Software Diversified Services

Securing your FTP Transmissions on z/OS

The Different Options

Today's Agenda

- [ ] Introductions and Company Overview
- [ ] Pros and Cons of using FTP
- [ ] Pros and Cons of FTPS and FTP over a SSH Tunnel
- [ ] Pros and Cons of SFTP , FTP to SFTP (Hybrid Solution)
- [ ] Pros and Cons of VPN and PGP

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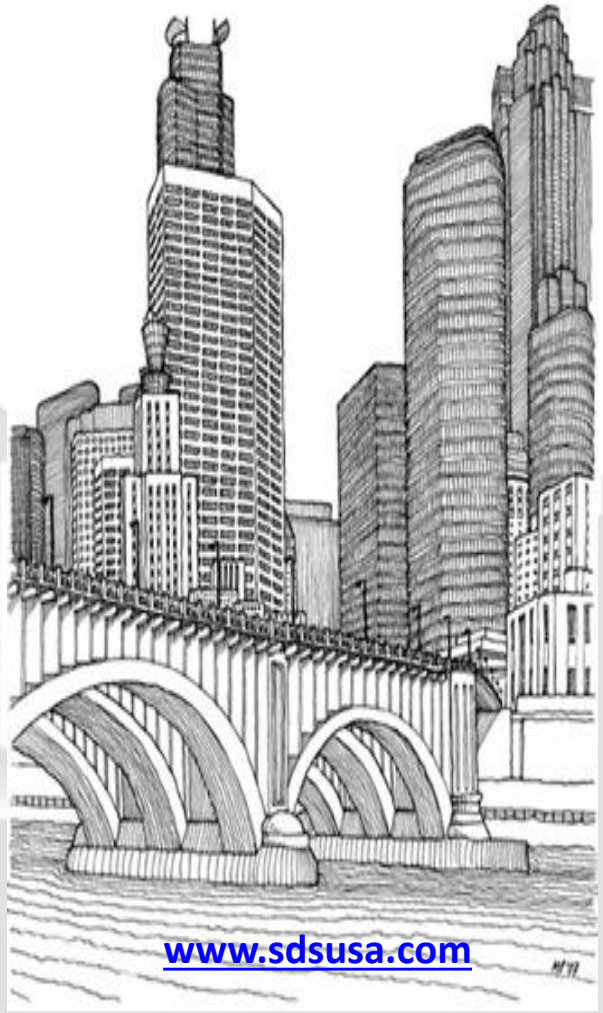
- VitalSigns SIEM Agent for z/OS
- IronSphere and FIM+



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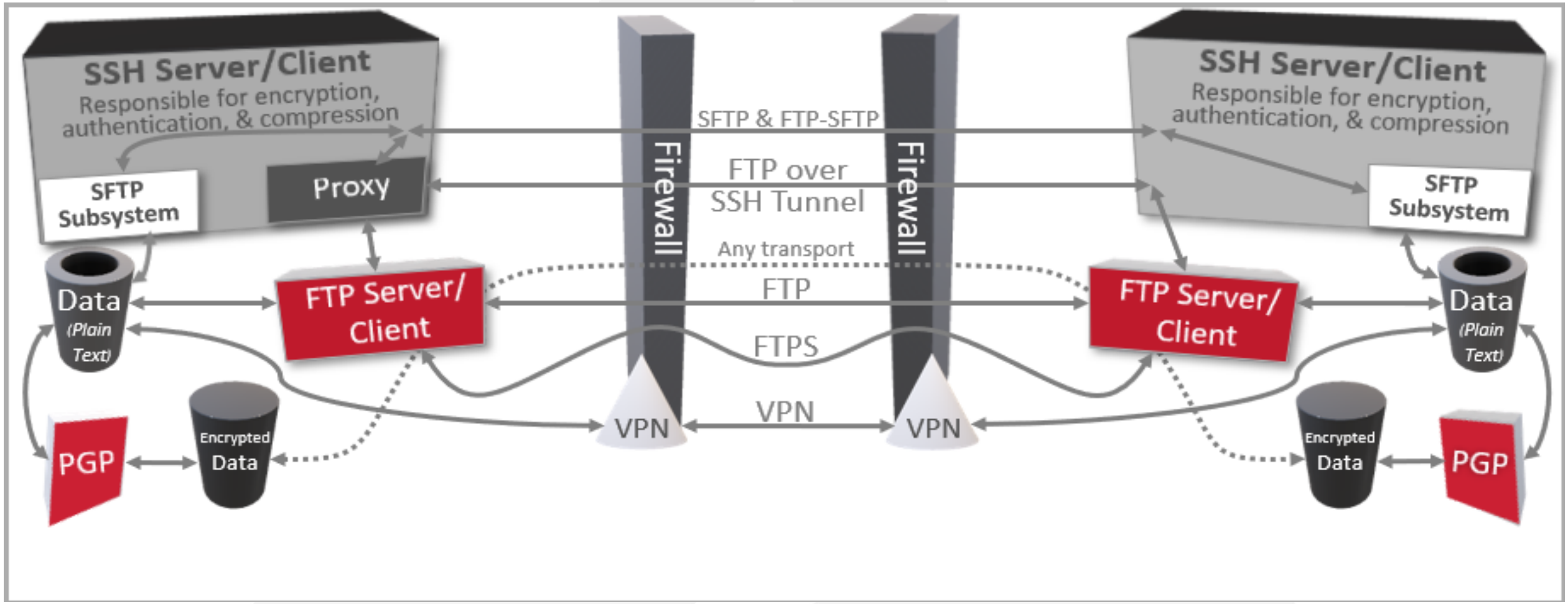
Securing Your FTP Transmissions on z/OS
The Different Options



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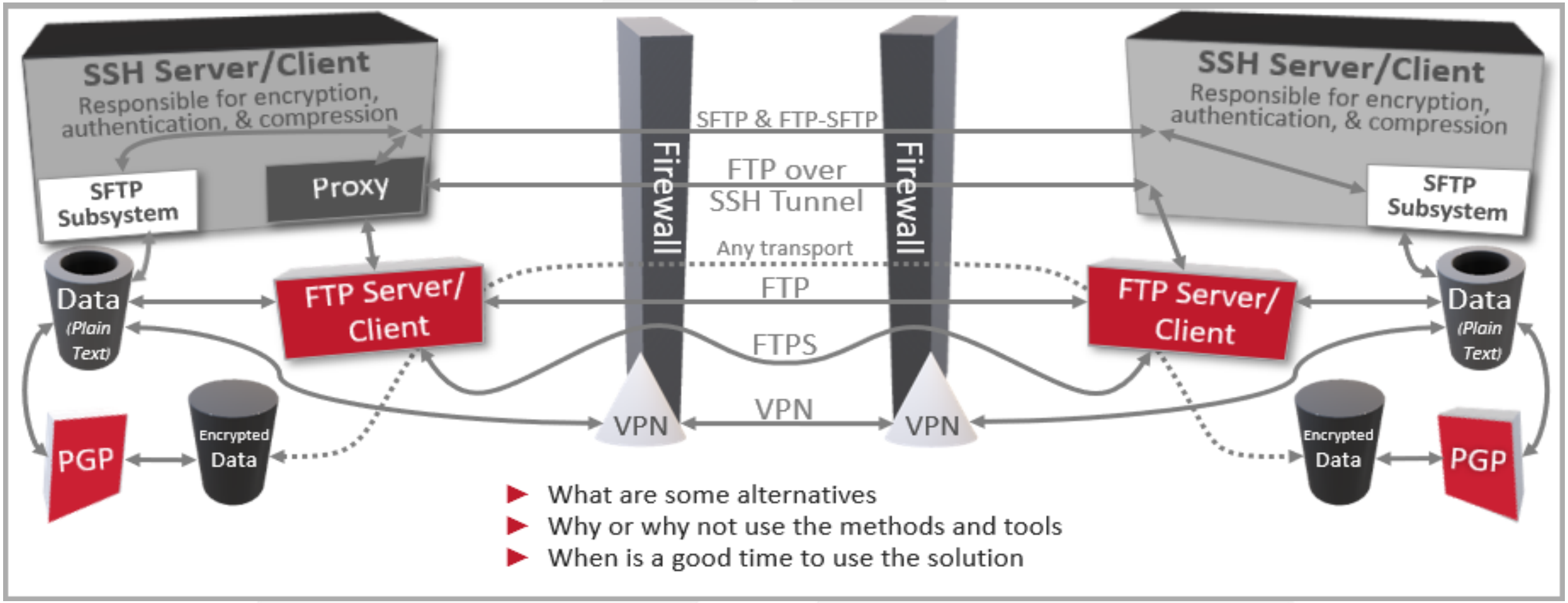

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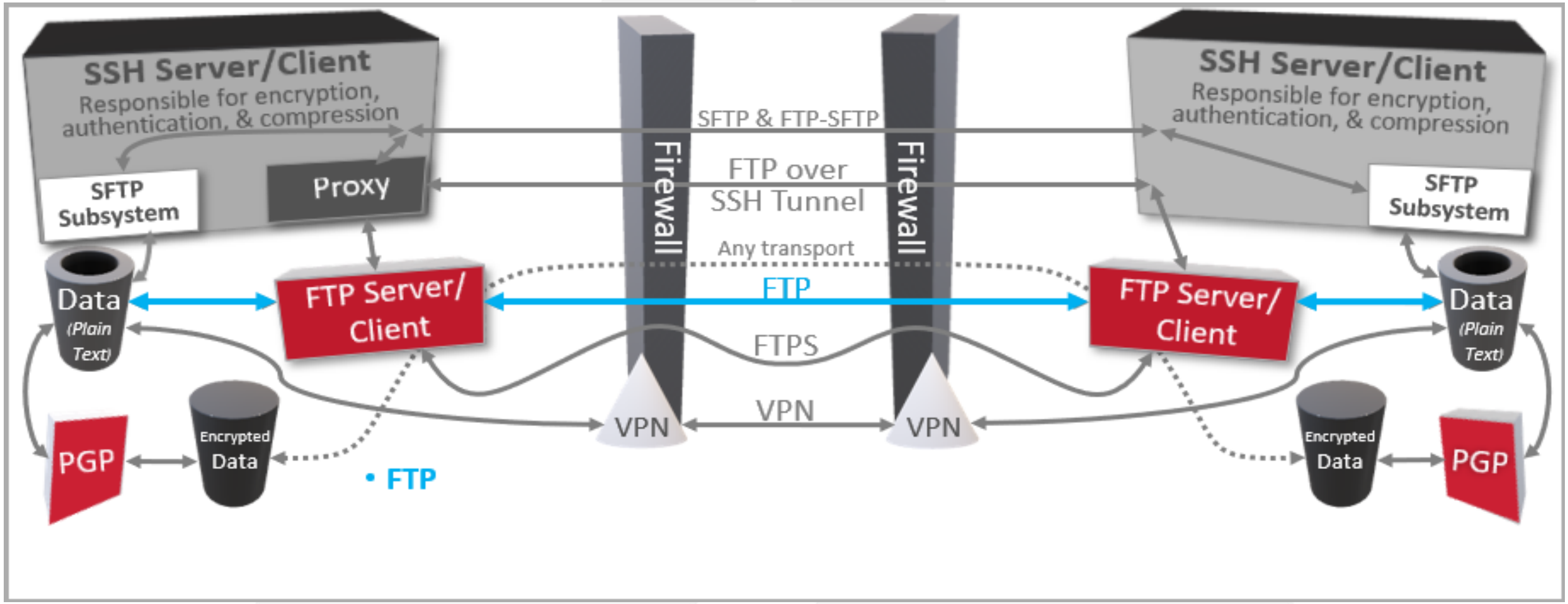
FTP (File Transfer Protocol)



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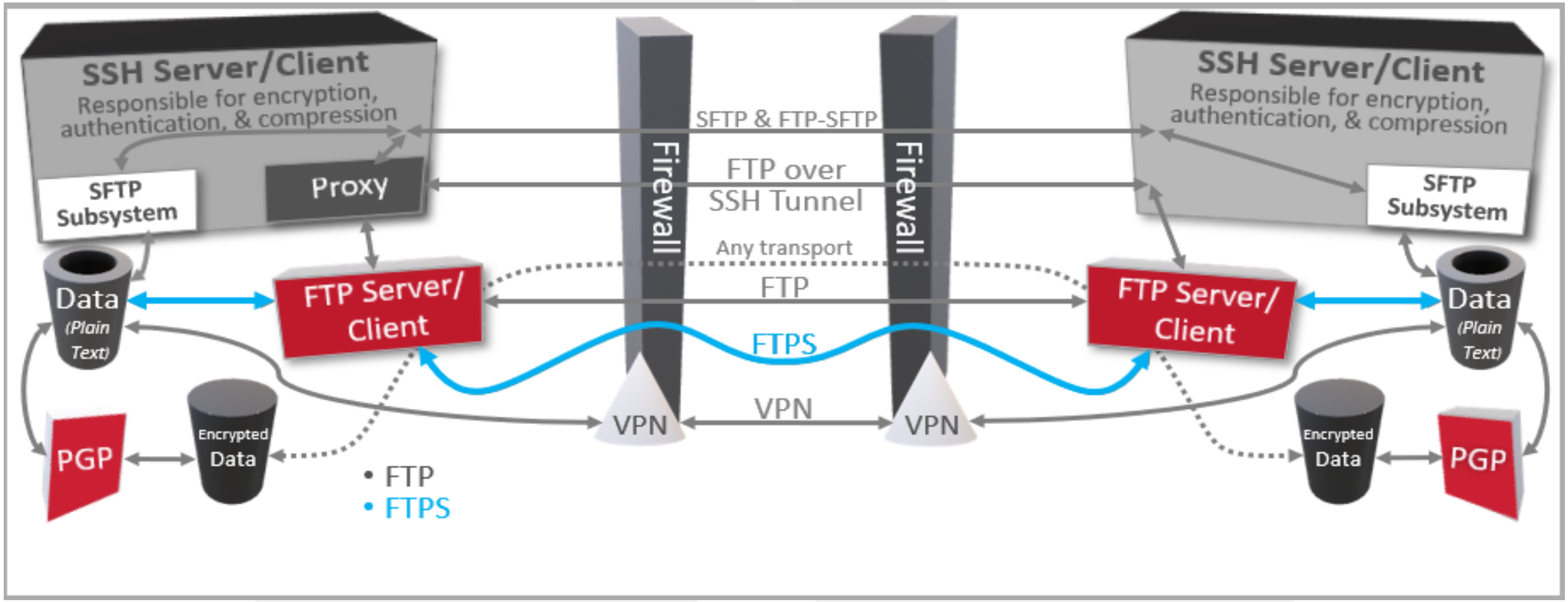
FTPS (FTP over SSL)



