

## Managing Jobs

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A job is a user-specified string of commands. A job can automatically execute on a pre-arranged schedule or upon an event trigger. This chapter describes the commands that let you:

- Create a job
- Run a job
- Stop a job
- Display one or more jobs
- Edit a job
- Delete a job
- Create a job trigger

The system assigns a number to a new job. This *job number* identifies the job and is a required parameter for most job control commands. Upon new job creation, the current privilege level is automatically saved as the privilege level of the job. Only commands that are available at your privilege level can be in your job specification. For example, a user whose highest privilege level is 3 cannot include the **addtrk** command in a job because **addtrk** requires a level 1 privilege. This privilege requirement also applies to other job functions, such as running, editing, or stopping a job.

Not all Cisco WAN Switching commands can execute as a part of a job. For this reason, the Attributes section of each command description in this manual states whether the command can function in a job.

### Creating (Adding) a Job

Consider the following before creating a job:

- The **addjob** command creates a new job. When you use **addjob**, the system prompts for optional and required arguments. Unlike other commands, the **addjob** command begins with optional parameters. A job can run when you execute the **runjob** command or at a time and date you specify with **addjob**. Note that the system increments the job number, but you can assign a job description to indicate the function of the job. The following list describes the **addjob** parameters:
  - Description (optional): this can contain up to 16 characters and include spaces.
  - Execution time (optional): if you specify an execution time, the first (unprompted) parameter to enter is four digits indicating the year. The system subsequently prompts for the month, day, hour, minute, and (optional) second of the start time for the job.

- Interval (optional): the Interval prompt appears only if you have specified an execution time. The first interval prompt is for the units. The choices are *days*, *hours*, and *minutes*. The system subsequently prompts for a number of these units.
- Command (required): without a command specification, the **addjob** command terminates, so this is how you exit **addjob**. After each command and its parameters, the system prompts for an action to take if a failure occurs (see the **addjob** description for details).
- Because commands in a job do not immediately execute, the system does not check the validity of the commands and parameters to the same degree as it does for standard command entry. For example, if you enter **dncd** for a card slot that is out of range, the system flags the error, but it does not flag a card that is missing from a valid card slot.

## Running a Job

The following steps aid in running a job:

- Use the **runjob** command to run a job manually. Specify the job number to run.
- While a job is running, “executing” flashes in the upper-left area of the screen.
- The **runjob** command runs a job regardless of the assigned execution time. The **runjob** command does not change the specified execution time.
- The **runjob** command itself can be in a job. Therefore, running one job can cause another job to start. The limitation to this is that a job cannot cause itself to run. For example, Job 1 cannot contain the command “runjob 1.” Also, Job 1 cannot have the command “runjob 2” if Job 2 contains the command “runjob 1.”
- After **runjob** executes, the screen displays the results for each command in the job.

## Stopping a Job

The following steps aid in stopping a job:

- Use the **stopjob** command to stop a running job. The template for the current job appears on the screen along with the prompt, “Stop this and all currently executing jobs (y/n)?”
- The **stopjob** command works only on a job that is running. Because stopping a job can leave a task partially completed, use **stopjob** with caution.

## Displaying Jobs

For displaying one or all jobs:

- Use the **dspjob** command to display the status of a job. This command displays the template for the specified job and includes the results of the last run for each command in the job.
- To display details of all current jobs, use the **dspjobs** command.

## Editing a Job

The following information applies to job editing. Before using an edited job, test it to ensure that it works.

- Use the **editjob** command to edit job parameters.
- When you enter the **editjob** command, the template of the specified job appears. The system prompts you to keep or change each item in the template. To change an item, type over the existing information, then press Return. (You can use any of the control keys to edit existing information.) To keep the same specification for a parameter, press Return at the prompt.
- To insert a new command between existing commands in a job, press the ^ key while holding down the Control key. A new line opens above the command that is currently highlighted. Enter the new command at the “Enter Cmd” prompt.
- For deleting a command from a job, two methods are available. One way is to backspace over the command when it appears on the command line then press the Return. The other way is to press the “x”-key while holding down the Control key.
- When commands are added to or deleted from a job, the system re-numbers the remaining commands.

## Deleting a Job

Use the **deljob** command to delete a job. You cannot delete a job that is running. If necessary, stop the job with the **stopjob** command before deleting it.

