

## LAB #10

### Server Automation. Managing Jobs

#### Managing Jobs

The `sp_add_job` system stored procedure is used to create a jobs. It's the syntax:

---

```
sp_add_job [ @job_name = ] 'job_name'
[ , [ @enabled = ] activity ]
[ , [ @description = ] 'description' ]
[ , [ @start_step_id = ] step_number ]
[ , [ @category_name = ] 'category_name' ]
[ , [ @owner_login_name = ] 'login_name' ]
[ , [ @notify_level_eventlog = ] notify_level ]
[ , [ @notify_level_email = ] email_level ]
[ , [ @notify_level_page = ] page_level ]
[ , [ @notify_email_operator_name = ] 'email_name' ]
[ , [ @notify_page_operator_name = ] 'page_name' ]
[ , [ @delete_level = ] delete_level ]
```

Consider arguments.

- ☐ '*job\_name*'. The name of the task be create.
- ☐ *activity*. The inability of the task. The default value is 1, which corresponds to the activated task; 0 means that the job will not be executed, despite his schedule.
- ☐ '*description*'. Short description of the job, which should not exceed 512 characters.
- ☐ *step\_number*. The number of the step, from where starts task execution. The default value is 1.
- ☐ '*category\_name*'. The name of the category in which must be placed the task.
- ☐ '*login\_name*'. The login name of the job's owner.
- ☐ *notify\_level*. Determines when to send a notification about the completion of a task in Windows NT Application Log. The following values are allowed:
  - ☐ 0 - Never;
  - ☐ 1 – On success;
  - ☐ 2 – On failure;
  - ☐ 3 - Always.
- ☐ *email\_level*, *page\_level*. These arguments affect on sending notification about completion of the task, by email or pager. By default, the values of these arguments are equal to 0. The values of all three arguments coincide with the values of the "message\_and\_reason" argument.
- ☐ '*email\_name*', '*page\_name*'. These arguments define the name of the person.
- ☐ *delete\_level*. A value that indicates when to delete the job. *delete\_value* is `int`, with a default of 0, which means never. *delete\_level* uses the same values as *eventlog\_level*.

#### Examples.

Create the Job\_50 job:

USE msdb;

EXEC sp\_add\_job @job\_name = N'Job\_50';

**Create the Job\_51 job. The job is active. Never delete the job. The job's owner is Login\_51. The job never sends a notification about the completion of a task in Windows NT Application Log. The job never sends a notification about the completion of a task to operator.**

```
USE master;
CREATE LOGIN Login_51 WITH PASSWORD = 'password51';
USE msdb;
EXEC sp_add_operator @name = 'Operator_51';
EXEC dbo.sp_add_job
    @job_name = N'Job_51',
    @description = N'Job_51',
    @owner_login_name = N'Login_51',
    @enabled = 1,
    @delete_level = 0,
    @notify_level_eventlog = 0,
    @notify_level_email = 0;
```

**Create the Job\_52 job. The job is not active. Delete the job, if the task is completed unsuccessfully. The job's owner is Login\_52. The job sends a notification about the completion of a task in Windows NT Application Log, if the task is completed unsuccessfully. The job sends notification to the Operator\_52 operator by email, if the task is completed unsuccessfully. Define email\_name of operator.**

```
USE master;
CREATE LOGIN Login_52 WITH PASSWORD = 'password52';
USE msdb;
EXEC sp_add_operator @name = 'Operator_52';
EXEC dbo.sp_add_job
    @job_name = N'Job_52',
    @description = N'Job_52',
    @owner_login_name = N'Login_52',
    @enabled = 0,
    @delete_level = 2,
    @notify_level_eventlog = 2,
    @notify_level_email = 2,
    @notify_email_operator_name = N'Operator_52';
```

**Create the Job\_53 job. The job is not active. Always delete the job. The job's owner is Login\_53. The job always sends a notification about the completion of a task in Windows NT Application Log. The job always sends notification to the Operator\_53 operator on pager. Define page\_name of operator.**

```
USE master;
```

```

CREATE LOGIN Login_53 WITH PASSWORD = 'password53';
USE msdb;
EXEC sp_add_operator @name = 'Operator_53';
EXEC dbo.sp_add_job
    @job_name = N'Job_53',
    @description = N'Job_53',
    @owner_login_name = N'Login_53',
    @enabled = 0,
    @delete_level = 3,
    @notify_level_eventlog = 3,
    @notify_level_page = 3,
    @notify_page_operator_name = N'Operator_53';

