



Host Support Server Guide

© 2005 by FutureSoft, Inc. All rights reserved.

Host Support Server Guide

This manual, and the software described in it, is furnished under a license agreement. Information in this document is subject to change without notice and does not represent a commitment on the part of FutureSoft. FutureSoft assumes no responsibility or liability for any errors or inaccuracies that may appear in this manual.

No part of this manual may be produced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or otherwise, without the prior, written permission of FutureSoft, Inc.

MultiView 2000, MultiView 2000 Server Edition, MultiView Catalyst, MultiView License Manager, MultiView DeskTop and Host Support Server are tradenames of FutureSoft Inc.

E-Edition 6 March 2005
Document #E-HSSG-MV2000

FutureSoft, Inc.
12012 Wickchester Lane, Suite 600
Houston, Texas 77079 USA

Printed in the USA.
1.800.989.8908

info@futuresoft.com
<http://www.futuresoft.com>

TABLE OF CONTENTS

Introduction	5
Assumptions	6
Conventions	7
Getting Started	8
Product Registration	8
Prior to installation	8
Installing your Host Support Server	9
Using your Host Support Server	9
Using Host Support Server with MultiView DeskTop	10
Using Host Support Server with MultiView 2000	11
The connection process	11
What Next ?	11
HSS Files	12
Introduction	12
Standard installation	12
The HSS central directory	12
Application Programs	13
The HSS home directory	13
The UNIX application program directory	13
The UNIX device directory	14
The UNIX temporary file directory	14
Using HSS	17
Multiple applications per single login	17
File transfer	17
Remote print requests redirected to local printer	18
Windows print requests redirected to remote printer	18
Printing with HSS	19
Local Printing	19
Remote Printing	20

TABLE OF CONTENTS

Configuration	21
MultiView DeskTop configuration	21
MultiView 2000 configuration	21
Host Support program name	21
Remote Host utmp file updating	22
Forcing 7-bit protocols	23
UNIX configuration	23
Specifying terminal and user information	24
To limit the number of connections	24
Performance tuning	25
Pseudo-ttys	25
The mvw_ptys file	26
To use a clone device	26
To use a non-clone device	27
Troubleshooting	29
Remote error messages log	29
Terminating an HSS session	29
Common problems and solutions	29
Appendix	32
Communications messages	32
General messages	32
Terminal Emulator - messages	48
Printing - messages	53
DDE - messages	54
File Transfer system - messages	55
Stack - messages	58
Error correction failure over serial lines	59
Contact	60
Index	63

I N T R O D U C T I O N

Host Support Server provides you with the ability to deliver a high level of integration to PCs connected to UNIX systems. Host Support Server can be used with MultiView 2000 Client applications. This guide is aimed at experienced UNIX users and systems integrators, and describes the features of the Host Support Server and the configuration options. Host Support Server adds functionality to the terminal emulator in the following areas:

- **Multiple applications per single login**
With Host Support on a remote system you can run multiple applications across a single login session, even over an RS232 connection. This means you negotiate the connection procedure only once. Thereafter, applications run on the remote system will be run without requiring any further login procedure.
- **File Transfer**
The presence of Host Support on a remote system enables you to use the MultiView Client **File Transfer** application, even over an RS232 connection. This provides you with a simple way to move files between your local and remote systems.
- **Remote print requests redirected to local printer**
This facility allows you to redirect remote print requests to a printer attached to your local PC.
- **Windows print requests redirected to remote printer**
This facility allows you to redirect print requests from local Windows applications to a printer attached to the remote system.

The components of the Host Support Server documentation are as follows:

- **Installation Leaflet**
Contains detailed information about installing the software.
- **readme**
This file may be included on the installation media to provide important last minute addenda.
- **Product Registration Card**
This enables you to register your copy of the Host Support Server in order to qualify for updates and technical support.

A S S U M P T I O N S

The following assumptions are made throughout the guide:

- HSS refers to Host Support Server version 3.2 or later.
- The MultiView Client refers to MultiView 2000 version 4.3 or later or MultiView DeskTop v3.2 or later.
- Windows refers to Microsoft Windows version 3 or later (or Windows 95 or later if using MultiView 2000).
- X refers to OSF/Motif Version 1.0.
- Your operating system is UNIX. If your operating system is different, e.g. AIX, then certain operating system functions may be different to those described in this guide.
- You are familiar with the use of Windows and the techniques for manipulating windows, menus, and dialog boxes. For more information about these topics refer to your operating system documentation.
- You are familiar with the use of a MultiView Client, and the techniques for configuring the Host Support capability of that Client. For more information about Host Support refer to the **DeskTop Guide** for MultiView DeskTop or **The SysAdmin Guide** for MultiView 2000

C O N V E N T I O N S

For clarity, this guide uses several consistent typographical conventions. These are as follows:

Type Style	Used for
<code>computer</code>	Anything you type exactly as it appears, and system prompts.
Bold	Menu names and items, dialog box names and buttons, and window names.
↵ <ESC> etc.	The special key on the keyboard, such as Return (or Enter), Escape , etc.
⇐	The Backspace key.
<i>Italics</i>	References to further information on a related subject.

The following symbols are used in the text to identify special instructions:

Symbol	Used for
•	A list of items.

GETTING STARTED

Product Registration

Please complete and return your Product Registration form. This ensures that you qualify for technical support and receive details of enhancements and new products.

Prior to installation

Verify that you do not already have a copy of one of the MultiView Software Family products already installed on your host system. If you do, then you should proceed as follows:

- **MultiView Mascot**
With MultiView Mascot already installed, it is not necessary to load the HSS software. To activate your HSS license, simply follow the instructions detailed on the Installation Leaflet.
- **MultiView**
With MultiView, or one of its derivatives, already installed, it is recommended that you upgrade to MultiView Mascot before installing the HSS. Installation of the HSS will overwrite your copy of MultiView and render it inactive.
- **Read the addenda**
Before installing HSS you should refer to any addenda that may have been issued with this product.

GETTING STARTED

Installing your Host Support Server

1 Installation instructions

Follow the instructions detailed on the Installation Leaflet if you are loading the software on to your host system.

2 Read the readme file

Your installation media may include a file called **readme**. This contains supplementary information about your version of the HSS. It may also contain important information relevant to your host system and/or operating system.

3 Performance tuning

Most UNIX operating system resources are set according to the number of terminals and applications potentially in use. Because HSS enables each user to operate many more applications than normal, it may be necessary to increase some of these resources such as character buffers, etc., before using HSS. You should refer to your UNIX system administrator's manual for more details.

Using your Host Support Server

HSS is now installed on your remote system. You need to configure the MultiView Client to use HSS when connecting to the remote system.

GETTING STARTED

Using Host Support Server with MultiView DeskTop

Configuring the remote system

- 1 Choose **Configuration** from the terminal emulator menu bar, and then **Nodes**.
- 2 Select the required **Node Name**, then click the **Configure** button.
- 3 In the **Configure Node** dialog, click on the **Available** option in the Host Support box.
- 4 Click **OK**.