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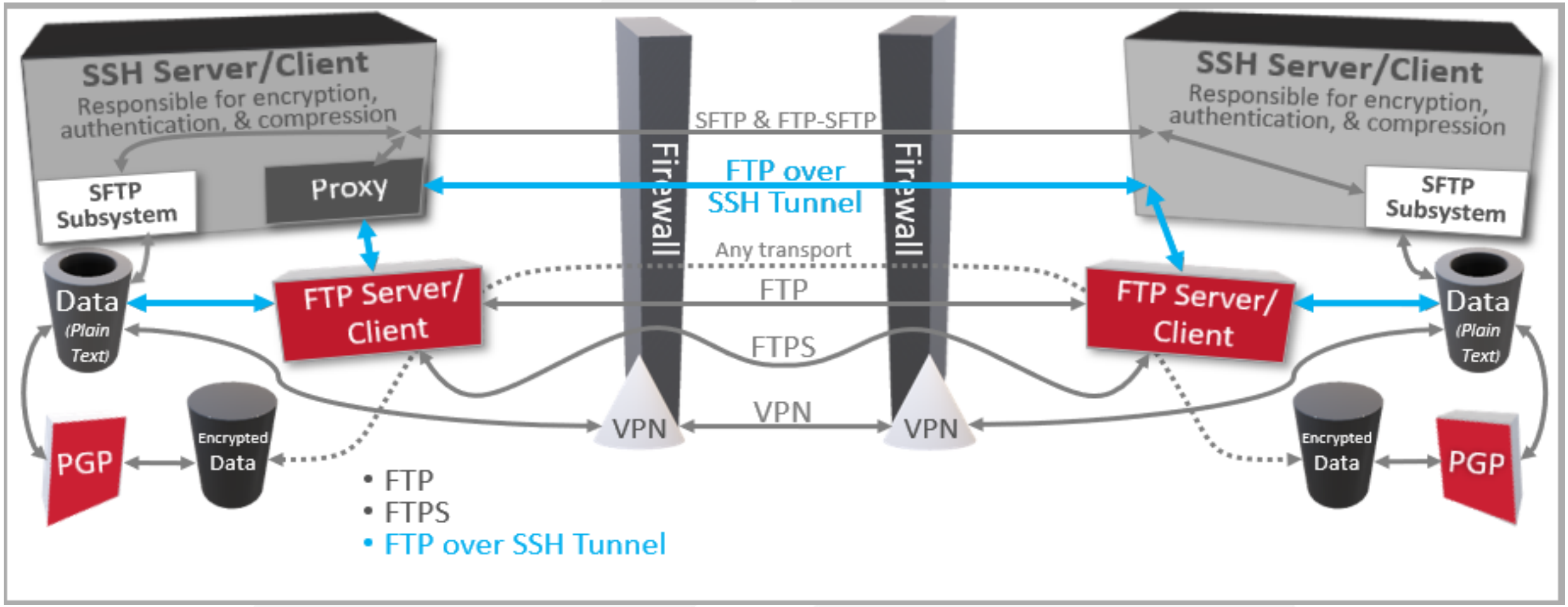
FTP over a SSH Tunnel



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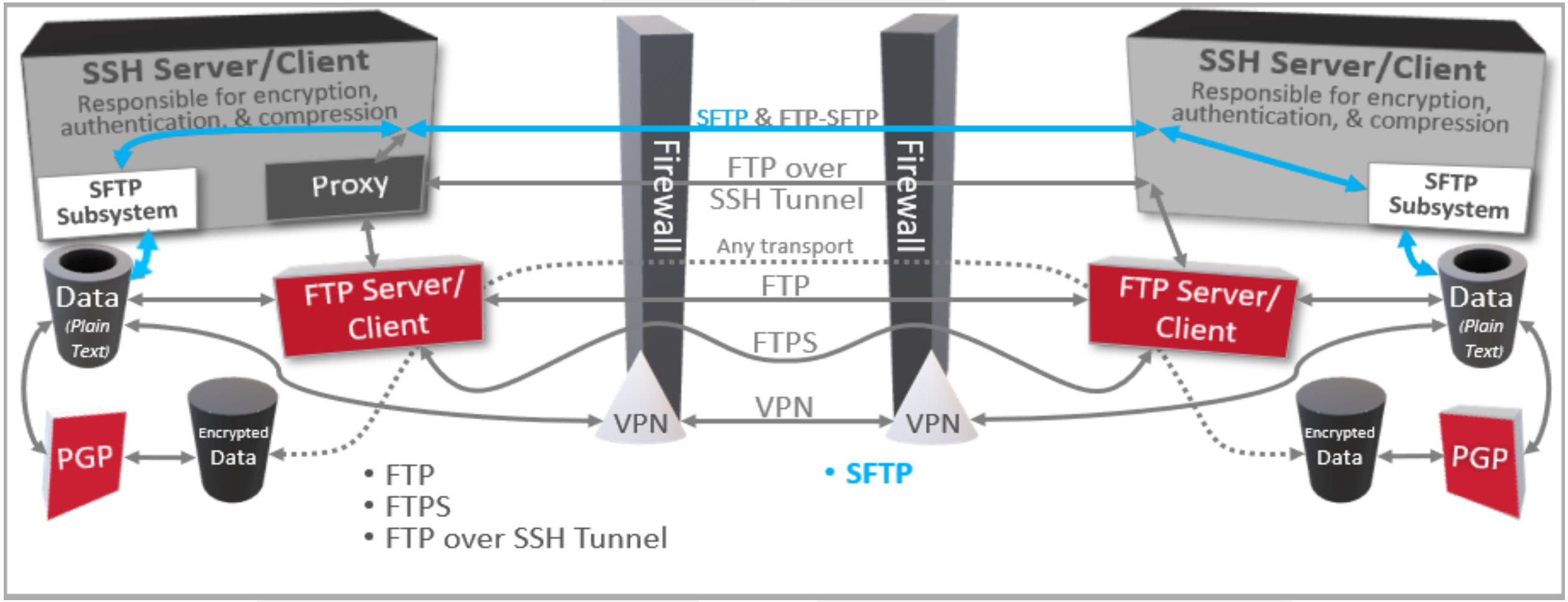
SFTP (SSH Secure FTP)



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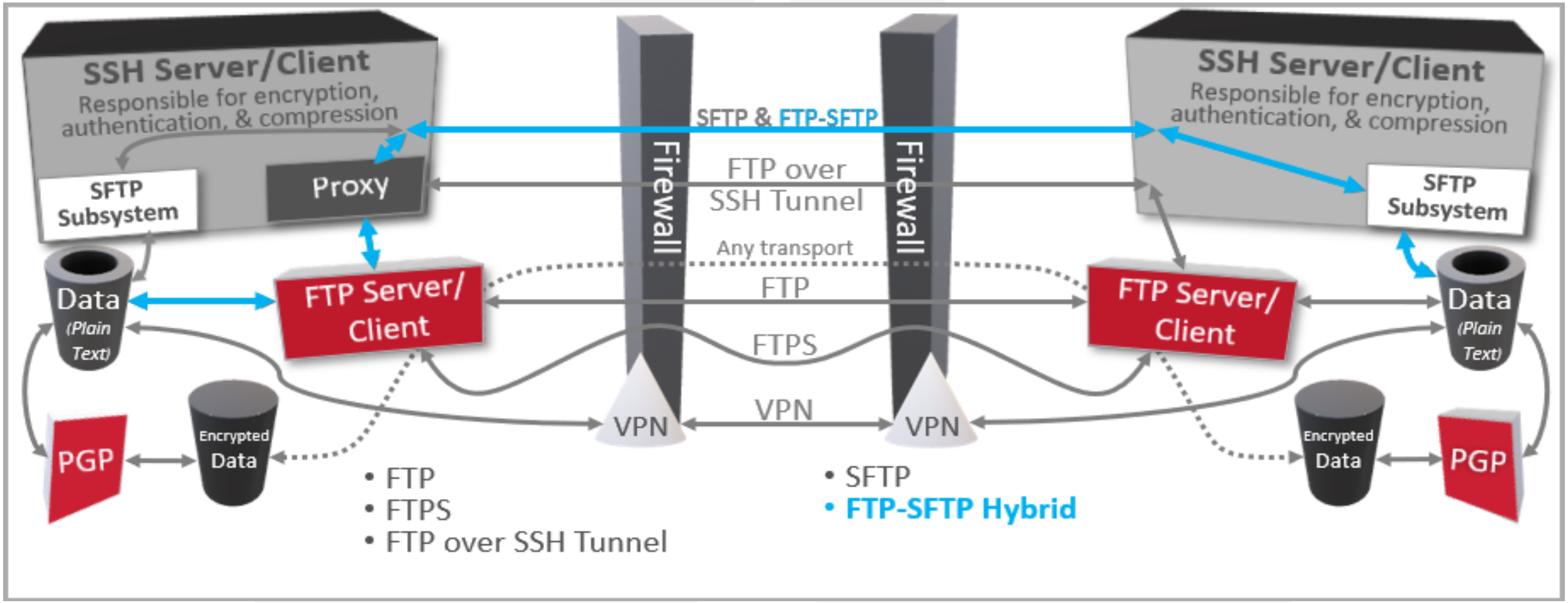
FTP to SFTP (Hybrid)



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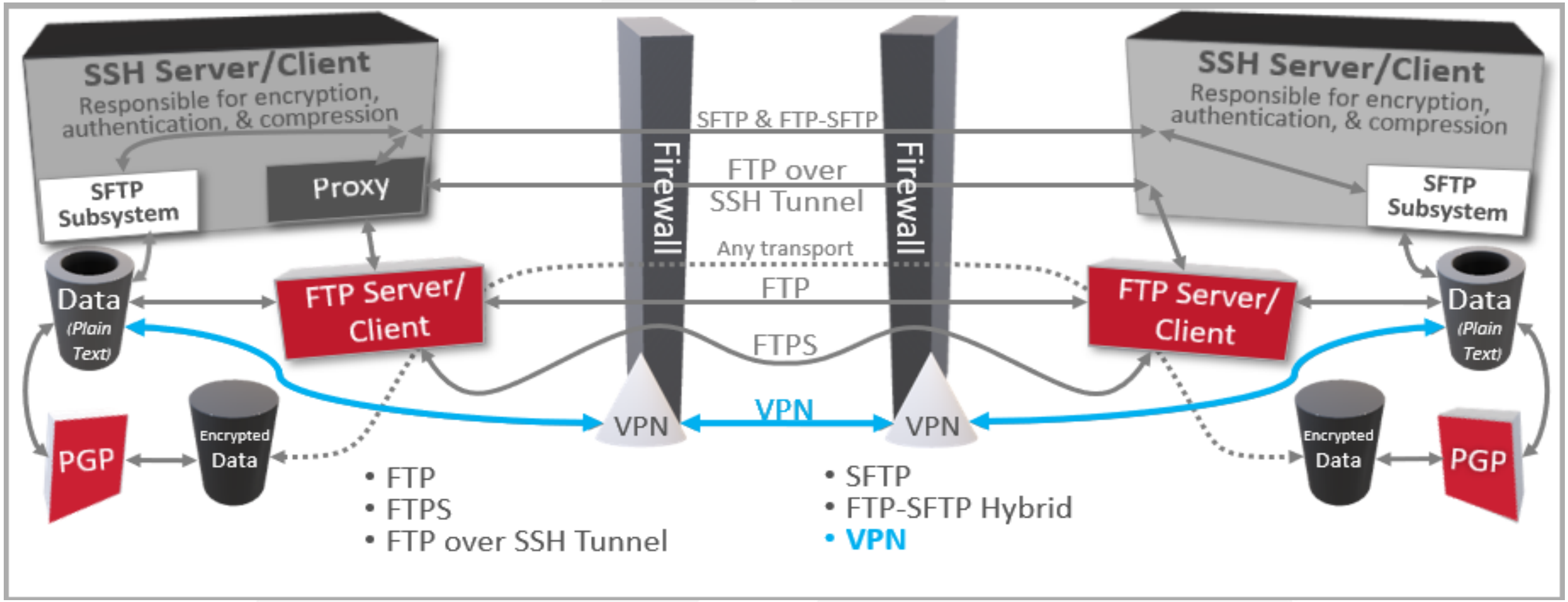
VPN (Virtual Private Network)



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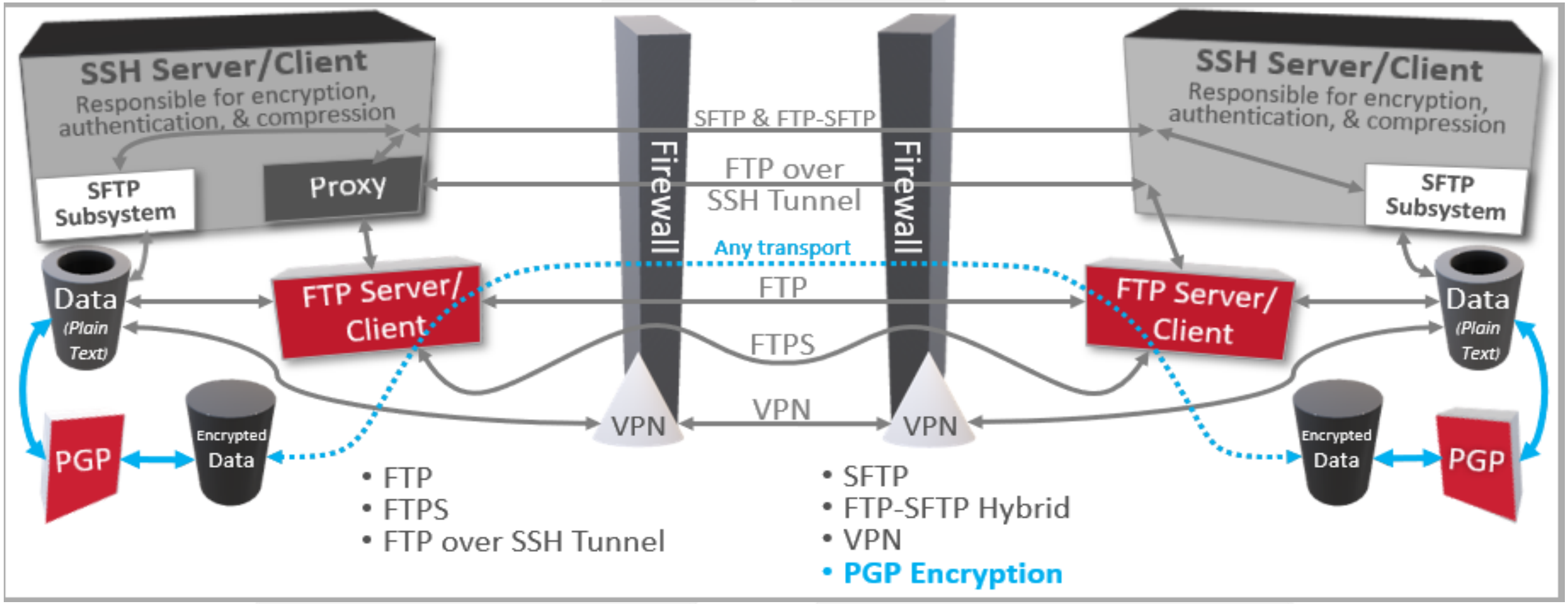
PGP Encryption (Data at Rest)



