



SeisComP3 © GFZ

Examples
of
usage

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Typical user questions

How to

- check the event history?
- create an earthquake bulletin?
- export event information to a file?
- extract waveform data from the archive?
- export event based waveform data from the archive?
- check the waveform data of a multiplexed MSeed?
- import external waveform data to the archive?
- copy event information from one DB to another?
- monitor the system?
- dump waveforms into an ASCII file?
- ...



How to check the event history?



scevtlog

is a module to log the complete event processing history in form of single updates and summary files



How to create an earthquake bulletin?



scbulletin

is a module to export event information to a bulletin file

- from database

```
scbulletin -E gfz2009groy -3  
-d mysql://sysop:sysop@localhost/seiscomp3
```

- from file

```
scbulletin -i gfz2009groy.xml -f xml -3
```



How to export event information to a file for backup or event data exchange?



scxmldump

is dumping event information into a XML file

- complete event information

```
scxmldump -d
mysql://sysop:sysop@localhost/seiscomp3 -E
gfz2009groy -PAMf -o gfz2009groy.xml
```

- only most important information

```
scxmldump -d
mysql://sysop:sysop@localhost/seiscomp3 -E
gfz2009groy -paf -o gfz2009groy.xml
```

- convert a dump into a bulletin

```
scxmldump -d
mysql://sysop:sysop@localhost/seiscomp3 -E
gfz2009groy -pmPAMf | scbulletin -i - -3
```




How to extract waveform
data from the archive?



scart

Export waveform data from the archive to a file

- All stations

```
scart -dsvE -t '2009-04-06 01:30~2009-04-06  
01:32' ~/seiscomp3/acquisition/archive >  
sorted.mseed
```

- Single network

```
scart -dsvE -t '2008-09-01 15:00~2008-09-01  
16:00' -n GE /archive > sorted.mseed
```



How to export event
based waveform data
from the archive?



scevtstreams + scart

Create a MSeed file containing all stations used for earthquake processing

```
scevtstreams -E gfz2009groy -d  
mysql://sysop:sysop@localhost/seiscomp3 -L 0 -m 300 |  
scart -dsvE -list ./archive > gfz2009waff.mseed
```



How to check the
waveform data of a
MSeed file?



scrttv

is displaying waveform data

- real-time

```
scrttv -H localhost -I slink://localhost:18000
```

- offline (file)

```
scrttv sorted.mseed --buffer-size 86400
```



How to copy event
information from one DB
to another?



scdb

- Create realtime DB backups

```
scdb -H localhost -o \<\  
mysql://sysop:sysop@localhost/seiscomp3
```

- Copy a SeisComP3 XML file created with scxmldump to a DB

```
scdb -i gfz2009waff.xml -d \<\  
mysql://sysop:sysop@localhost/seiscomp3
```




scevtls + scxmldump

scevtls is listing all events in a given time span

```
scevtls -d mysql://sysop:sysop@localhost/seiscomp3
--begin "2007-08-01 00:00:00" --end "2007-08-02
00:00:00"
```

Exporting all events in a given time span to a file

```
for i in `scevtls -d
mysql://sysop:sysop@localhost/seiscomp3 --begin "2008-
01-01 00:00:00"`; do scxmldump -d
mysql://sysop:sysop@localhost/seiscomp3 -E $i -PAMf -o
$i.xml; done
```



How to import external
waveform data into the
archive?



scart

Import a multiplexed Mseed file into the waveform archive

```
scart -I sorted.mseed  
~/seiscomp3/acquisition/archive
```



How to dump station
meta data to a file?



scxmldump

Dump inventory to a file

```
scxmldump -d sysop:sysop@localhost/seiscomp3 -I  
-f -o inventory.xml
```

Import inventory file

```
scdb -i inventory.xml -d  
mysql://sysop:sysop@localhost/seiscomp3
```



How to monitor the system performance?



scm

scm is a module to

- monitor system performance
 - `scm -H localhost`
- sending email alerts in case of problems
 - `scm.cfg`

```
memailplugin.sendEmail = true  
memailplugin.recipients = "test@test.de"  
memailplugin.filterMeanInterval = 1  
memailplugin.requiredClients = scautopick,  
scautoloc, scevent, scmag, scamp
```



How to dump waveforms
into an ASCII file?



scdumpwaveform

Dumps waveforms from

- SeedLink

```
python dumpwaveform.py -I  
slink://localhost:18000 --begin "2009-04-06  
01:32:00" --end "2009-04-06 01:34:00" --stream  
GE.UGM..BHZ
```

- Archive

```
python dumpwaveform.py -I  
arclink://localhost:18001 --begin "2009-04-06  
01:32:00" --end "2009-04-06 01:34:00" --stream  
GE.UGM..BHZ
```



How to apply queries to
the mysql DB?



scquery

is executing predefined mysql queries

- Listing all stations in a given Region

```
scquery -d
mysql://sysop:sysop@localhost/seiscomp3
stationsInRegion 0 50 0 50
```

- List network of a station

```
scquery -d
mysql://sysop:sysop@localhost/seiscomp3
stationNetwork CURRENT_DATE UGM
```



How to test new
processing informations
offline?



playback.sh

Offline playback

```
sh playback.sh gfz2009abcd.mseed gfz2009abcd.xml
```

Create bulletin

```
scbulletin -i gfz2009abcd.xml -f xml -3
```

Open Playback results with scolv

```
scolv --offline -I gfz2008apgp-Xizang-M6.8.sorted-mseed --inventory-db inventory.xml
```