--- raw values

select

tag\_uid, ts, val

from

tag\_value

where

tag\_uid in (1, 4, 5)

and ts between to\_timestamp('2021-01-01 00:00:00', 'YYYY-MM-DD HH24:MI:SS')

and to\_timestamp('2021-01-01 02:05:00', 'YYYY-MM-DD HH24:MI:SS')

-- and to\_date(ts) = :daterange

A graph with blue and orange lines

Description automatically generated

--- linearly interpolated

select val v, ts, tag\_uid

from table(tag\_value\_lin\_interpolate(

to\_timestamp('2021-01-01 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), -- start time

to\_timestamp('2021-01-01 02:05:00', 'YYYY-MM-DD HH24:MI:SS'), -- end time

'1,4,5', -- tag\_uids

'S30')) ; -- interpolate to every one minutes

A graph with lines and numbers

Description automatically generated

--- raw, last, next, linear

select 'lin' ty, ts, val from

table(tag\_value\_lin\_interpolate(to\_timestamp('2021-01-02 00:05:00', 'YYYY-MM-DD HH24:MI:SS'),

to\_timestamp('2021-01-02 00:30:00', 'YYYY-MM-DD HH24:MI:SS'),'1','M1'))

union all

select 'last' ty, ts, val from

table(tag\_value\_last\_interpolate(to\_timestamp('2021-01-02 00:05:00', 'YYYY-MM-DD HH24:MI:SS'),

to\_timestamp('2021-01-02 00:30:00', 'YYYY-MM-DD HH24:MI:SS'),'1','S30'))

union all

select 'next' ty, ts, val from

table(tag\_value\_next\_interpolate(to\_timestamp('2021-01-02 00:05:00', 'YYYY-MM-DD HH24:MI:SS'),

to\_timestamp('2021-01-02 00:30:00', 'YYYY-MM-DD HH24:MI:SS'),'1','S30'))

union all

select 'raw' ty, ts, val from tag\_value where tag\_uid = 1 and ts between

to\_timestamp('2021-01-02 00:05:00', 'YYYY-MM-DD HH24:MI:SS')

and to\_timestamp('2021-01-02 00:30:00', 'YYYY-MM-DD HH24:MI:SS');

A graph with colored lines

Description automatically generated

----sum of tags vs raw

select -- show original values along the bottom

to\_char(tag\_uid) tag,

ts,

decode(tag\_uid, 1, val\*4, val) val

from tag\_value where tag\_uid in (1, 4)

and ts between to\_timestamp\_ntz('2021-01-02 03:01:15', 'YYYY-MM-DD HH24:MI:SS')

and to\_timestamp\_ntz('2021-01-02 03:40:00', 'YYYY-MM-DD HH24:MI:SS')

union all

select 'sum of 1 and 4 interpolated' tag, ts,

sum(decode(tag\_uid, 1, val\*4, val) + 50) val -- move the calc tags up to view more easily

from table(tag\_value\_lin\_interpolate(

to\_timestamp\_ntz('2021-01-02 03:01:15', 'YYYY-MM-DD HH24:MI:SS'),

to\_timestamp\_ntz('2021-01-02 03:40:00', 'YYYY-MM-DD HH24:MI:SS'),

'1,4','S20')) -- interpolated every 4 seconds

group by ts;

A graph of different colored lines

Description automatically generated

---- linear on first tag timestamps

select val v, ts, tag\_uid

from table(tag\_value\_lin\_interpolate\_on\_tag(

to\_timestamp('2021-01-01 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), -- start time

to\_timestamp('2021-01-01 02:05:00', 'YYYY-MM-DD HH24:MI:SS'), -- end time

'1,4,5', -- tag\_uids

'S30')) ; -- interpolate to every one minutes

A graph of a graph

Description automatically generated with medium confidence

---- linear and pivot

with v as (

select val v, ts, tag\_uid

from table(tag\_value\_lin\_interpolate(

to\_timestamp('2021-01-01 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), -- start time

to\_timestamp('2021-01-01 02:05:00', 'YYYY-MM-DD HH24:MI:SS'), -- end time

'1,4,5', -- tag\_uids

'M1')) -- interpolate to every minute

)

select \* from v

pivot (sum(v) for tag\_uid in (1, 4, 5))

as p (ts, tag\_1, tag\_4, tag\_5)

order by ts;

A graph with different colored lines

Description automatically generated

---- subquery of tags

select val v, ts, tag\_uid

from table(tag\_value\_lin\_interpolate(

to\_timestamp\_ntz('2021-01-01 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), -- start time

to\_timestamp\_ntz('2021-01-01 02:05:00', 'YYYY-MM-DD HH24:MI:SS'), -- end time

(select listagg(tag\_uid, ',') within group (order by tag\_uid) from tag\_group where group\_name = 'MINS1'), -- tag\_uids

'M2')) ; -- interpolate to every minute

A graph of a graph

Description automatically generated with medium confidence