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# DDL Changer



**Managing the change**  
of status of data structures.

Lifecycle management of data structures  
in relational DBMSs, to coordinate the  
process of adaptation in different operating  
environments.

# DDL Changer

## Growth and development, a natural trend towards the future.

Because of the complexity of automated operations, relational database **data structures** are often considered a secondary element of **the application life cycle**, and normally **excluded from change management processes**, resulting in use of **manual systems**, characterized by **lack of automation, generating a higher risk of errors** and difficulties in the application of both naming conventions and behavioral standards.

This leads to:

- difficulties with communication between sector development and systems management poor control regarding the correctness of the statements provided by the development staff
- risk of misalignment of the data structures in the target environments
- absence of historical details of changes

Often, change management tools/processes are inadequate to address the requirements associated with managing DDL update (just the "change traffic" is taken into account).

Other solutions, that are designed to essentially address this issue as an integrated feature in complex products, are expensive and difficult to use outside the systems environment context.

- to data structures and lack of operational independence from the developers
- difficulty in adapting to different production environments.

```

SessionA - [24 x 80]
RES SUITE V5.1 - DDL-Changer
Command ==> _
-> Request      Userid : XASE
    1 Insert    Date   : 2016/03/09 - 14:10
    2 Management PLAN  : PRESP51
                   DB2Ver :
-> Transfer Package
    C Creation
    G Management
-> Cloning Objects
    D Single Cloning
    M Massive Cloning
    A Audit DDL Execution
-> Other
    R Search
    P Parameters
    0 Options (only for system programmers)
  
```

```

SessionA - [24 x 80]
RES SUITE V5.1 - DDL-Changer
Command ==> _
Appl. : DM      Date min.: 01.01.2015  User  : *      Scope  : *
Request N.: 00000000 max.: 31.12.2018  Staus  : *
-----
S Detail - M Modify - B Browse - A Annull - C Cancel TP (FRZ)
V Validation - E Execution - P Create Transfer Package
-----
Opt.  Appl.Area  Req. N.  Req. Date  Userid  Status  SSID  Scope  TRich
-----
DM    00000001    15.10.2015  XKSP    FRZ     DSN9   TS
DM    00000002    15.10.2015  XKSP    FRZ     DSN9   TS
DM    00000003    21.10.2015  XKSP    FRZ     DSN9   TS
DM    00000004    22.10.2015  XKSP    FRZ     DSN9   TS
DM    00000005    10.02.2016  XKSP    CLO     DSN9   TS
DM    00000006    10.02.2016  XKSP    FRZ     DSN9   TS
DM    00000007    10.02.2016  XKSP    CLO     DSN9   TS
DM    00000008    10.02.2016  XKSP    FRZ     DSN9   TS
DM    00000009    10.02.2016  XKSP    FRZ     DSN9   TS
DM    00000010    10.02.2016  XASE    CLO     DSN9   TS
DM    00000011    10.02.2016  XASE    FRZ     DSN9   TS
DM    00000012    10.02.2016  XASE    FRZ     DSN9   TS
DM    00000013    11.02.2016  XASE    FRZ     DSN9   TS
DM    00000014    11.02.2016  XASE    FRZ     DSN9   TS
  
```

## The DDL Changer solution

**DDL Changer** manages the **life cycle** of the data structures and of the associated **relational database objects** and is able to **govern** the necessary **changes** in the different environments. DDL Changer is a technology solution for streamlining change management, characterized by a very **sustainable organizational impact** and costs.

DDL Changer **creates** a relationship in the **communication between development and management**, as it acts as "cross" organization instrument between them. The subject of the change, the **Transfer Package**, comes from an input environment, typically the test environment, which is already within the DDL Changer tool and controls and manages the progress up to the move into the working environments.

The developer is then put in a position to **write, syntactically check and run** his own **DDL** input, submitting it to the QA controls, consolidate

and promote to any **next stage** where it is regenerated and adapted to the target environment.

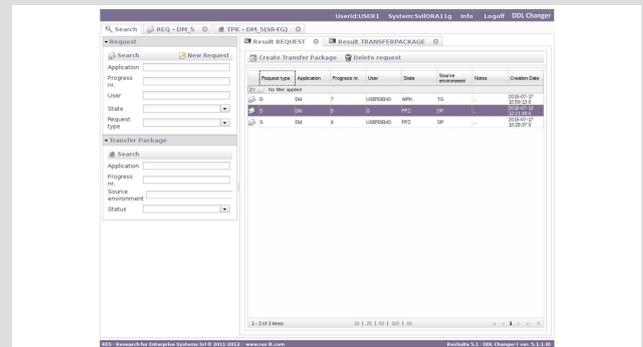
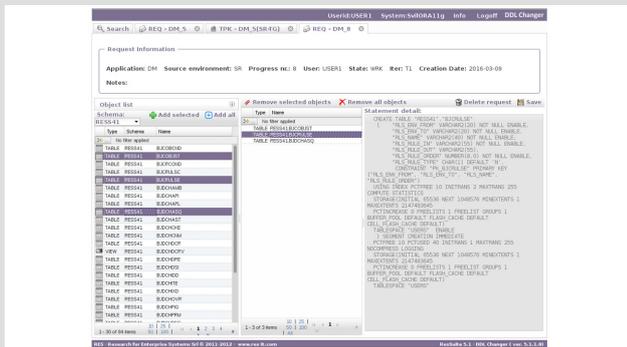
The **automated control**, the **DDL generation for differences and the changes** are guaranteed throughout the change lifecycle process, which can be configured via various parameters to adapt to any specific needs of the customer - parallel lines of tests and testing, multi corporate systems, ...

DDL Changer is also able to coordinate the alignment and/or to generate the **creation of an entire target environment**, starting from a basic environment, thus allowing the definition or the update of an entire system in a very short time. For all these functions DDL Changer is able to interface with virtually all the most common change "**administration**" tools on the market and can be easily integrated with popular **change management** systems.

## Objectives and Functionality of DDL Changer

**DDL Changer** is a tool that supports the **life cycle** management of **relational data structures** and the environment throughout all of the stages, from development to test to production.

DDL Changer is not limited, like traditional change management tools, to just the promoting and versioning features, but instead, it bases its features on the **ability to control, generate, and adapt** all of the **relational objects** to the **different environments** in which there are updates in the change path, ensuring that the progress of the modification package is semantically consistent at every transition. DDL Changer also **standardizes** and **facilitates communication** between the **areas of development** and management, ensuring increased operational autonomy to the application developers and at the same time lifting the **DBA** from checks and corrections on change requests received.



## Benefits

- Management of the end to end process administration of relational structures from test to production:
  - Assurance to avoid duplicate changes on the same object
  - Edit the change request
  - Controlled forwarding of the change package
  - Archiving of the changes and the status of any executions
- Centralized control of operations of systems and applications
- Integration of functionality for:
  - Syntax check of the package
  - Comparison of object structures across environments
  - DDL generation for all target environments
- Additional quality controls customizable by the user - congruence, reserved words...
- Conversion of automatic naming convention for target environments
- Controlled execution of the DDL in the source environment for the application developers and in the target environments for the DBA
- Management of cross-systems: ability to communicate directly with a network of subsystems also placed on different systems provided that they can be reached via TCP-IP
- Integration with popular change management tools thanks to a special batch API and SOA Web Services.

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■ **DDL Changer**



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