



SEISCOMP – wsiris

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 - WS-Event
 - WS-Station
 - WS-Availability
 - WS-DataSelect
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- implements part of the IRIS DMC Web services ▶ <http://www.iris.edu/ws/>
- implemented services:
 - ▶ WS-Event – event information
 - ▶ WS-Station – station meta data
 - ▶ WS-Availabitly – waveform availability
 - ▶ WS-DataSelect – single stream waveform query
 - ▶ WS-BulkDataSelect – multi stream waveform query
- supports native SEISCOMP format as well (SC3ML, inventory and event)
- implemented in Python as standard SEISCOMP module
- served by ▶ Python Twisted Networking Engine, no external Web server needed
- SEISCOMP dependencies:
 - ▶ database connection (ws-event, ws-station, ws-availability)
 - ▶ local SDS archive (ws-availabilty, ws-dataselect, ws-bulkdataselect)
 - ▶ StationXML plug-in (staxml) enabled



Install twisted libraries

```
sysop@host:~$ sudo apt-get install python-twisted
```

Start config editor and set parameters under Modules-Utilities-wsiris

```
sysop@host:~$ seiscomp exec scconfig
```

The `wsiris` module may be activated through the config editor or on the commandline

Activate and start wsiris

```
sysop@host:~$ seiscomp enable wsiris
```

```
sysop@host:~$ seiscomp start wsiris
```



- provides event information in the QuakeML format ▶ version 1.2 RC3
- events may be filtered e.g. by hypocenter, time and magnitude, see ▶ <http://www.iris.edu/ws/event/>
- service location (HTTP-GET): /event, ▶ sample request
- feature notes:
 - ▶ SEISCOMP does not distinguish between catalogs and contributors, but supports agencyIDs. Hence, if specified, the value of the catalog or contributor parameter is mapped to the agencyID. If both parameters are supplied, the value of the contributor is used.
 - ▶ origin and magnitude filter parameters are always applied to preferred origin resp. preferred magnitude
 - ▶ additional request parameters:
 - ★ output: [qml, qml-rt, sc3ml], default: qml
 - ★ includecomments: boolean, default: true
 - ★ formatted: boolean, default: false
 - ▶ recently IRIS changes: offset, includeallorigins, output (text)



- provides station meta data in StationXML format ▶ SCEDC version, March 7, 2012
- StationXML recently became an official ▶ FDSN standard
- stations may be filtered e.g. by geographic region and time, also the information depth level is selectable, see ▶ <http://www.iris.edu/ws/station/>
- service location (HTTP-GET): /station, ▶ sample request
- feature notes:
 - ▶ updatedafter request parameter not implemented: The last modification time in SeisComP is tracked on the object level. If a child of an object is updated the update time is not propagated to all parents. In order to check if a station was updated all children must be evaluated recursively. This operation would be much to expensive.
 - ▶ additional request parameters:
 - ★ output: [stationxml, sc3ml], default: stationxml
 - ★ formatted: boolean, default: false
 - ▶ recently IRIS changes: output (text)



- provides information about the availability of waveform data
- data may be filtered e.g. by geographic, time and channel information, see <http://www.iris.edu/ws/availability/>
- supports different output formats:
 - ▶ xml – StationXML like
 - ▶ query – HTTP-GET parameter list, used as input for WS-DataSelect
 - ▶ bulkdataselect – Lines of stream parameters, used for WS-BulkDataSelect
- service location (HTTP-GET): /availability, [sample request](#)
- feature notes:
 - ▶ data availability is only based on SDS file names (not miniSEED content), hence date precision is limited to days



- provides access to single stream waveform data in MiniSEED format

▶ <http://www.iris.edu/ws/dataselect/>

- service location (HTTP-GET): /dataselect, ▶ sample request

- feature notes:

- ▶ quality parameter not implemented (information not available in SEISCOMP)
- ▶ ref parameter is limited to direct, no ICAB (IRIS Caching Artifact Builder) support



- provides access to multi stream waveform data in MiniSEED format

▶ <http://www.iris.edu/ws/bulkdataselect/>

- service location (HTTP-POST): /bulkdataselect

- feature notes:

- ▶ quality parameter not implemented (information not available in SEISCOMP)
- ▶ minimumlength parameter is not implemented
- ▶ longestonly parameter is not implemented

Test request using curl

```
sysop@host:~$ curl -o request.txt "http://localhost:8080/availability?start=2013-01-14T23:00:00&output=bulkdataselect"
```

```
sysop@host:~$ curl -o data.mseed --data-urlencode selection@request.txt "http://localhost:8080/bulkdataselect"
```



- Implementation of recently changed/added IRIS parameters
- Implementation of QuakeML 1.2 RC4 (current version: RC3)
- Bug fixes for QuakeML export (recently reported on mailinglist)
- Implementation of FDSN StationXML version