action.log.

Examples in english in the second half of the document.

Programmet har delvis körts bara för att få lämpliga loggar. De har pga detta lite märkliga tidsstämplar.

Ett fall där enbart schemalagd styrning konfigurerats. set_indoor_temp_hours=20_16, 05_18, 06_21
Timmen 09 är en "mellantimme" därför inget att uppdatera.

```
- - - - - - - - - - - - - - - - - - - - -
2023-01-22 07:02:01 main:start.

2023-01-22 07:02:01 Get indoor_temp:
     ['2023-01-22', '06', '21']

2023-01-22 07:02:01 Get start_update:
      ['-', '0', '0', '0', '0', '0', '0', '0', '0']

2023-01-22 07:02:01 set_new_indoor_temp:
      Generella schemat. Inget att reglera denna timme

2023-01-22 07:02:01 main: end.
```

Vid dygnsskifte ska en sparad temperatur inte gälla längre. Schemalag ändring + vindkyleändring. set_indoor_temp_hours=20_17, 06_20

```
- - - - - - - - - - - - - - - - - - - - -
2023-01-21 06:02:12 main: start.

2023-01-21 06:02:12 create_hourly_rates:
     created /home/pg/pgart/var/local/hourly_rate_20230121.txt

2023-01-21 06:02:12 Get indoor_temp:
     ['2023-01-20', '20', '17']

2023-01-21 06:02:12 Del indoor_temp:
     borttagen. Anledning:För gammalt

2023-01-21 06:02:13 tcp_get_indoor_temperature:
     status:ok. heating_effect:17

2023-01-21 06:02:13 Get hourly_rate:
     ['-', '0', '0']

2023-01-21 06:02:13 Get windchill:
     ['2023-01-20', '20', '3', '-5.4', '-3.5', '1']

2023-01-21 06:02:13 Set windchill:
     (3) Temperaturhöjningen inom gränsvärdena. windchill_temp:-6.3 diff_real_windchill:-3.8 pump_incr:2

2023-01-21 06:02:13 Get indoor_temp:
     ['-', '0', '0']

2023-01-21 06:02:13 set_new_indoor_temp:
     Schemalagd temperatur:20

2023-01-21 06:02:13 Set start_update:
     hr_rate_usage:off hr_rate_temp_decr/incr:0 windchill_temp_usage:set_hour windchill_temp_incr/decr:2 if_new_failure_this_temp:22

2023-01-21 06:02:14 tcp_set_indoor_temperature:
     status:ok

2023-01-21 06:02:14 Set indoor_temp:
     Generella schemat. Schemalagd ändring. Vindkyle temphöjning. Börvärdet satt till:22, hr_rate_temp_decr/incr:0, windchill_temp_incr/decr:2

2023-01-21 06:02:14 Del start_update:
     Uppdateringen avslutad.

2023-01-21 06:02:14 main: end.
```

Ingen schemalag ändring men vindkyleeffekten medför en temperaturhöjning.

```
- - - - - - - - - - - - - - - - - - - - -
2023-01-21 10:02:03 main: start.

2023-01-21 10:02:03 Get indoor_temp:
     ['2023-01-21', '09', '21']

2023-01-21 10:02:03 tcp_get_indoor_temperature:
     status:ok. heating_effect:21

2023-01-21 10:02:03 Get windchill:
     ['-', '0', '0', '0', '0', '0']
```

```
2023-01-21 10:02:03 Set windchill:
     (3) Temperaturhöjningen inom gränsvärdena. windchill_temp:-2.2 diff_real_windchill:-2.4 pump_incr:1

2023-01-21 10:02:03 Get indoor_temp:
     ['2023-01-21', '09', '21']

2023-01-21 10:02:03 Set start_update:
     hr_rate_usage:off hr_rate_temp_decr/incr:0 windchill_temp_usage:set_hour windchill_temp_incr/decr:1 if_new_failure_this_temp:22

2023-01-21 10:02:04 tcp_set_indoor_temperature:
     status:ok

2023-01-21 10:02:04 Set indoor_temp:
     Generella schemat. Ingen schemalagd ändring. Vindkyle temphöjning. Börvärdet satt till:22, hr_rate_temp_decr/incr:0, windchill_temp_incr/decr:1

2023-01-21 10:02:04 Del start_update:
     Uppdateringen avslutad.

2023-01-21 10:02:04 main: end.
```