Configuring an application in MultiView DeskTop

- 1 Click the application icon you want to enable Host Support for.
- 2 Choose **Configuration** from the MultiView Client menu bar, and then **Applications**.
- 3 Click the **Advanced** button.
- 4 In the **Advanced Configuration** dialog, click on **Host Support Available** in the **Options** box. If the **Host Support Available** field is grayed out, repeat the steps for 'Configuring the remote system', above.
- 5 Click **OK**.
- 6 In the **Command** field, type the applications program filename, including any parameters. The command to be run must be a UNIX executable. HSS requires that a command is specified before the application can be run. If you do not type a command, you will be prompted to specify one when you run the icon.
- 7 Click **Modify**.

GETTING STARTED

Configuring the login

Now your remote system and application are configured to use HSS. The next time you choose the application icon, the connection will be an HSS connection. At this point, it is important to note that with an HSS connection, you must connect into a UNIX shell working environment. If you have enabled the automatic launch of your application, e.g. in the users profile, this **must** be removed, otherwise the HSS connection will fail.

Using Host Support Server with MultiView 2000

Full configuration details for MultiView 2000 are covered in **The SysAdmin Guide** which is available from your MultiView Software Family CD.

The connection process

These are the steps taken by the MultiView Client after you have selected the icon to run, showing why it is important to set the login environment correctly:

- 1 The MultiView Client starts.
- 2 The login procedure takes place as normal.
- 3 The users `.profile` commands are executed.
- 4 Host Support is initiated.
- 5 Your application **Command** is executed on the remote system.

What next ?

You may wish to configure the HSS to suit your own environment. Refer to the remaining chapters for detailed information on HSS configuration.

H S S F I L E S

Introduction

Standard installation

The files installed by the HSS installation procedures are installed into the following directories:

- The HSS central directory `/usr/mvw`.
- The HSS home directory, by default the user's home directory.
- The UNIX application program directory `/usr/bin`.
- The UNIX device directory `/dev`.
- The UNIX temporary file directory `/tmp`.

The HSS central directory

Most of the files used by HSS are located in what is referred to as the **HSS central directory**. By default this is `/usr/mvw`, but this can be overridden by defining a UNIX environment variable `$MVWDIR`. See **Overriding the file accessing defaults** for further details.

Files

The central directory contains the following configuration files used by HSS :

- **The MultiView Software Family Mascot / HSS command file :**
For version 3 this is called `mascot.rc`
For version 4 this is called `.mvw_messages`
- **The tty control file `mvw_ttys`**
- **The pty control file `mvw_ptys`**

H S S F I L E S

Application programs

The HSS central directory contains the HSS application programs. By default this sub-directory is named `bin`.

- **The file transfer program, `mvw_xfer`, is located in the `bin` sub-directory.**
- **You can add your own programs to the HSS application program directory.** Each program's name should be prefixed by `mvw` to identify it as an HSS application program.
- **Execute permission must be set on all of the programs in this directory.**
- **You can override the directory name by changing prompt 1 in the MultiView Mascot command file.**

The HSS home directory

Files specific to individual users are saved in what is referred to as the HSS home directory. By default, this is the user's home directory, as defined by the UNIX environment variable `$HOME`. This default can be overridden by defining a UNIX environment variable `$MVWHOME`. See the product documentation for further details.

H S S F I L E S

The UNIX application program directory

The main program used by HSS, `mvw_ixsrv`, is installed by default into the UNIX application program directory `/usr/bin`. This can be moved to any other suitable directory.

The users UNIX `$PATH` environment variable must reference this new directory. It is important that `mvw_ixsrv` has a user ID set to `root` so that HSS can maintain operating system functions such as the `/etc/utmp` file and the linking of devices. The MultiView Mascot program is also installed into this directory. This program provides a 30 day evaluation of the functionality of the MultiView Mascot product.

The UNIX device directory

The UNIX device directory `/dev` contains the operating system pseudo ttys. Each application run by HSS is assigned one of these devices to act as the tty terminal device. If a user chooses to use the local printer facility, HSS will create a link between a pseudo-tty device and the local printer in this directory.

The UNIX temporary file directory

A number of temporary files are created in the UNIX `/tmp` directory during an HSS session. Each file is prefixed by `mvw_` and suffixed by the process ID (`pid`) to make sure that it is unique.

These temporary files are deleted automatically when all applications have terminated and the HSS connection is being closed. If a user's session terminates abnormally, these files will not be deleted.

H S S F I L E S

Overriding the file accessing defaults

HSS has been designed so that different users on the system can be given access to a different range of facilities, depending on their requirements.

The following options are available :

To create a separate HSS system - On some remote systems it is not desirable to install files into the `/usr` directory. During installation you may choose the directory path where your HSS central directory is to be installed. Alternatively, you may want to create a separate set of files for other purposes, while leaving the standard set of files in the original central directory. To do this you need to copy all the files from their original location in the central directory to the directory you want to use, and set the environment variable `$MVWDIR` to contain the name of the new directory.

For example, to set up a copy of HSS in the directory `john/hss`, proceed as follows:

```
mkdir hss
cd /usr/mvw
find * -print | cpio -pd /usr/acct/john/hss
```

Then set the environment variable `$MVWDIR`, as follows:

for the Bourne shell :

```
MVWDIR=/usr/acct/john/hss
export MVWDIR
```

for the C shell:

```
setenv MVWDIR /usr/acct/john/hss
```

Running HSS will then run the copy in `/usr/acct/john/hss` in preference to the standard copy in `/usr/mvw`.

H S S F I L E S

To change the location of personal files - The HSS home directory can hold files specific to each HSS user. HSS will use copies of files in the HSS home directory in preference to the files in the HSS central directory.

By default, the HSS home directory is the directory specified by the UNIX environment variable `$HOME`. You can override this by using the `$MVVHOME` environment variable.

To include your own HSS application programs - You can add your own programs to the HSS application program directory, by default this is `/usr/mvw/bin`. Each program's name should be prefixed by `mvw.` to identify it as a HSS application program. Execute permission must be set on all of the programs in this directory.

U S I N G H S S

The Host Support Server is usually automatically invoked on the remote system when the MultiView Client makes its first Host Support connection. In the case of MultiView 2000 the Host Support Server will only be invoked if the `start_HSS` command has initially been included in the Script. The name of the program which provides Host Support is `mvw_ixsrv`. As the connection is established this program is invoked automatically using default command `exec mvw_ixsrv\r`.

The options provided by the Host Support Server are listed below. Some of these are automatically available, whereas others require an argument to be added to the command. This is normally configured on the MultiView Client. For MultiView 2000 see **The SysAdmin Guide** for more details.

Multiple applications per single login

With Host Support on a remote system you can run multiple applications across a single 'login' session, even over an RS232 connection. This means that you negotiate the connection procedure only once. Thereafter, applications run on the remote system will be run without requiring any further login procedure.

File transfer

The presence of Host Support on a remote system enables you to use the MultiView Client File Transfer application. This provides you with a simple way to move files between your local and remote systems.

MultiView DeskTop Users

See the DeskTop File Transfer online help for more details.

MultiView 2000 Users

See **The SysAdmin Guide** for more information.

