



# UGW - WebServices

Documentation

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# Description of web services

## General Information

Communication via the described WebServices currently takes place unencrypted. From version 1.0 of the Web Interface communication via HTTPS can be done.

Hereafter the current Web services are described including their parameters, examples, answers and error messages. The current version of the documentation as well as the web interface itself is still not final.

# Querying system overview - getPlantList.ws

## Serviceparameter

Parameter	Required	Format	Comments
uid	Yes		User Login
pwd	Yes		Password

## Example

http://10.250.52.58/cgi-bin/getPlantList.ws?uid=ckl&pwd=ckl

## Response format

```
<?xml version="1.0" encoding="UTF-8"?>
<Result Name="getPlantList">
  <Plant Id="23" Name="Anlage 1 - Heizung" KeyName="SV-100" />
  <Plant Id="24" Name="Anlage 2 - Lüftung" KeyName="SV-101" />
  <Plant Id="58" Name="Anlage 3 - Keller" KeyName="SV-102" />
  <Plant Id="59" Name="Anlage 4 - Wohnräume 1" KeyName="SV-103" />
  <Plant Id="60" Name="Anlage 4 - Wohnräume 23" KeyName="SV-104" />
  <Plant Id="61" Name="Wasserzähler-TR" KeyName="SV-105" />
  <Plant Id="62" Name="LED Leiste" KeyName="SV-106" />
  <Plant Id="73" Name="Testanlage" KeyName="SV-107" />
  <Plant Id="75" Name="TEST3" KeyName="SV-107" />
</Result>
```

Attribut	Comments
Result.Name	Name of the called services
Plant.Id	Unique ID of the plant
Plant.Name	Name of plant
Plant.KeyName	Unique identifier

## Error format

```
<?xml version="1.0" encoding="UTF-8"?>
<Error>Invalid Parameter</Error>
```

# Querying plant content - getPlant.ws

## Serviceparameter

Parameter	Required	Format	Comments
uid	Yes		User Login
pwd	Yes		Password
id	Yes		Plant address

## Example

http://10.250.52.58/cgi-bin/getPlant.ws?uid=energy&pwd=saver&id=24

## Response format

```
<?xml version="1.0" encoding="UTF-8"?>
<Result name="getPlant">
  <Datapoint Addr="940 bac 222222 AI-100" Name="Geräteinnentemperatur"
    KeyName="AI-Object-100" ActValue="42.000000" Type="Double"
    Setpoint="0" Trend="1" Alarm="0" Unit="°C">
  </Datapoint>
  <Datapoint Addr="940 bac 222222 BI-100" Name="Binärer Eingang"
    KeyName="BI-Object-100" ActValue="1" Type="Int32" Setpoint="0"
    Trend="0" Alarm="1">
    <StateText Value="0" Text="Aus" />
    <StateText Value="1" Text="Ein" />
  </Datapoint>
</Result>
```

Attribut	Comments
Result.name	Name of the called services
Datapoint.Addr	Address of the data point
Datapoint.Name	Name of the datapoint
D a t a p o i n t . KeyName	Unique identifier
Datapoint.ActValue	Current value of the datapoint
Datapoint.Type	Type of the datapoint
Datapoint.Setpoint	Setpoint (0 = no setpoint 1 = setpoint)

Attribut	Comments
Datapoint.Trend	Located on trend (0 = no trend; 1 = trend)
Datapoint.Alarm	Outstanding alarm ( 0 = no alarm; 1 = alarm)
Datapoint.Unit	Unit of the datapoint (- = No unit). (Only for analog values)
StateText.Value	Value for whom the text is allocated. (Only for binary values)
StateText.Text	The value assigned text. (Only for binary values)

#### Error format

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<Error>Invalid Parameter</Error>
```

# Querying values - getValue.ws

## Serviceparameter

Parameter	Required	Format	Comments
uid	Yes		User Login
pwd	Yes		Password
addr	Yes		Datapoint address

## Example

http://10.250.52.58/cgi-bin/getValue.ws?uid=energy&pwd=saver&addr=940%20bac%20222222%20AI-100

## Response format

