# 5G-Enhancement Implementation Steps

## Overview

This document outlines the steps and details for implementing the 5G enhancement, including the creation of static and derived tables, as well as the views required for specific classifications and metrics. The deliverables include a middle table (`aether\_smf\_performance\_middle\_tbl`) and a utilization view (`aether\_smf\_performance\_utilization\_view\_2`), along with their associated schemas and business logic.

## 1. Create Static Table: SAP\_SITE\_MAPPING

Purpose: This table provides mapping logic for classifying FQDNs into primary or secondary and associating them with their primary CLLI.

### Implementation Steps:

1. Classify `fqdn` as primary or secondary and map it to its primary `clli`.

2. Split `key\_group` into `group\_key` and `group\_value`.

3. Add `event\_time\_local` column by converting UTC timestamps into their respective time zones.

4. Add `fqdn\_type` column to specify if the `fqdn` is primary or secondary.

5. Cluster the table by `vendor`, `region`, and `site\_name` for optimized querying.

## 2. Create Derived Table: AETHER\_SMF\_PERFORMANCE\_MIDDLE\_TBL

### Schema:

|  |  |
| --- | --- |
| Field Name | Type |
| trans\_dt | DATE |
| event\_time | TIMESTAMP |
| local\_event\_time | DATETIME |
| fqdn | STRING |
| vendor | STRING |
| metric\_name | STRING |
| value | FLOAT |
| group\_key | STRING |
| group\_value | STRING |
| fqdn\_type | STRING |
| clli | STRING |
| site\_name | STRING |
| region | STRING |
| latitude | FLOAT |
| longitude | FLOAT |

### SQL to Create Table:

CREATE OR REPLACE TABLE `vz-it-np-gudv-dev-dtwndo-0.aid\_nwperf\_aether\_core\_tbls.aether\_smf\_performance\_middle\_tbl`  
PARTITION BY trans\_dt  
CLUSTER BY vendor, region, site\_name  
OPTIONS(require\_partition\_filter = true)  
AS  
WITH fqdn\_classification AS (  
 SELECT  
 st.trans\_dt,  
 st.event\_time,  
 st.fqdn,  
 st.vendor,  
 st.metric\_name,  
 st.value,  
 CASE  
 WHEN st.fqdn LIKE '%ec-p%' OR fqdn LIKE '%consp%' OR fqdn LIKE '%entrp%' OR fqdn LIKE '%entpp%' THEN 'primary'  
 WHEN st.fqdn LIKE '%ec-s%' OR fqdn LIKE '%conss%' OR fqdn LIKE '%entrs%' OR fqdn LIKE '%entps%' THEN 'secondary'  
 ELSE NULL  
 END AS fqdn\_type,  
 UPPER(SUBSTR(st.fqdn, 1, 8)) AS clli\_base  
 FROM  
 `vz-it-np-gudv-dev-dtwndo-0.aid\_nwperf\_aether\_core\_tbls.aether\_smf\_performance\_summary\_test` st  
)  
SELECT  
 f.trans\_dt,  
 f.event\_time,  
 DATETIME(TIMESTAMP(f.event\_time), pm.timezone) AS local\_event\_time,  
 f.fqdn,  
 f.vendor,  
 f.metric\_name,  
 f.value,  
 f.fqdn\_type,   
 CASE  
 WHEN f.fqdn\_type = 'primary' AND pm.primary\_clli IS NOT NULL THEN pm.primary\_clli  
 WHEN f.fqdn\_type = 'secondary' AND pm.secondary\_clli IS NOT NULL THEN pm.primary\_clli  
 ELSE 'lab-element'  
 END AS clli,  
 pm.site\_name,  
 pm.region,  
 pm.latitude,  
 pm.longitude  
FROM  
 fqdn\_classification f  
LEFT JOIN (  
 SELECT  
 UPPER(site\_clli) AS primary\_clli,  
 UPPER(pair) AS secondary\_clli,  
 site\_name,  
 region,  
 latitude,  
 longitude,  
 timezone  
 FROM `vz-it-np-gudv-dev-dtwndo-0.aid\_nwperf\_aether\_core\_tbls.sap\_site\_mapping`  
) pm  
ON  
 (f.fqdn\_type = 'primary' AND f.clli\_base = pm.primary\_clli)  
 OR (f.fqdn\_type = 'secondary' AND f.clli\_base = pm.secondary\_clli)  
WHERE trans\_dt IS NOT NULL;

ETA for Completion: 2 Days

## 3. Create Utilization View: UTILIZATION\_VIEW

Purpose: Provides hourly-based classifications for specific KPIs, consolidating data for `smf` and `upf`.

### Required KPIs:

1. in\_ipv4\_bytes

2. in\_ipv6\_bytes

3. out\_ipv4\_bytes

4. out\_ipv6\_bytes

5. active\_session

6. ggsn\_nbr\_of\_subscribers

### Schema:

|  |  |
| --- | --- |
| Field Name | Type |
| trans\_dt | DATE |
| event\_time | TIMESTAMP |
| local\_event\_time | DATETIME |
| fqdn | STRING |
| vendor | STRING |
| metric\_name | STRING |
| value | FLOAT |
| group\_key | STRING |
| group\_value | STRING |
| fqdn\_type | STRING |
| clli | STRING |
| site\_name | STRING |
| region | STRING |
| latitude | FLOAT |
| longitude | FLOAT |

### SQL to Create View:

CREATE OR REPLACE VIEW `vz-it-np-gudv-dev-dtwndo-0.aid\_nwperf\_aether\_core\_tbls.aether\_smf\_performance\_utilization\_view\_2` AS  
SELECT \*  
FROM `vz-it-np-gudv-dev-dtwndo-0.aid\_nwperf\_aether\_core\_tbls.aether\_smf\_performance\_middle\_tbl`;

ETA for Completion: 1 Day

## Final ETA for Delivery

Total Time Required: 3 Days (2 Days for the middle table and 1 Day for the utilization view).