

## XRemote Configuration Commands

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XRemote is a protocol developed specifically to optimize support for X over a serial communications link. Its compression and decompression algorithms are designed to handle bit-mapped displays and windowing systems.

Use the commands in this chapter to configure XRemote on your communication server. For configuration information and examples, refer to the XRemote chapter of the *Communication Server Configuration Guide*. For information about making connections, see the *Communication Server and Protocol Translator Connection Guide*.

## show xremote

Use the **show xremote EXEC** command to display XRemote connections and monitor XRemote traffic through the communication server. This command displays XRemote parameters applied to the entire system, as well as statistics that are pulled for all active XRemote connections.

### show xremote

### Syntax Description

This command has no arguments or keywords.

### Command Mode

EXEC

### Sample Display

The following is sample output from the **show xremote** command when XRemote is enabled on a communication server and XRemote sessions are active:

```
orange# show xremote

XRemote server-wide parameters:
  Font buffersize:      72000           Font retries: 3
  Font memory errors:  0

TFTP font load statistics for host 131.108.1.111:
  Bytes read:          2697239         Files read: 258
  Network errors:      4               File errors: 0

LAT font load statistics for service WHEEL, incarnation 5:
  Bytes read           182401           Files read: 14
  Protocol errors:     0               Insufficient memory: 0

XRemote statistics for tty2:
  Current clients:      9               Total clients: 17
  Requesting client:    5               Current request size: 0
  Replying client:      6               Current reply size: 0
  XDM state:            10             Next timeout: 172460
  Retransmit counter:   0               Local UDP port: 53616
  Keepalive dormancy:  180             Session id: 94
  Unread input:         0               Unwritten output: 0
  Input buffer size:    1024            Output buffer size: 108
  Protocol version:     2               Line state: Connected
  Transmit packets:     50768           Receive packets: 49444
  Transmit errors:      0               Receive errors: 37
  Retransmissions:     403             Receive out of sequence: 76
  Round trip time:      383             Retransmit interval: 766
  Transmit window:      7               Receive window: 7
  Transmit next:        6               Receive next: 3
  Transmit unacked:    6               Receive unacked: 0

Connection 0 - TCP connection from 131.108.1.55 [Display Manager]
  Client state:         CS_ACTIVE       Byte order: MSBfirst
  Unread input:         0               Unwritten output: 0
  Input buffer size:    1024            Output buffer size: 1024
```

```

Connection 1 - LAT connection from WHEEL
Client state:      CS_ACTIVE      Byte order: LSBfirst
Unread input:     0                Unwritten output: 0
Input buffer size: 1024           Output buffer size: 1024

```

Table 1-1 describes the fields shown in the first section of the display.

**Table 1-1 Show Xremote Field Descriptions—First Section of Output**

Field	Description
XRemote server-wide parameters:	This section displays XRemote parameters that apply to the communication server.
Font buffersize:	Displays the XRemote font buffer size, as specified using the <b>xremote tftp buffersize</b> command.
Font retries:	Displays the number of retries the font loader (host) will attempt before declaring an error condition.
Font memory errors:	Number of font memory error conditions that have been declared for the communication server.

Table 1-2 describes the fields shown in the second section of the display.

**Table 1-2 Show Xremote Field Descriptions—Second Section of Output**

Field	Description
TFTP font load statistics for host 131.108.1.111	This section displays XRemote statistics for fonts that have been loaded from a TFTP font server at the IP address shown.
Bytes read:	Number of bytes the host read in order to load the fonts.
Files read:	Number of files the host read in order to load the fonts.

Table 1-3 describes the fields shown in the fourth section of the display.

**Table 1-3 Show Xremote Field Descriptions—Fourth Section of Output**

Field	Description
XRemote statistics for tty2	This section displays XRemote for the specified line.
Current clients:	Number of clients using this line for active XRemote sessions.
Total clients:	Includes the number of clients using this line for active XRemote sessions.
Requesting client:	Number of clients requesting XRemote service.
Retransmit counter:	Indicates the number of times that XRemote connection requests? were retransmitted.
Local UDP port:	Number assigned to the local UDP port.
Keepalive dormancy:	Amount of time between keepalive messages.

## show xremote line

You can use the EXEC command **show xremote line** with a line number to list XRemote connections and monitor XRemote traffic for specific lines on a communication server.