U S I N G H S S

Remote print requests redirected to local printer

This facility allows you to redirect remote print requests to a printer attached to your local PC. See the following section for more detailed information.

Windows print requests redirected to remote printer

This facility allows you to redirect print requests from local Windows applications to a printer attached to the remote system. See the following section for more detailed information.

PRINTING WITH HSS

Local Printing

This facility allows you to redirect remote print requests to a printer attached to your local PC. HSS provides this service by linking a printer device in the UNIX device directory to a pseudo `-tty` device in the same directory. Any information written to this printer device is passed through HSS to the local PC and then printed on the specified local printer.

Configuring the Host Support Print Device

The print device is created on the remote system at the point the initial HSS connection is made. The HSS remote program is invoked with the `-p` printername flag. To configure the product to invoke HSS with a printer device:

MultiView DeskTop Users

- 1 Choose **Configuration** from the MultiView DeskTop menu bar, and then **Nodes**.
- 2 Select the required Node Name, then click the **Configure** button.
- 3 In the Configure Node dialog, click on the **Printer** option in the Host Support field.
- 4 Enter the printer device name you will be using in the Printer Name field in the Host Support box. If you do not prefix the printer name with the path of `/dev/`, it is added automatically by HSS at run time.

MultiView 2000 Users

See **The SysAdmin Guide**. The device is deleted at the end of each HSS session. This ensures the remote print systems integrity is maintained if it tries to use the device and the HSS connection is no longer open. If, during a MultiView Client login, the connection fails with the message: "Remote Server Failure" this usually means the device was not deleted at the end of the last session. Remove the file from the UNIX device directory to correct this problem.

PRINTING WITH HSS

Remote Printing

This option allows you to redirect print requests from local Windows applications to a printer attached to the remote system.

If you are using a network software package to provide connectivity to your remote system, this may provide an equivalent facility, for example LPR. If it does, for reasons of speed, you are encouraged to use it rather than the HSS facility.

The way in which HSS provides remote printing is to transfer the print file from the local PC to the remote system. A command is then invoked on the remote system to pass the print file to the print system.

MultiView DeskTop Users

- 1 Add a new Windows printer. In the Add Printer Wizard dialog box that follows, choose **My Computer**.
- 2 Click **Next** and then **Add Port**. Select **MultiView 2000 Remote Printer Port**.
- 3 Next choose **New Port**. Follow the on screen prompts ensuring you choose Host Support in the Printer Protocols dialog box.
- 4 If the remote command in the Host Support Configuratoin Box needs editing, alter it now.
- 5 Click **Finish**.

These settings can be altered at any time through Printer Properties.

MultiView 2000 Users

See **The Sys Admin Guide** for details of how to configure remote printing.

C O N F I G U R A T I O N

MultiView DeskTop configuration

The MultiView DeskTop HSS environment is controlled using the control file `MVIEW.INI`. The `MVIEW.INI` file is similar in format to the Windows `WIN.INI` file, and is installed in the Windows directory. It contains information specific to remote systems and other settings, all of which have been entered through the MultiView DeskTop user interface. Unless otherwise advised to do so, you should use the MultiView DeskTop user interface to configure this file. The layout of the file consists of sections named in the form:

```
[multiview-...]
```

Followed by the section details in the form

```
identifier=value
```

MultiView 2000 configuration

For information on how to configure the MultiView 2000 environment see the product documentation for further details.

Host Support program name

The name of the program on the remote system which provides Host Support is `mvw_ixsrv`. When the initial Host Support connection is established, this program is invoked automatically using the command, `exec mvw_ixsrv\r`. You can rename the program as follows:

MultiView DeskTop Users

To rename the program, configure the `MVIEW.INI` section: `[multiview-nodename]` where **nodename** is the name of your remote system. Add the following two lines:

C O N F I G U R A T I O N

```
servertunables=yes
```

```
initial=exec hostsupport\r
```

where `hostsupport` is the new name for the Host Support program.

MultiView 2000 Users

- 1 Open the Host Support tab of the Session Properties dialog and click the **Advanced** button.
- 2 Enter the new name for the Host Support program into the **HSS Command** edit field.

Remote host `utmp` file updating

The UNIX `utmp` file is used by certain UNIX commands such as `who`, to derive information on which users are using which ttys. HSS maintains the integrity of the `utmp` file by logging each application separately. You can restrict this to the initial connection only. Host Support may be invoked with the `-u` flag in order to request that the remote `utmp` file not be updated on a per pseudo-ty basis but on a once-per-connection basis. To configure the remote system:

MultiView DeskTop Users

- 1 Choose **Configuration** from the MultiView DeskTop menu bar, and then **Nodes**.
- 2 Select the required **Node Name**, then choose the **Configure** button.
- 3 In the **Configure Node** dialog, click off the **Update** `utmp` file option in the Host Support box.

C O N F I G U R A T I O N

MultiView 2000 Users

- Open the Host Support tab of the Session Properties dialog and uncheck the Update `utmp` file box.

Forcing 7-bit protocol

MultiView DeskTop

You may experience problems establishing Host Support connections with MultiView DeskTop. If one or more computer devices exists between your local PC and the remote system, the problem may be because the connection is not 8-bit clean through all these devices.

To address this problem you can direct the MultiView Client to use 7-bit protocols across the connection. Configure the `MVIEW.INI` section: `[multiview-node-name]` where `nodename` is the name of your remote system. Add the following two lines:

```
servertunables=yes
```

```
sevenbitxport=yes
```

MultiView 2000

The MultiView 2000 Policy Editor Template file adds a branch into the Machine Policy tree that allows you to configure using 7-bit transport.

UNIX configuration

The UNIX HSS environment is controlled using the control files found in the central directory, by default this is `/usr/mvw`.

C O N F I G U R A T I O N

Specifying terminal and user information

The `mvw_ttys` provides configuration options on a per-user or connection (tty), basis. The layout of the file consists of a series of entries, each of which have the following syntax : `ttyname:timeout=value, windows=value` or: `username:windows=value`

Where `ttyname` is a real tty name, such as `tty02`, and defines the original HSS tty device. `username` is a UNIX user name, such as `root`. The keyword `windows` specifies the number of windows available to the specified tty or user. If omitted, it defaults to the maximum. The keyword `timeout` specifies the time-out period used when processing input keystrokes for a specified tty. The default is set in tenths of a second. If omitted, it defaults to 10, i.e. one second.

The tty name can be specified as 'others' to specify values for all remaining users or tty names. The keywords 'timeout' and 'windows' can be abbreviated to 'tim' and 'win', respectively. A sample `mvw_ttys` file is:

```
##HSS tty information file:
##
root:windows = 4
tty01:windows = 4
tty02:timeout = 15 , windows = 4

others:timeout = 20
```

To limit the number of connections

If your system has a large number of users and a small number of available pseudo-ttys, you can limit the number of application windows available to users in the `mvw_ttys` file and therefore reduce the numbers of pseudo-ttys used.

The number of windows to be used must be less than or equal to the maximum number of windows available per connection for which your product has been configured, and must be at least two. This number is inclusive of a local printer

C O N F I G U R A T I O N

'window', even if it is not in use. For example, a value of 3 implies two on-screen windows plus a local printer. A user restriction will supersede a tty restriction as user details are matched prior to tty ones.

