1. Overall, 5 different regions and different servers:
   1. US
   2. CA
   3. UK
   4. CN
   5. MX
2. US has two servers, the same as CA with replication to build connections.

**US/CA**

**US/CA DWS**

**OLAP**

**US/CA CORP**

**OLTP**

1. **OLAP** stands for **Online Analytical Process.**
2. **OLTP** stands for **Online Transaction Process.**
3. **OLTP**: **US CORP/CA CORP**
4. **OLAP**: **US DWS/CA DWS**
5. HYVE US PRODUK PROD/HYCN PROD/MX PROD are 4 independent servers for 4 different regions.
   * 1. **XD PROD** is for **xerox company.**
     2. They 5 don't have severs to be separated to 2 servers like US and CA. They only have 1 serunt named **PROD**
     3. **But PROD** still has both OLAP and OLTP processes.
     4. **In PROD, OLTP** also uses **replication** to **build connection with OLAP.**
     5. You can understand that **OLAP & OLTP (CORP and DWS)** are in the **same server named PROD.**

**US CORP**

* 1. **CORP** is **OLTP** (Online Transaction Process).
  2. **CIS**:
     1. **CIS** is **read-only** for DWS.
     2. **CIS** **for CORP** is from kind of **business support system, which is not read only.**
  3. **HIS** is **archive** for **CIS**.
  4. **INT** is a **temporary database**. **Data will not change** **when the database server restarts.**
  5. We have the **other temporary database named tempah.** The difference is that **tables in tempdb will lose data or be dropped when server restarts.**

**Replication frequency**

1. Real time for CIS.
2. Weekly for HIS.

**US DWS**

* 1. **DWS** is **OLAP**
  2. **CIS** for DWS is **read-only**.
  3. **DW\_PROD**
     1. **DW\_PROD** is its unique database.
     2. **Data in** **DW\_PROD** is based on data of CIS through CRON (stored procedures and shell scripts)
     3. Data in **DW\_PROD** **can be modified**.
  4. Data from **CIS** to DW PROD is Nightly loading.

**Deployment Process**

**Rules to create table and Stored Procedure**

* + - 1. If the **old SP is not formatted**, the **first step** is to **format old SP and submit to CVS**. Then **add new changes and submit again**.
      2. Fill **DMR information**, which is only **valid for the table**.
      3. **Deploy** to **UAT by One Tools**.
      4. **Deployment time window:**
* **Monday, Tuesday, Thursday, the last week of each month cannot be deployed.**
* **the 25th of each month (the billing day) is blackout.**

**Design and preparation**

* + - 1. **Confirm the need** to create a table/**Business data or report data/if must create table on CIS.**
      2. **Code** and **test on DEV.**
      3. **Format code with Notepad++ and prepare DDL code**.
      4. **Fill DMR information**.

**One Tool Process**

1. **Create DP** (Deployment Plan) **based on backlog or release**.
2. **Create DO Submit tested code and apply.**
3. **Integrity Review.**
4. **DM Review.**
5. **IT Leader Approve.**
6. **QC and Exec Approve**
7. **Deploy.**

How to know data delay between primary DB and replicate DB?

**Exec CIS..reptime;**

**Create table in STECH DB**

1. **Judge before deleting objects**
2. **Start with letter**
3. It is **separated by "\_"** and **consists of lowercase letters and numbers**
4. Table name **cannot exceed 27 characters**
5. **Create a fixed temporary table in INT**
6. I**nclude timestamp (entry date) and operation source (entry id)**
7. In order **to avoid the jump of identity column, the gap value should be set**

**Index name in table**

1. Index must be **named by TablenameI[1,2,3]**
2. **The first index uses business fields/field combinations that represent the uniqueness of the table as much as possible**
3. **Identity field can't be index field**
4. Long **strings (>50) cannot be used as keys for indexes**.
5. **One table only has one clustered index**.