## Creating a Job Trigger

The following information applies to creating a job trigger:

- Use the **addjobtrig** command to configure a job to run if a line failure or repair-alarm occurs.
- The template on the screen prompts for a line type (“p” for packet line, “c” for circuit line, or “d” for a T3 (DS3) line).
- The template on the screen prompts for the slot number of the line on which an alarm triggers the job.
- In the case of a trigger on a DS3 line, specify the East (“e”) or West (“w”). For example, “w f” specifies a trigger on the West line occurring on a failure.
- The prompt requests you to specify whether the trigger should occur on the failure (“f”) or repair (“r”) of a line.
- The prompt requests you to specify whether the trigger occurs on an “up” or a “down” condition for the EIA lead status. The “up” condition indicates that the system should allocate bandwidth from other connections to enable data transfer. The “down” condition indicates that the system should release bandwidth to other connections because the connection does not require the bandwidth for data transfer. The applicable cards are the SDP, LPD, HDM, and LDM.

## Summary of Commands

The following list shows the full command name and starting page for the description of each job command.

**Table 14-1**

<b>Mnemonic</b>	<b>Description</b>	<b>Page</b>
<b>addjob</b>	Add job	14-5
<b>addjobtrig</b>	Add job trigger	14-8
<b>deljob</b>	Delete job	14-10
<b>deljobtrig</b>	Delete job trigger	14-12
<b>dspjob</b>	Display job	14-14
<b>dspjobs</b>	Display jobs	14-16
<b>editjob</b>	Edit job	14-18
<b>prtjob</b>	Print job	14-18
<b>prtjobs</b>	Print jobs	14-21
<b>runjob</b>	Run job	14-22
<b>stopjob</b>	Stop job	14-24

## addjob

This command creates a new job. When you create a new job with **addjob**, your privilege level becomes the privilege level of the job itself. When adding commands to the job, you cannot add a command that requires a privilege higher than your privilege level. Furthermore, you must have a privilege level at least as high as the job to run the job (with **runjob**, for example).

The system does not check commands validity with respect to the current state of the network or for relationships to other commands in the job. To ensure that it works as expected, try running the job with **runjob**.

### Full Name

Add a job

### Syntax

```
addjob [description] [execution time, execution interval] <commands>
```

### Related Commands

deljob, dspjob, dspjobs, editjob, prtjob, runjob, stopjob

### Attributes

Privilege	1-6
Jobs	No
Log	Yes
Node	IPX, IGX, BPX
Lock	Yes

### Example 1 Description

addjob

The system response is a series of prompts requesting details of the job. The system requests a job description (or name), an execution time for the job, a unit for the interval at which the job is to run (hours, for example), the number of units in the interval, the commands to execute, and what to do with the result.

```

alpha          TRM   YourID:1          IPX 16      8.1      Mar. 16 1996 14:15 PST

                               Job 1   test
Last Execution Results: None          Status: Idle
Next Execution Time: 03/17/96 20:20:30 Interval: 1 days

1: prtlog
  - Failure Reaction: Repeat 2 Times and Abort      Exec. Results: None
  
```

Last Command: addjob

Next Command:

In this example, a new job is being created. The job number is “1.” The job description (or name) is “test.” The job is scheduled to run on March 17, at 2:20:30 PM and every day thereafter at the same time. The command in the job is **prtlog**. If this command fails when the job runs, it tries twice again and aborts if unsuccessful.

The “Enter Cmd” prompt at the bottom of the screen indicates you can enter the next command for the job. To exit **addjob**, press the Return key without entering a command.

**Table 14-2 addjob – Parameters**

Parameter	Description
command	<p>Specifies the syntax for a command to include in the job. The number of commands that can be included in a job is limited only by available memory.</p> <p>Not all commands can be included in a job. A job cannot contain commands that are above your privilege level. For example, if you have privilege level 3, your job cannot include the <b>addtrk</b> command because this command requires privilege level 1.</p>
failure reaction	<p>Specifies the desired reaction to the failure of a command in the job. Each command in the job must have a failure reaction. The failure reaction is specified in the following format &lt;c/a/rc/ra&gt; &lt;number of repetitions&gt;. In this format:</p> <ul style="list-style-type: none"> <li>c - specifies that the job continues running.</li> <li>a - specifies that the job must abort.</li> <li>rc - specifies that the command should retry for the specified number of times and continue running the job even if the command fails during the retries.</li> <li>ra - specifies that the command should retry for the specified number of times and abort the job if the command always fails during the retries.</li> </ul>

