources.list  
apt-get update
```

2. install ECAR:

```
apt-get install ecar
```

3. start the ECAR server process:

```
/etc/init.d/ecar start
```

4. configure ECAR to run after every reboot:

```
update-rc.d ecar defaults 80
```

## **Copyright and license**

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## **Docutils System Messages**

System Message: ERROR/3 (<string>, line 93); *[backlink](#)*

Unknown target name: "storm-authz-ecar".