Performance tuning

Most operating system resources are set according to the number of terminals and applications potentially in use. Because HSS enables each user to operate many more applications than normal, it may be necessary to increase operating systems limits such as character buffers etc., before installing this product. You should refer to your UNIX system administrator's manual for more details.

MultiView 2000 Users

See **The SysAdmin Guide** for more information on how to optimize the performance of Host Support.

Pseudo-ttys

HSS makes use of the built-in pseudo-tty devices. Each pseudo-tty device consists of a pair of UNIX devices in the `/dev` directory called the pty device and the tty device. These are named:

```
pty[p-E][0-f]  
and:
```

```
tty[p-E][0-f]
```

They are followed by two digits, the first of which ranges from `p` to `E`, and the second of which ranges from `0` to `f`, giving a total of 256 alternatives. A typical pair of devices, comprising one pseudo-tty, is:

```
/dev/ttyp0
```

```
/dev/ptyp0
```

C O N F I G U R A T I O N

These two devices are identified as a pair by having matching last four characters. The device prefixed by `/dev/tty` is termed the slave, and the device prefixed by `/dev/pty`, the controller. The application communicates with the slave device, which behaves as a real tty device as far as the application is concerned.

The `mvw_ptys` file

This file exists in the HSS central directory, usually `/usr/mvw`. It performs the task of naming the UNIX operating system pseudo-ttys that HSS will use to communicate with the processes running in each window. Each pseudo-tty is defined by a statement:

```
controller-device:slave-device
```

where `controller-device` specifies the pty, and `slave-device` the corresponding tty. Pseudo-ttys are also used by other applications, such as local area network products, and you may need to configure the `mvw_ptys` file to avoid conflicts with such applications. Refer to the comments in the `mvw_ptys` file for more details on the defaults available with your system.

To use a clone device

For a STREAMS-based system with the clone device available, there is a single line entry which contains the name of the clone node:

```
clone:"clonename"
```

The `clonename` is a device name in `/dev` whose major device number is the clone device `/dev/clone` and whose minor device number is the same as the major device number of the device to be multiplexed; i.e. a pseudo-tty controller device.

```
clone:ptmx
```

C O N F I G U R A T I O N

indicates that `/dev/ptmx` is such a device. For more information please refer to your UNIX system documentation.

The following example shows a STREAMS `mvw_ptys` file:

```
##
## If present, this file overrides HSS default
names, ie,
##
## pty[p-E][0-f]
## tty[p-E][0-f]
##
## The format is:
## controller_device:slave_device
##

clone:ptmx
```

To use a non-clone device

If you are running on a non-STREAMS system, or on a system which is STREAMS-based but has no clone device, you will need to define a set of pseudo-ttys for each user of HSS. Each set should take into account the maximum number of windows allowed per user. If other applications also make use of these system resources, then additional pseudo-ttys must be made available.

For example, if the number of pseudo-ttys required by other applications using these system resources is eight, the number of HSS users is four, and the number of HSS application windows allowed per user is six, then thirty six pseudo-ttys need to be defined, ie $8+4+(4\times 6)$.

The names will normally be in an unbroken sequence starting with the pseudo-ttys corresponding to minor device zero. However, it may be necessary to

C O N F I G U R A T I O N

reverse the order of the entries, or to miss some entries out, and start at a higher minor device to avoid conflict with other applications that make use of these pseudo-ttys.

For example, the following file defines twelve pseudo-ttys:

```
##
## If present, this file overrides HSS's default
## names, ie,
##
## pty{p-E}[0-f]
## tty{p-E}[0-f]
##
## The format is:
## controller_device:slave_device
##
ptyp0:ttyp0
ptyp1:ttyp1
ptyp2:ttyp2
ptyp3:ttyp3
ptyp4:ttyp4
ptyp5:ttyp5
ptyp6:ttyp6
ptyp7:ttyp7
ptyp8:ttyp8
ptyp9:ttyp9
ptypa:ttypa

ptypb:ttypb
```

TROUBLESHOOTING

Remote error messages log

If you experience problems when using Host Support you may find it useful to examine an error log file which Host Support attempts to create on the remote system. This file is named `MvwLog.ttyname` where `ttyname` is the `tty` on which the remote Server is running. This file is usually found in the `/tmp` directory on the remote system.

For more information on this file and its possible contents see the terminal emulator online help.

Terminating an HSS session

If it is necessary to abnormally terminate an HSS session, you should always use the `SIGHUP` signal (`kill -1`) to allow HSS to complete the end of session procedures. The `SIGHUP` will be propagated to the application windows. You should only use `SIGKILL` (`kill -9`) as a last resort.

Common Problems and Solutions

Remote Server failure

- | | |
|-----------------|--|
| PROBLEM | When trying to login to a remote system the error message 'Remote Server Failure' is received. With some older versions of DeskTop this maybe 'Can't create pseudo tty devices'. |
| CAUSE | This usually happens when trying to connect with Host Support and specifying a pseudo print device that already exists in the <code>/dev</code> directory. |
| SOLUTION | Remove the device from the <code>/dev</code> directory. You will find the name of the device to remove in the Configure Node dialog, Printer Name field. |

TROUBLESHOOTING

Transparent printing adding extra escape characters

PROBLEM When using the print facility that allows you to redirect remote print requests to a printer attached to your local PC (also referred to as Transparent Printing), the data is printed incorrectly.

CAUSE This is normally caused by the Windows printer driver formatting a print job that has already been formatted on your remote system.

SOLUTION **MultiView DeskTop**
Apply the Transparent Printer device (`XPRNT.DRV`) to the printer you are using to receive remote print jobs. This driver does not add any additional formatting.

MultiView 2000
Open the Host Support Client and choose **Printer** from the **Configure** menu. Tick **Send Data Unformatted**.