Vid denna körning svarade inte SMHIs webbAPI. Temperaturhöjningen pga vindkyleeffekten gäller alltså inte längre. Temperaturen återställs (sänks).

```
- - - - - - - - - - - - - - - - - - - - - -
2023-01-21 11:02:06 main: start.

2023-01-21 11:02:06 Get indoor_temp:
     ['2023-01-21', '10', '22']

2023-01-21 11:02:07 tcp_get_indoor_temperature:
     status:ok. heating_effect:22

2023-01-21 11:02:07 get_forecast:
     Kunde inte hämta utsikterna från SMHI. Response:503

2023-01-21 11:03:02 get_forecast:
     Kunde inte hämta utsikterna från SMHI. Response:503

2023-01-21 11:03:02 Get windchill:
     ['2023-01-21', '10', '3', '-2.2', '-2.4', '1']

2023-01-21 11:03:02 Get indoor_temp:
     ['2023-01-21', '10', '22']

2023-01-21 11:03:02 Del windchill:
     borttagen. Anledning:reset_back_to_normal

2023-01-21 11:03:02 Set start_update:
     hr_rate_usage:off hr_rate_temp_decr/incr:0 windchill_temp_usage:reset_hour windchill_temp_incr/decr:1 if_new_failure_this_temp:21

2023-01-21 11:03:02 tcp_set_indoor_temperature:
     status:ok

2023-01-21 11:03:02 Set indoor_temp:
     Generella schemat. Ingen schemalagd ändring. Vindkyle tempåterställning. Börvärdet satt till:21, hr_rate_temp_decr/incr:0, windchill_temp_incr/decr:1

2023-01-21 11:03:02 Del start_update:
     Uppdateringen avslutad.

2023-01-21 11:03:02 main: end.
```

I detta fall har schemalagd användning + timprisstyrning + vindkylestyrning konfigurertas.
Ingen schemalag träff. Både timpris och vindkyleeffekten har påverkat temperatursättningen.

```
- - - - - - - - - - - - - - - - - - - - - -
2023-01-21 12:02:01 main: start.

2023-01-21 12:02:01 Get indoor_temp:
     ['2023-01-21', '11', '21']

2023-01-21 12:02:01 tcp_get_indoor_temperature:
     status:ok. heating_effect:21

2023-01-21 12:02:01 Get hourly_rate:
     ['-', '0', '0']

2023-01-21 12:02:01 Set hourly_rate:
     Börvärdet sänks med:2

2023-01-21 12:02:02 Get windchill:
     ['-', '0', '0', '0', '0', '0']

2023-01-21 12:02:02 Set windchill:
     (3) Temperaturhöjningen inom gränsvärdena. windchill_temp:-1.3 lower_than_real:-2.1 pump_incr:1

2023-01-21 12:02:02 Get indoor_temp:
```

```
     ['2023-01-21', '11', '21']

2023-01-21 12:02:02 Set start_update:
     hr_rate_usage:set_hour hr_rate_temp_decr/incr:2 windchill_temp_usage:set_hour windchill_temp_incr/decr:1 if_new_failure_this_temp:20

2023-01-21 12:02:02 tcp_set_indoor_temperature:
     status:ok

2023-01-21 12:02:02 Set indoor_temp:
     Generella schemat. Ingen schemalagd ändring. Timpris tempsänkning. Vindkyle temphöjning. Börvärdet satt till:20, hr_rate_temp_decr/incr:2, windchill_temp_incr/decr:1

2023-01-21 12:02:02 Del start_update:
     Uppdateringen avslutad.

2023-01-21 12:02:02 main: end.
```

