DDL Validation of External Views

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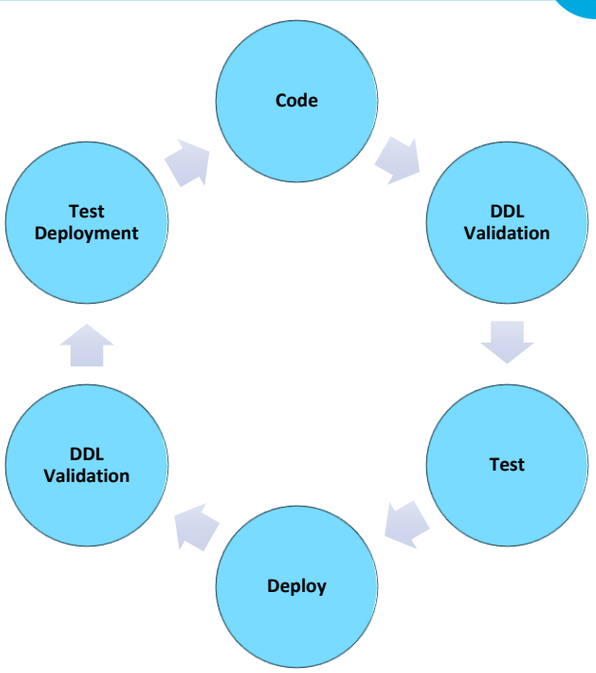
INTRODUCTION

The team wants to ensure that database tables and views match what their code is expecting when the code is deployed from the development environment to upper environments and production.

This automated process allows deployments to fail earlier in post deployment testing, saving the teams time. It also helps to identify the root cause of problems more quickly and efficiently especially when the failure is based on dependencies from the views of external teams.



CODE

The files that dictate the expected database structure look like the following:

```
ColumnName|ColumnType|Nullable
ADDR_EFF_DT|DATE|N
ADDR_KEY|CHAR(32)|N
ADDR_LN_1|VARCHAR(100)|Y
ADDR_LN_2|VARCHAR(100)|Y
ADDR_LN_3|VARCHAR(100)|Y
ADDR_LN_4|VARCHAR(100)|Y
ADDR_NM|VARCHAR(20)|Y
ADDR_TERMNTN_DT|DATE|N
ADDR_TXT|VARCHAR(256)|Y
ADDR_TY_CD|VARCHAR(50)|N
CARE_OF_LN|VARCHAR(100)|Y
CHK_SUM_TXT|VARCHAR(32)|N
CHNL_CD|VARCHAR(10)|N
CHNL_DESC|VARCHAR(30)|N
CHNL_SRC_CD|VARCHAR(10)|N
CHNL_SRC_DESC|VARCHAR(100)|N
CITY_NM|VARCHAR(50)|Y
```

Text Files

The use of text files allows non-developers and developers from outside of the project contribute to validation.

DDL Validation Framework

The team solved this by providing text files with our code that represent the expected DDLs of both internal and external views and tables. These text files are used to perform DDL Validation in the development environment as well as after deployment in the upper environments.

The text files in the lower environment are checked against a tool provided by the team through Artifactory called cigna_im_provider_ddl_validation. This provides higher environment checks as well as debugging tests for developers.

In the upper environments, the same text files are checked against the database using an existing TD Guild tool that is available for download through Artifactory called cigna_im_ddlval.

Conclusion

The validation of external views has improved the efficiency of testing and detecting the root cause of errors. The inclusion of this as part of our automated deployment process provides a layer of predictability on external dependencies.