Host Support Problem, can't synchronize

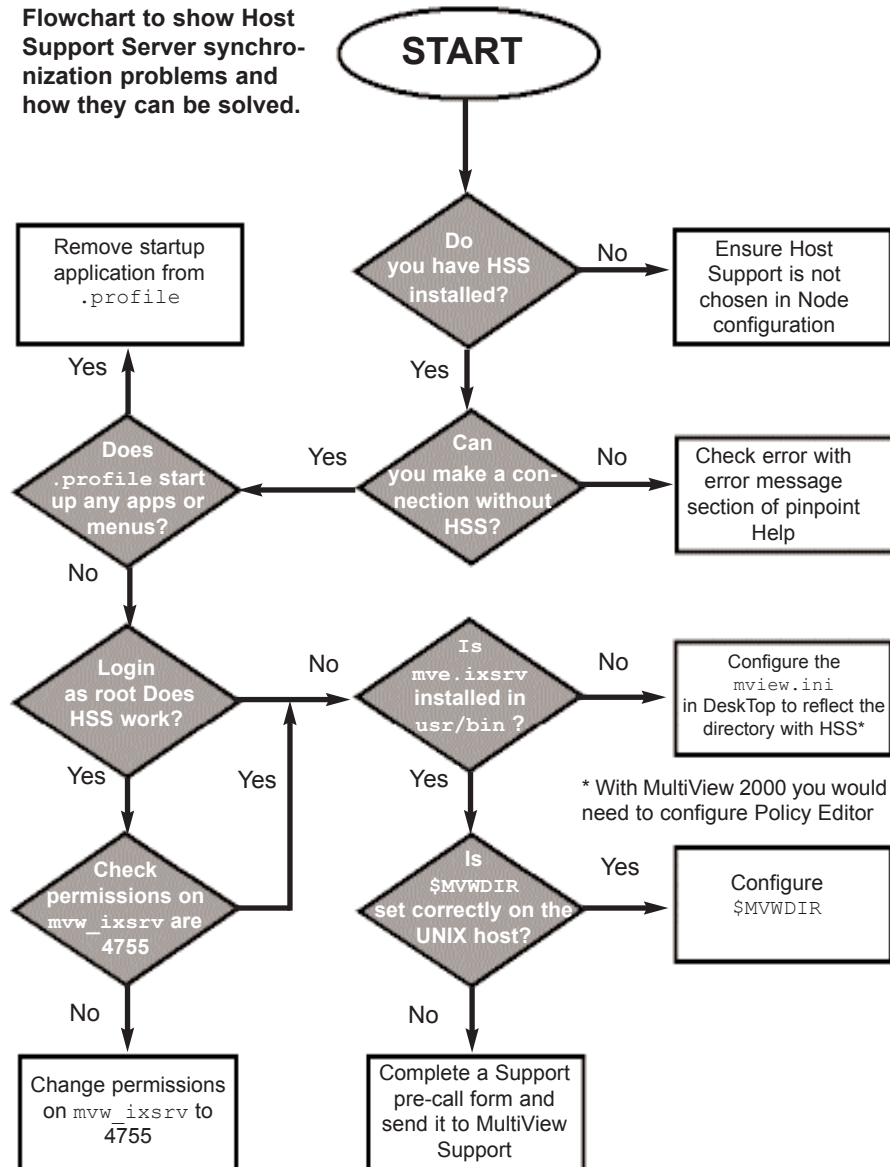
PROBLEM When connecting to a remote system, a connection is made and then stops on synchronizing, eventually giving a synchronizing error message.

CAUSE There can be several reasons why this happens.

SOLUTION The following flowchart details the different problems that might arise and how they can be solved.

TROUBLESHOOTING

Flowchart to show Host Support Server synchronization problems and how they can be solved.



A P P E N D I X

Communications messages

Messages with asterisks are generic and could be experienced with both MultiView DeskTop and MultiView 2000.

Messages without asterisks are exclusive to MultiView DeskTop and will not occur when MultiView 2000 is in use. If you experience any problems not listed below with MultiView 2000, please contact Technical Support.

All messages marked with an asterisk (*) occur on a remote system having Host Support. They are logged in the `/tmp` directory in the file `MvwLog.ttyname` Where `ttyname` is the tty on which the remote server is running. Access the log file to view the communications messages.

General Messages

Bad Connection specified (connection type)

PROBLEM A problem occurred during a connection attempt using connection type.

SOLUTION Try closing down some existing connections to remote systems. If none exist close down your Windows session, reboot your machine and try the connection again.

Can't access real tty*

PROBLEM The Server cannot access the tty on which it is running.

SOLUTION This may be due to permissions problems on the device in question.

A P P E N D I X

Can't allocate device slot*

PROBLEM The remote Server cannot initialize a particular pseudo tty device successfully.

SOLUTION This is probably due to a memory allocation problem on the remote system.

Can't allocate devices*

PROBLEM Host Support cannot allocate more pseudo ttys from its pool.

SOLUTION See your system administrator.

Can't bind to socket (connection type)

PROBLEM A problem occurred during a connection attempt using connection type.

SOLUTION Try closing down some existing connections to remote systems. If none exist close down your Windows sessions, reboot your machine and try the connection again.

Can't change device ownership*

PROBLEM The remote server cannot change ownership of its new set of pseudo ttys to the ID of the current user.

SOLUTION This may be a permissions problem.

A P P E N D I X

Can't close controller device*

PROBLEM The server cannot close the Host Support controlling device.

SOLUTION See your system administrator.

Can't create new process*

PROBLEM The server cannot create a new process for a newly invoked application.

SOLUTION You have probably encountered a system process limit.

Can't create pseudo tty devices*

PROBLEM The server cannot create a new set of pseudo tty devices.

SOLUTION This is probably due to a permissions problem.

Can't create socket (connection type)

PROBLEM A problem occurred during a connection attempt using connection type.

SOLUTION Try closing down some existing connections to remote systems. If none exist close down your Windows session, reboot your machine and try the connection again.

A P P E N D I X

Can't find Dynamic Link Library Network Module for connection type

PROBLEM The Dynamic Link Library (DLL) Network Module which provides support for the connection type cannot be found.

SOLUTION Ensure the Dynamic Link Library (DLL) Network Module is either in the current directory or in a directory contained in your `$PATH` environment variable.

Can't find print server program

PROBLEM DeskTop cannot locate the program which provides printing services.

SOLUTION Ensure the program exists either in the current directory or in a directory contained within your `$PATH` environment variable.

Can't free pseudo tty devices*

PROBLEM The server cannot free a set of pseudo tty devices.

SOLUTION This may be due to a problem with the controlling device `/dev/mwdev` on the remote system.

Can't get real tty name*

PROBLEM The Host Support server is unable to establish the name of the tty on which it is running.

SOLUTION This may be a permissions problem.

A P P E N D I X

Can't initialize device*

PROBLEM Initialization of a pseudo tty device for a new process (application) has failed.

SOLUTION See your system administrator.

Can't open command file filename for node (nodename)

PROBLEM You have asked DeskTop to run a command file that it cannot find.

SOLUTION Check the file is named correctly and retry. Also check your `$MVWDIR` environment variable is configured correctly.

Can't open communications port COMn

PROBLEM COMn is the port you are attempting to use.

SOLUTION Check the port is available and correctly configured. If the configuration appears correct, try closing down your session and rebooting your machine. Then attempt to run the application again.

Can't open controller device*

PROBLEM The remote server cannot open a pseudo tty controlling device for association with a new process (application).

SOLUTION This is probably due to a permissions problem or the device has been removed since the server was first invoked.

A P P E N D I X

Can't open controlling device (/dev/mvwddev)*

PROBLEM The server cannot make use of the Host Support controlling device.

SOLUTION This is probably because it has been removed from the system or has the wrong permissions.

Can't open slave device*

PROBLEM The remote server cannot open a pseudo tty device for association with a new process (application).

SOLUTION This is probably due to a permissions problem, or is because the device has been removed since the server was first invoked.

Can't register serial number*

PROBLEM The server cannot register the serial number of your DeskTop with Host Support.

SOLUTION See your system administrator.

Can't remove existing devices*

PROBLEM The server cannot remove a redundant set of pseudo tty devices.

SOLUTION This is probably due to a permissions problem.

A P P E N D I X

Can't resynchronize. Exiting.*

PROBLEM The remote server has detected an error from which it cannot recover.