Här sänktes inte temperaturen trots att timprissänkningen hade valt denna timme. Anledning: timpriset var lägre än "hourly_rate_only_decrease_when_rate_above".

```
- - - - - - - - - - - - - - - - - - - - -
2023-01-21 15:02:01 main: start.

2023-01-21 15:02:01 Get indoor_temp:
     ['2023-01-21', '14', '21']

2023-01-21 15:02:03 tcp_get_indoor_temperature:
     status:ok. heating_effect:21

2023-01-21 15:02:03 Get hourly_rate:
     ['-', '0', '0']

2023-01-21 15:02:03 Get windchill:
     ['2023-01-21', '14', '3', '-4.6', '-3.5', '1']

2023-01-21 15:02:03 Set windchill:
     (3) Temperaturhöjningen inom gränsvärdena. windchill_temp:-5.4 diff_real_windchill:-3.5 pump_incr:1

2023-01-21 15:02:03 Get indoor_temp:
     ['2023-01-21', '14', '21']

2023-01-21 15:02:03 set_new_indoor_temp:
     Temperaturen sänks inte. Inte dyrt nog denna timme. Timpriset:1.12 < hourly_rate_only_decrease_when_rate_above=1.5

2023-01-21 15:02:03 Set start_update:
     hr_rate_usage:off:rate_too_low hr_rate_temp_decr/incr:0 windchill_temp_usage:set_hour windchill_temp_incr/decr:1 if_new_failure_this_temp:21

2023-01-21 15:02:03 set_new_indoor_temp:
     Samma temperatur nu som förra gången. Pumpen uppdateras inte. Temp:21

2023-01-21 15:02:03 Set indoor_temp:
     Generella schemat. Ingen schemalagd ändring. Vindkyle temphöjning. Börvärdet satt till:21, hr_rate_temp_decr/incr:0, windchill_temp_incr/decr:1

2023-01-21 15:02:03 Del start_update:
     Uppdateringen avslutad.

2023-01-21 15:02:03
 main: end.
```

Ingen schemalag ändring men timprisstyrningen har "paus" i sänkningen. Därför höjs temperaturen lika mycket som den sänkts tidigare.

```
- - - - - - - - - - - - - - - - - - - - -
2023-01-21 10:02:01 main: start.

2023-01-21 10:02:01 Get indoor_temp:
     ['2023-01-21', '09', '19']

2023-01-21 10:02:01 tcp_get_indoor_temperature:
     status:ok. heating_effect:19

2023-01-21 10:02:02 Get hourly_rate:
     ['2023-01-21', '09', '2']

2023-01-21 10:02:02 Get windchill:
     ['-', '0', '0', '0', '0', '0']

2023-01-21 10:02:02 Get indoor_temp:
     ['2023-01-21', '09', '19']

2023-01-21 10:02:02 Del hourly_rate:
     borttagen. Anledning:reset_back_to_normal

2023-01-21 10:02:02 set_new_indoor_temp:
     Temperaturen sänks inte. Paustimme i timprissänkningen.

2023-01-21 10:02:02 Set start_update:
     hr_rate_usage:reset_hour:hour_rate_paus hr_rate_temp_decr/incr:2 windchill_temp_usage:off windchill_temp_incr/decr:0 if_new_failure_this_temp:21
```

```
2023-01-21 10:02:02 tcp_set_indoor_temperature:
     status:ok

2023-01-21 10:02:02 Set indoor_temp:
     Generella schemat. Ingen schemalagd ändring. Timpris tempåterställning. Börvärdet satt till:21, hr_rate_temp_decr/incr:2, windchill_temp_incr/decr:0

2023-01-21 10:02:02 Del start_update:
     Uppdateringen avslutad.

2023-01-21 10:02:02 main: end.
```

Felmeddelanden kan sändas till gmail om man har skapat ett “Gmail app password”

```
- - - - - - - - - - - - - - - - - - - - -
2023-01-25 16:24:48 main: start.

2023-01-25 16:24:48 Get indoor_temp:
     ['-', '0', '0']

2023-01-25 16:24:48 BEGIN login:
     request_config, response:200 json_len=22

2023-01-25 16:24:48 request_auth:
     response:200 size:151095

2023-01-25 16:24:49 request_self_asserted:
     online-genesis, Azure misslyckades, fel login_id/password. Response:200{"status":"400","errorCode":"AADB2C90053","message":"Invalid username or password."}. Forced exit.

2023-01-25 16:24:51 send_mail_via_gmail:
     ok. xyz@gmail.com felmail

2023-01-25 16:24:51 Aborted.
```

Mailet från Gmail. xyz ersätter den verkliga adressen.

nyatester
xyz@gmail.com <xyz@gmail.com>
Bcc: xyz@gmail.com

2023-01-25_16:24:49 request_self_asserted:
     online-genesis, Azure misslyckades, fel login_id/password. Response:200 {"status":"400","errorCode":"AADB2C90053","message":"Invalid username or password."}. Forced exit.