**show xremote line** *number*

### Syntax Description

*number* A decimal value representing the virtual terminal lines available on a communication server.

### Command Mode

EXEC

### Sample Display

The following is sample output from the **show xremote line** command when XRemote is enabled on a communication server, and XRemote sessions are active. Only information specific to an individual terminal line is provided.

```

CS# show xremote line 3
Xremote statistics for tty3:
Current clients:      11                Total clients: 19
Requesting client:   10                Current request size: 0
Replying client:     10                Current reply size: 0
XDM state:           10                Next timeout: 173304
Retransmit counter:  0                 Local UDP port: 28384
Keepalive dormancy: 180               Session id: 29
Unread input:        0                 Unwritten output: 0
Input buffer size:   1024              Output buffer size: 108
Protocol version:    2                 Line state: Connected
Transmit packets:    28875             Receive packets: 18644
Transmit errors:     0                 Receive errors: 13
Retransmissions:     53                Receive out of sequence: 41
Round trip time:     384                Retransmit interval: 768
Transmit window:     7                 Receive window: 7
Transmit next:       2                 Receive next: 7
Transmit unacked:    2                 Receive unacked: 0

Connection 0 - TCP connection from 131.108.1.27 [Display Manager]
Client state:        CS_ACTIVE          Byte order: MSBfirst
Unread input:        0                 Unwritten output: 0
Input buffer size:   1024              Output buffer size: 1024

Connection 1 - TCP connection from 131.108.1.27
Client state:        CS_ACTIVE          Byte order: MSBfirst
Unread input:        0                 Unwritten output: 0
Input buffer size:   1024              Output buffer size: 1024

Connection 2 - TCP connection from 131.108.1.27
Client state:        CS_ACTIVE          Byte order: MSBfirst
Unread input:        0                 Unwritten output: 0
Input buffer size:   1024              Output buffer size: 1024

```

See the tables in the **show xremote** command description earlier in this chapter for **show xremote line** output field descriptions.

## xremote tftp buffersize

To change the buffer size used for loading font files, use the **xremote tftp buffersize** global configuration command. The command **no xremote tftp buffersize** restores the buffer size to the default value.

```
xremote tftp buffersize buffersize  
no xremote tftp buffersize
```

### Syntax Description

*buffersize* Buffer size expressed as a decimal value. The range is 4096 to 70,000 bytes.

### Default

70000 bytes

### Command Mode

Global configuration

### Usage Guidelines

When the X terminal requests that a font file be loaded, the communication server must first load the font file into an internal buffer before passing it to the X terminal. The default value of 70,000 bytes is adequate for most font files, but the size can be increased as necessary for nonstandard font files.

The buffer size can be set as low as 4096 bytes and as large as the available memory on the communication server will allow. If you are using LAT font access, you should not lower the buffer size below the default, because the font directory for all of the LAT fonts (created internally) requires 70,000 bytes.

This command applies to both TFTP and LAT font access.

### Example

The following example sets the buffer size to 20,000 bytes:

```
xremote tftp buffersize 20000
```

## xremote tftp host

To add a specific TFTP font server as a source of fonts for the terminal, use the **xremote tftp host** global configuration command. The command **no xremote tftp host** removes a font server from the list maintained by the communication server.

```
xremote tftp host hostname  
no xremote tftp host hostname
```

### Syntax Description

*hostname*            Name of the host containing fonts.

### Default

None

### Command Mode

Global configuration

### Usage Guidelines

Each time a new host name is entered, the list on the communication server is updated. Font servers are queried in the order of their definition when the X terminal requests a font.

### Example

The following example sets the host name to IBM-1:

```
xremote tftp host IBM-1
```

## xremote tftp retries

To specify the number of retries the font loader will attempt before declaring an error condition, use the **xremote tftp retries** global configuration command. The command **no xremote tftp retries** restores the retries number to the default.

**xremote tftp retries** *retries*  
**no xremote tftp retries**

### Syntax Description

*retries*                      Number of retries. Acceptable values are decimal numbers in the range from 1 to 15.

### Default

3 retries

### Command Mode

Global configuration

### Usage Guidelines

Under certain conditions, you might need to increase the number of retries, particularly if the font servers are known to be heavily loaded.

### Example

The following example sets the font loader retries to five:

```
xremote tftp retries 5
```