FTP Protocol Principles





Early development of standards introduced the foundations of a file transfer protocol, with the aim of promoting the sharing of files between remote locations that were not impacted by variations in file storage systems among hosts. The resulting FTP application was eventually adopted as part of the TCP/IP protocol suite. The FTP service remains an integral part of networking as an application for ensuring the reliable and efficient transfer of data, commonly implemented for effective backup and retrieval of files and logs, thereby improving overall management of the enterprise network. This section therefore introduces the means for engineers and administrators to implement FTP services within Huawei products.

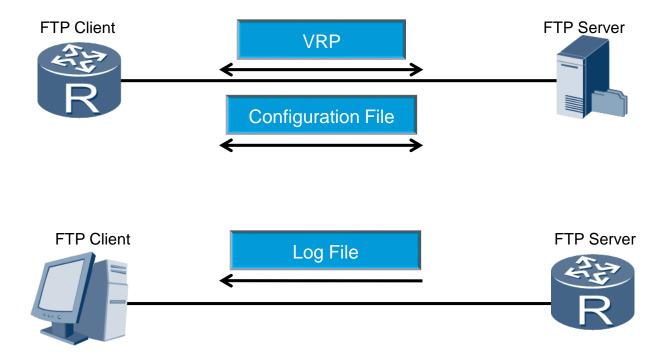




Upon completion of this section, trainees will be able to:

- Explain the file transfer process of FTP.
- Configure the FTP service on supporting Huawei devices.

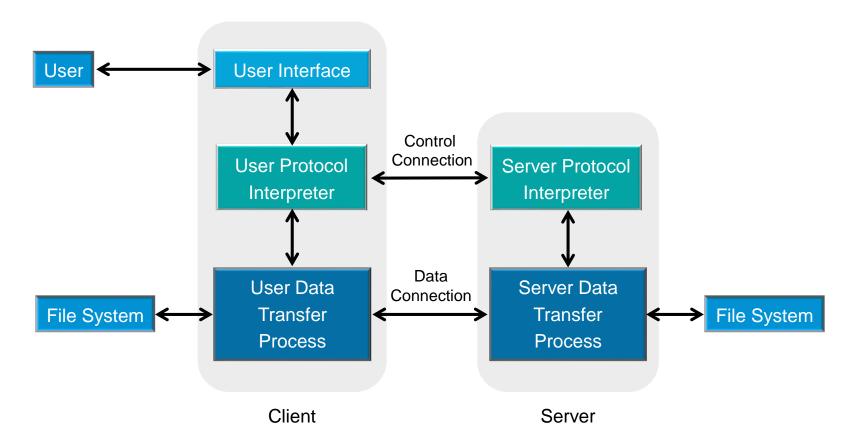
FTP Application In the Enterprise Network



 FTP provides an effective means for backup and retrieval of important files.



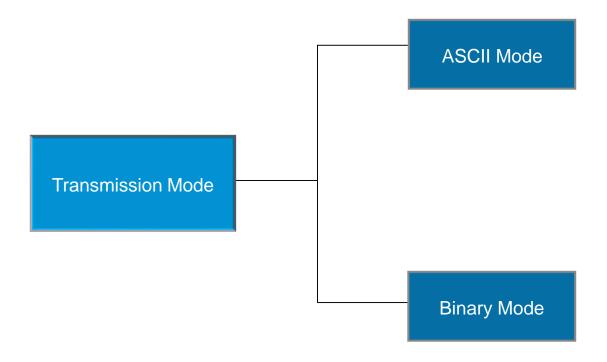
FTP File Transfer Process



• FTP relies on two TCP connections for file transfer.



FTP Basic Concepts



 Transmission modes define the format of data before it is carried between the sender and receiver.

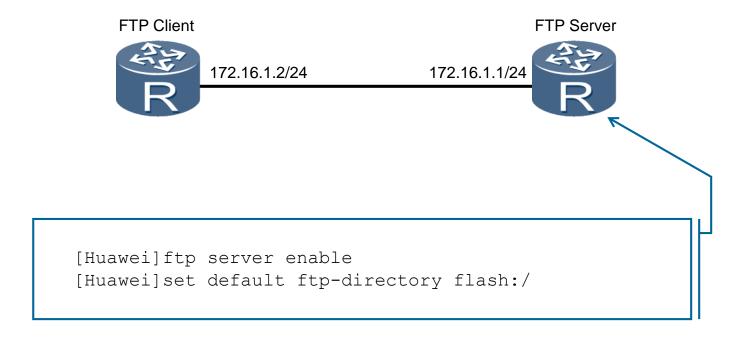


FTP Basic Concepts



ftp_protocol.pcapng

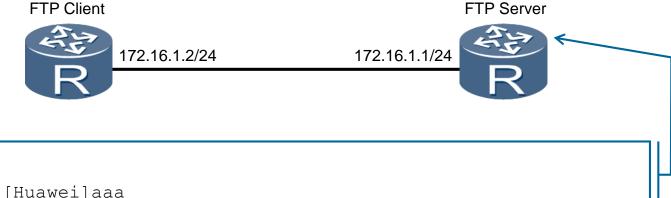
FTP Service Establishment



 The FTP service must be enabled and a default FTP directory specified for file handling.



FTP Service User Establishment



```
[Huawei-aaa]local-user huawei password cipher huawei123
[Huawei-aaa]local-user huawei service-type ftp
[Huawei-aaa]local-user huawei ftp-directory flash:/
[Huawei-aaa]local-user huawei access-limit 200
[Huawei-aaa]local-user huawei idle-timeout 0 0
[Huawei-aaa]local-user huawei privilege level 3
```

 User accounts can be implemented to identify users and as well as apply specific permissions for each user individually.



FTP User Configuration





172.16.1.2/24

FTP Server



```
<Huawei>ftp 172.16.1.1
Trying 172.16.1.1 ...
Press CTRL+K to abort
Connected to 172.16.1.1.
220 FTP service ready.
User(172.16.1.1:(none)):huawei
331 Password required for huawei.
Enter password:
230 User logged in.
[ftp]binary
200 Type set to I.
[ftp]get vrp.cc
```



- Which ports are required to be open in order to allow the FTP service to operate?
- A user is considered to have no authority to access any working directory. What steps are required to resolve this?



Thank you

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