Tried to get a forecast from SMHI for a place too far from Sweden.

```
- - - - - - - - - - - - - - - - - - - - -
2023-02-19 16:55:45 get_smhi_forecast:
     Could not get the the forecasts from SMHI. response:404 b'Requested point is out of bounds'
```

Pump access via azure login. There was not anything to change this hour.

```
- - - - - - - - - - - - - - - - - - - - -
2023-02-08 10:17:56 main: start.

2023-02-08 10:17:56 Get indoor_temp:
     ['2023-02-08', '10', '20']

2023-02-08 10:17:56 BEGIN login:
     request_config. Response:200 json_len=22

2023-02-08 10:17:57 request_auth:
     response:200 size:151095

2023-02-08 10:17:58 request_self_asserted:
     response:200 size:16

2023-02-08 10:17:58 set_cookie request_confirmed_cookies:
     size:224

2023-02-08 10:17:58 request_confirmed:
     response:200 size:1721

2023-02-08 10:17:58 request_token response:
     200 size:3899

2023-02-08 10:17:58 END login:
     auth_via_azure

2023-02-08 10:17:58 get_pump_info: thermia_api_login:
     login-status:online-genesis, Signed in.

2023-02-08 10:17:59 thermia_api_get_heating_effect:
     status:ok. heating_effect:21
```

```
2023-02-08 10:17:59 Get indoor_temp:
     ['2023-02-08', '10', '20']

2023-02-08 10:17:59 set_new_indoor_temp:
     Scheduled temperature: 20

2023-02-08 10:17:59 Set start_update:
     hr_rate_usage:off hr_rate_temp_decr/incr:0 windchill_temp_usage:off windchill_temp_incr/decr:0 if_new_failure_this_temp:20

2023-02-08 10:17:59 set_new_indoor_temp:
     The same temperature as last time. The pump will not be updated. Temp:20

2023-02-08 10:17:59 Set indoor_temp:
     The weekday schema. A scheduled change. Indoor temperature set to:20, hr_rate_temp_decr/incr:0, windchill_temp_incr/decr:0

2023-02-08 10:17:59 Del start_update:
     The update finished.

2023-02-08 10:17:59 main: end.
```

Hourly rates and windchill active. Temperature increase because of the windchill effect and no decrease because of “paus hour” in hourly rate..

```
- - - - - - - - - - - - - - - - - - - - -
2023-02-08 19:16:18 main: start.

2023-02-08 19:16:18 Get indoor_temp:
     ['2023-02-08', '19', '20']

2023-02-08 19:16:18 tcp_get_indoor_temperature:
     status:ok. heating_effect:20

2023-02-08 19:16:18 Get hourly_rate:
     ['-', '0', '0']

2023-02-08 19:16:18 Get windchill:
     ['-', '0', '0', '0', '0', '0']

2023-02-08 19:16:18 Set windchill:
     (3) The temperature increase is acceptable. windchill_temp:-4.1 diff_real_windchill:-6.6 pump_incr:3

2023-02-08 19:16:18 Get indoor_temp:
     ['2023-02-08', '19', '20']

2023-02-08 19:16:18 set_new_indoor_temp:
     The temperature will not be decreased. Pause hour.

2023-02-08 19:16:18 Set start_update:
     hr_rate_usage:hour_rate_paus hr_rate_temp_decr/incr:0 windchill_temp_usage:set_hour windchill_temp_incr/decr:3 if_new_failure_this_temp:23

2023-02-08 19:16:19 tcp_set_indoor_temperature:
     status:ok

2023-02-08 19:16:19 Set indoor_temp:
     The weekday schema. No scheduled change. Temperature increase, windchill.  Indoor temperature set to:23, hr_rate_temp_decr/incr:0, windchill_temp_incr/decr:3

2023-02-08 19:16:19 Del start_update:
     The update finished.

2023-02-08 19:16:19 main: end.
```

