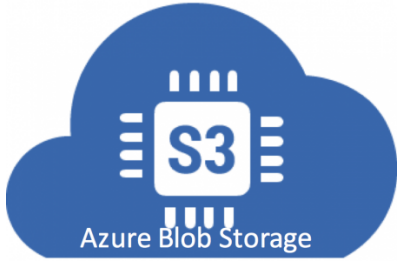
STAGES IN SNOWFLAKE

- **Don’t confuse staging area of snowflake with data warehouse staging area.**
- **Staging area in snowflake is a blob storage area where you load all your raw files before loading them into snowflake database.**

STAGES IN SNOWFLAKE

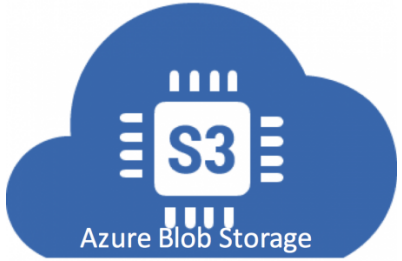
- **Which blob storage areas you can use ?**



SNOWFLAKE EXTERNAL STAGING AREAS

STAGES IN SNOWFLAKE

- **What if I don’t have subscription to these cloud storage areas ?**



STAGES IN SNOWFLAKE

- **What if I don’t have subscription to these cloud storage areas ?**

Internal staging area

- **Remember this is also a blob storage, which is managed by snowflake.**

STAGES IN SNOWFLAKE

- Snowflake stage is not data warehouse stages.
- We have two types of staging areas in snowflake.
    - External staging area.
    - Internal staging area.