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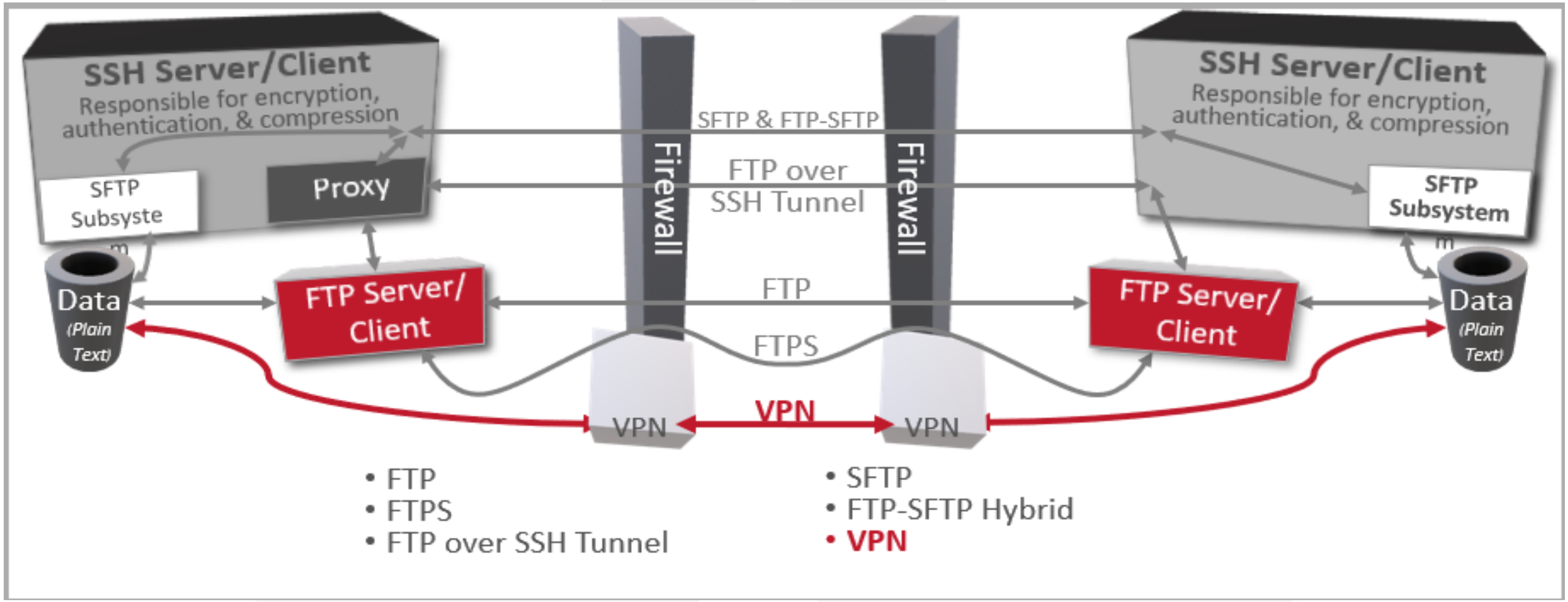
Securing Your FTP Transmissions on z/OS
Let's Simplify



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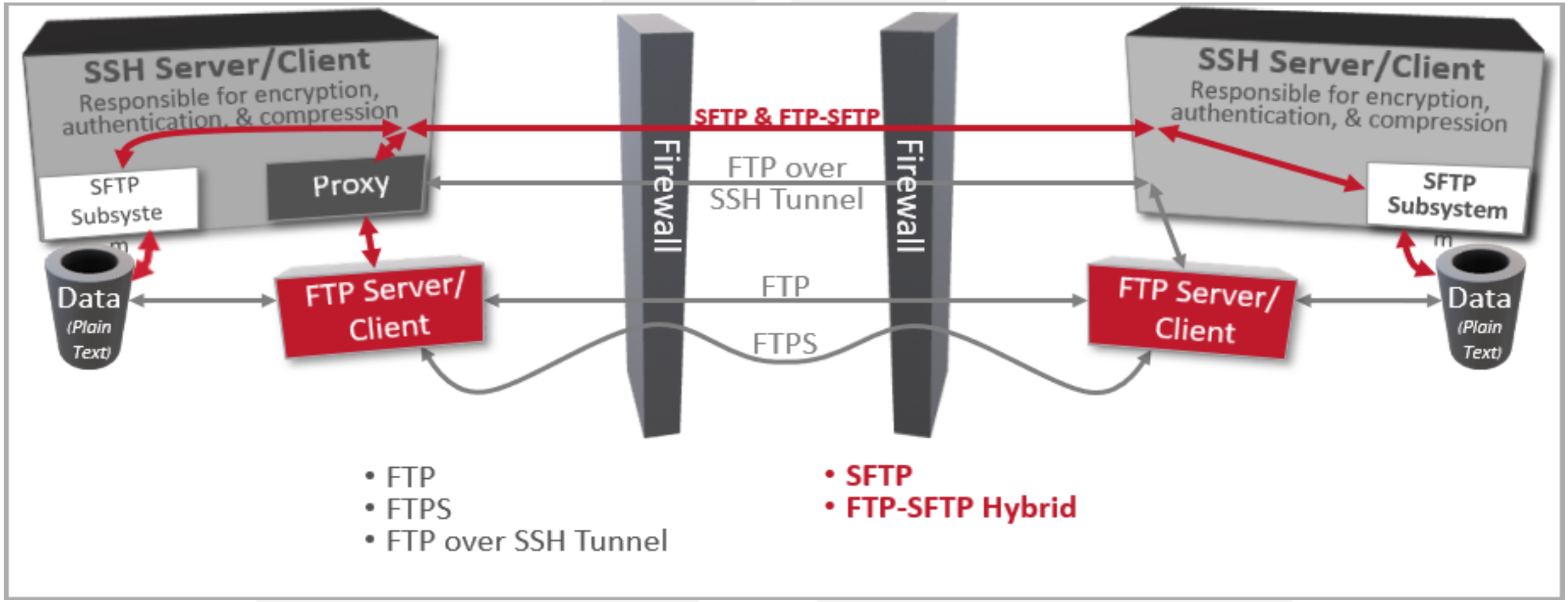

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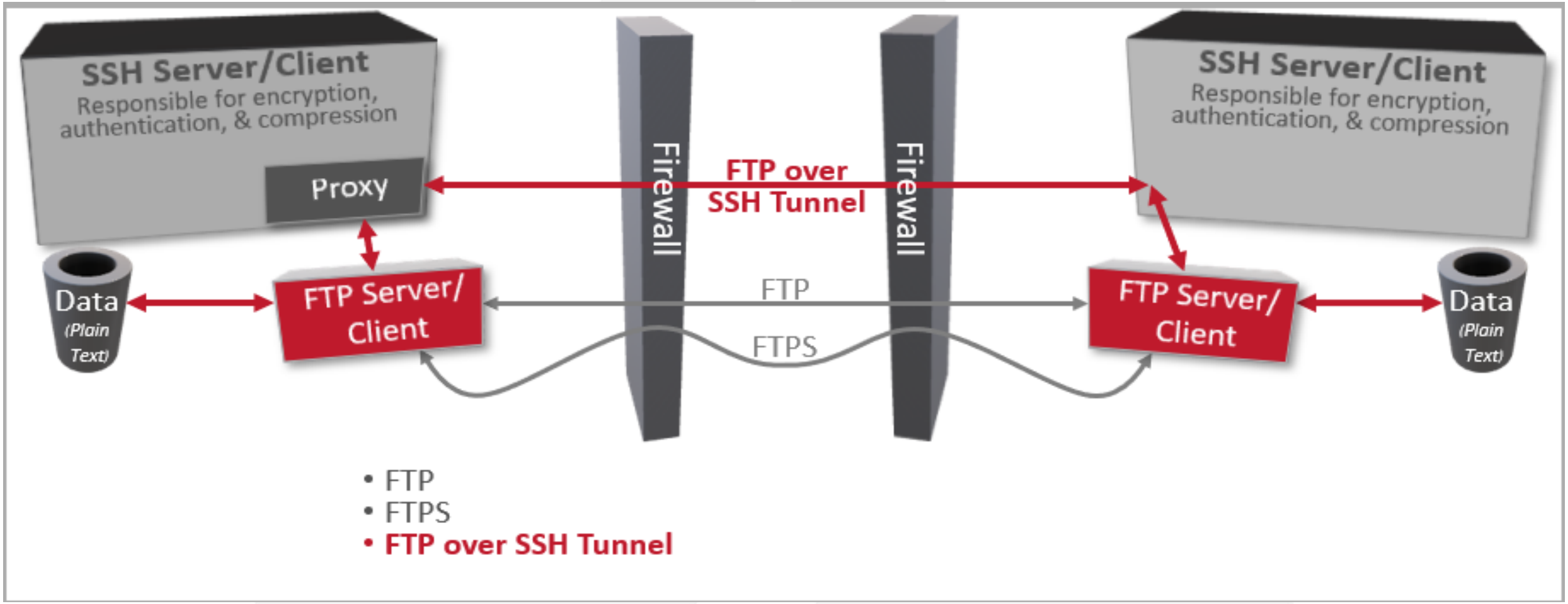

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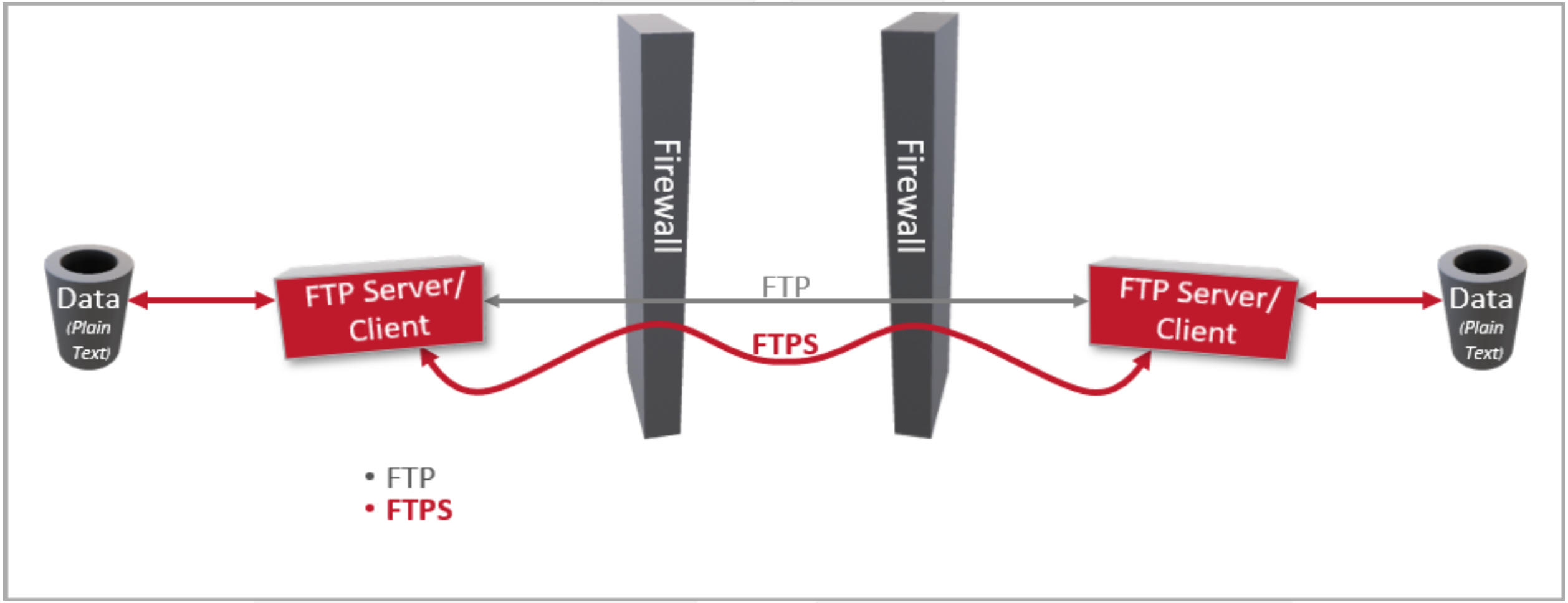

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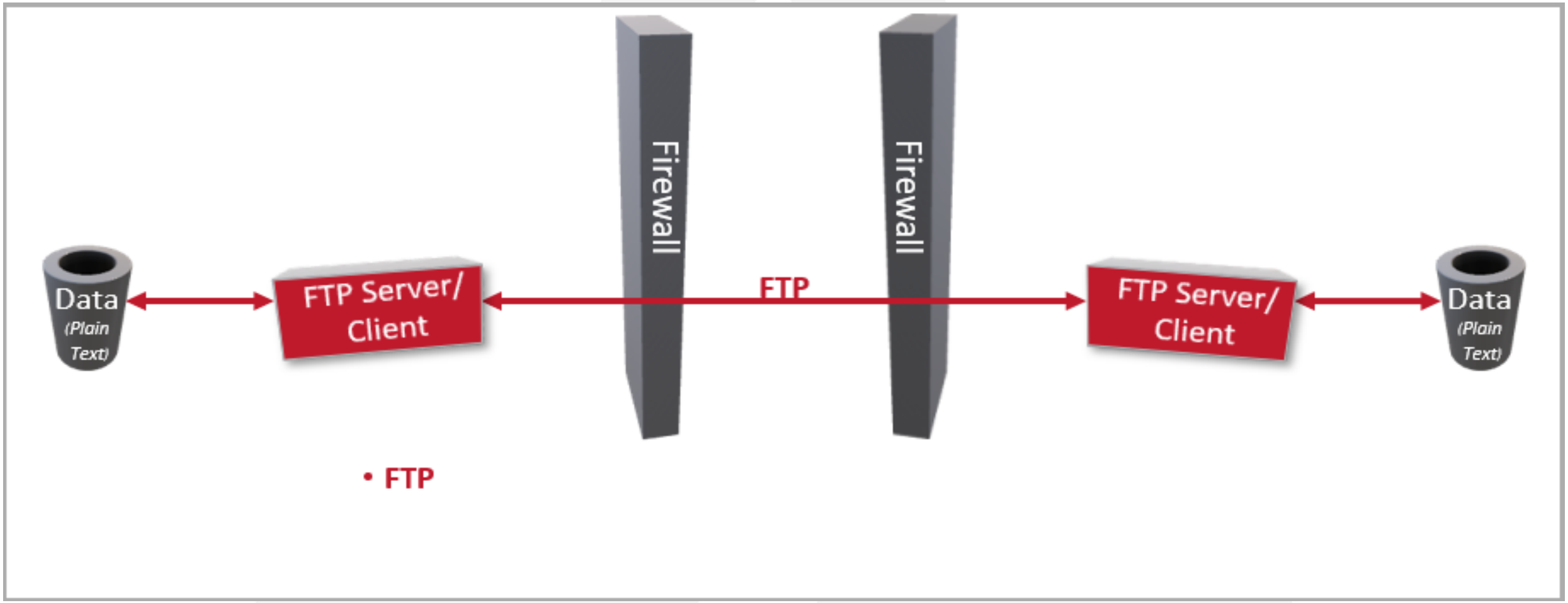
FTP (File Transfer Protocol)