```
<?xml version="1.0" encoding="UTF-8"?>
<Result name="getValue">
  <Datapoint Addr="940 bac 222222 AI-100" ActValue="42.000000"
  Type="Double" Setpoint="0" />
</Result>
```

Attribut	Comments
Result.name	Name of the called services
Datapoint.Addr	Address of the data point
Datapoint.ActValue	Current value of the datapoint
Datapoint.Type	Datapoint Type
Datapoint.Setpoint	Setpoint (0 = no setpoint 1 = setpoint)

## Error format

```
<?xml version="1.0" encoding="UTF-8"?>
<Error>Invalid Parameter</Error>
```



# Set values - setValue.ws

## Serviceparameter

Parameter	Required	Format	Comments
uid	Yes		User Login
pwd	Yes		Password
addr	Yes		Datapoint address
value	Yes		Value

## Example

http://10.250.52.58/cgi-bin/setValue.ws?uid=energy&pwd=saver&addr=940%20bac%20222222%20AI-100&value=20

## Response format

```
<?xml version="1.0" encoding="UTF-8"?>  
<Result name="setValue" errno="0" />
```

Attribut	Comments
Result.name	Name of the called services
Result.errno	Error Code (0 = no error)

## Error format

```
<?xml version="1.0" encoding="UTF-8"?>  
<Error>Invalid Parameter</Error>
```

# Querying trend data - getTrendData.ws

## Serviceparameter

Parameter	Required	Format	Comments
uid	Yes		User Login
pwd	Yes		Password
addr	Yes		Datapoint address
start	Yes	Y Y Y Y - M M - D D [ HH:MM[:SS]]	Start date
raster	Yes	<p>hour: Display an hour in 5-minute intervals</p> <p>day15: Display one day in 15th minute intervals</p> <p>day60: Display one day in 60th minute intervals</p> <p>week: Display a week in the daily grid</p> <p>week24: Display one week in an hourly grid</p> <p>month: Display of a month in the daily grid</p> <p>quarter: Display of each quarter in the month grid</p> <p>year: Display a year in the month grid</p>	Rastering
mode	Yes	<p>diff: Consumption (difference between end and StartValue in the grid)</p> <p>min: MinimalValue in the grid</p> <p>max: MaximalValue in the grid</p> <p>mid: MittelValue in the grid</p>	Mode

## Example

http://10.250.52.58/cgi-bin/getTrendData.

ws?uid=energy&pwd=saver&addr=940%20bac%20240766%20AV-117%20  
&start=2011-02-23%2008:00&raster=day60&mode=mid

## Response format

```
<?xml version="1.0" encoding="UTF-8"?>  
<Result name="getTrendData" Addr="940 bac 222222 AI-100" Begin="2011-02-23  
08:00" End="2011-02-24 08:00" Raster="day60" Type="Double" Num="3">  
  <TrendData Timestamp="2011-02-23 08:00:00" Value="---" />  
  <TrendData Timestamp="2011-02-23 09:00:00" Value="15" />  
  <TrendData Timestamp="2011-02-23 10:00:00" Value="21" />
```

Attribut	Comments
Result.Addr	Address of the data point
Result.Begin	Start the trend query
Result.End	End of the trend query
Result.Raster	Rasterization
Result.Type	Datapoint Type
Result.Num	Number of trend lines included
TrendData.Timestamp	Date of trend logging
TrendData.Value	Value of trend logging (--- = no Value)

# Register for PushNotifications - registerDevice.ws

## Serviceparameter

Parameter	Required	Format	Comments
uid	Yes		User Login
pwd	Yes		Password
	Yes	iOS Token, An empty string deletes the registration for Value Changes	i O S DeviceToken
deviceType	Yes	ipad, iphone	Type of device
Sound	No	Name of the alarm sound in remote UGW	Alarmsound

## Example

http:// 10.250.52.58 /cgi-bin/registerDevice.ws?

