

Operation Flashpoint: Resistance Administrationshandbuch zum dedizierten Server

Deutsche Übersetzung von Eckhard Frank Sandig*

Juni 2008

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1 Installation

Man benötigt einen Computer mit Windows 2000 oder XP, um einen dedizierten OFP-Server zu betreiben ¹. Wir empfehlen den Einsatz eines Rechners mit wenigstens einem 800 MHz PIII, 256 MB RAM und einer Netzwerkverbindung mit 256 kbps Uploadbandbreite. Es gibt zwei mögliche Wege, den dedizierten Server zu installieren. Wenn man das Spiel Operation Flashpoint installiert hat, so kann man die Startdatei (*FlashpointResistance.exe*) mit dem Kommandozeilenparameter `-server` verwenden, um den dedizierten Server zu starten. Das ist zwar recht einfach, erfordert aber, dass sich eine Operation Flashpoint: Resistance-CD während des Serverbetriebs im Laufwerk befindet. Will man einen Server ohne CD starten, muss man die Startdatei des allein lauffähigen dedizierten Servers verwenden. Die aktuelle Version dieser Startdatei ist stets auf der offiziellen Website [<http://www.flashpoint1985.com>] oder, als teil des letzten Upgrades, auch unter [<http://www.codemasters.com>] verfügbar. Um den autonomen Server zu installieren, muss man die entsprechende Version des Spiels auf irgendeinem Rechner installieren (dafür benötigt man eine OFP- bzw OFP: Resistance-CD), das Spiel mindestens einmal starten (um eine *Flashpoint.cfg*-Datei zu erzeugen) und die Datei *FlashpointServer.exe* in das Verzeichnis mit der Datei *FlashpointResistance.exe* kopieren. Man kann das OFP-Stammverzeichnis dann einfach auf die Servermaschine kopieren.

Dieses Dokument beschreibt den dedizierten Server der Version 1.96.

2 Neuerungen

Folgendes wurde an diesem Dokument geändert, um die Änderungen in Programmversion 1.96 wiederzugeben:

- neues Administratorkommando `#debug` zur Fernüberwachung des Servers
- neuer Wert `kickduplicate` in der Serverkonfiguration
- neues Feld `checkfiles[]` in der Serverkonfiguration
- neuer Wert `equalModRequired` in der Serverkonfiguration
- neuer Wert `proxy` in der Datei *Flashpoint.cfg*
- neuer Wert `MinErrorToSend` in der Datei *Flashpoint.cfg*

¹Eine Linuxversion des Servers ist im Internet, z.B. auf den offiziellen Seiten zum Spiel, verfügbar. Windows Vista wurde noch nicht getestet. WinME funktioniert auch, ist aber nicht empfehlenswert; Anm. d. Übersetzers

Folgendes wurde an diesem Dokument geändert, um die Änderungen in Programmversion 1.75 wiederzugeben:

- neuer Kommandozeilenparameter `-dplay`
- Standardport von 2234 auf 2302 geändert
- Neuer Firewall-Abschnitt, der beschreibt, welche Ports zu öffnen sind.

Folgendes wurde an diesem Dokument geändert, um die Änderungen in Programmversion 1.75 wiederzugeben:

- neues Kommando `#init`
- geänderte Standardwerte für die Variablen `MaxMsgSend` und `MinBandwidth`

3 Den Server starten

Man kann folgende zusätzliche Kommandozeilenparameter beim Start des dedizierten Servers übergeben:

```
-config=<configfile> | Select server configuration file (see below). Default: No configuration file; all pa  
-port=<portnumber> | Select port at which session should operate. Default: 2302 Check Firewall issues s  
-dplay | Select DirectPlay implementation. Sockets implementation is used when this argument is not pr
```

In the event of a server crash, please help us to fix the problem by sending the Flashpoint.rpt and context.bin files that will be created in Operation Flashpoint directory on each crash. Please send those files to e-mail address support@bistudio.com; we will investigate them and if possible we will fix the bug that led to crash; or we will suggest you a workaround.

You may also consider running the OFP server as a service, and enabling automatic restart in case of crash. In this case, you may want to disable DrWatson crash monitoring utility on your computer, as it often prevents OFP server to shutdown properly (by displaying a message box that requires an operator to confirm application termination).

4 Serverkonfiguration

When running a dedicated server, you will usually want to create a Server.cfg file. In this file you can adjust many server parameters, and you can provide a mission list for automatic mission selection. An example can be found in Appendix B. The following entries are recognized in the configuration file:

```
password = <session_password>; Password required to connect to server. Default: No  
password required. passwordAdmin = <admin_password>; Password required to admini-  
nistrate the server. Default: No password required. hostname = «user friendly host na-
```

me>"; Server name displayed in session overview. motd[]= { «1st MOTD line>", «2nd MOTD line>", «Last MOTD line>"}; Message of the day (MOTD). This message may consist of several lines. Each player is shown this text when connected to the server.

Default: No MOTD. motdInterval=<interval_in_sec>; Interval in which subsequent lines of MOTD appear. Default: 5 seconds. voteThreshold=<threshold>; More than voteThreshold players must agree when voting for some action. Default: 0.5 (more than half required). reportingIP=<id_address>; IP address of the master server to which this server is reporting its state. Use to disable reporting. Default: "master.gamespy.com". voteMissionPlayers=<number>; How many players must connect to the server for mission selection voting to start automatically. Default: 1 class Missions { class Mission01 { template = <mission_name>; cadetMode = <cadet_mode>; param1 = <value>; param2 = <value>; }; class Mission02 { ... see above ... }; class Mission<N> { ... see above ... };

}; Mission list

First mission name Cadet mode (1) or Veteran (0) Values of mission-specific parameters. You will find more information about their meaning in the description.ext of the corresponding mission.