- FTP

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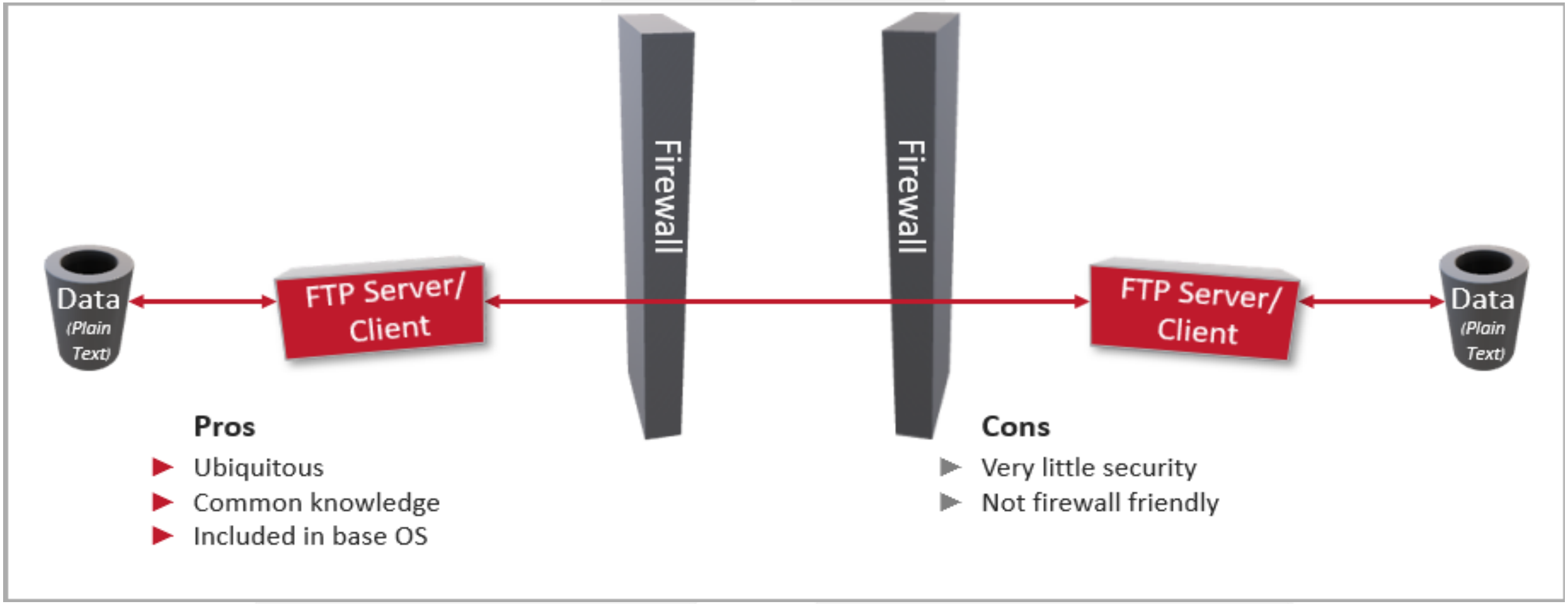
FTP - Pros and Cons



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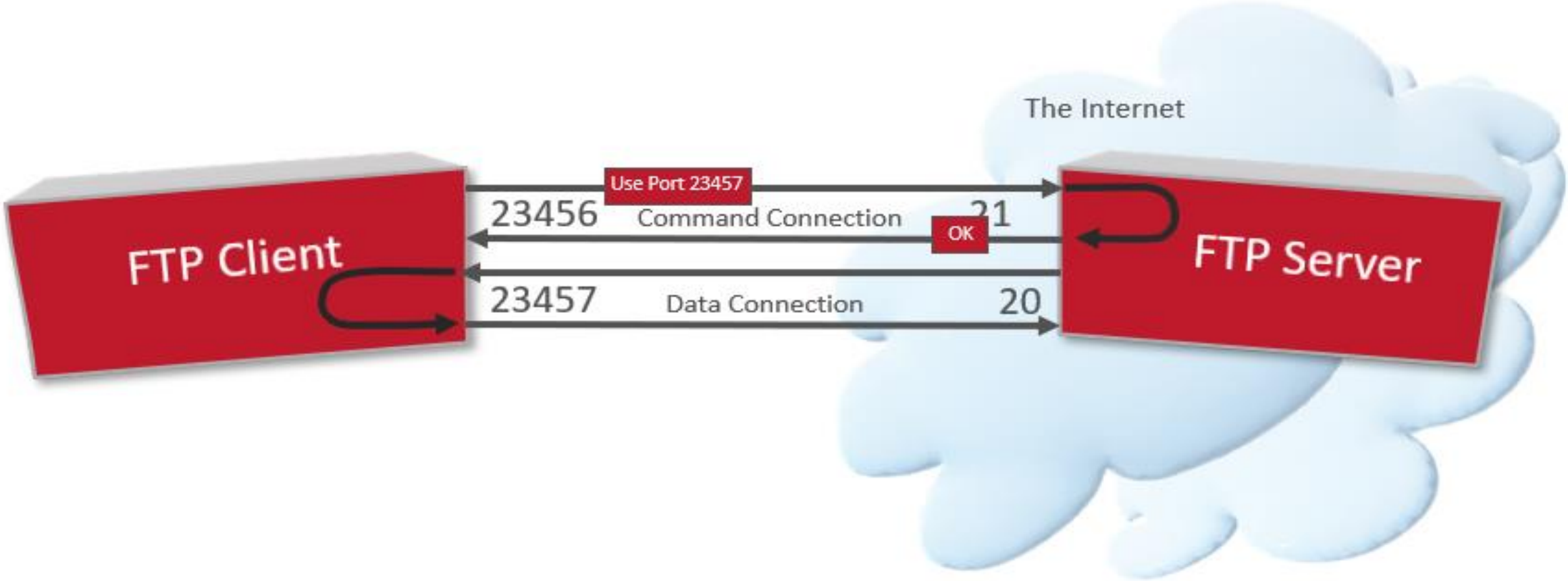
FTP - Active Firewall



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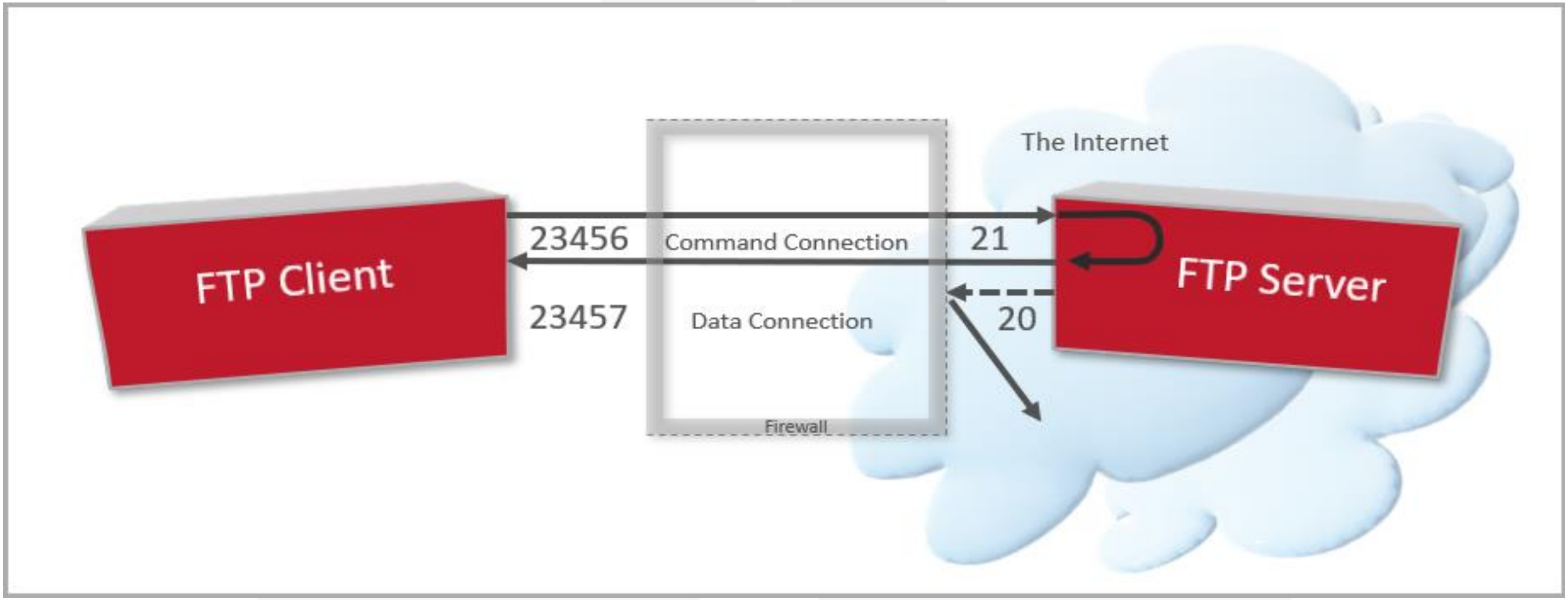
FTP - Active FTP with Firewall



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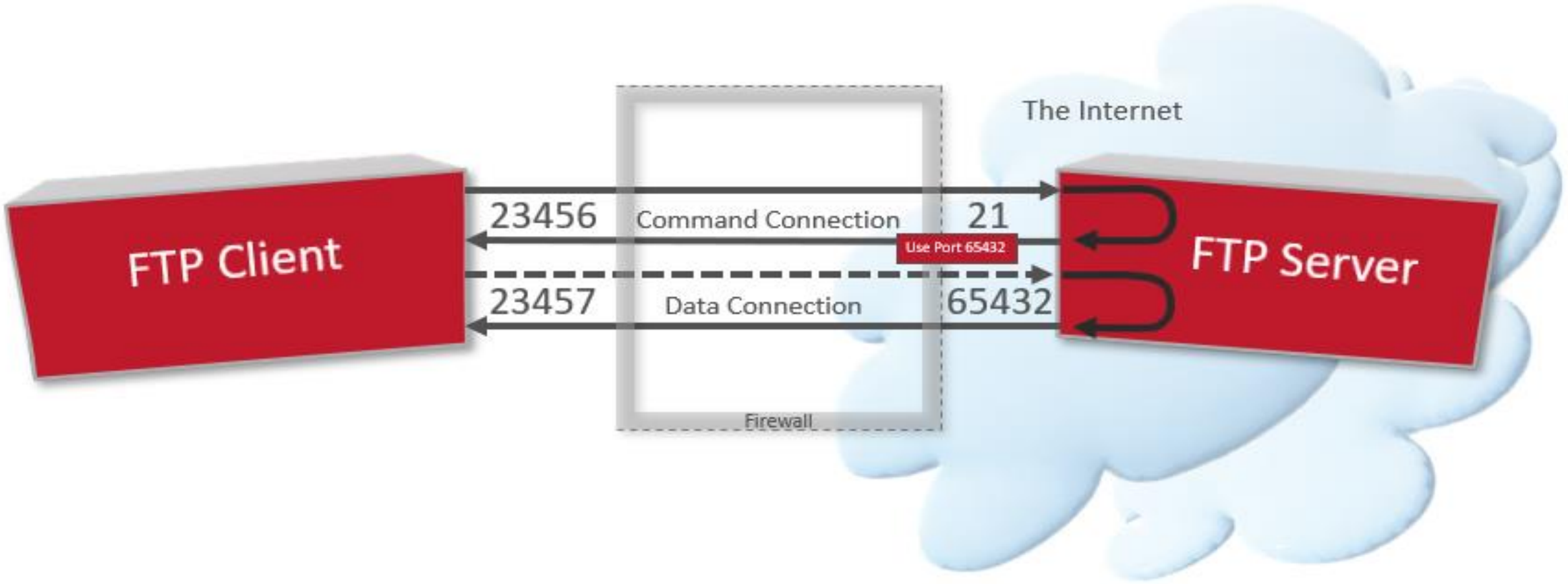
FTP - Passive FTP



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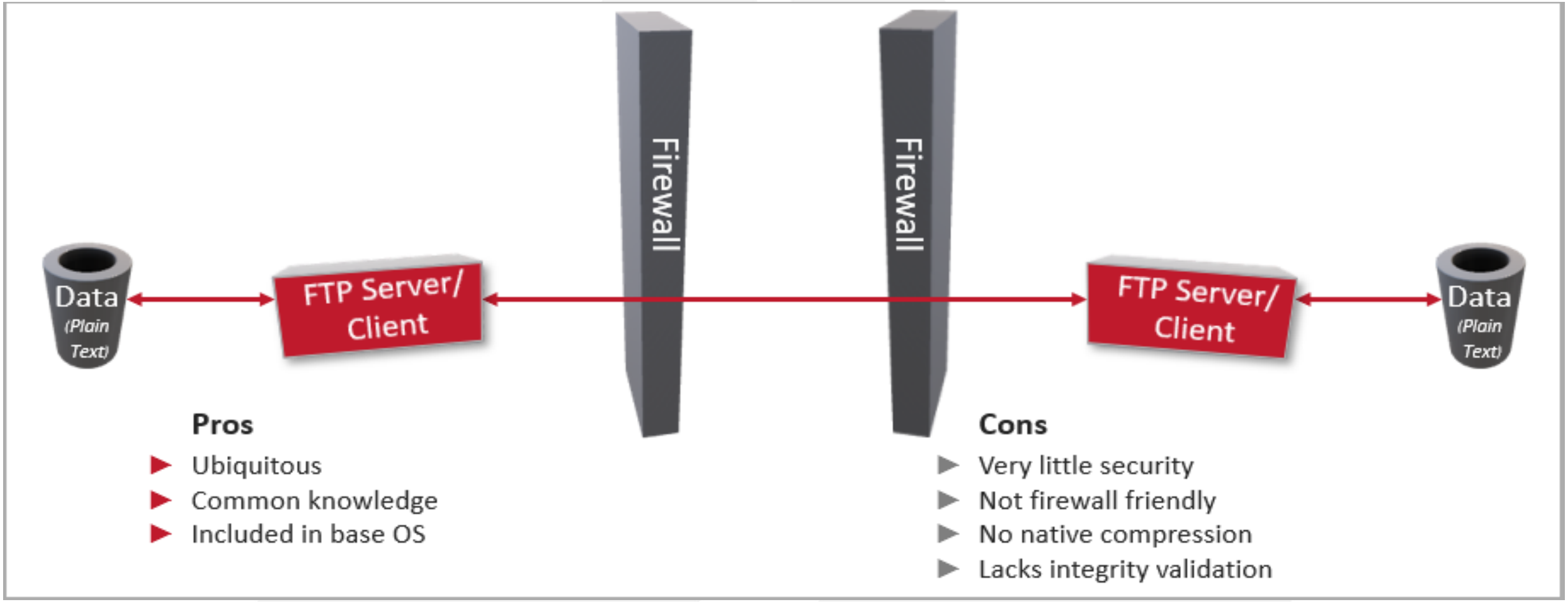
FTP - Pros and Cons



