

# Padus *pfcnet*

## Command line interface for Padus Network Server

### Technology Overview

**pfcnet** provides a command line interface for sending jobs to servers running the Padus Network Server. This client application operates according to information specified in a Job Order File (\*.JOB). Job Order Files can be utilized in almost limitless ways by linking to source audio, data, or disc image files through directories or FTP/HTTP hyperlinks. A disc image file is created on the server based on sources specified in Job Order Files sent by the client and then written to disc by the server.

Upon receiving a request from **pfcnet**, the Padus Network Server authenticates the optional login information using the same user security schema from the Padus Network Console. Once a session has been authenticated the server will request **pfcnet** to transfer the order data. Upon receiving all the necessary files from **pfcnet**, the server will proceed to process the job and **pfcnet** will quit successfully.

### Command Usage

The syntax for **pfcnet** commands follows a basic structure depending on the command sent.

```
pfcnet --<Operation> -s <Server> [-o <JobOrderFile> | -j[t] <JobNumber>] [Option(s)]
```

The command usage for **pfcnet** provides all necessary functions for transferring jobs to the server.

```
pfcnet  --help | -h | -?
        --errors
        --broadcast
        --template [-o <JobOrderFile>] [-U] [-I] [-F]
        --submit -s <Server> -o <JobOrderFile>
        [-u <Username>] [-p <Password>] [-n <Port>]
        [-q <Quantity>] [-ws <WritingSpeed>] [-wf <WritingFlags>]
        [-F] [-K] [-v[1|2]] [-i[0]]
        --delete -s <Server> -j[t] <JobNumber> [-u <Username>]
        [-p <Password>] [-n <Port>] [-F]
        --status -s <Server> -j[t] <JobNumber> [-u <Username>]
        [-p <Password>] [-n <Port>] [-v]
        --edit -s <Server> -j[t] <JobNumber> [-u <Username>]
        [-p <Password>] [-n <Port>]
        [-p <Priority>] [-q <Quantity>] [-ws <WritingSpeed>]
        [-wf <WritingFlags>] [-F]
```

All options within square brackets "[ ]" are optional.

### Command Options

**pfcnet** supports a variety of operations providing all desired abilities in sending jobs to a Padus Network Server. Each operation has a unique function and is described in detail below.

```
--help
```

Displays **pfcnet** help, command usage, and command options.

```
--errors
```

Display list of batch mode errors and their descriptions

```
--broadcast
```

Displays a list of available Padus Network Servers (UDP broadcast query).

```
--template
```

Generates a Job Order File in interactive or non-interactive mode.

#### Contents

Technology Overview	1
Command Usage	1
Command Options	1
Job Order Files	3
Examples	5
Advanced Implementation	6
Support	6

```
--submit
```

Submits a job order to Padus Network Server(s).

```
--delete
```

Deletes a submitted job order.

```
--status
```

Displays the status of one or all submitted job orders.

```
--edit
```

Edits a submitted job order.

**pfcnet** supports a variety of options which provide authentication, network, and writing features of a Padus Network Server. Each option has a unique purpose and is described in detail below.

```
-u <Username>
```

The username portion of the login information. This option is required if user security is enabled.

```
-p <Password>
```

The password portion of the login information. This option is required if user security is enabled.

```
-s <Server>
```

The IP address or resolvable name of the Padus Network Server. This option is required for all operations excluding help and template.

```
-o <JobOrderFile>
```

The absolute or relative path to the text-based Job Order File. It is required for the path to be enclosed in double quotation marks.

```
-n <Port>
```

The port of the target server running Padus Network Server. The default port is 3700 and will be assumed as such if none is specified.

```
-q <Quantity>
```

The number of disc(s) to be copied. The default quantity is 1 and will be assumed as such if none is specified.

```
-j <JobNumber>
```

The identification number assigned as a job is submitted. This option required for delete, edit, and status operations.

```
-jt <TempJobNumber>
```

The temporary identification number assigned as a job being transferred. This option required for delete, edit, and status operations.

```
-v[1|2]
```