**Table 14-3** addjob – Optional Parameters

Parameter	Description
job description	A description of the job. This description can be up to 16 characters, including spaces.
execution time	<p>Specifies the date and time to run the job. Without an execution time, the job can begin running only by the <b>runjob</b> command.</p> <p>Execution time is specified in the following format. (The <i>seconds</i> parameter is optional.)</p> <p>year (four digits) month (two digits) day hour (0 - 23) minute [seconds]</p>
execution interval	<p>Specifies an interval between job repetitions. The three possible execution intervals are:</p> <ul style="list-style-type: none"><li><b>d</b> - days</li><li><b>h</b> - hours</li><li><b>m</b> - minutes</li></ul> <p>The interval range is 1 minute to 45 days. If you do not specify an execution interval, the job runs once at execution time. If you specify an execution interval (<b>d</b>, <b>h</b>, or <b>m</b>), you must also specify the number of units in the interval.</p>

## addjobtrig

Configures a job to run if a failure or repair occurs on a circuit line, trunk, or T3 (DS3). A line acquires “failed” status when an alarm condition is invoked. A “repair” of a line occurs when the alarms on the line are removed. Jobs can be triggered upon either a failure or repair of a line.

The command also configures a job to allocate or release bandwidth from other connections. This bandwidth decision depends on whether the EIA lead status is “up” or “down.”

### Full Name

Add a job trigger

### Syntax

addjobtrig <job\_number> <line\_type> <line\_specifier> <fail/repair>

### Related Commands

addjob, dspjob, dspjobs

### Attributes

Privilege	1–5
Jobs	No
Log	No
Node	IPX, IGX, BPX
Lock	Yes

### Example 1 Description

addjobtrig	1 p 14 f	trigger job 1 when TRK 14 fails
addjobtrig	3 c 15 r	trigger job 3 when CLN 15 repairs
addjobtrig	2 p 14 r	trigger job 2 when TRK 14 repairs
addjobtrig	3 d 27 E f	trigger job 3 when DS3 27 E (East) fails



```

alpha          TRM   YourID:1          IPX 16    8.1    Mar. 16 1996 14:22 PST

Job  Description      Next Execution      Status      Interval      Access Group
1    test              03/17/96 11:00:00  Idle        1 days        Group 1
      Trigger 1 - CLN 14          REPAIR

```

Last Command: addjobtrig 1 c 14 r

Next Command:

## Example 2 Description

addjobtrig 1 c 14 r

Trigger job 1 upon repair of circuit line 14

**Table 14-4** addjobtrig – Parameters

Parameter	Description
job number	Specifies the number of the job to trigger.
line type	Specifies the type of line. A “p” indicates a trunk (TRK) or packet line. A “c” indicates a circuit line (CLN). A “d” indicates a DS3 line.
line specifier	Specifies the slot number for TRK and CLN lines, or the slot number and DS3 indicator (E or W) for DS3 lines.
fail/repair	Specifies whether the trigger occurs on the failure or repair of a line.
fail/repair	If the card is an SDP, LDP, HDM, or LDM, the fail and repair triggers occur only on the transitions of RTS (regardless of whether the port is DCE or DTE). If you select “fail,” the trigger is the transition of RTS from “on” to “off.” If you select “repair,” the trigger is the transition of RTS from “off” to “on.”  To enable triggering on leads other than RTS, use the <b>cnfict</b> command.

## deljob

Deletes a job. To delete a job, you must have a privilege level at least as high as the job itself. A job that is currently running cannot be deleted. If necessary, use **stopjob** to stop the job so that you can delete it.

### Full Name

Delete a job

### Syntax

```
deljob <job_number>
```

### Related Commands

addjob, dspjob, dspjobs

### Attributes

Privilege	1–6
Jobs	No
Log	Yes
Node	IPX, IGX, BPX
Lock	Yes

### Example 1 Description

```
deljob 4
```

Delete job 4.

pubsigx1          TN      SuperUser          IGX 32      8.1          Sep. 3 1996 19:54 GMT

Job 4

Last Execution Results: None

Status: Locked

Next Execution Time:

Interval:

1: prtlog

- Failure Reaction: Abort

Exec. Results: None

2: dncd 6

- Failure Reaction: Repeat 12 Times and Abort

Exec. Results: None

3: dncd 6

- Failure Reaction: Repeat 12 Times and Continue

Exec. Results: None

This Command: deljob 4

Delete this job (y/n)?

**Table 14-5      deljob – Parameters**

<b>Parameter</b>	<b>Description</b>
job number	Specifies the number of the job.

## deljobtrig

Deletes a job trigger. The **deljobtrig** command deletes one trigger at a time. If a job is deleted by the **deljob** command, all associated job triggers are deleted.

