



# Asynchronous DDR Preparation Commands

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This chapter describes the commands required in the preparation steps to be completed before you configure DDR on asynchronous serial interfaces on the router.

For the preparation tasks and configuration examples, refer to the “Preparing for Asynchronous DDR” chapter in the *Dial Solutions Configuration Guide*.

## chat-script

To create a script that will place a call over a modem, use the **chat-script** global configuration command. To disable the specified chat script, use the **no** form of this command.

**chat-script** *script-name expect-send*  
**no chat-script** *script-name expect-send*

### Syntax Description

|                    |   |
|--------------------|---|
| <i>script-name</i> | Name of the chat script.  |
| <i>expect-send</i> | Pairs of information elements: an item to expect and an item to send in response. |

### Default

No chat scripts are defined.

### Command Mode

Global configuration

### Usage Guidelines

This command first appeared in Cisco IOS Release 10.0.

Chat scripts are used in dial-on-demand routing (DDR) to give commands to dial a modem and commands to log on to remote systems. The defined script will be used to place a call over a modem.

Some characteristics of chat scripts are as follows:

- Chat scripts are case sensitive.
- You can have any number of ABORT sequences active at once.
- When a chat script starts, the default timeout is 5 seconds. Changes to the timeout persist until the next time you change them in the script.
- A string within quotation marks is treated as a single entity.

We recommend that one chat script (a “modem” chat script) be written for placing a call and another chat script (a “system” or “login” chat script) be written to log on to remote systems, where required.

### Suggested Chat Script Naming Conventions

A suggested chat script naming convention is as follows:

*vendor-type-modulation*

If you follow this convention, the syntax of the **chat-script** command becomes the following:

**chat-script** *vendor-type-modulation expect-send*

For example, if you have a Telebit T3000 modem that uses V.32*bis* modulation, you would name your chat script as follows:

telebit-t3000-v32bis

The **chat-script** command could become the following:

```
chat-script telebit-t3000-v32bis ABORT ERROR ABORT BUSY ABORT "NO ANSWER" "" "AT H" OK
"AT DT \T" DIALING \c TIMEOUT 30 CONNECT \c
```

For example, you could have script names like the following:

- telebit-tb-b103
- telebit-tb-v21
- telebit-tb-v22
- codex-326x-b103
- codex-326x-v21
- codex-326x-v22
- codex-326x-v22bis
- codex-326x-v32
- codex-326x-v32bis
- usr-courier-v22bis
- usr-courier-hst
- usr-courier-v32
- usr-courier-v32bis

Adhering to this naming convention allows you to use partial chat script names with regular expressions to specify a range of chat scripts that can be used. This capability is particularly useful for dialer rotary groups and is explained further in the next section.

Chat scripts are in the form *expect-send*, where the send string following the hyphen (-) is executed if the preceding expect string fails. Each send string is followed by a return unless it ends with the escape sequence `\c`. The sequence `^x` is translated into the appropriate control character, and the sequence `\x` is translated into `x` if `\x` is not one of the special sequences listed in Table 116.

See the book entitled *Managing uucp and Usenet* by Tim O'Reilly and Grace Todino for more information about chat scripts.

## Escape Sequences

The escape sequences used in chat scripts are listed in Table 116.

**Table 116** Chat Script Escape Sequences

| Escape Sequence | Description   |
|-----------------|---|
| " "             | Expect a null string.   |
| EOT             | Send an end-of-transmission character.  |
| BREAK           | Cause a BREAK. This sequence is sometimes simulated with line speed changes and null characters. May not work on all systems. |
| \c              | Suppress new line at the end of the send string.  |
| \d              | Delay for 2 seconds.  |
| \K              | Insert a BREAK.   |
| \n              | Send a newline or linefeed character.   |

**Table 116 Chat Script Escape Sequences**

| Escape Sequence | Description                     |
|-----------------|---------------------------------|
| \p              | Pause for 1/4 second.           |
| \r              | Send a return.                  |
| \s              | Send a space character.         |
| \t              | Send a tab character.           |
| \\              | Send a backslash (\) character. |
| \T              | Replaced by phone number.       |
| \q              | Reserved, not yet used.         |

## Expect-Send Pairs

Sample supported *expect-send* pairs are described in Table 117.

**Table 117 Sample Supported Expect-Send Pairs**

| Expect and Send Pair       | Function   |
|----------------------------|--|
| <b>ABORT</b> <i>string</i> | Designates a string whose presence in the input indicates that the chat script has failed. |
| <b>TIMEOUT</b> <i>time</i> | Sets the time to wait for input, in seconds. The default is 5 seconds.                     |

For example, if a modem reports BUSY when the number dialed is busy, you can indicate that you want the attempt stopped at this point by including ABORT BUSY in your chat script.

## Alternate Handlers

If you use the *expect-send* pair ABORT SINK instead of ABORT ERROR, the system terminates abnormally when it encounters SINK instead of ERROR.

## Missed Characters

After the connection is established and you press the Return key, you must often press Return a second time before the prompt appears.

For example, you might include the following as part of your chat script:

```
ssword:~/r-ssword
```

This part of the script specifies that, after the connection is established, you want **ssword** to be displayed. If it is not displayed, you must press Return again after the timeout passes.

## Example

The following example shows the **chat-script** command being used to create a chat script named *t3000*:

```
chat-script t3000 ABORT ERROR ABORT BUSY ABORT "NO ANSWER" "" "AT H" OK "AT DT \T"  
DIALING \c TIMEOUT 30 CONNECT \c
```

## Related Commands

You can use the master indexes or search online to find documentation of related commands.

**dialer map**  
**script dialer**

## script dialer

To specify a default modem chat script, use the **script dialer** line configuration command. Use the **no** form of this command to disable this feature.

```
script dialer regex  
no script dialer
```

### Syntax Description

|              |  |
|--------------|--|
| <i>regex</i> | Specifies the set of modem scripts that might be executed. The first script that matches the argument <i>regex</i> will be used. |
|--------------|--|

### Default

No chat script is defined.

### Command Mode

Line configuration

### Usage Guidelines

This command first appeared in Cisco IOS Release 10.3.

This command is used by DDR modules to provide modem dialing commands and commands to log in to remote systems.

The argument *regex* is used to specify the name of the modem script that is to be executed. The first script that matches the argument in this command and the **dialer map** command will be used. For more information about regular expressions, refer to the “Regular Expressions” appendix in this manual.

If you adhere to the naming convention recommended for chat scripts (see the **chat-script** command), the modem lines (the argument *regex* in the **script dialer** command) will be set to one of the following regular expressions to match patterns, depending on the kind of modem you have:

- **codex-.\***
- **telebit-.\***
- **usr-.\***
- **xyz-.\***

In the **dialer map** command, you can specify the modulation but leave the type of modem unspecified, as in *.\*-v32bis*.

## Example

The following example shows line chat scripts being specified for lines connected to Telebit and US Robotics modems:

```
! Some lines have telebit modems
line 1 6
script dialer telebit.*
!
! Some lines have US robotics modems
line 7 12
script dialer usr.*
```

## Related Commands

You can use the master indexes or search online to find documentation of related commands.

- chat-script**
- dialer map modem-script system-script**
- dialer map name modem-script system-script**
- script activation**
- script connection**
- script reset**
- script startup**
- start-chat**