SOLUTION Check the connection between your local PC and remote system.

Can't synchronize with child process*

PROBLEM The server cannot synchronize with the remote server.

SOLUTION See your system administrator.

Can't synchronize with parent process*

PROBLEM The new child process (application) cannot synchronize with the remote server.

SOLUTION See your system administrator.

Can't understand command in command file filename

PROBLEM The DeskTop DOS server cannot understand the specified command in the command file filename.

SOLUTION Edit the filename, correct the command and try again.

A P P E N D I X

Close Failure (connection type)

PROBLEM An attempt to close an existing connection (using connection type) has failed.

SOLUTION This may be due to a number of reasons such as:

- the configuration of the software providing the connection (a local network package)
- the physical connection to the remote system has been broken
- the remote system has stopped running.

Connection Failure (connection type)

PROBLEM The attempt to establish a connection using connection type failed.

SOLUTION Check your software is configured correctly and that the physical connection route is not causing the problem.

Check that the machine to which you are trying to connect is running.

Connection Problem: Timed Out (connection type)

PROBLEM A problem occurred during a connection attempt over connection type.

SOLUTION Try the connection again. If this doesn't work try closing down some existing connections to remote systems. If none exist close down your Windows session, reboot your machine and try the connection again.

A P P E N D I X

Error Correction Failure

PROBLEM The synchronization between the local and remote servers has failed.

SOLUTION Check your connection. You can also specify a retry.

Fail to get data for node (nodename)

PROBLEM Configuration data for the specified node cannot be obtained due to some problem.

SOLUTION Retry the process.

Failed to Connect to node

PROBLEM The connection attempt failed.

SOLUTION Try to connect again. Ensure that the remote system is available.

Failed to send command (command file filename)

PROBLEM This error is associated with executing a communication command file with the name filename. While executing the command filename, the displayed command has not been sent.

A P P E N D I X

SOLUTION This is either caused by an error in the command or other problems associated with communications. For errors in the command, correct the command and try again.

For other associated communications problems, other messages will be displayed to assist you.

Host Support Module User License Limit Exceeded

PROBLEM You are attempting to run more copies of DeskTop than your Host Support Module license permits.

SOLUTION You should obtain more licenses from your supplier.

Initialization Fail

PROBLEM The DeskTop Communications Server has suffered an internal failure.

SOLUTION This is probably due to memory problems. Try closing other applications and try again.

Kernel configuration error (NWPT >n)*

PROBLEM The Server has detected a problem wherein Host Support has been configured to support more than 'n' Windows per real tty.

SOLUTION See your system administrator.

A P P E N D I X

Line hang up*

PROBLEM The line on which the remote Server was running was abnormally disconnected.

SOLUTION This may occur on a modem or standard RS232 line and may be due to a physical or virtual break in the line.

Lost Connection (connection type)

PROBLEM An existing connection was terminated for some reason by the remote system.

SOLUTION This may be due to a number of reasons such as:

- the configuration of the software providing the connection (a local network package)
- the physical connection to the remote system has been broken
- the remote system has stopped running.

No HOSTS file (connection type)

PROBLEM The software package connection type cannot locate the file which determines the address of the machine to which you are connecting.

SOLUTION Check the configuration of connection type.

No more connections available to this node using (connection type)

PROBLEM DeskTop has been configured to provide a maximum number of connections to the node to which you are trying to connect and this number has already been reached.

A P P E N D I X

SOLUTION Increase the maximum number of connections available.

No more connections available using (connection type)

PROBLEM DeskTop cannot create any more connections using the connection type.

SOLUTION Either reconfigure your DeskTop or configure your network software to support more connections.

No more local ports available (connection type)

PROBLEM A problem occurred during a connection attempt.

SOLUTION Try closing down some existing connections to remote systems. If none exist close down your Windows session, reboot your machine and try the connection again.

No more minor devices left*

PROBLEM There are no more pseudo tty minor devices available to the remote Server.

SOLUTION See your systems administrator.

No more ttys left*

PROBLEM The maximum number of real ttys supported by Host Support has been reached.

SOLUTION See your system administrator.

A P P E N D I X

No phone number specified. Do you want to continue?

PROBLEM You omitted to specify a phone number.

SOLUTION Specify a phone number.

Packet error detected*

PROBLEM The Server detected an error on the packet protocol it uses to communicate with the DeskTop DOS Server.

SOLUTION The implicit error correction procedure should have resolved the problem. See your system administrator.

Post Read Failure (connection type)

PROBLEM An attempt to read from the machine to which a connection already existed has failed.

SOLUTION This may be due to a number of reasons such as:

- the configuration of the software providing the connection (a local network package)
- the physical connection to the remote system has been broken
- the remote system has stopped running.

Read Failure (connection type)

PROBLEM An attempt to read from the machine to which a connection already existed has failed.

A P P E N D I X

- SOLUTION** This may be due to a number of reasons such as:
- the configuration of the software providing the connection (a local network package)
 - the physical connection to the remote system has been broken
 - the remote system has stopped running.

Remote Failure (connection type)

PROBLEM Some problem on the remote system has led to the termination of an existing connection through connection type.

SOLUTION Check the remote system.

Remote Server Failure (nodename)

PROBLEM During running of an application on a remote system using Host Support, an irrecoverable error has occurred.

SOLUTION Try other applications at the same remote node and if they fail, close any applications running at that node and then close the connection and restart. If this fails view the messages logged at that remote system.

Resource creation problem

PROBLEM A Window's internal resource allocation has failed.

SOLUTION Try closing down some windows.

A P P E N D I X

REXEC Failed: (message)

PROBLEM An attempt to connect using the TCP/IP REXEC protocol failed because of the problem detailed by message.

SOLUTION Try and check the configuration of this application. Ensure the command is correct and that you enter the correct login name and password.

Server initialization failure

PROBLEM A general error has occurred on initialization of the Server.

SOLUTION This may be due to a memory allocation problem on the remote system.

Timed out. Do you want continue?

PROBLEM When replaying a previously learned connection procedure, DeskTop has failed to receive an expected sequence of characters.

SOLUTION This may be because you entered your password incorrectly, your password has expired, or some other reason. To continue the connection procedure, choose **OK**. You will then be able to continue the connection through the resulting dialog box. This is exactly the same as the Learn login dialog box, with the addition of a **Hide Input** option which allows your input to be disguised for secure items such as password prompts.

This error may also occur due to a slow performing host. Try increasing the timeout keyword value to cure the problem.

A P P E N D I X

Transport Error number (package)

PROBLEM A low level problem detailed by number occurred when connecting through package.

SOLUTION Check the configuration of package. Try the connection again.

TSR/DLL Network Module for (connection type) not loaded

PROBLEM The TSR or DLL which provides support for the connection type you are using cannot be located.

SOLUTION Load the appropriate TSR before running Windows check to see that your network package is configured correctly.

Unknown remote node (connection type)

PROBLEM The node to which you are trying to connect is unknown to the software providing the connection type connection type.

SOLUTION Ensure that you defined this node when configuring your connection type software. For example, for TCP/IP connection types, this usually means that the node is not defined in your HOSTS file.