```
uid=energy&
pwd=saver&
deviceToken=987654321&
deviceType=ipad&
sound=hallo
```

## Response format

```
<?xml version="1.0" encoding="UTF-8"?>
<Result name="registerDevice" errno="0" />
```

Attribut	Comments
Result.name	Name of the called services
Result.errno	Error Code (0 = no error)

## Error format

```
<?xml version="1.0" encoding="UTF-8"?>
<Error>Invalid Parameter</Error>
```

# Query of alarms - getEventInfo

## Serviceparameter

Parameter	Required	Format	Comments
uid	Yes		User Login
pwd	Yes		Password
start	No	YYYY-MM-DD HH:MM:SS StandardValue: 1970-01-01 00:00:00	Start date
end	No	YYYY-MM-DD HH:MM:SS StandardValue: actual time	End date

## Example

http://10.250.52.58/cgi-bin/getEventInfo.ws?uid=energy&pwd=saver&start=2011-04-27%2009:00:00.000

## Response format

```
<?xml version="1.0" encoding="UTF-8"?>
<Result name="getEventInfo" Begin="2011-04-27 09:00" End="2011-06-03
  16:25">
  <Event Id="179" Addr="940 bac 222222 BI-100"
    Name="Binärer Eingang" KeyName="BI-Object 100"
    TimeStamp="2011-04-27 16:08:45.000" Message="Normal"
    EventType="1" ToState="0" />
  <Event Id="180" Addr="940 bac 222222 BI-100"
    Name="Binärer Eingang" KeyName="BI-Object 100"
    TimeStamp="2011-05-04 07:53:07.000" Message="Alarm"
    EventType="1" ToState="2" />
</Result>
```

Attribut	Comments
Result.name	Name of the called services
Result.Begin	Start of the query range
Result.End	End of the query range
Event.Id	Unique ID of the message

Attribut	Comments
Event.Addr	Address of the data point
Event.Name	Name of the datapoint
Event.KeyName	Unique identifier
Event.TimeStamp	Time of the notification
Event.Message	Additional message of the event
Event.EventType	BACnetEventType ::= {change-of-bitstring (0),change-of-state (1),change-of-value (2),command-failure (3),floating-limit (4),out-of-range (5),change-of-life-safety (8),extended (9),buffer-ready (10),unsigned-range (11),...}
Event.ToState	BACnetEventState ::= ENUMERATED {normal (0),fault (1),offnormal (2),high-limit (3),low-limit (4),life-safety-alarm (5),...}

## Binding of data points and trend logs to Plant ID

(Appropriate programming knowledge is required)

/ugw/config/gateway.cfg Section  
[webservices] mit „enabled = 1“

http://IP-UGW/cgi-bin/getPlantList.ws Adress  
für Webservice.

Other Webservices:

- getPlant.ws
- getValue.ws
- setValue.ws
- getTrendData.ws
- getEventInfo.ws
- registerDevice.ws

The following values must be set in each request:

uid = gw

pwd = GATEWAY

z.B. <http://IP-UGW/cgi-bin/getPlantList.ws?uid=gw&pwd=GATEWAY>

The following values must / can be set to individual requests:

getPlant.ws: id

getValue.ws: addr (<ROUTE>%20<TYPE>%20<NAME>)

setValue.ws: addr, value

getTrendData.ws: addr, start, end, raster, mode

getEventInfo.ws: start, end

registerDevice.ws: deviceToken, deviceType, sound

z.B. [http://IP-UGW/cgi-bin/getValue ws?uid=gw&pwd=GATEWAY&addr=1280%20vyzvoice%20sensor%20MAXI.AI.0](http://IP-UGW/cgi-bin/getValue.ws?uid=gw&pwd=GATEWAY&addr=1280%20vyzvoice%20sensor%20MAXI.AI.0)

With getValue you can also query the String-Value!

#-----

#

# Example /ugw/config/plants.cfg

# Section name as plant tag

#

[hzg 1]

id=1

name=Heizung 1. OG

[hzg 2]

id=2

name=Heizung Keller

[solar]

id=101

name=Solaranlage Hauptgebäude

#

# Example /ugw/config/bac1.txt

# Data points value is settable => ,setpoint = 1'

# Entry ,tag' with a list of plant tags (separated by ,!')

#

[S 2000.AV 1]

:

tag = hzg 1hzg 2solar

setpoint = 1