Pros

- Ubiquitous
- Common knowledge
- Included in base OS

Cons

- Very little security
- Not firewall friendly
- No native compression
- Lacks integrity validation

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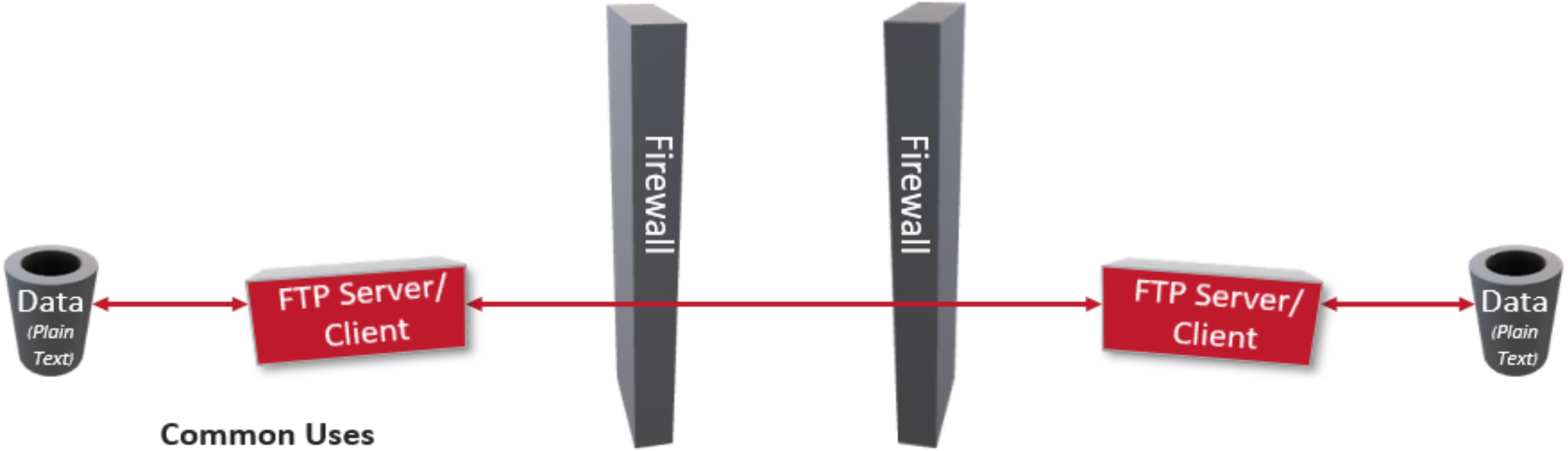
FTP - Common Uses



Common Uses

- Public information
- Intranet transfers (careful, not everyone on the intranet is safe)
- Used for far too many things - should really use something better

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Securing Your FTP Transmissions on z/OS

FTPS (FTP Over SSL)

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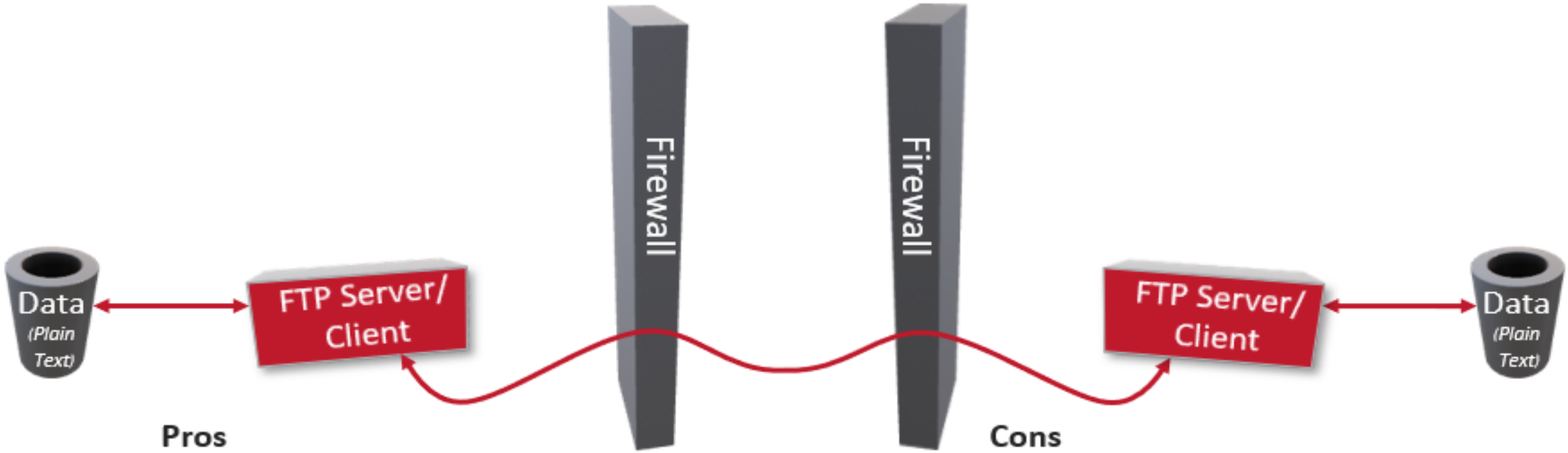
FTPS (FTP Over SSL) – Pros and Cons



Pros

- Same FTP familiarity
- Included in base z/OS
- Supports X.509 certificates and Kerberos
- RACF keyrings supported

Cons

- Not firewall-friendly (even worse than straight FTP)
- Can't assume it's available on the other end

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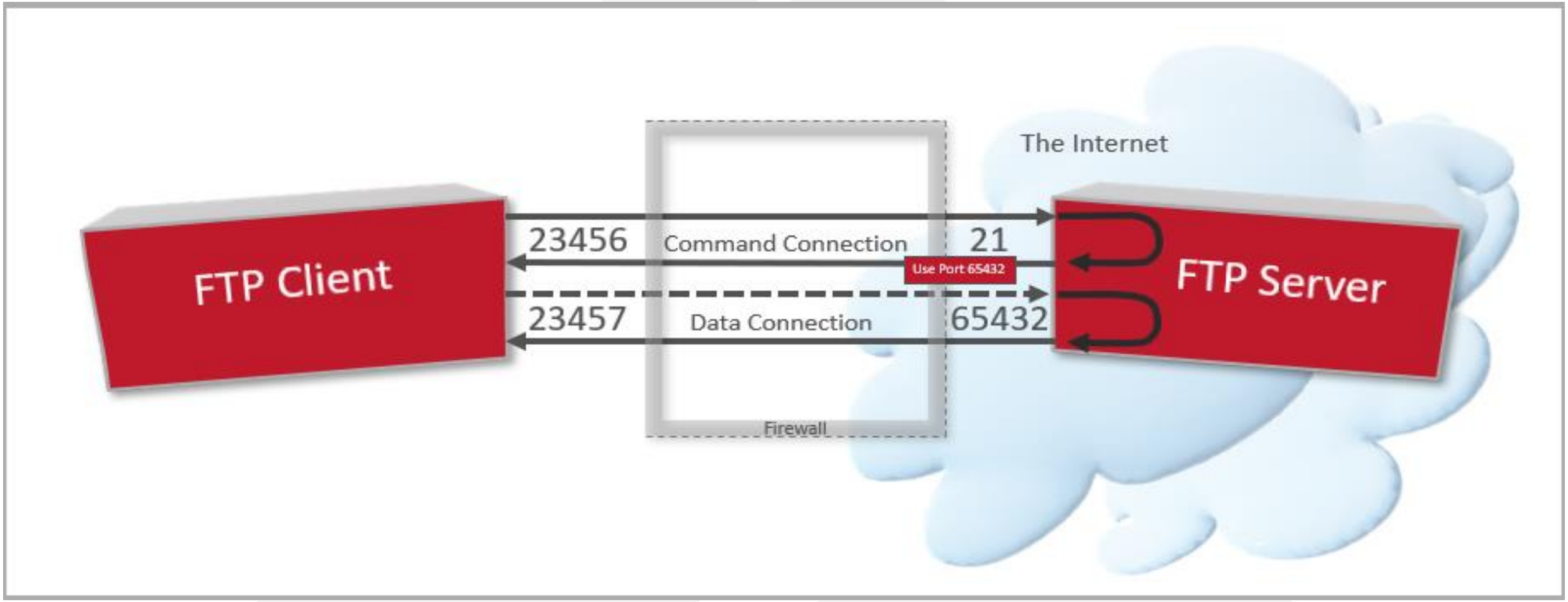

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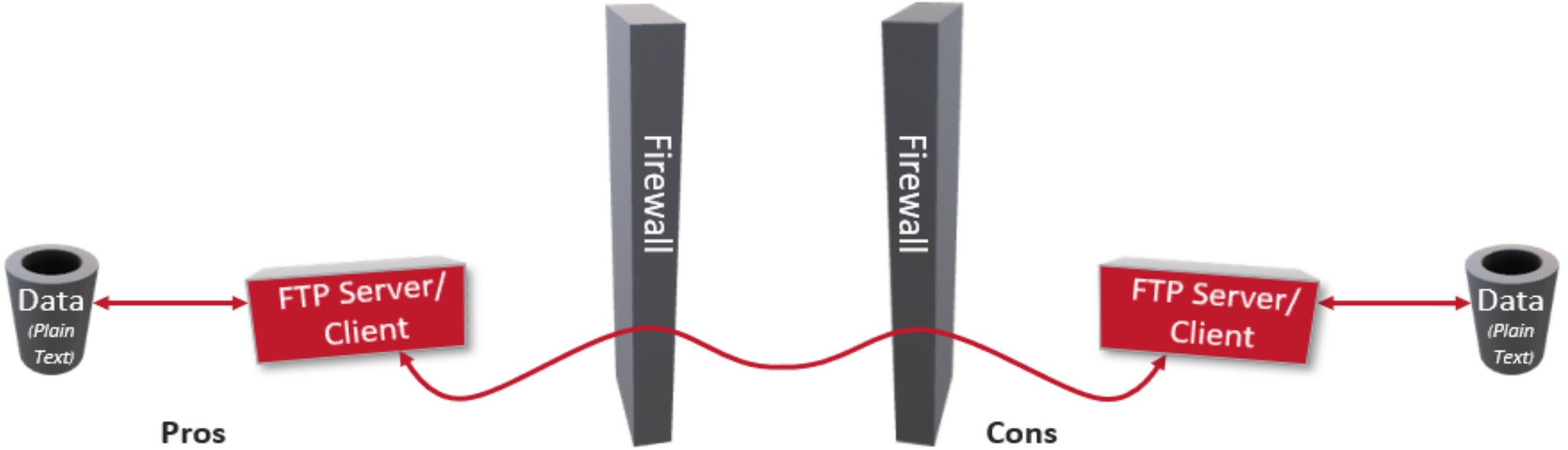
FTPS (FTP Over SSL) – Pros and Cons



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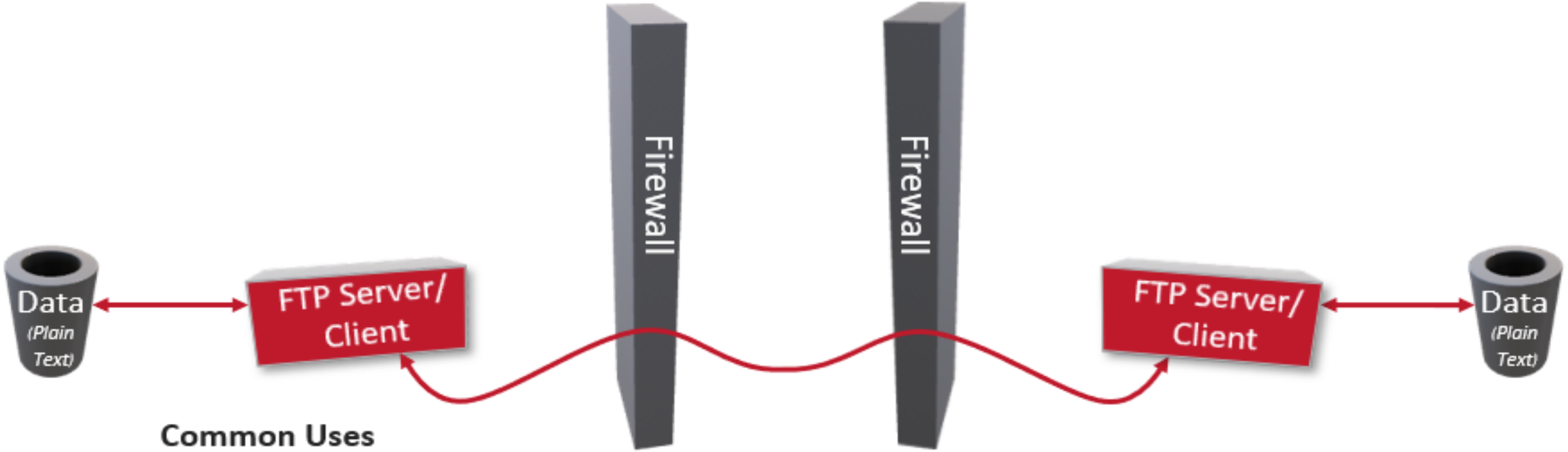
FTPS (FTP Over SSL) – Common Uses



Common Uses

- z/OS to z/OS
- z/OS to iSeries
- Servers and clients available on platforms

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Securing Your FTP Transmissions on z/OS