The level of verbose mode desired to show detailed information only during submit and status operations. Option 1 is for minimum verbose, which excludes percent complete. Option 2 is for maximum verbose, which includes percent complete. By default verbose is off and maximum verbose is the default setting if the option is enabled.

```
-i [0]
```

Ignore specific warning or errors during submit operations. Option 0 is for ignoring inaccessible file errors. This option is off by default.

```
-F
```

Force deletes job in writing. This option can only be used with the delete operation.

```
-K
```

Keep temporary directories containing any downloaded source files specified in Job Order File. This information will be saved in the directory where *pfnet* was started.

```
-U
```

Excludes comments from the generation of a Job Order File. Can only be used with template operation.

```
-I
```

The interactive mode of *pfnet* to generate a Job Order File.

```
-P <Priority>
```

The priority of a job for placement in the Padus Network Server queue. Job priority can only be set by Operator or Superuser user accounts. Option 0 is for high priority, while option 1 is for low priority. The default option is 1. This option can only be used delete and submit operations.

```
-ws <WritingSpeed>
```

The writing speed for the Padus Network Server to use on the job. The default option is 0, representing the writing speed set on the Padus Network Server.

```
-wf <WritingFlags>
```

The flags for specific writing functions. WritingFlags is composed of one or more flags and can only contain at most one flag from each group. Multiple groups can be use at the same time. Each group and option has a unique set of capabilities and is described in detail below.

α Group 1: { o | q | b }

- o Enables Optimize speed functions such as PowerRec.
- q# Enables Maximize quality functions. The # represents the optimized laser power as defined by AudioMASTER, VariRec, or related technologies.
- b Enables Boost speed function for drives with writing speed throttles.

α Group 2: { r | t }

- r Enables RAW writing mode.
- t Enables Track-At-Once writing mode.

α Group 3: { w }

- w Enables R-W (CD+G) sub-code writing.

α Group 4: { p }

- p Enables PQ sub-code writing.

α Group 5: { c }

- c Enables CD-TEXT writing.

α Group 6: { v }

- v Enables verify after writing is complete.

α Group 7: { g }

- g Adds post-gap, a two second pause between audio tracks.

α Group 8: { n }

- n Leave the disc open.

α Group 9: { D }

- D UDF file-system only.

## Job Order Files

*pfnet* supports parsing text files containing the parameters of jobs for a Padus Network Server. These files are referred to as Job Order Files. They can be created by anyone and customized in any text editor. The level of flexibility offered by Job Order Files allows users to have multiple .JOB files for different purposes. Using the template operation with comments included will result in the generation of the following text file.

```
-----
: Job Order File format:
: ** Comments must begin with semicolon (;) or pound (#).
: ** Strings must be enclosed in double quotation marks ("").
:-----
:
: [ORDER] is a tag to indicate the Job order section.
:
: Username = "string"
:           Username of login information. An alphanumerical character string that can include
:           symbol characters, but no spaces.
:
: Password = "string"
:           Password of login information. An alphanumerical character string that can include
:           symbol characters, but no spaces.
:
: Server = "string"
:           IP address or name of server. An alphanumerical character string that can include
:           symbol characters, but no spaces.
:
```

```

Port = number
    Server port number. Default = 3700

VolumeName = "string"
    A text string of alphanumerical characters that will be used as the disc volume name.

SourceType = "CDI" | "ISO" | "NRG" | "*"
    CDI : Disc image file
    ISO : Data image file
    NRG : Disc image file
    * : Data files (Default)

DiscType = "CD-ROM" | "CD-DA" | "DVD"
    CD-ROM : Data CD (Default)
    CD-DA : Digital Audio CD
    DVD : Data/Audio/Video DVD

DiscSize = number
    Maximum number of blocks a disc can store.
    360000 : CD
    2304000 : DVD

WritingFlags = "string"
    Flags for specific writing functions. WritingFlags are composed of one or more flags.
    WritingFlags can only have at most one flag from each group, but can be from multiple
    groups at the same time.
    Group-1 flags: { o | b | q# }
        o = Optimize speed.
        b = Boost speed.
        q# = Maximize quality, where # is 0 to 4 laser power.
    Group-2 flags: { r | t }
        r = RAW mode.
        t = TAO write.
    Group-3 flags: { w }
        w = R-W (CD+G).
    Group-4 flags: { p }
        p = PQ.
    Group-5 flags: { c }
        c = CD-TEXT.
    Group-6 flags: { v }
        v = Verify.
    Group-7 flags: { g }
        g = Add post-gap (2 second pause between audio tracks).
    Group-8 flags: { n }
        n = Leave the disc open.
    Group-9 flags: { D }
        D = UDF file-system only.

WritingSpeed = number
    Specifies the CD or DVD writing speed. Default = 0.

Quantity = number
    Specifies the number of discs to be replicated. The value 0 can be used to specify an
    automatic number of copies allowing the autoloader to use all available media.
    Default = 1.

Label = "Y"|"N"
    Y: Indicates there is a label to be printed on the disc.
    N: Indicates there is not a label to be printed on the disc (Default).

IgnoreInaccessibleFiles = "Y"|"N"
    Y: Ignores inaccessible file(s).
    N: Does not ignore inaccessible file(s), displays error, and terminates
    pfcnet (Default).