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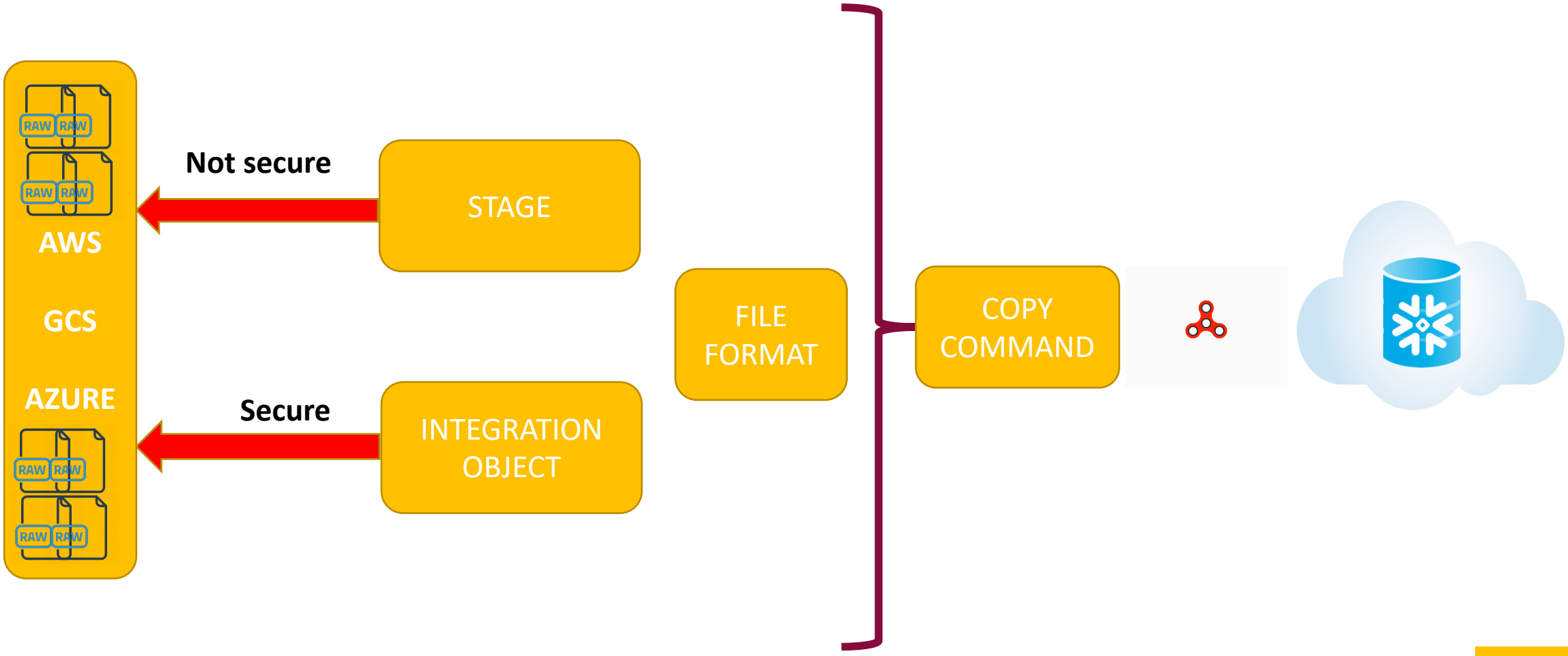
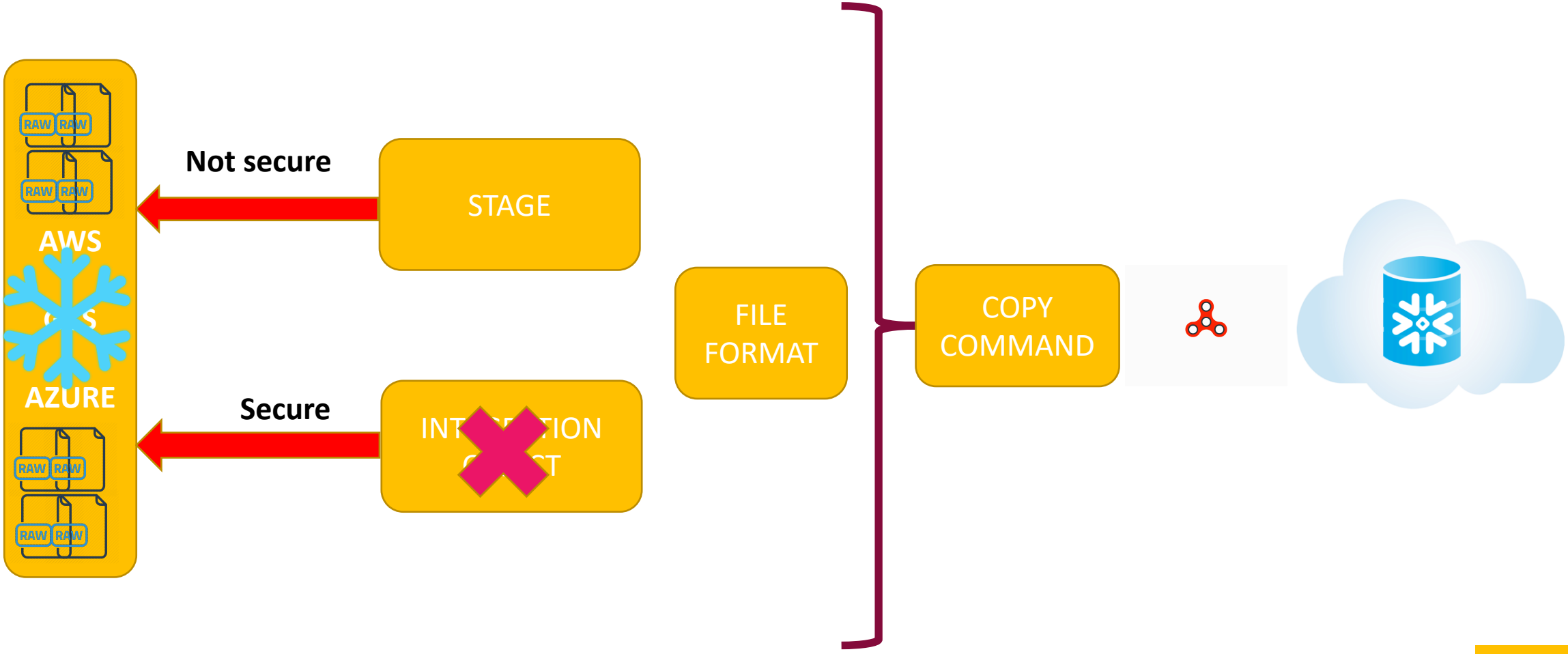
STAGES IN SNOWFLAKE