FTP Over a SSH Tunnel

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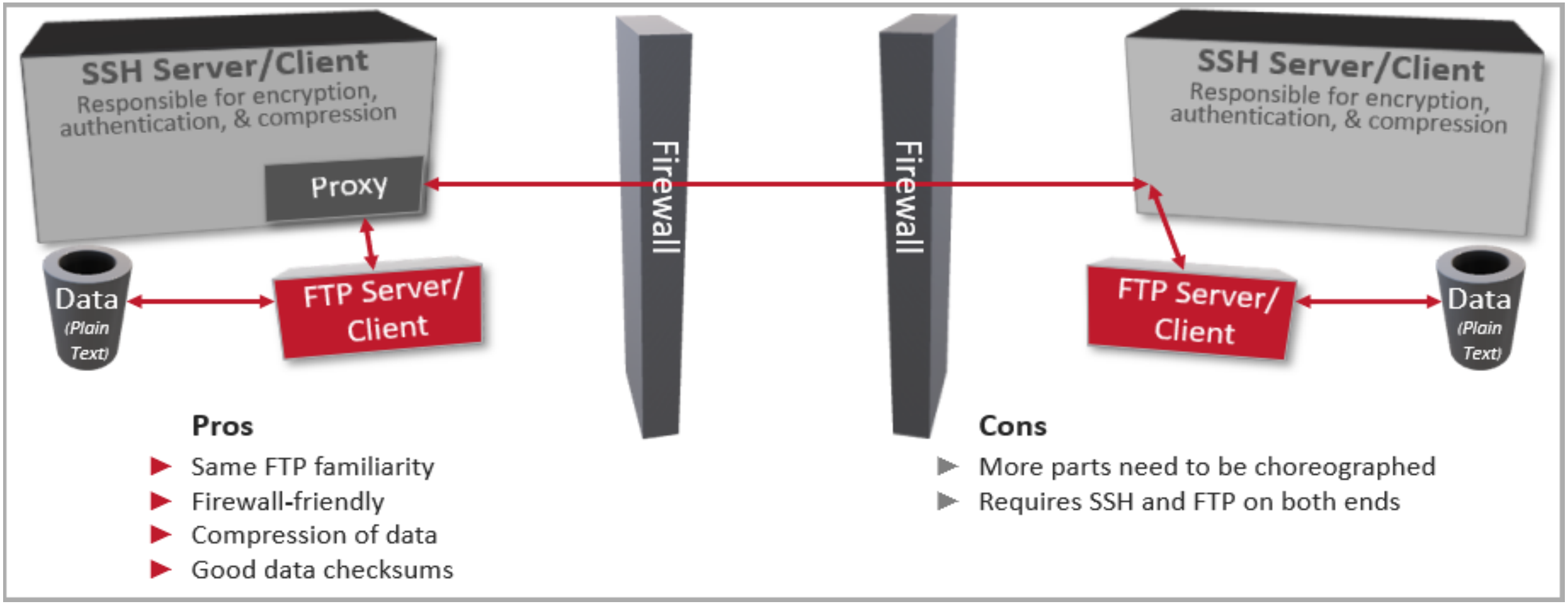
FTP over SSH Tunnel Pros and Cons



Pros

- Same FTP familiarity
- Firewall-friendly
- Compression of data
- Good data checksums

Cons

- More parts need to be choreographed
- Requires SSH and FTP on both ends

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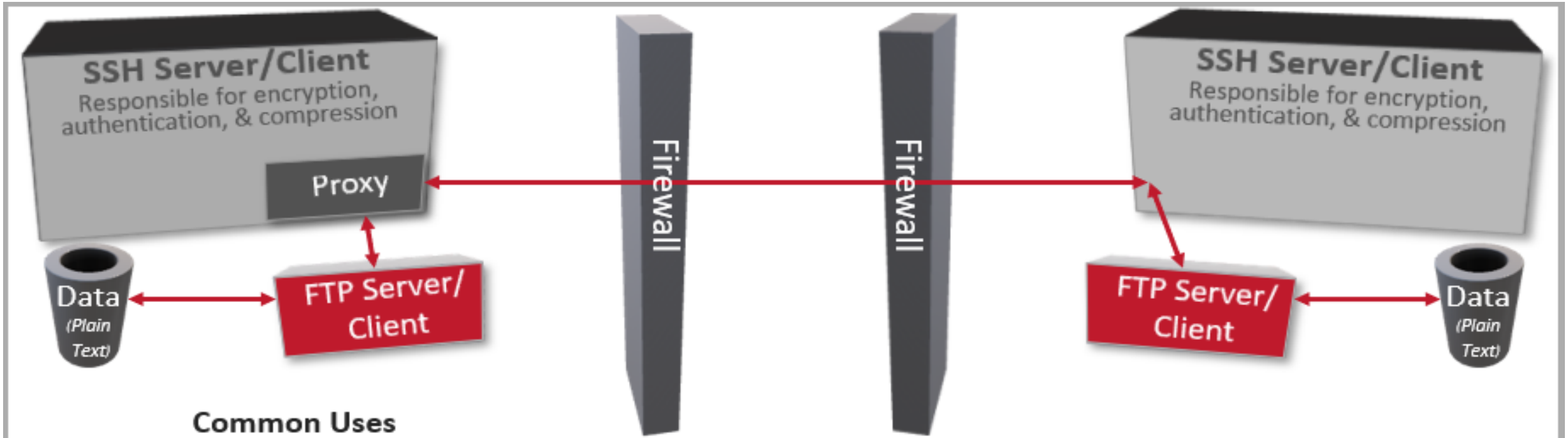
FTP over SSH Tunnel – Common Uses



Common Uses

- Sites that have a significant reliance on FTP already in place that need to implement SSH encryption for transit

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Securing Your FTP Transmissions on z/OS

Secure SFTP (SFTP)

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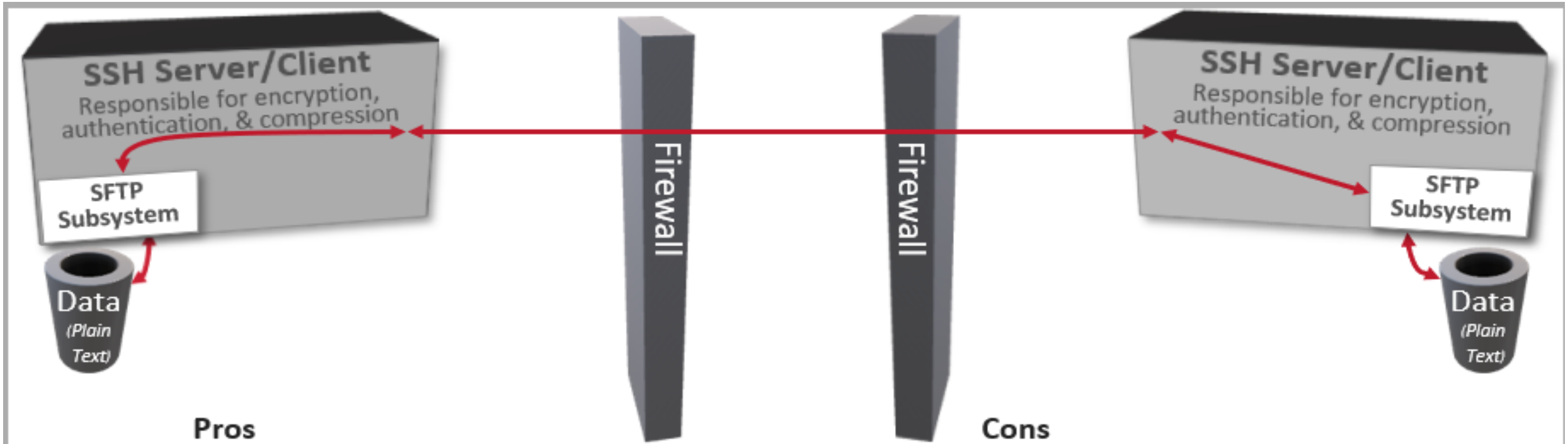
Secure FTP (SFTP) – Pros and Cons



Pros

- Satisfies SFTP requirement
- Point to point encryption
- Compression and Integrity built-in
- Already ready to go on Unix/Linux servers

Cons

- May not be a part of your base operating system
- May not be as familiar to users
- Only protects data in transit

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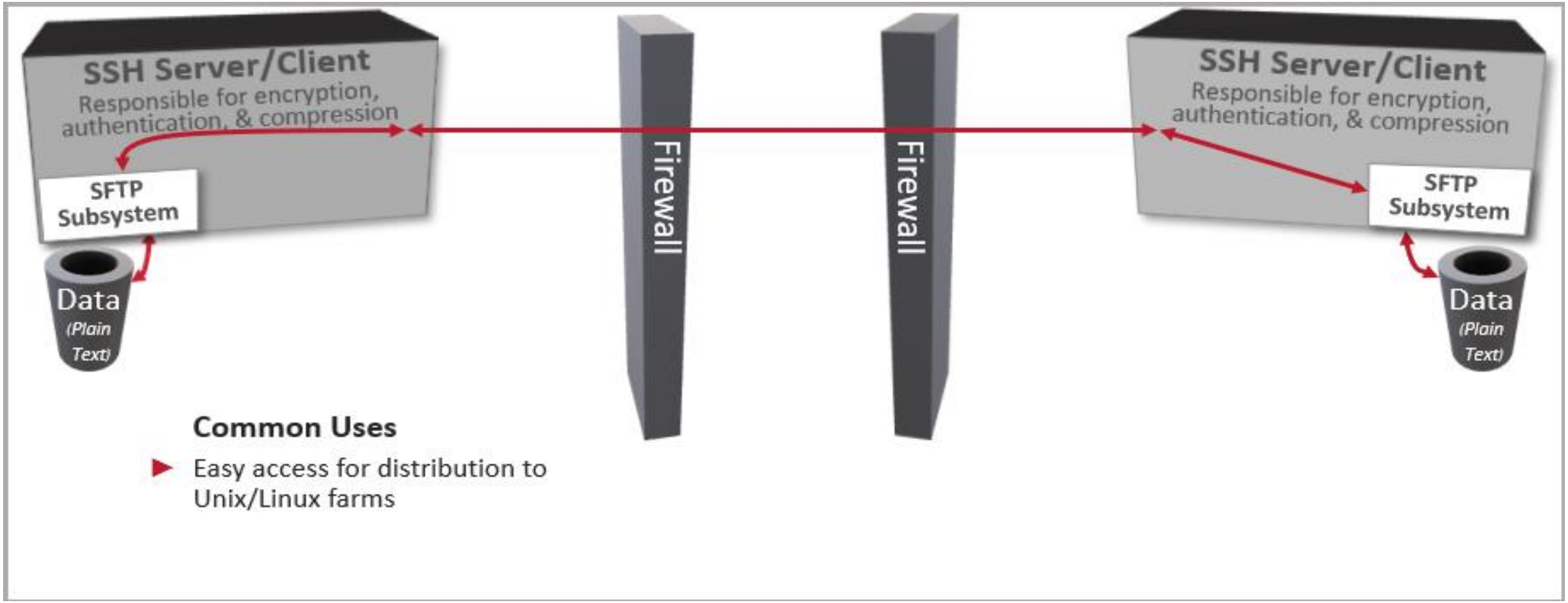
Secure FTP (SFTP) – Common Uses



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Securing Your FTP Transmissions on z/OS

FTP to SFTP Conversion (Vendor Solution)

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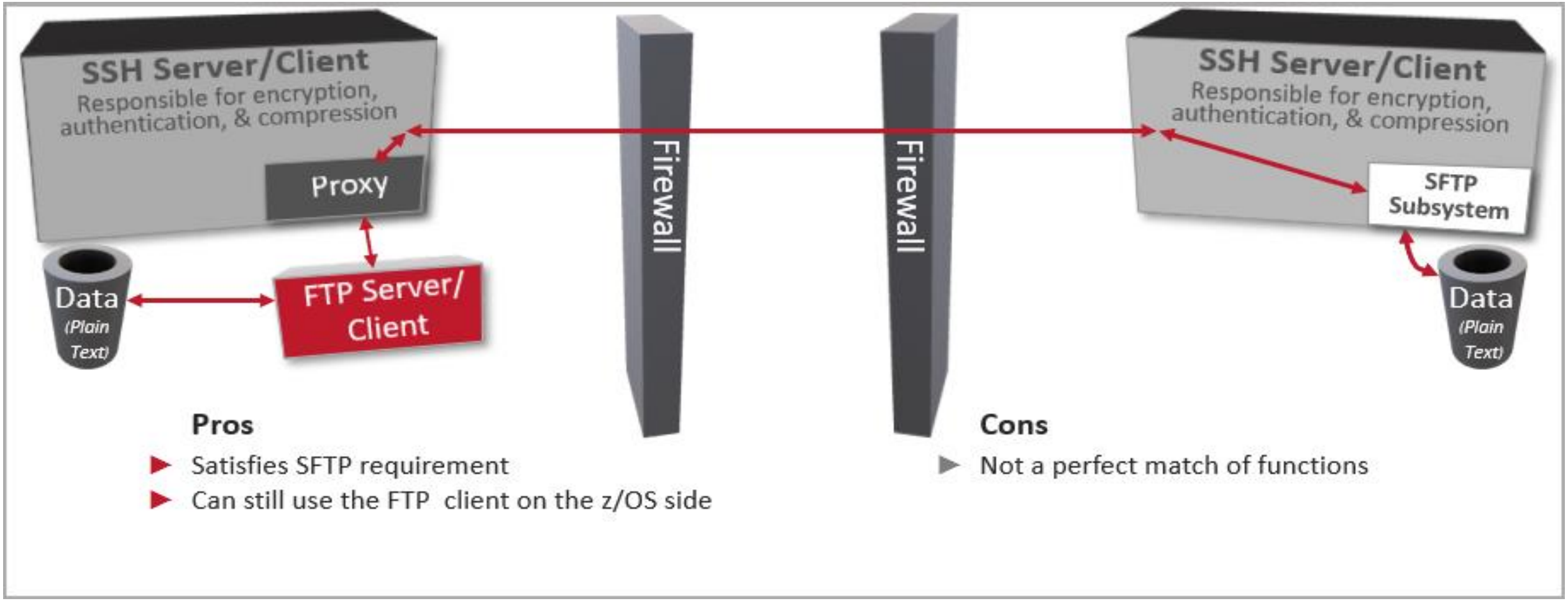
FTP to SFTP Conversion (Vendor Solution) Pros and Cons