```

**Create the Job\_54 job. The job is active. Delete the job, if the task is completed successfully. The job's owner is Login\_54. The job sends notification about the completion of a task in Windows NT Application Log, if the task is completed successfully. The job sends notification to the Operator\_54 operator by email and on pager, if the task is completed successfully. Define email\_name and pager\_name of operator.**

```

USE master;
CREATE LOGIN Login_54 WITH PASSWORD = 'password54';
USE msdb;
EXEC sp_add_operator @name = 'Operator_54';
EXEC dbo.sp_add_job
    @job_name = N'Job_54',
    @description = N'Job_54',
    @owner_login_name = N'Login_54',
    @enabled = 1,
    @delete_level = 1,
    @notify_level_eventlog = 1,
    @notify_level_email = 1,
    @notify_email_operator_name = N'Operator_54',
    @notify_level_page = 1,
    @notify_page_operator_name = N'Operator_54';

```

**Change the Job\_51 job. Disable the job. Delete the job, if the task is completed successfully. The job's owner is Login\_31. The job sends notification about the completion of a task in Windows NT Application Log, if the task is completed successfully. The job sends notification to the Operator\_31 operator on pager, if the task is completed successfully. Define pager\_name of operator.**

```

USE master;
CREATE LOGIN Login_31 WITH PASSWORD = 'password31';
USE msdb;

```

```
EXEC sp_add_operator @name = 'Operator_31';
EXEC dbo.sp_update_job
    @job_name = N'Job_51',
    @description = N'Job_51',
    @owner_login_name = N'Login_31',
    @enabled = 0,
    @delete_level = 1,
    @notify_level_eventlog = 1,
    @notify_level_page = 1,
    @notify_page_operator_name = N'Operator_31';
```

**Change the Job\_52 job. Disable the job. Delete the job, if the task is completed successfully. The job's owner is Login\_32. The job sends a notification about the completion of a task in Windows NT Application Log, if the task is completed successfully. The job sends notification to the Operator\_32 operator by email, if the task is completed successfully. Define email\_name of operator.**

```
USE master;
CREATE LOGIN Login_32 WITH PASSWORD = 'password32';
USE msdb;
EXEC sp_add_operator @name = 'Operator_32';
EXEC dbo.sp_update_job
    @job_name = N'Job_52',
    @description = N'Job_52',
    @owner_login_name = N'Login_32',
    @enabled = 0,
    @delete_level = 1,
    @notify_level_eventlog = 1,
    @notify_level_email = 1,
    @notify_email_operator_name = N'Operator_32';
```

**Change the Job\_53 job. Disable the job. Delete the job, if the task is completed successfully. The job's owner is Login\_33. The job sends notification about the completion of a task in Windows NT Application Log, if the task is completed successfully. The job sends notification to the Operator\_33 operator by email, if the task is completed successfully. Define email\_name of operator.**

```
USE master;
CREATE LOGIN Login_33 WITH PASSWORD = 'password33';
USE msdb;
EXEC sp_add_operator @name = 'Operator_33';
EXEC dbo.sp_update_job
    @job_name = N'Job_53',
```

```

@description = N'Job_53',
@owner_login_name = N'Login_33',
@enabled = 0,
@delete_level = 1,
@notify_level_eventlog = 1,
@notify_level_email = 1,
@notify_email_operator_name = N'Operator_33';

```

**Change the Job\_54 job. Disable the job. Delete the job, if the task is completed unsuccessfully. The job's owner is Login\_34. The job sends notification about the completion of a task in Windows NT Application Log, if the task is completed unsuccessfully. The job sends notification to the Operator\_34 operator by email and on pager, if the task is completed unsuccessfully. Define email\_name and pager\_name of operator.**

```

USE master;
CREATE LOGIN Login_34 WITH PASSWORD = 'password34';
USE msdb;
EXEC sp_add_operator @name = 'Operator_34';
EXEC dbo.sp_update_job
    @job_name = N'Job_54',
    @description = N'Job_54',
    @owner_login_name = N'Login_34',
    @enabled = 0,
    @delete_level = 2,
    @notify_level_eventlog = 2,
    @notify_level_email = 2,
    @notify_email_operator_name = N'Operator_34',
    @notify_level_page = 2,
    @notify_page_operator_name = N'Operator_34';

```

**Change the name of Job\_53. The new name is Job\_57.**

```
EXEC sp_update_job @job_name = N'Job_53', @new_name = N'Job_57';
```

**Delete the Job\_54 job:**

```

USE msdb;
EXEC sp_delete_job @job_name = N'Job_54';

```

**Exercises.**

1. Create the Job\_2 job, that sends the notification to the Operator\_2 operator by pager, e-mail and network if the job is completed unsuccessfully.
2. Create the Job\_3 job, that sends the notification to the Operator\_3 operator by e-mail in any case. The owner of job is the Login\_3 login. The job should not be executed.
3. Change the name of the Job\_33. The new name is - Job\_4. Activate this job.
4. Change the Job\_4 job so, that the Operator\_4 operator receives notifications by pager only if the job is completed successfully. The owner of the job is the Login\_4 login. Do not activate this job. The step identifier is 1.
5. Delete the Job\_4 job.
6. Associate the Job\_1 job with the Server\_1 local server.