### Full Name

Delete a job trigger

### Syntax

```
deljobtrig <job_number> <trig_num>
```

### Related Commands

addjobtrig, dspjobs

### Attributes

Privilege	1-6
Jobs	No
Log	Yes
Node	IPX, IGX, BPX
Lock	Yes

### Example 1 Description

```
deljobtrig 1 1
```

Delete job trigger 1 for job 1.

```

pubsigx1      TN      SuperUser      IGX 32      8.1      Sep. 3 1996  18:19 GMT

Job  Description      Next Execution      Status      Interval      Access Group
1    test1              2                  Idle        1 days        SuperUser
    Trigger 1 - PLN
2    test3              12/12/96 11:11:11 Idle        1 days        SuperUser
3    test3              12/12/96 11:11:11 Idle        1 days        SuperUser
4    test3              12/12/96 11:11:11 Idle        1 days        SuperUser
5    test3              12/12/96 11:11:11 Idle        1 days        SuperUser
6    test3              12/12/96 11:11:11 Idle        1 days        SuperUser

```

This Command: deljobtrig 1

Enter trigger number:

**Table 14-6 deljobtrig – Parameters**

Parameter	Description
job number	Specifies the number of the job.
trigger number	Specifies the number of the trigger to delete.

## dspjob

The **dspjob** command displays the following information about a job.

- Job number and description
- Next execution date and time
- Status
- The time interval between successive executions of the job
- The results of the last execution of the job

This command requires at least the same privilege level as the person who created the job.

### Full Name

Display jobs

### Syntax

dspjob <job\_number>

### Related Commands

addjob, deljob, dspjob

### Attributes

Privilege	1–6
Jobs	No
Log	No
Node	IPX, IGX, BPX
Lock	No

### Example 1 Description

dspjob 2

Display job number 2.

---

## System Response

alpha TRM YourID:1 IPX 16 8.1 Mar. 16 1996 14:17 PST

Job 1 test

Last Execution Results: None

Status: Idle

Next Execution Time: 03/17/96 20:20:30

Interval: 1 days

1: prtlog

- Failure Reaction: Repeat 2 Times and Abort

Exec. Results: None

Last Command: dspjob 1

Next Command:

**Table 14-7 dspjob – Parameters**

Parameter	Description
job number	Specifies the the number of the job to display.

## dspjobs

Displays the following information on each job:

- Job number
- Job description
- Next execution date and time
- Execution interval between jobs
- Access Group: The privilege level required to run or display the job

To see details of an individual job, use the **dspjob** command.

### Full Name

Display jobs

### Syntax

dspjobs

### Related Commands

addjob, deljob, dspjob

### Attributes

Privilege	1-6
Jobs	No
Log	No
Node	IPX, IGX, BPX
Lock	No

### Example 1 Description

dspjobs

Display a summary of all jobs stored at the node



### System Response

```
alpha          TRM  YourID:1      IPX 16      8.1      Mar. 16 1996 14:16 PST

Job  Description      Next Execution      Status      Interval      Access Group
1    test              03/17/96 20:20:30  Idle        1 days        Group 1
```

Last Command: dspjobs

Next Command:

## editjob

Allows you to change any of the following items in a job:

- The job description
- Execution time
- Execution interval
- Individual commands in the job
- Failure reactions for each command

After you enter the **editjob** command, the system displays the template for the job. With **editjob**, you can edit, delete, or add a command. Each item in the template is successively displayed on the command line so that you can confirm or change the item. You cannot change the privilege level of a job.

The following is a list of actions you can take with **editjob**:

- To change an item in the job template, enter or type over the existing information on the command line and press the Return key.
- Use any of the control keys to change information on the command line. To keep the same value of an item, press the Return key at the prompt.
- To add a new command between existing commands in a job, hold down the Control key while you press the ^ key. A new line appears above the command that is highlighted. Enter the new command after the "Enter Cmd:" prompt and press Return.
- To add a new command to the end of a job, press the Return key after the last command in the job template.
- To delete a command from a job, either backspace over the command when it appears on the command line and press the Return key, or hold down the Control key while you press the "x"-key.
- To end the editing session, press the Return key when prompted for a new command or press the Del key.

When commands are added to or deleted from a job, the system re-numbers the commands. To test an edited job, run it with the **runjob** command.

### Full Name

Edit a job

### Syntax

```
editjob <job_number>
```

### Related Commands

addjob, deljob, dspjob, dspjobs, runjob

**Attributes**

Privilege	1–6
Jobs	No
Log	Yes
Node	IPX, IGX, BPX
Lock	YES

**Example 1 Description**

editjob 1

Edit job 1. The template for job 1 appears on the screen. The system displays the existing job description, which you can change or keep. To keep it, press Return. The system then displays the execution time. To change it to March 17, 1996 at 11:00:, for example, enter:

1996 3 17 11 00

If no other items need changing, press the Return key.