Pros

- Satisfies SFTP requirement
- Can still use the FTP client on the z/OS side

Cons

- Not a perfect match of functions

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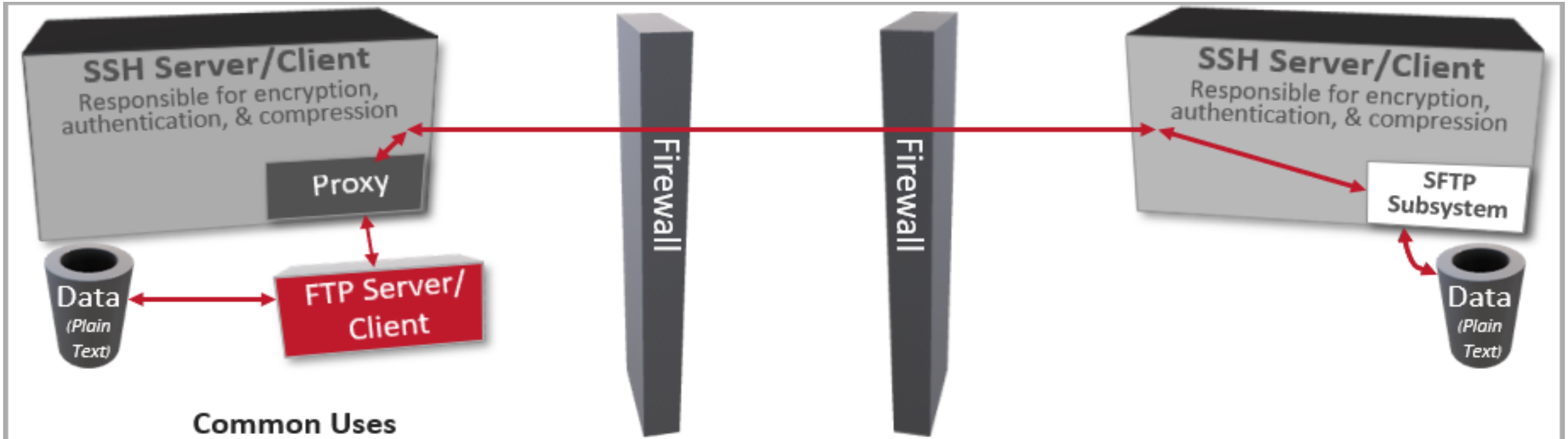

Common Uses

- Leveraging FTP already in place, but transitioning it to your SFTP knowledgeable partners

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Securing Your FTP Transmissions on z/OS

Virtual Private Network (VPN)

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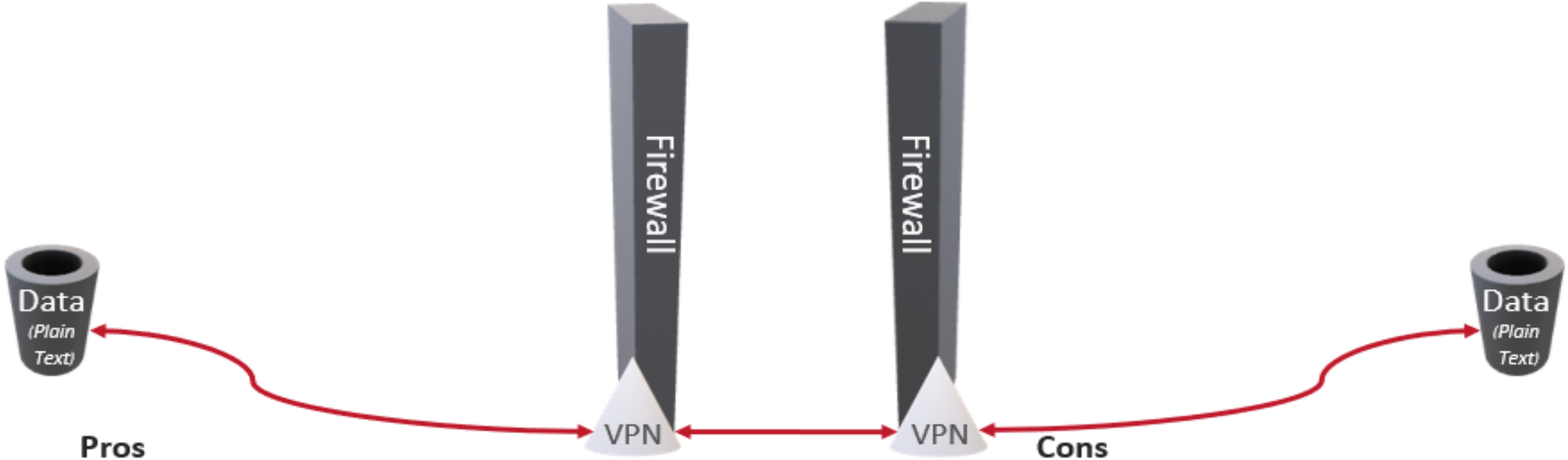
Virtual Private Network (VPN) – Pros and Cons



Pros

- Network-to-network encryption (everything covered)
- Some integrity built-in
- Compression might be included
- Transparent to the applications

Cons

- More complex to set up
- Intranet traffic is unprotected
- Usually managed by another group

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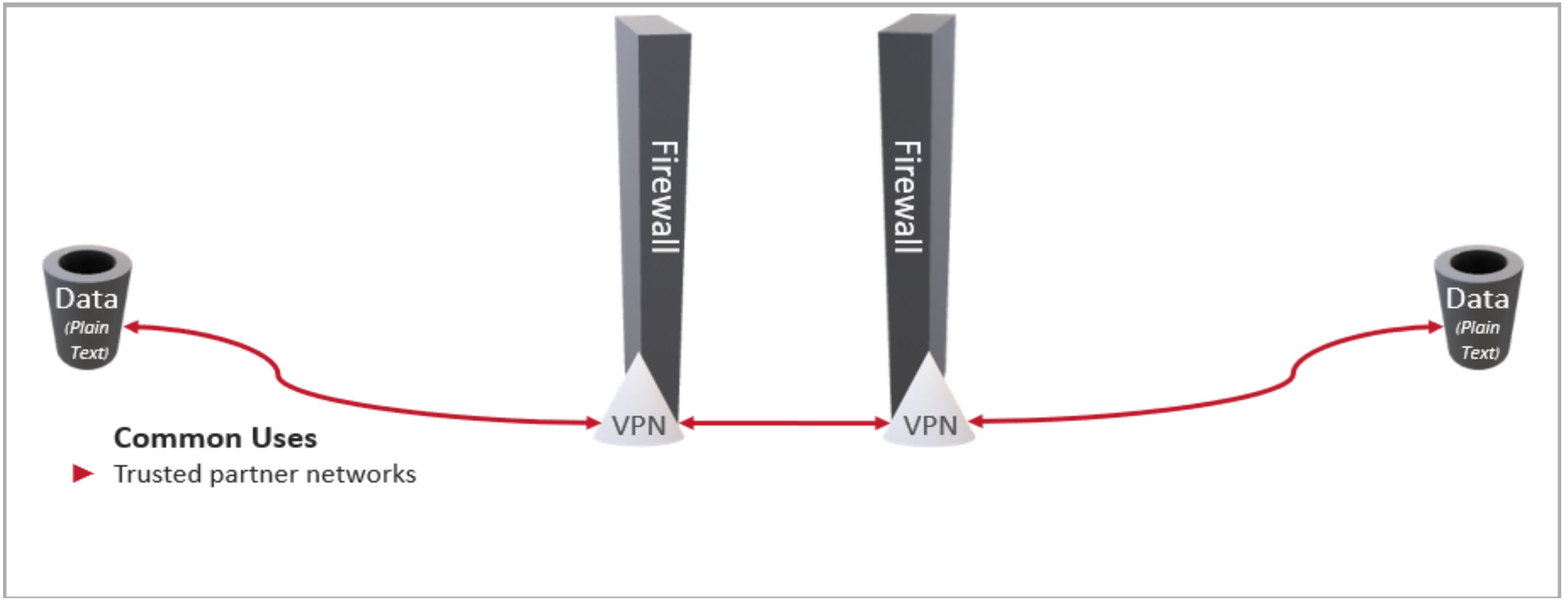

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Securing Your FTP Transmissions on z/OS

Pretty Good Privacy (PGP)

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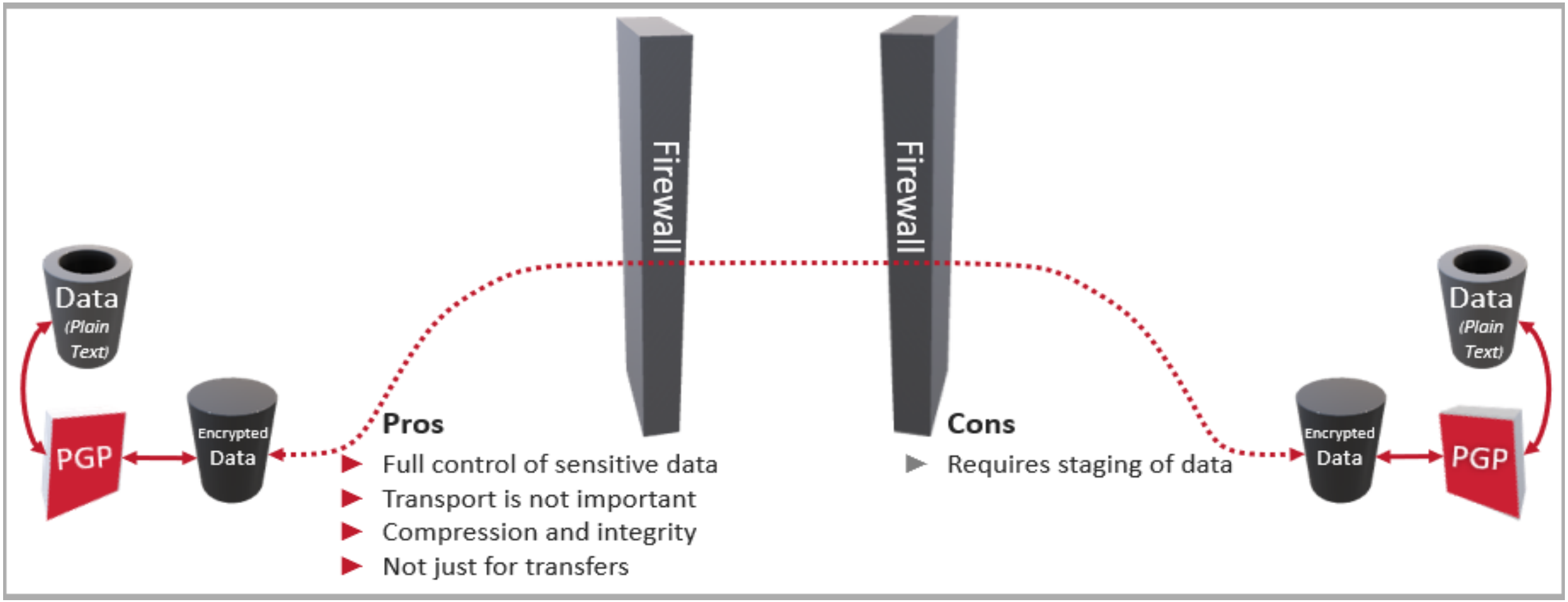
Pretty Good Privacy (PGP) – Pros and Cons



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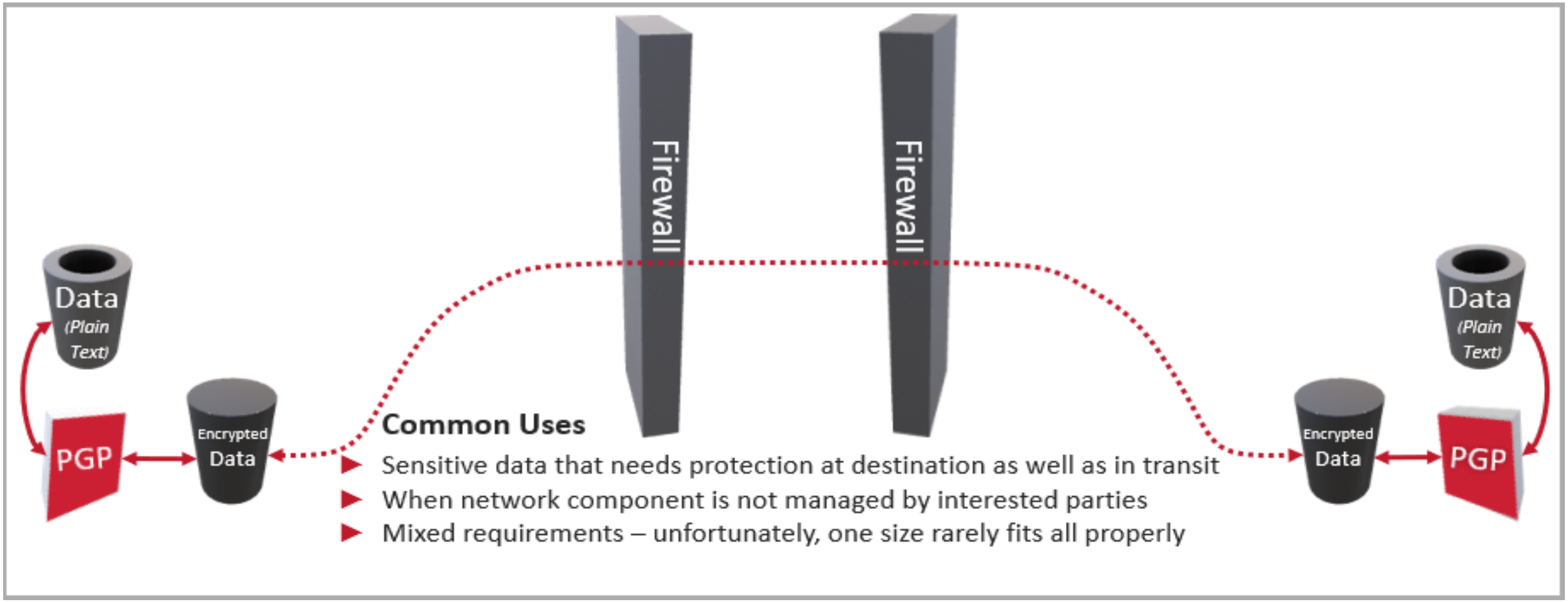
Pretty Good Privacy (PGP) – Common Uses