User License limit exceeded

PROBLEM The Server has detected more instances of MultiView DeskTop than are supported. You are in breach of your User License Agreement.

SOLUTION Erase the illegal copies and obtain additional licenses from your authorized supplier.

A P P E N D I X

Write Failure (connection type)

PROBLEM An attempt to write to the machine to which a connection already existed has failed.

SOLUTION Check the configuration of the software providing the connection (a local network package). Check whether the connection to the remote system has stopped running. Retry the operation.

(connection type) support not found

PROBLEM The connection type software cannot be located on your machine.

SOLUTION Ensure it is loaded/configured correctly.

Terminal emulator - messages

Can't create the Terminal Emulator Window

PROBLEM Your local system cannot create the terminal emulator window invoked to run a remote application.

SOLUTION This is usually due to an error in the `MVIEW.INI`, or to a memory allocation failure. Check the syntax in the `MVIEW.INI` file if no memory problem exists. If necessary delete the relevant section with your text editor and reconfigure through the MultiView DeskTop user interface.

A P P E N D I X

Can't execute Server for node (nodename)

PROBLEM This message appears when you terminate a session on the remote system without Host Support installed and with Auto Disconnect not set for the node.

SOLUTION Continue or cancel.

Can't execute command at node (nodename)

PROBLEM 'command' is the program you are trying to invoke at the specified node. If nodename is the local node then either the command does not exist or the path name is incorrectly specified.

SOLUTION If nodename is non-local it means that there are communication problems between the local and remote system preventing the application being invoked.

This may be due to memory problems. Try closing down some applications.

Can't initialize the Terminal Emulator

PROBLEM Although the terminal emulator can be created it will still not run applications.

SOLUTION This is usually due to an error in the `MVIEW.INI`, or to a memory allocation failure.

A P P E N D I X

Can't understand initialization data

PROBLEM Errors exist in the `MVIEW.INI` or `WMGR.RC` file related to the terminal emulator data.

SOLUTION Check the syntax of the files and retry.

Connection channel busy

PROBLEM A connection cannot be made to a remote system because the communication line is busy. This can happen if you have run up a session to a remote system specifying no Host Support over an RS232 line and you attempt to run a second session to that remote system.

SOLUTION It can also occur if a phone line is busy. Close the application occupying the communications line before you invoke a new session using the same communications line.

Maximum number of windows already running on node (nodename)

PROBLEM Nodename is the name of a remote system.

SOLUTION This message appears when you have reached the limit of the number of windows available on a remote system when using Host Support. This is usually six windows.

Close a window down before starting a new window for the node to avoid the problem.

A P P E N D I X

The command has terminated

PROBLEM The remote command has exited.

SOLUTION Choose the **OK** button.

This will terminate the connection

PROBLEM This message appears when you terminate a session on the remote system without Host Support installed and with Auto-Disconnect not set for the node.

SOLUTION Continue or cancel.

Application still active

PROBLEM Cannot close the window because a remote application is still active.

SOLUTION Exit the remote application first.

manager -d: not supported

PROBLEM This UNIX manager option is not supported.

SOLUTION This feature is no longer supported.

A P P E N D I X

No node specified

PROBLEM The terminal emulator has been launched without knowing which node to attempt to connect to.

SOLUTION Check your configuration.

This may abnormally terminate the application

PROBLEM Closing the remote application down in this way may cause it to terminate without tidying up. Do you want to proceed?

SOLUTION This is a warning that proceeding may cause problems. You may want to try exiting the application before closing the window.

Unknown DDE topic

PROBLEM The specified DDE topic is unknown to the terminal window.

SOLUTION Check your existing DDE configuration.

Unknown terminal emulation type

PROBLEM The specified terminal emulation type is not supported.

SOLUTION The specified terminal type is not known to MultiView DeskTop. Check your configuration.

A P P E N D I X

Printing - messages

Can't create timer

PROBLEM The local printer support program cannot create a timer.

SOLUTION If your print job is incomplete, close down all applications running on the same host as the application using the local printing facility.

Spooler out of disk space

PROBLEM The Windows print spooler has run out of space on the current disk drive for a spool file.

SOLUTION Delete some existing files.

Spooler out of disk memory

PROBLEM The Windows print spooler cannot obtain sufficient memory.

SOLUTION Close some existing applications.

A P P E N D I X

General Spooler error

PROBLEM An internal Windows spooler error has occurred.

SOLUTION Try rebooting your machine.

Can't find default printer

PROBLEM The printer specified as the default Windows printer has not been detected.

SOLUTION Check the connection to the default printer.

Cannot access default printer

PROBLEM MultiView DeskTop cannot initialize the printer/spooler.

SOLUTION Check the connection to the printer.

DDE - messages

(nodename) no such node

PROBLEM The specified node does not exist.

SOLUTION Check that nodename represents a node known to MultiView DeskTop. To view the node, on the MultiView DeskTop **Configuration** menu, click **Nodes**.

A P P E N D I X

Continue waiting for DDE Client to respond?

PROBLEM An application that the terminal window is currently supplying with DDE information seems to have stopped responding, keep trying?

SOLUTION Check to see if your DDE Client is still running. If it is, select **YES**, otherwise select **NO**.

File Transfer system - messages

Cannot create (filename)

PROBLEM You have attempted to transfer a file but it could not be created at the destination you specified.

SOLUTION Check that you have access permission to the remote system. See your system administrator if you need access permission. Copy the file to a destination where you already have access permission.

Cannot get data connection. Transfer terminated

PROBLEM The File Transfer program cannot get configuration details of your local PC.

SOLUTION Check that the installation of the TCP/IP stack is correct. Ensure that all hosts named are actually configured.

A P P E N D I X

Cannot get file information about (%s)

PROBLEM The File Transfer program is trying to get a file listing from a remote system but is being refused the listing.

SOLUTION Check the access permission on the remote system.

Cannot get file information. Connection terminated

PROBLEM The File Transfer program cannot get information about a file.

SOLUTION Check that you have access permission to read the file.

Cannot get file listing. Connection terminated

PROBLEM The File Transfer program cannot get information about a file.

SOLUTION Check that you have access permission to read the file.

Cannot find host entry in HOSTS file

PROBLEM The File Transfer program is trying to resolve your local IP address and cannot find a local host entry in your HOSTS file.

SOLUTION Add the local host entry to your HOSTS file, for example:
192.109.111.231 mypc Localhost.

A P P E N D I X

Cannot connect to Remote Server

PROBLEM The File Transfer program is trying to connect to a remote Server, but the connection is being refused.

SOLUTION Check that the File Transfer remote Server is running. Ensure that you have access permission to the remote machine.

Cannot open (filename) at node (nodename)

PROBLEM You have attempted to transfer a file but File Transfer could not open the file you specified.

SOLUTION If you typed a filename, check you typed the filename correctly and that the file still exists. Check that you have permission to open or read the file. Copy the file to another storage location or see your system administrator.

Transfer fail at node (nodename)

PROBLEM You have attempted to transfer files but the process was not successful because of a system error.