```

---

[LABEL] is a tag to indicate the Job label section.

```
Image = <Data: "Path\ImageFileName[.BMP | .JPG | .JPEG | .PRN]">
    A text string of alphanumerical characters specifying an absolute or relative path
    and/or an image file (whether a BMP, JPEG, or PRN).
```

```
Text = <Data: "String">
    A string of alphanumerical characters.
```

---

[SOURCES] is a tag to indicate the Job sources section.

```
<Src: "[URL][\ServerName\][Path\][filename]">
    [<DestDir: "LongPathName"> | <DestFile: "[LongPathName\]LongNewFileName">]
    [<DestISOName: "[ShortPathName\]ShortNewFileName""]
```

Src: A source file or directory name must be specified, regardless of DiscType. If the source is a directory on FTP or HTTP, it must end with a back-slash ("\") or a forward-slash ("/") depending on the current operating system.

DestDir: Optional destination directory. The root directory ("\") will be used by default. You don't need to specify DestDir if the DiscType is CD-DA.

DestFile: Optional destination file, but if specified it must contained a filename. If the source is a directory, the DestFile option will be ignored.

DestISOName: Optional short ISO-9660 name for use of disc without Joliet or UDF file-systems.

NOTE: For audio tracks, the <DestDir:> and <DestFile:> and <DestISOName:> options can be omitted. All audio tracks are placed under the destination's root. Supported file types for audio tracks include mp3 (.MP3), WAVE (.WAV), and windows Media Audio (.WMA).

For data files and/or folders, <DestDir:> or <DestFile:> must be specified.

---

```

[ORDER]
Username          = "john"
Password          = "code"
Server            = "server1"
Port              = 3700
SourceType        = "*"
DiscType          = "CD-ROM"
VolumeName        = "Release 1"

```

```

DiscSize           = 360000
WritingFlags       = ""
WritingSpeed       = 8
Quantity           = 1
Label              = "N"
IgnoreInaccessibleFiles = "N"

[LABEL]
#Image             = <Data: "Path\ImageFile[.BMP | .JPG | .JPEG | .PRN]">
#Text              = <Data: "String">

#LABELS EXAMPLE:
#Image             = <Data: "C:\Logo.bmp">
#Text              = <Data: "Release Candidate 1">

[SOURCES]
#<Src: "Path\File"> [<DestFile: "[LongPathName\]LongFileName">] [<DestISOName: "[ShortPathName\]ShortFileName">]
#<Src: "ftp://Path/File"> [<DestFile: "[LongPathName\]LongFileName">] [<DestISOName: "[ShortPathName\]ShortFileName">]
#<Src: "http://Path/File"> [<DestDir: "LongPathName">] [<DestISOName: "ShortPathName">]
#<Src: "\\system\Path\File"> [<DestDir: "LongPathName">] [<DestISOName: "ShortPathName">]

#SOURCES EXAMPLE:
#<Src: "C:\Texts\RootText_1.txt"> <DestFile: "Long Text File.txt"> <DestISOName: "Short.txt">
#<Src: "C:\Texts\My Documents"> <DestDir: "\My Documents"> <DestISOName: "\Docs">
#<Src: "C:\Texts\DataText_1.txt"> <DestFile: "\Dir1\Text_1.txt">
#<Src: "C:\Texts\DataText_2.txt"> <DestDir: "\Dir1\Dir2">

