XRemote Configuration Commands

XRemote is a protocol developed specifically to optimize support for the X Window System 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 XRemote configuration information and examples, refer to the chapter "Configuring XRemote" in the *Access and Communication Servers Configuration Guide*. For information about establishing XRemote connections, refer to the *Cisco Access Connection Guide*.

show xremote

To display XRemote connections and monitor XRemote traffic through the communication server, use the **show xremote** EXEC command.

> **show xremote**

Syntax Description

This command has no arguments or keywords.

Command Mode

EXEC

Usage Guidelines

The **show xremote** command displays XRemote parameters applied to the entire system, as well as statistics that are pulled for all active XRemote connections.

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 16-1 describes the significant fields shown in the display.

Table 16-1 Show XRemote Field Descriptions

Field	Description
XRemote server-wide parameters	This section displays XRemote parameters that apply to the protocol translator.
Font buffersize	XRemote font buffer size that was specified with the **xremote tftp buffersize** global configuration command.
Font retries	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 protocol translator.
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.
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	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

To list XRemote connections and monitor XRemote traffic, use the **show xremote line** EXEC command.

   show xremote line *number*

Syntax Description

number	A decimal value representing the number of virtual terminal lines about which to display information.

Command Mode

EXEC

Sample Display

The following is sample output from the **show xremote line** command (line 3 is specified) when XRemote is enabled 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 Table 16-1 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. To restore the buffer size to the default value, use the **no** form of this command.

> **xremote tftp buffersize** *buffersize*
> **no xremote tftp buffersize**

Syntax Description

buffersize	(Optional) Buffer size in bytes. This is a decimal number in the range from 4096 to 70000 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 70000 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 70000 bytes.

This command applies to both TFTP and LAT font access.

Example

The following example sets the buffer size to 20000 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. To remove a font server from the list, use the **no** form of this command.

xremote tftp host *hostname*
no xremote tftp host *hostname*

Syntax Description

hostname   Name of the host containing fonts.

Default

No TFTP font server is specified.

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. To restore the default retries number, use the **no** form of this command.

xremote tftp retries *retries*
no xremote tftp retries

Syntax Description

retries	(Optional) 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 retires, particularly if the font servers are known to be heavily loaded.

Example

The following example sets the font loader retries to 5:

```
xremote tftp retries 5
```