**System Response**

```
alpha          TRM   YourID:1          IPX 16      8.1   Mar. 16 1996 14:19 PST

Job 1 prtlog
Last Execution Results: None          Status: Editing
Next Execution Time: 03/17/96 11:00:00 Interval: 1 days

1: prtlog
  - Failure Reaction: Repeat 2 Times and Abort      Exec. Results: None
2:
```

Last Command: editjob 1

Next Command:

**Table 14-8 editjob – Parameters**

Parameter	Description
job number	Specifies the number of the job to edit.

## prtjob

Prints the following information about a specific job:

- Job number
- Job description
- Next execution date and time
- Status
- Interval. The time interval between successive executions of the job
- Execution. The results of the last execution of the job

To print a job, you must have at least the same (or higher) privilege level as the person who wrote the job). See the **addjob** description for more information. The **prtjob** command uses the same syntax and prints the same information the **dspjob** command.

### Full Name

Print job

### Syntax

prtjob <job\_number>

### Related Commands

dspjob

### Attributes

Privilege	1-6
Jobs	Yes
Log	No
Node	IPX, IGX, BPX
Lock	Yes

## prtjobs

Prints the following information about all existing jobs:

- Job number
- Job description
- Next execution date and time.Status
- Execution interval between jobs
- Access Group: The privilege level required to run or display the job

For a printout on a single job, use the **prtjob** command. This command uses the same syntax, and prints the same information as is displayed using the **dspjobs** command. See the **dspjobs** command for syntax and output information.

### Full Name

Print jobs

### Syntax

prtjobs

### Related Commands

dspjobs

### Attributes

Privilege	1-6
Jobs	No
Log	Yes
Node	IPX, IGX, BPX
Lock	Yes

## runjob

Runs a job. The **runjob** command runs a job regardless of its execution time. The **runjob** command does not change a Job's assigned execution time.

When you enter **runjob**, the system displays the job template and prompts, "Run this job (y/n)?" Enter "y" to start the job. Enter "n" to exit **runjob**. Four seconds pass before a job begins running after you enter "y." Pressing any keys briefly suspends a job, and four seconds of no keyboard activity must pass before the jobs resume. While a job is running, the system highlights the current command and updates command results.

You can include the **runjob** command in a job. Therefore, running one job can cause another job to run. The only limitation is that a job cannot cause itself to run. For example, Job 1 cannot include the command "runjob 1." Also, Job 1 cannot include the command "runjob 2" if Job 2 contains the command "runjob 1."

### Full Name

Run a job

### Syntax

```
runjob <job_number>
```

### Related Commands

addjob, dspjobs, editjob, stopjob

### Attributes

Privilege	1-6
Jobs	Yes
Log	Yes
Node	IPX, IGX, BPX
Lock	Yes

### Example 1 Description

```
runjob 1
```

Run job 1.

---

alpha TRM YourID:1 IPX 16 8.1 Mar. 16 1996 14:23 PST

Job 1 test

Last Execution Results: None

Status: Idle

Next Execution Time: 03/17/96 11:00:00

Interval: 1 days

1: prtlog

- Failure Reaction: Repeat 2 Times and Abort

Exec. Results: None

This Command: runjob 1

Run this job (y/n)?

**Table 14-9 runjob – Parameters**

Parameter	Description
job number	Specifies the number of the job to run.

## stopjob

Stops all running and all waiting jobs. When you enter the **stopjob** command, the system prompts, “Stop all running and waiting jobs (y/n)?” Enter a “y” to stop running jobs and prevent all waiting jobs from beginning. Enter an “n” to exit stopjob. Because the **stopjob** command can leave a task partially executed, use **stopjob** with caution. You must have at least the same or higher privilege level of the creator of the jobs you want to stop.

### Full Name

Stop job

### Syntax

stopjob

### Related Commands

runjob

### Attributes

Privilege	1–6
Jobs	No
Log	No
Node	IPX, IGX, BPX
Lock	No

### Example 1 Description

stopjob

Stop all jobs currently running or queued to run on the node. Confirm by entering: y.



## System Response

alpha TRM YourID:1 IPX 16 8.1 Mar. 16 1996 14:24 PST

Job 1 test

Last Execution Results: None

Status: Idle

Next Execution Time: 03/17/96 11:00:00

Interval: 1 days

1: prtlog

- Failure Reaction: Repeat 2 Times and Abort

Exec. Results: None

This Command: stopjob

Stop all running and waiting jobs (y/n)?