When the end of the list is reached, the first mission is used again.

checkfiles[]= { «1st file>", «2nd file>", «Last file>"}; Files which are checked for changes when any client connects. When any of those files is different, a message is shown both on the chat and on the server console.

kickduplicate

When set a second user with the same ID attempts to connect, he is kicked immediately (same ID means one or both users do not have a valid license for the game).

equalModRequired When set, all connecting users need to use the same -mod command line option as used on the server and visible in the ingame browser.

Note: The configuration file uses C++ like syntax. Each entry must be terminated with semicolon. You can also use C++ comments (starting with a double slash: //).

5 Leistungsoptimierung

There are also some parameters that can be used to fine-tune network performance. You can add following entries to Flashpoint.cfg (the main Flashpoint configuration file):

MaxMsgSend=<limit>; Maximum number of messages that can be sent in one simulation cycle. Increasing this value can decrease lag on high upload bandwidth servers. Default: 128 MaxSizeGuaranteed=<limit>; Maximum size of guaranteed packet in bytes (without headers). Small messages are packed to larger frames. Guaranteed messages are used for

non-repetitive events like shooting. Default: 512 MaxSizeNonguaranteed = <limit>; Maximum size of non-guaranteed packet in bytes (without headers). Non-guaranteed messages are used for repetitive updates like soldier or vehicle position. Increasing this value may improve bandwidth requirement, but it may increase lag. Default: 256 MinBandwidth = <bottom_limit>; Bandwidth the server is guaranteed to have (in bps). This value helps server to estimate bandwidth available. Increasing it to too optimistic values can increase lag and CPU load, as too many messages will be sent but discarded. Default: 131072 MaxBandwidth = <top_limit> Bandwidth the server is guaranteed to never have. This value helps server to estimate bandwidth available. MinErrorToSend = <limit> Minimal error to send updates across network. Default value is 0.01. Using smaller value can make units observed by binoculars or sniper rifle to move smoother. MaxCustomFileSize = <size_in_bytes> Users with custom face or custom sound larger than this size are kicked when trying to connect.

The greatest level of optimization can be achieved by setting the MaxMsgSend and MinBandwidth parameters. For a server with 1024kbps we recommend the following values:

```
MaxMsgSend = 256; MinBandwidth = 768000;
```

You can use the admin command #monitor to monitor server resource usage. The server never runs at more than 50 fps. When running slower, it always uses all available CPU processing power to maintain the smoothest possible gameplay. When running at less than 15 fps, you can consider the server overloaded – the mission currently played is probably too complex for given server. If you see the server is not using bandwidth that it could use, you can try increasing values MaxMsgSend and MinBandwidth. For more detailed monitoring you can use the #debug command (see below).

6 Verbannung

To ban a user you have to know their unique online ID (called Player ID). This can be checked in the players overview screen ('P' key) during the game, or with the #userlist command. To ban a user you have to add their Player ID to file ban.txt residing in the main OFP directory. If there is no such file there, create a new one. The format of ban.txt is a plain ASCII text list of decimal Player IDs delimited with space, tabulator or end-of-line characters.

7 Umgang mit Firewalls

If you want to run your server behind firewall you need to open and/or forward following incoming ports:

```
port UDP (used for game) port+1 UDP (used for server reporting)
```

Following outgoing ports need to be open as well:

port UDP (used for game) port+1 UDP (used for server reporting)

Default value of port is 2302, but you may change it by -port command line argument.

8 Proxy

You may enforce proxy server used to download xml squad page etc. using value "proxyin Flashpoint.cfg.

A Liste der Administrationskommandos

The following commands have special meaning when issued on global chat channel:

#login <password> Login as server administrator #logout Logout, but stay connected as a normal user #init Reload server config file loaded by -config option. #kick <player_name> Kick given player #kick <player_number> Kick player with given number #restart Restart mission #reassign Go back to side selection screen #mission <mission_name> Select mission with known name #missions Select mission #shutdown Shutdown server #userlist Display list of all users #monitor <interval_in_sec> Start server monitoring. Server CPU load and bandwidth usage is displayed in the global chat channel. The default interval is 10 seconds. To stop monitoring type monitor 0. #debug <command> checkfile - check if any file used by clients matches server version (output done both via chat and console)

console - watch server console log remotely * totalsent - watch outgoing network traffic stats (total) * usersent - watch outgoing network traffic stats (per-user) * userinfo - watch bandwidth estimations (per-user) * userqueue - report outgoing queue status (per-user) * <interval> - set debug stats monitoring interval * off - stop all debug monitoring. You can also use off to cancel single stats, e.g. #debug userinfo off *

* - output is done using OutputDebugString from the admins client. You can use any debugger to watch this output, or there are utilities for this as well (on very good is DebugView from SysInternals available at <http://www.sysinternals.com/ntw2k/freeware/debugview.shtml>)

B Beispiel für die Datei *server.cfg*

```
passwordAdmin = "xyzxyz"; // password to protect admin access hostname=ÖFP Server # 1"; motd[]= "Welcome to OFP server.", "Hosted by Flashpoint Webworlds.", ; // Welcome message motdInterval=1; voteThreshold=0.33; // when one third agrees, this
```

```
is enough to confirm a vote reportingIP=; // private server - no reporting voteMission-
Players=3; // start voting when 3 players connect checkfiles[]={ "HWTL\dta\data3d.pbo", "dta\data3d.p
//list of files to check for identity kickduplicate=1; // do not allow duplicate id equalM-
odRequired=1; // require equal mod
```

C Anmerkungen des Übersetzers

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Eckhard Frank Sandig, 21.06.2008