T-SQL Constraints

www.tsql.info

In the Constraints sections you can learn how to create a Primary Key Constraint or add a Foreign Key to a table. Also you can learn how to use commands to enable or disable keys.

Constraints operations

- Create a Primary Key
- Create a Foreign Key
- Disable a Foreign Key
- Enable a Foreign Key
- List table constraints
- Delete a Constraint Key

Create a Primary Key

To create a primary key in a table, use the command alter table with add constraint.

Departments table

```
USE tempdb;
GO
CREATE TABLE dbo.departments
(
id int NOT NULL,
name varchar(250)
 );
GO
```

Create Constraint Primary Key

```
USE tempdb;
GO
ALTER TABLE dbo.departments
ADD CONSTRAINT PK_DEP_ID
PRIMARY KEY CLUSTERED (ID);
GO
```

Create a Foreign Key

To Create a foreign key in an existing table, use the command alter table with add constraint.

Employees table

```
USE tempdb;
GO
CREATE TABLE dbo.EMPLOYEES(
ID INT NULL,
NAME VARCHAR (250) NULL,
JOB VARCHAR (30) NULL,
DEPT_ID INT NULL );
GO
```

Departments table

```
USE tempdb;
GO
CREATE TABLE dbo.departments(
id int NOT NULL,
name varchar(250) );
GO
```

Create Constraint Foreign Key

```
USE tempdb;
GO
ALTER TABLE dbo.EMPLOYEES
ADD CONSTRAINT
FK_DEPT_ID FOREIGN KEY(DEPT_ID)
REFERENCES dbo.DEPARTMENTS(ID);
GO
```

Disable a Foreign Key

To disable a foreign key constraint, use the command alter table with NOCHECK constraint.

Status Foreign Key

```
select name, type_desc, is_disabled from sys.foreign_keys;
```

name	type_desc	is_disabled
FK_DEPT_ID	FOREIGN_KEY_CONSTRAINT	0

Disable Foreign Key Constraint

```
USE tempdb;
GO
ALTER TABLE dbo.EMPLOYEES
NOCHECK CONSTRAINT FK_DEPT_ID;
GO
```

Status Foreign Key

select name, type_desc, is_disabled from sys.foreign_keys;

name	type_desc	is_disabled
FK_DEPT_ID	FOREIGN_KEY_CONSTRAINT	1

Enable a Foreign Key

To Enable a foreign key constraint, use the command alter table with CHECK constraint.

Status Foreign Key

select name, type_desc, is_disabled from sys.foreign_keys;

name	type_desc	is_disabled
FK_DEPT_ID	FOREIGN_KEY_CONSTRAINT	1

Enable Foreign Key Constraint

```
USE tempdb;
GO
ALTER TABLE dbo.EMPLOYEES
CHECK CONSTRAINT FK_DEPT_ID;
GO
```

Status Foreign Key

select name, type_desc, is_disabled from sys.foreign_keys;

name	type_desc	is_disabled
FK_DEPT_ID	FOREIGN_KEY_CONSTRAINT	0

List table constraints

To list table constraints, use select on sys.foreign_keys, sys.key_constraints or sys.all_objects.

sys.foreign_keys

SELECT * FROM sys.foreign_keys;

sys.key_constraints

SELECT * FROM sys.key_constraints;

sys.all_objects

```
SELECT * FROM sys.all_objects
WHERE TYPE IN ('F','PK')
ORDER BY create_date DESC;
```

Delete a Constraint Key

To delete a constraint key from an existing table, use the command alter table with drop constraint.

Create Constraint Foreign Key

```
USE tempdb;
GO
ALTER TABLE dbo.EMPLOYEES
ADD CONSTRAINT FK_DEPT_ID FOREIGN KEY(DEPT_ID)
REFERENCES dbo.DEPARTMENTS(ID);
GO
```

Delete Constraint Foreign Key

```
USE tempdb;
GO
ALTER TABLE dbo.EMPLOYEES
DROP CONSTRAINT FK_DEPT_ID;
GO
```

Resources: