FRP

frp

frp TCP UDP HTTP HTTPS IP

frp

IP frp

- TCP KCP Websocket
- TCP
- HTTP SOCK5 frp
- UI

frp

frp Golang

Golang Golang System requirements

GitHub Release

frpc frps IP

`./frps -c ./frps.ini` `./frpc -c ./frpc.ini` `systemd` `supervisor`

Windows cmd

frp

frp **(frpc) (frps)** IP

IP

frps frp

frp

frp

tcp	TCP
udp	UDP
http	HTTP Host Header
https	HTTPS
stcp	TCP frpc
sudp	UDP frpc
xtcp	stcp
tcpmux	TCP

SSH

TCP

1. IP frps frps.ini frp

```
[common]
bind_port = 7000
```

2. SSH 22 frpc frpc.ini frps IP x.x.x.x

```
[common]
server_addr = x.x.x.x
server_port = 7000

[ssh]
type = tcp
local_ip = 127.0.0.1
local_port = 22
remote_port = 6000
```

`local_ip` `local_port` `remote_port` frp

3. frps frpc
4. SSH test

`ssh -oPort=6000 test@x.x.x.x`

frp `x.x.x.x:6000` 22

Web

HTTP Web

HTTP `vhost_http_port` HTTP HTTP

1. frps.ini HTTP 8080

```
[common]
bind_port = 7000
vhost_http_port = 8080
```

2. frpc.ini frps `local_port`.x.x V`custom_domains`

```
[common]
server_addr = x.x.x.x
server_port = 7000

[web]
type = http
local_port = 80
custom_domains = www.yourdomain.com

[web2]
type = http
local_port = 8080
custom_domains = www.yourdomain2.com
```

3. frps frpc
4. `www.yourdomain.com` `www.yourdomain2.com` A `x.x.x.x` CNAME
5. `http://www.yourdomain.com:8080` `http://www.yourdomain2.com:8080` 8080

DNS

UDP DNS

DNS UDP frp UDP TCP

1. frps.ini

```
[common]
```

```
bind_port = 7000
```

2. frpc.ini

```
[common]
server_addr = x.x.x.x
server_port = 7000

[dns]
type = udp
local_ip = 8.8.8.8
local_port = 53
remote_port = 6000
```

Google DNS UDP

3. frps frpc
4. dig U `www.baidu.com`

```
dig @x.x.x.x -p 6000 www.baidu.com
```

Unix

Unix TCP Unix Docker Daemon

1. frps.ini

```
[common]
bind_port = 7000
```

2. frpc.ini

```
[common]
server_addr = x.x.x.x
server_port = 7000

[unix_domain_socket]
type = tcp
remote_port = 6000
plugin = unix_domain_socket
plugin_unix_path = /var/run/docker.sock
```

3. frps frpc
4. curl docker

`curl http://x.x.x.x:6000/version`

`static_file`

`static_file` HTTP

1. frps.ini

```
[common]
bind_port = 7000
```

2. frpc.ini

```
[common]
server_addr = x.x.x.x
server_port = 7000

[test_static_file]
type = tcp
remote_port = 6000
plugin = static_file
#
plugin_local_path = /tmp/file
#     URL
plugin_strip_prefix = static
plugin_http_user = abc
plugin_http_passwd = abc
```

3. frps frpc
4. `http://x.x.x.x:6000/static/` `/tmp/file`

HTTP HTTPS

`https2http` HTTP HTTPS

1. frps.ini

```
[common]
bind_port = 7000
```

2. frpc.ini

```
[common]
```

```
server_addr = x.x.x.x
server_port = 7000

[test_htts2http]
type = https
custom_domains = test.yourdomain.com

plugin = https2http
plugin_local_addr = 127.0.0.1:80

# HTTPS
plugin_crt_path = ./server.crt
plugin_key_path = ./server.key
plugin_host_header_rewrite = 127.0.0.1
plugin_header_X-From-Where = frp
```

3. frps frpc
4. `https://test.yourdomain.com`

SSH

`stcp(secret tcp)` frpc

1. frps.ini

```
[common]
bind_port = 7000
```

2. frpc

```
[common]
server_addr = x.x.x.x
server_port = 7000

[secret_ssh]
type = stcp
#  sk
sk = abcdefg
local_ip = 127.0.0.1
local_port = 22
```

3. frpc

```
[common]
server_addr = x.x.x.x
server_port = 7000

[secret_ssh_visitor]
type = stcp
# stcp
role = visitor
#     stcp
server_name = secret_ssh
sk = abcdefg
#          SSH
bind_addr = 127.0.0.1
bind_port = 6000
```

4. SSH test
`ssh -oPort=6000 test@127.0.0.1`

frp `xtcp`

`stcp` frpc

`stcp` **NAT**

1. frps.ini UDP

```
[common]
bind_port = 7000
bind_udp_port = 7000
```

2. frpc

```
[common]
server_addr = x.x.x.x
server_port = 7000

[p2p_ssh]
type = xtcp
#   sk
sk = abcdefg
local_ip = 127.0.0.1
```

```
local_port = 22
```

3. frpc

```
[common]
server_addr = x.x.x.x
server_port = 7000

[p2p_ssh_visitor]
type = xtcp
# xtcp
role = visitor
#     xtcp
server_name = p2p_ssh
sk = abcdefg
#          ssh
bind_addr = 127.0.0.1
bind_port = 6000
```

4. SSH test

```
ssh -oPort=6000 test@127.0.0.1
```

frp

bind_addr	string		0.0.0.0		
bind_port	int		7000		frpc
bind_udp_port	int	UDP	0		P2P
kcp_bind_port	int	KCP	0		KCP frpc
proxy_bind_addr	string		bind_addr		
log_file	string		./frps.log		console
log_level	string		info	trace, debug, info, warn, error	
log_max_days	int		3		
disable_log_color	bool		false		
detailed_errors_to_client	bool		true		
heart_beat_timeout	int		90		
user_conn_timeout	int		10		
udp_packet_size	int	UDP	1500		

tls_cert_file	string	TLS			
tls_key_file	string	TLS			
tls_trusted_ca_file	string	TLS CA			

authentication_method	string		token	token, oidc	
authenticate_heartbeats	bool		false		
authenticate_new_work_conns	bool		false		
token	string	token			
oidc_issuer	string	oidc_issuer			
oidc_audience	string	oidc_audience			
oidc_skip_expiry_check	bool	oidc_skip_expiry_check			
oidc_skip_issuer_check	bool	oidc_skip_issuer_check			

allow_ports	string				1000-2000,2001,3000-4000
max_pool_count	int		5		
max_ports_per_client	int		0		0
tls_only	bool	TLS	false		

Dashboard,

dashboard_addr	string	Dashboard	0.0.0.0		
dashboard_port	int	Dashboard	0		
dashboard_user	string	HTTP BasicAuth			
dashboard_pwd	string	HTTP BasicAuth			
enable_prometheus	bool	Prometheus	false		Dashboard
asserts_dir	string				Dashboard

HTTP & HTTPS

vhost_http_port	int	HTTP	0		HTTP
vhost_https_port	int	HTTPS	0		HTTPS

vhost_http_timeout	int	HTTP ResponseHeader	60		
subdomain_host	string				
custom_404_page	string	404			

TCPMUX

tcpmux_httpconnect_port	int	TCPMUX	0		TCPMUX

frp

server_addr	string		0.0.0.0		
server_port	int		7000		
http_proxy	string				{protocol}://user:pa protocol http socks5 ntlm
log_file	string		./frpc.log		console
log_level	string		info	trace, debug, info, warn, error	
log_max_days	int		3		
disable_log_color	bool		false		
pool_count	int		0		
user	string				{user}.{proxyNam
dns_server	string	DNS			DNS
login_fail_exit	bool		true		
protocol	string		tcp	tcp, kcp, websocket	
tls_enable	bool	TLS	false		
tls_cert_file	string	TLS			
tls_key_file	string	TLS			
tls_trusted_ca_file	string	TLS CA			
tls_server_name	string	TLS Server			server_addr
heartbeat_interval	int		30		

heartbeat_timeout	int		90		
udp_packet_size	int	UDP	1500		
start	string				

authentication_method	string		token	token, oidc	
authenticate_heartbeats	bool		false		
authenticate_new_work_conns	bool		false		
token	string	token			
oidc_client_id	string	oidc_client_id			
oidc_client_secret	string	oidc_client_secret			
oidc_audience	string	oidc_audience			
oidc_token_endpoint_url	string	oidc_token_endpoint_url			

UI

admin_addr	string	AdminUI	0.0.0.0		
admin_port	int	AdminUI	0		
admin_user	string	HTTP BasicAuth			
admin_pwd	string	HTTP BasicAuth			
asserts_dir	string				AdminUI

frp

type	string			tcp	tcp, udp, http, https, stcp, sudp, xtcp, tcpmux	
use_encryption	bool			false		
use_compression	bool			false		
proxy_protocol_version	string	proxy protocol			v1, v2	frpc protocol
bandwidth_limit	string	proxy				MB KB 0

`local_ip` `plugin` `plugin` `local_ip`

local_ip	string	IP		127.0.0.1		IP
local_port	int					local_ip
plugin	string					frpc local_ip local_port
plugin_params	map					map key "plugin_" plugin

group	string					
group_key	string					gr
health_check_type	string				tcp,http	tcp
health_check_timeout_s	int	( )		3		
health_check_max_failed	int			1		
health_check_interval_s	int	( )		10		
health_check_url	string	HTTP				health_check_ty http "/health"

TCP

remote_port	int					local_ip:local_po

UDP

remote_port	int					local_ip:local_po

HTTP

`custom_domains` `subdomain`

custom_domains	[]string		(subdomain)			vhost_http_port HTTP Ho custom_domains

subdomain	string		(custom_domains)			custom_domains subdomain_host
locations	[]string	URL				
http_user	string					HT Auth
http_pwd	string					http_user
host_header_rewrite	string	Host header				HTTP
headers	map	header				map key header key value

HTTPS

`custom_domains` `subdomain`

custom_domains	[]string		(subdomain)			vhost_http_port HTTP Ho custom_domains
subdomain	string		(custom_domains)			custom_domains subdomain_host

STCP

role	string			server	server,visitor	server visi
sk	string					

SUDP

role	string			server	server,visitor	server visi
sk	string					

XTCP

role	string			server	server,visitor	server visi

sk	string					

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