```

## Examples

Audio CDs can be important to businesses not only as presentation multimedia, but also as portable archives of speech.

```

[ORDER]
Username           = "mike"
Password           = "pass"
Server             = "server5"
Port               = 3700
SourceType         = "a"
DiscType           = "CD-DA"
VolumeName         = ""
DiscSize           = 360000
WritingFlags       = "r"
WritingSpeed       = 8
Quantity           = 1
Label              = "v"
IgnoreInaccessibleFiles = "N"

[LABEL]
Image              = <Data: "c:\labels\music.jpg">
Text               = <Data: "Audio Collection">

[SOURCES]
;when source files are used for audio tracks, <DestDir:> and <DestFile:> are omitted. Audio tracks are placed
;in the root directory of the destination.

<Src: "c:\test\symphony.wav">
<Src: "c:\music\concert_1.mp3">
<Src: "c:\music\concert_5.mp3">
<Src: "\\server3\c$\music\orchestra.wma">
<Src: "http://server4/Public/Music/ending.mp3">

```

Data CDs are commonly used for small to moderate data backups and offline transfers.

```

[ORDER]
Username           = "susan"
Password           = "secrets"
Server             = "server5"
Port               = 3700
SourceType         = "a"
DiscType           = "CD-ROM"
VolumeName         = ""
DiscSize           = 360000
WritingFlags       = "o"
WritingSpeed       = 24
Quantity           = 10
Label              = "v"
IgnoreInaccessibleFiles = "N"

[LABEL]
Image              = <Data: "c:\labels\companylogo.bmp">
Text               = <Data: "2003 Q4">

[SOURCES]
<Src: "\\server2\mysql"> <DestDir: "\Backup\mysql">
<Src: "\\server4\c$\inetpub"> <DestDir: "\Backup\inetpub">
<Src: "ftp://susan:secret@192.168.11.21/priv/users/susan/asia_japan2003q4.xls"> <DestFile: "\Sales\Japan.xls">
<Src: "ftp://susan:secret@192.168.11.21/priv/users/susan/europe_uk2003q4.xls"> <DestFile: "\Sales\United King-
dom.xls">

```

Data DVDs allow for large amounts of data to be archived or exchanged on a single disc.

```

[ORDER]
Username           = "alice"
Password           = "phrase"
Server             = "192.168.11.38"
Port               = 3701
SourceType         = "cdi"
DiscType           = "DVD"
VolumeName         = ""
DiscSize           = 2304000
WritingFlags       = "vn"
WritingSpeed       = 8
Quantity           = 1
Label              = "v"
IgnoreInaccessibleFiles = "N"

[LABEL]
Image              = <Data: "\\helpdesk\labels\ghostdisc.prn">
Text               = <Data: "D800 Ghost Boot Image">

[SOURCES]
<Src: "\\helpdesk\ghost boot images\d800_01042004.cdi">

```

### Advanced Implementation

Due to the flexibility of a command line interface *pfcnet* can be used in an almost limitless number of implementations. Common development and operating system administration practices can put *pfcnet* to use for the special needs of day-to-day business.

Custom graphical interfaces can be built to send commands to *pfcnet*, resulting in applications ranging from Audio CD kiosks at stores or events to CD/DVD writing stations at the office. Automated batch or shell scripts can be designed to control *pfcnet*, opening the door for scheduled backups or duplication runs started from a single command or click of the mouse.

If you have any questions or ideas about custom implementations of *pfcnet*, Technical Support can be contacted to discuss the feasibility and practicality of any plan.

### Support

If you have any concerns or questions, Technical Support can be reached by e-mail at [support@padus.com](mailto:support@padus.com) or on the web at <http://www.padus.com/>.