A run after a manually set temperature. From a test. The timestamps are not as in real life.

```
- - - - - - - - - - - - - - - - - - - - -
2023-02-10 09:39:47 main: start.

2023-02-10 09:39:47 Get indoor_temp:
     ['2023-02-10', '9', '20']

2023-02-10 09:39:48 tcp_get_indoor_temperature:
     status:ok. heating_effect:22

2023-02-10 09:39:48 Get hourly_rate:
     ['-', '0', '0']

2023-02-10 09:39:48 Get windchill:
     ['-', '0', '0', '0', '0', '0']

2023-02-10 09:39:48 Set windchill:
     (3) The temperature increase is acceptable. windchill_temp:-1.0 diff_real_windchill:-4.5 pump_incr:2

2023-02-10 09:39:48 Get indoor_temp:
     ['2023-02-10', '9', '20']

2023-02-10 09:39:48 Del windchill:
     removed. Reason:obsolete-because-manual-set-temp
```

```
2023-02-10 09:39:48 set_new_indoor_temp:
     The temperature is manually changed and will thus not be touched. Pump temp:22, last value:20

2023-02-10 09:39:48 main: end.
```

Last run for today. From a test. The timestamps are not as in real life.

```
- - - - - - - - - - - - - - - - - - - - -
2023-02-10 09:41:56 main: start.

2023-02-10 09:41:56 Get indoor_temp:
     ['2023-02-10', '9', '20']

2023-02-10 09:41:56 tcp_get_indoor_temperature:
     status:ok. heating_effect:22

2023-02-10 09:41:56 Get hourly_rate:
     ['-', '0', '0']

2023-02-10 09:41:56 Get windchill:
     ['-', '0', '0', '0', '0', '0']

2023-02-10 09:41:56 Set windchill:
     (3) The temperature increase is acceptable. windchill_temp:-1.0 diff_real_windchill:-4.5 pump_incr:2

2023-02-10 09:41:56 Get indoor_temp:
     ['2023-02-10', '9', '20']

2023-02-10 09:41:56 Del windchill:
     removed. Reason:obsolete-because-last-run-of-the-day

2023-02-10 09:41:56 Del indoor_temp:
     removed. Reason:obsolete-because-last-run-of-the-day

2023-02-10 09:41:56 set_new_indoor_temp:
     The night starts. A forced temperature changed will be done. Pump temp:22

2023-02-10 09:41:56 set_new_indoor_temp:
     Scheduled temperature: 16

2023-02-10 09:41:56 Set start_update:
     hr_rate_usage:off hr_rate_temp_decr/incr:0 windchill_temp_usage:off windchill_temp_incr/decr:0 if_new_failure_this_temp:16

2023-02-10 09:41:57 tcp_set_indoor_temperature:
     status:ok

2023-02-10 09:41:57 Set indoor_temp:
     The common schema. A scheduled change.  Indoor temperature set to:16, hr_rate_temp_decr/incr:0, windchill_temp_incr/decr:0

2023-02-10 09:41:57 Del start_update:
     The update finished.

2023-02-10 09:41:57 main: end.
```

A run in the night. From a test. The timestamps are not as in real life.

```
- - - - - - - - - - - - - - - - - - - - -
2023-02-10 09:44:43 main: start.

2023-02-10 09:44:43 Get indoor_temp:
     ['2023-02-10', '9', '16']

2023-02-10 09:44:43 tcp_get_indoor_temperature:
     status:ok. heating_effect:16

2023-02-10 09:44:43 Get hourly_rate:
     ['-', '0', '0']

2023-02-10 09:44:43 get_windchill_temp_adjustment:
     indoor_temp:16 < windchill_adjust_only_when_set_indoor_temp_is_above:18

2023-02-10 09:44:43 Get windchill:
     ['-', '0', '0', '0', '0', '0']

2023-02-10 09:44:43 Get indoor_temp:
     ['2023-02-10', '9', '16']

2023-02-10 09:44:43 set_new_indoor_temp:
     The temperature will not be decreased. The price is not high enough. Hourly-rate:1.242 < hourly_rate_only_decrease_when_rate_above:1.50

2023-02-10 09:44:43 Set start_update:
     hr_rate_usage:off:rate_too_low=1.2415 hr_rate_temp_decr/incr:0 windchill_temp_usage:off windchill_temp_incr/decr:0 if_new_failure_this_temp:16

2023-02-10 09:44:43 set_new_indoor_temp:
     The same temperature as last time. The pump will not be updated. Temp:16
```

```
2023-02-10 09:44:43 Set indoor_temp:
     The common schema. No scheduled change.  Indoor temperature set to:16, hr_rate_temp_decr/incr:0, windchill_temp_incr/decr:0

2023-02-10 09:44:43 Del start_update:
     The update finished.

2023-02-10 09:44:43 main: end.
```

