

# REST API for Application Monitoring

Besides the REST API interface on D2000, the SmartWeb Server makes also the interface for performance monitoring and application load accessible. Statistics are collected globally but also for every session individually.

## Monitoring of Current Sessions with D2000

The list of active sessions and information such as time of origin (login of a user), user name and type of connection can be acquired with HTTP GET request with the HTTP header `Content-Type: application/json` on the address:

```
GET https://<domain.sk>/<application name>/api/rest/v0/admin/d2/sessions
```

## Statistics of Communication with D2000

For statistics collection, the java library [Metrics](#) is used. Names of individual metrics are composed of their types (prefix `rpc/sba/object`) and a name of monitored D2000 object or else RPC procedure. It is possible to get complete statistics of all used RPC, SBA and also objects and sessions at the same time by the HTTP GET request with the HTTP header `Content-Type: application/json` on the address:

```
GET https://<domain.sk>/<application name>/api/rest/v0/admin/metrics/d2
```

It is possible to get statistics of created sessions, such as their number and the creating duration, by HTTP GET request with the HTTP header `Content-Type: application/json` on the address:

```
GET https://<domain.sk>/<application name>/api/rest/v0/admin/metrics/d2/sessions
```

It is possible to get statistics about the number and the length of calling RPC procedures by sending HTTP GET request with the HTTP header `Content-Type: application/json` on the address:

```
GET https://<domain.sk>/<application name>/api/rest/v0/admin/metrics/d2/rpc
```

or for SBA RPC methods:

```
GET https://<domain.sk>/<application name>/api/rest/v0/admin/metrics/d2/sba
```

It is possible to get a statistic specific only for the given RPC method by sending the HTTP GET request with the HTTP header `Content-Type: application/json` on the address:

```
GET https://<domain.sk>/<application name>/api/rest/v0/admin/metrics/d2/rpc/<name of event and the RPC method separated by a dot>
```

or for SBA RPC methods:

```
GET https://<domain.sk>/<application name>/api/rest/v0/admin/metrics/d2/rpc/<name of event and the RPC method separated by a dot>
```

To other collected statistics, there belongs the number of monitored D2000 objects, their names and the number of received values. In the case of monitored objects, statistics of the number of monitorings and the number of received values are distinguished (postfix subscriptions and `newValues`). Statistics of monitored D2000 objects are available by the HTTP GET request with the HTTP header `Content-Type: application/json` on the address:

```
GET https://<domain.sk>/<application name>/api/rest/v0/admin/metrics/d2/object
```

It is possible to get a statistic specific only for the given object by sending the HTTP GET request with the HTTP header `Content-Type: application/json` on the address:

```
GET https://<domain.sk>/<application name>/api/rest/v0/admin/metrics/d2/object/<object name>
```

## Monitoring of SmartWeb Server Condition

To monitored quantities, there belongs also information about the usage and load of the Java Virtual Machine (JVM) used by the application server. Information about the Class Loader is available by the HTTP GET request with the HTTP header `Content-Type: application/json` on the address:

```
GET https://<domain.sk>/<application name>/api/rest/v0/admin/metrics/jvm/classloader
```

for information about the use of operating memory is the URL:

GET https://<domain.sk>/<application name>/api/rest/v0/admin/metrics/jvm/memory

for information about the state of the garbage collector is the URL:

GET https://<domain.sk>/<application name>/api/rest/v0/admin/metrics/jvm/garbagecollector

It is possible to get all this information at once using the URL:

GET https://<domain.sk>/<application name>/api/rest/v0/admin/metrics/jvm