- **Configuring stages with snowflake database.**

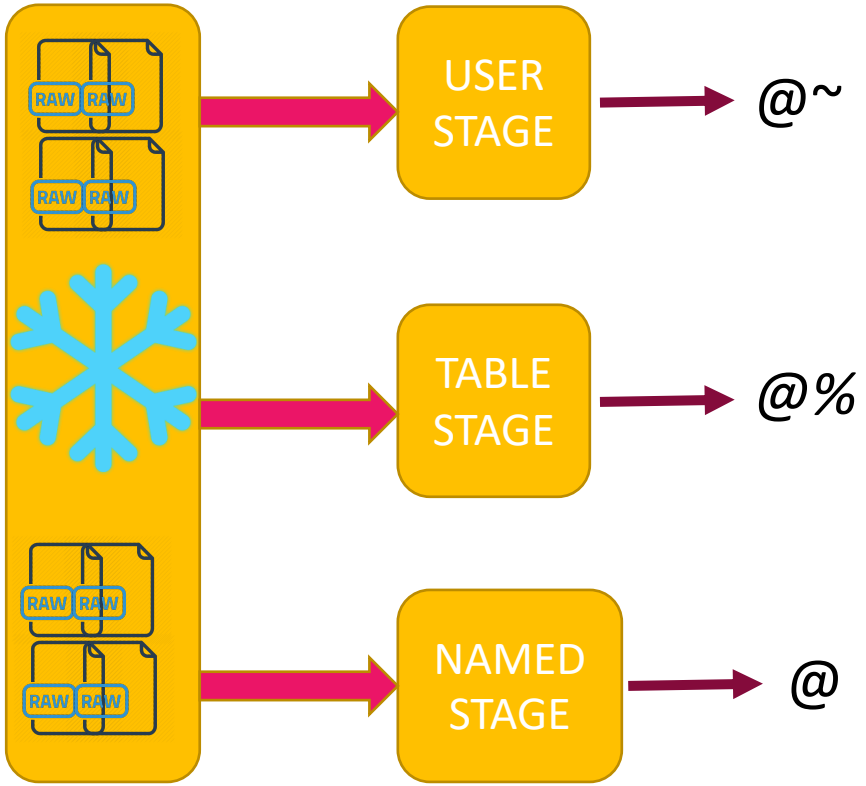
EXTERNAL STAGING SNOWFLAKE



INTERNAL STAGING SNOWFLAKE



INTERNAL STAGING SNOWFLAKE



USER STAGES IN SNOWFLAKE

- Each user has a Snowflake stage allocated to them by default for storing files. This stage is a convenient option if your files will only be accessed by a single user but need to be copied into multiple tables.
- Constraints
  - Multiple users require access to the files.
  - The current user does not have INSERT privileges on the tables the data will be loaded into.

TABLE STAGES IN SNOWFLAKE

- **Each table has a Snowflake stage allocated to it by default for storing files. This stage is a convenient option if your files need to be accessible to multiple users and only need to be copied into a single table.**
- **Constraints**
  - **Multiple users require access to the files.**
  - **Unlike named stages, table stages cannot be altered or dropped.**
  - **Table stages do not support setting file format options. Instead, you must specify file format and copy options as part of the COPY INTO <table> command.**
  - **Table stages do not support transforming data while loading it (i.e. using a query as the source for the COPY command).**

NAMED STAGES IN SNOWFLAKE

- **Internal stages are named database objects that provide the greatest degree of flexibility for data loading. Because they are database objects, the security/access rules that apply to all objects apply**
- **Users with the appropriate privileges on the stage can load data into any table.**
- **Ownership of the stage can be transferred to another role, and privileges granted to use the stage can be modified to add or remove roles.**

LESSONS LEARNED

- Syntax for creating stage objects.
- Syntax for creating file format object.
- Understood differences between both objects.
- Best practice to create stage object and file format object.
- You got high level overview of copy command.

LESSONS LEARNED

- How to use put command.
- How to list files, remove files in staging area.
- Split part function in snowflake.
- Using place holders while executing copy command.
- Performance impact and storage impact if you are not cleaning staging area.

LESSONS LEARNED

- **How to use get command.**
- **How to unload only selective columns to stage.**
- **OVERWRITE option and creating files with different names.**
- **Syntax of copy command to unload data.**

LESSONS LEARNED

- **Named stage is an object.**
- **You can desc it and provide access control and revoke access for named stage.**
- **You can share data stored in named stage across tables.**

Working with Internal staging area

- How to upload data to internal staging area.
- Download data from internal staging area.
- Using table stage and named stage.
- Best practice while using internal staging.