From a test. The timestamps are not as in real life. It is windy enough to increase the temperature but the new scheduled temperature is below the limit for an increase.
There was a windchill increase in the previous hour but that is obsolete now.

```
- - - - - - - - - - - - - - - - - - - - -
2023-02-10 19:04:58 main: start.

2023-02-10 19:04:58 Get indoor_temp:
     ['2023-02-10', '19', '21']

2023-02-10 19:04:59 tcp_get_indoor_temperature:
     status:ok. heating_effect:21

2023-02-10 19:04:59 Get hourly_rate:
     ['-', '0', '0']

2023-02-10 19:04:59 get_windchill_temp_adjustment:
     indoor_temp:17 < windchill_adjust_only_when_set_indoor_temp_is_above:18

2023-02-10 19:04:59 Get windchill:
     ['2023-02-10', '19', '3', '-1.3', '-5.4', '2']

2023-02-10 19:04:59 Get indoor_temp:
     ['2023-02-10', '19', '21']

2023-02-10 19:04:59 Del windchill:
     removed. Reason:scheduled_change_reset_hour_obsolete

2023-02-10 19:04:59 set_new_indoor_temp:
     Scheduled temperature: 17

2023-02-10 19:04:59 set_new_indoor_temp:
     The temperature will not be decreased. Pause hour.

2023-02-10 19:04:59 Set start_update:
     hr_rate_usage:hour_rate_paus hr_rate_temp_decr/incr:0 windchill_temp_usage:reset_hour windchill_temp_incr/decr:2 if_new_failure_this_temp:17

2023-02-10 19:05:00 tcp_set_indoor_temperature:
     status:ok

2023-02-10 19:05:00 Set indoor_temp:
     The common schema. A scheduled change. Temperature reset, windchill.  Indoor temperature set to:17, hr_rate_temp_decr/incr:0, windchill_temp_incr/decr:2

2023-02-10 19:05:00 Del start_update:
     The update finished.

2023-02-10 19:05:00 main: end.
```

Log from hourly rates behaviour.

```
- - - - - - - - - - - - - - - - - - - - -
2023-02-20 16:08:15 main: start.

2023-02-20 16:08:15 Get indoor_temp:
     ['2023-02-20', '16', '20']

2023-02-20 16:08:15 tcp_get_indoor_temperature:
     status:ok. heating_effect:20

2023-02-20 16:08:15 Get hourly_rate:
     ['2023-02-20', '16', '2']

2023-02-20 16:08:15 Set hourly_rate:
     Indoor temperature will be decreased by:2

2023-02-20 16:08:15 Get indoor_temp:
     ['2023-02-20', '16', '20']

2023-02-20 16:08:15 set_new_indoor_temp:
     The indoor temperature was already decreased at the last run. It was then decreased by: 2

2023-02-20 16:08:15 Set start_update:
     hr_rate_usage:set_hour hr_rate_temp_decr/incr:0 windchill_temp_usage:off windchill_temp_incr/decr:0 if_new_failure_this_temp:20

2023-02-20 16:08:15 set_new_indoor_temp:
     The same temperature as last time. The pump will not be updated. Temp:20
```

```
2023-02-20 16:08:15 Set indoor_temp:
     The common schema. No scheduled change. Temperature decrease, hour-rate. Indoor temperature set to:21, hr_rate_temp_decr/incr:0, windchill_temp_incr/decr:0

2023-02-20 16:08:15 Del start_update:
     The update finished.

2023-02-20 16:08:15 main: end.
```