SOLUTION Check that there is sufficient disk space on the destination node. Make space on the destination node.

Cannot initialize File Transfer at node (nodename)

PROBLEM You attempted a file transfer but the remote portion of the File Transfer program could not be initialized.

A P P E N D I X

SOLUTION Check that the remote portion of File Transfer is present on the node you specified. The MultiView DeskTop subdirectory `/bin` usually contains the remote portion of the File Transfer program.

Stack - messages

Cannot find local host entry in Host file

PROBLEM Your TCP/IP stack is not configured correctly or your host file requires the Internet Domain name of the host.

SOLUTION Make sure your stack is correctly configured using your stack documentation. Add the Internet Domain name to your host file. Make sure your host file is in the correct directory.

A P P E N D I X

Error Correction Failure with HSS Over Serial Lines

This information is only relevant to users who are using MultiView DeskTop to connect to their UNIX system over a serial link utilising the Host Support Server.

If you are experiencing difficulty with your initial connection, typically shown by the error message 'Error Correction ...', the following suggestions may help to resolve the problem. Alternatively see **Appendix-Communications messages**.

- If the first task you are invoking is an application, try starting a UNIX shell session prior to loading the application.
- If you have a robust connection, for example an error correcting modem or a stable direct link to your system, you should disable the error correction feature in the Host Support Server.

To disable error correction, configure the `MVIEW.INI` section `[multiview-nodename]` where `nodename` is the name of your remote system. Add the two lines:

```
servertunables=yes  
  
errorcheck=no
```

- If you are connecting via an RS232 connection to a terminal control unit which is linked to the host system by a TCP/IP connection. To address this problem try directing the terminal emulator to use 7-bit protocols across the connection.

To set 7-bit protocol, configure the `MVIEW.INI` section, `[multiview-node-name]` where `nodename` is the name of your remote system.

Add the following two lines:

```
servertunables=yes  
  
sevenbitxport=yes
```

C O N T A C T

US Headquarters

MultiView Group

Telephone: (281) 496-9400

Fax: (281) 496-1090

Email: info@futuresoft.com

European Headquarters

MultiView Group

Tel: +44 (0) 1260 296230

Fax: +44 (0) 1260 296224

Email: info@futuresoftuk.com

Online Resources

www.futuresoft.com

C O N T A C T

The information in this document is subject to change without notice and does not represent a commitment on the part of FutureSoft Inc. The software described in this document is furnished under a license agreement or nondisclosure agreement. The software may be used or copied only in accordance with the terms of the Software License Agreement.

This document is copyright material and may not be copied in any form whatsoever, with the exception of printed copies for the sole use of the software license holder.

© 2002 FutureSoft, Inc.

Issue 10 July 2002

MultiView Group

**FutureSoft, Inc.
12012 Wickchester Lane
Suite 600
Houston
Texas 77079**

USA

MultiView Group

**FutureSoft UK Ltd
Shepherds Mill
Worrall
Congleton
Cheshire
CW12 1DT**

UK

MultiView 2000, MultiView 2000 Server Edition, MultiView Catalyst, MultiView License Manager, MultiView DeskTop and Host Support Server are tradenames of FutureSoft Inc.

All other trademarks are the property of their respective holders. MultiView Group is part of FutureSoft Inc.

Part Number - 333100

I N D E X

- \$MVWDIR 12
- \$MVWHOME environment variable 16
- .profile commands 11
- 7- bit transport 23
- 8-bit clean 23

C

- Character buffers 9
- Cone device 26
- Clone node 26
- Clonename 26
- Close Failure (connection type) 39
- Configure Node dialog 10
- Configure the MultiView Client to use HSS 9
- Configuring an application in MultiView DeskTop 10
- Configuring the Host Support Print Device 19
 - MultiView 2000 Users 19
 - MultiView DeskTop Users 19
- Configuring the login 11
- Configuring the remote system 10
- Connection Failure (connection type) 39
- Connection Problem: Timed Out (connection type) 39
- Connection process 11
- Controller. 26

E

- Environment variable 15
 - Bourne shell 15
 - C shell 15
- Error log file 29
- Execute permissio 13
- Execute permission 16

I N D E X

F

- Fail to get data for node (nodename) 40
- File transfer 17
 - MultiView 2000 Users 17
 - MultiView DeskTop Users 17
- File Transfer application 17
- Forcing 7-bit protocols 23
 - MultiView 2000 23
 - Multiview DeskTop 23

H

- Host Support program name 21
 - MultiView 2000 Users 22
 - MultiView DeskTop Users 21
- HSS application program directory 16

I

- Increase operating systems limits 25
- Installation 9
- Invoking HSS 17

L

- Limit the number of application windows available 24
- Limit the number of connections 24
- Local Printing 19

M

- Mascot 8
- Multiple applications per single login 17
- Multiplexing 26
- MultiView 2000 8
- MultiView 2000 configuration 21
- MultiView Client 6
- MultiView DeskTop configuration 21
- Mvw_ptys file 26
- Mvw_ttys 24
- Mvw_xfer 13

I N D E X

N

- No more local ports available (connection type) 43
- Non-clone device 27
- Non-STREAMS system, 27

O

- Operating system 6

P

- p printername flag. 19
- Performance tuning 9, 25
 - MultiView 2000 Users 25
- Policy Editor Template file 23
- Print device 19
- Problems and Solutions 29
 - Communications messages 32
 - Error Correction Failure with HSS Over Serial Lines 59
 - General Messages 32
 - Host Support Problem, can't synchronize 30
 - Printing - messages 53
 - Remote Server failure 29
 - Stack - messages 58
 - Transparent printing adding extra escape characters 30
- Pseudo-ttys 25

R

- Readme file 9
- Redirect remote print requests 5
- Remote host utmp file updating 22
 - MultiView 2000 Users 23
 - MultiView DeskTop Users 22
- Remote print requests redirected to local printer 18
- Remote Printing 20
 - MultiView 2000 Users 20
 - Multiview DeskTop Users 20

I N D E X

Remote Server Failure 19
RS232 connection 5

S

Slave device 26
Specifying terminal and user information 24
Standard installation 12
STREAMS mvw_ptys file 27

T

Terminating an HSS session 29
The HSS central directory 12
The HSS home directory 13
The UNIX application program directory 14
 /usr/bin 14
 mvw_ixsrv 14
The UNIX device directory 14
The UNIX temporary file directory 14
Timeout 24
TSR/DLL Network Module for (connection type) not loaded 47

U

-u flag 22
UNIX /tmp directory 14
UNIX configuration 23
UNIX device directory 14

W

Windows 24
Windows print requests redirected to remote printer 18



MultiView Group, a division of FutureSoft, Inc.
12012 Wickchester Lane, Suite 600, Houston, Texas 77079, USA

Tel: 1.800.989.8908
Fax: 1.281.496.1090
E-mail: info@futuresoft.com

MultiView Group, a division of FutureSoft UK Ltd
Shepherds Mill, Worrall Street, Congleton, Cheshire CW12 1DT, UK

Tel: +44 (0) 1260 292222
Fax: +44 (0) 1260 292224
E-mail: info@futuresoftuk.com

www.futuresoft.com