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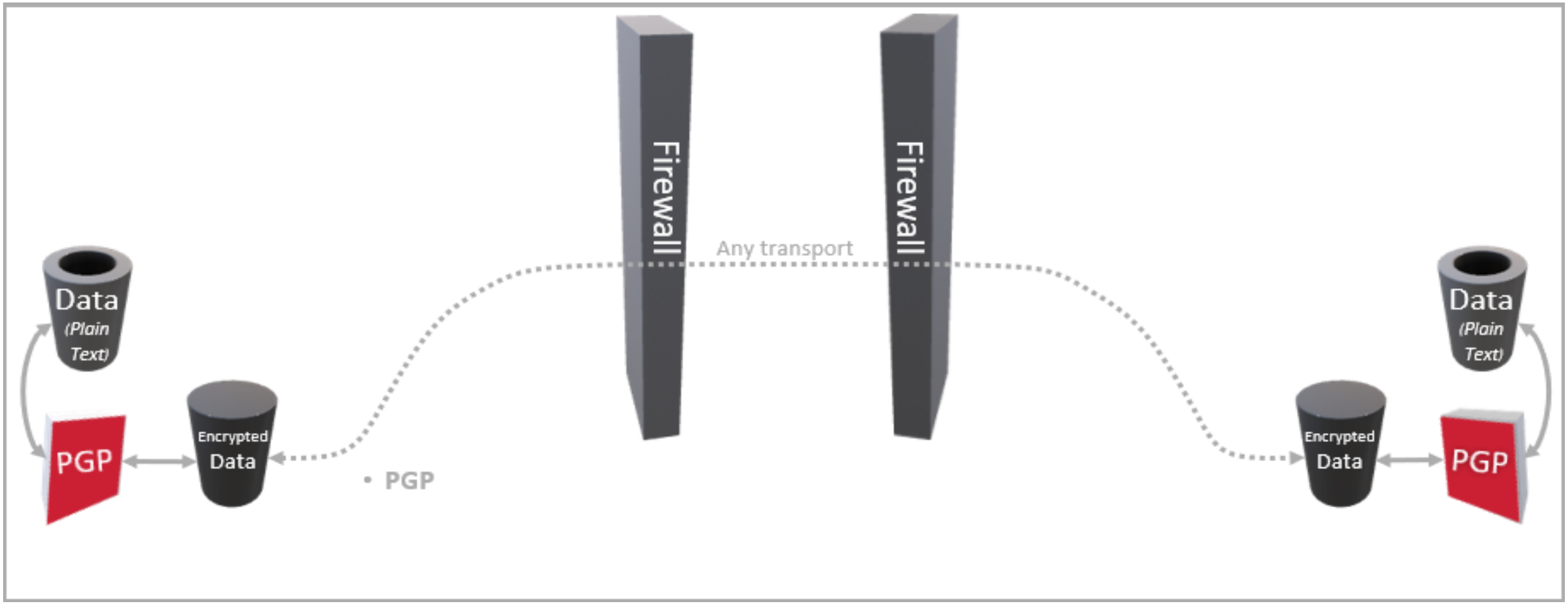
Putting it all Together
Pretty Good Privacy (PGP)



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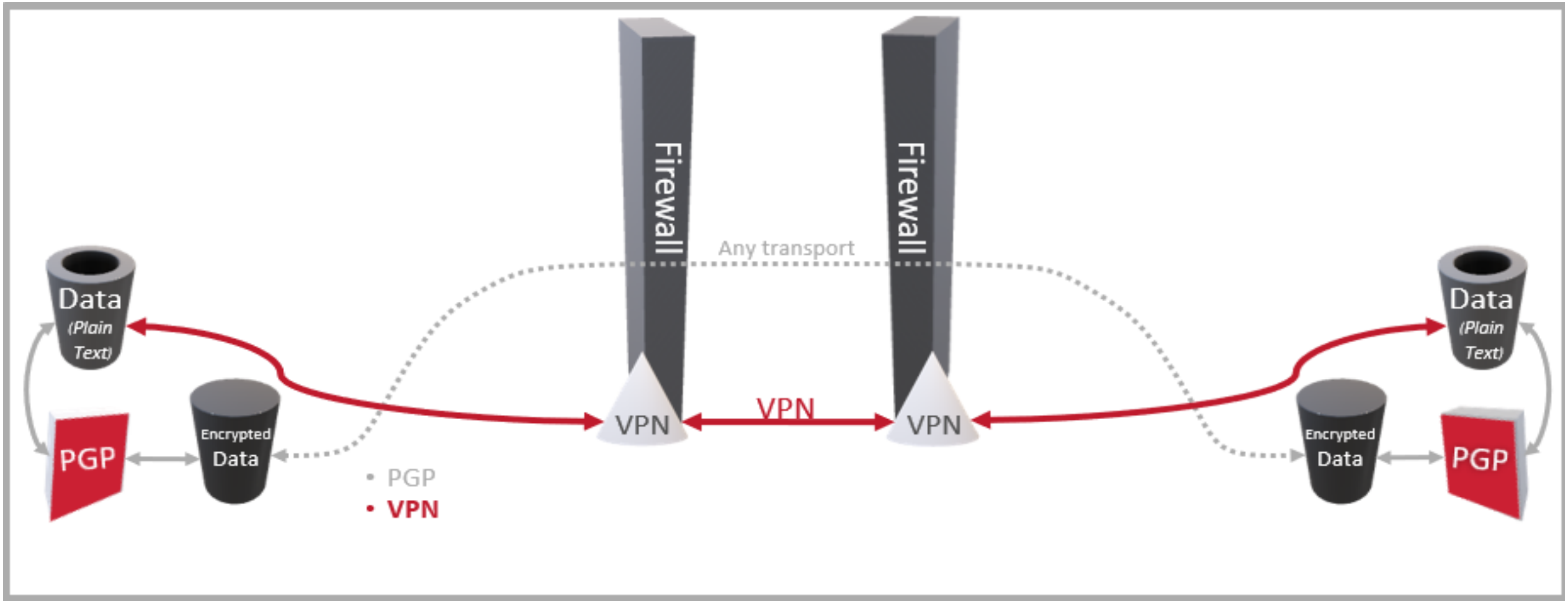
Securing Your FTP Transmissions
Putting it all Together
VPN



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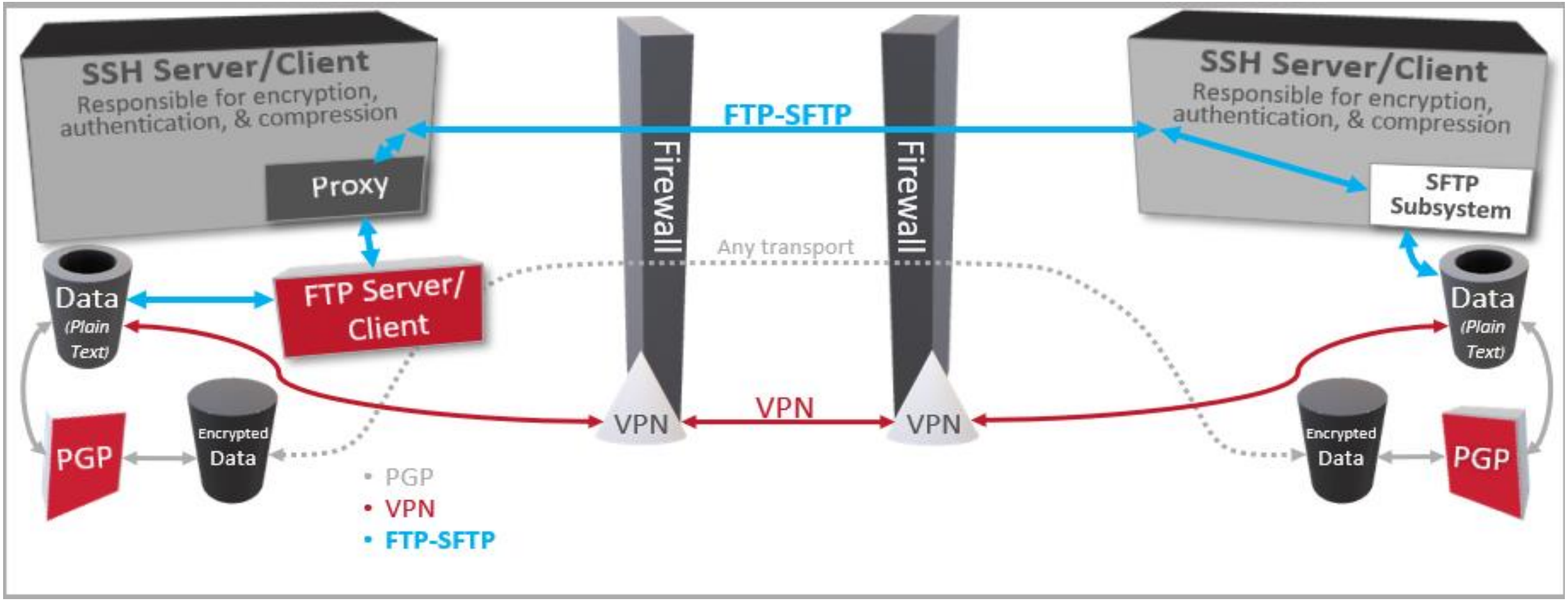
Securing Your FTP Transmissions
Putting it all Together
FTP – SFTP Conversion



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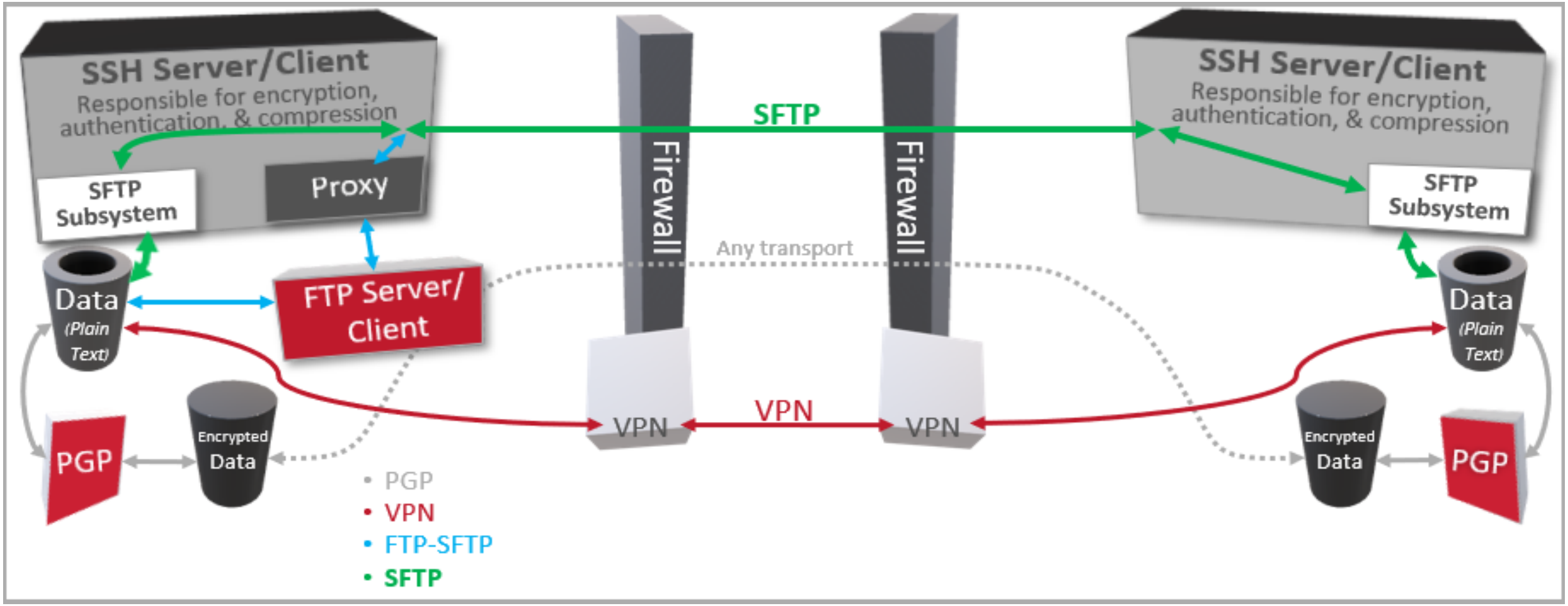
Securing Your FTP Transmissions
Putting it all Together
SFTP



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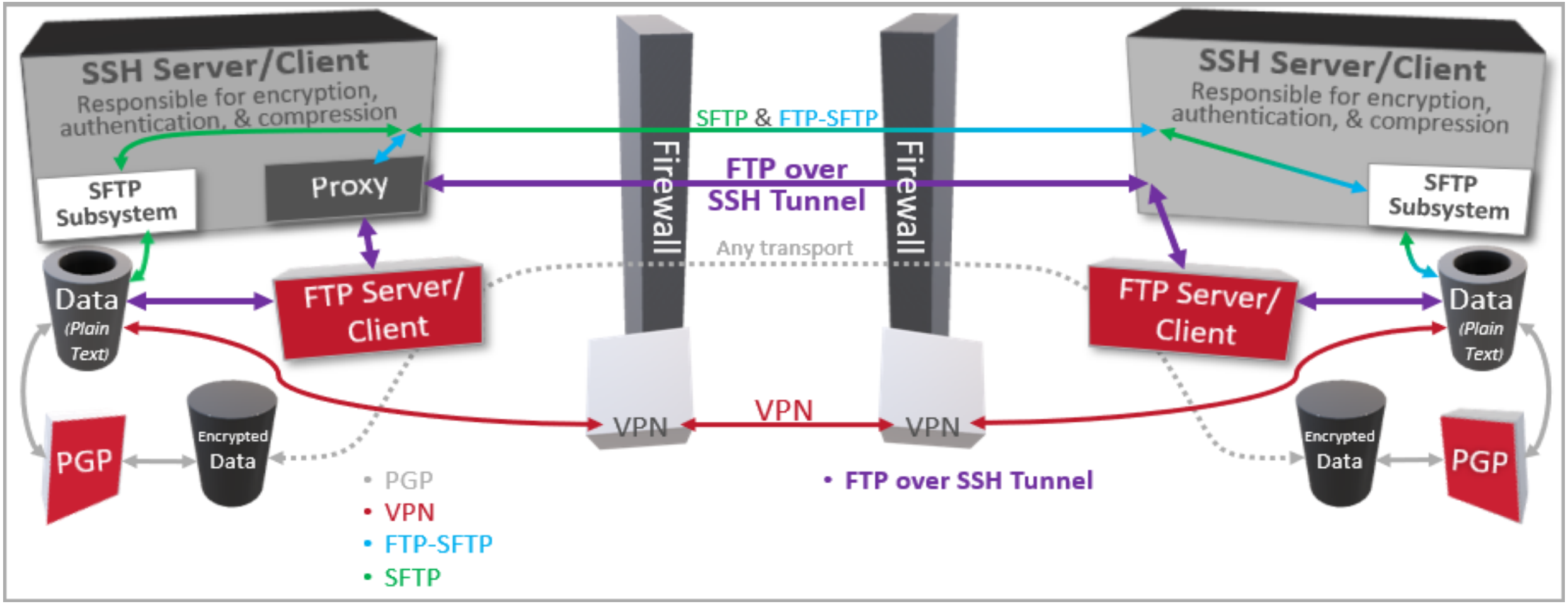
Securing Your FTP Transmissions
Putting it all Together
FTP over SSL Tunnel



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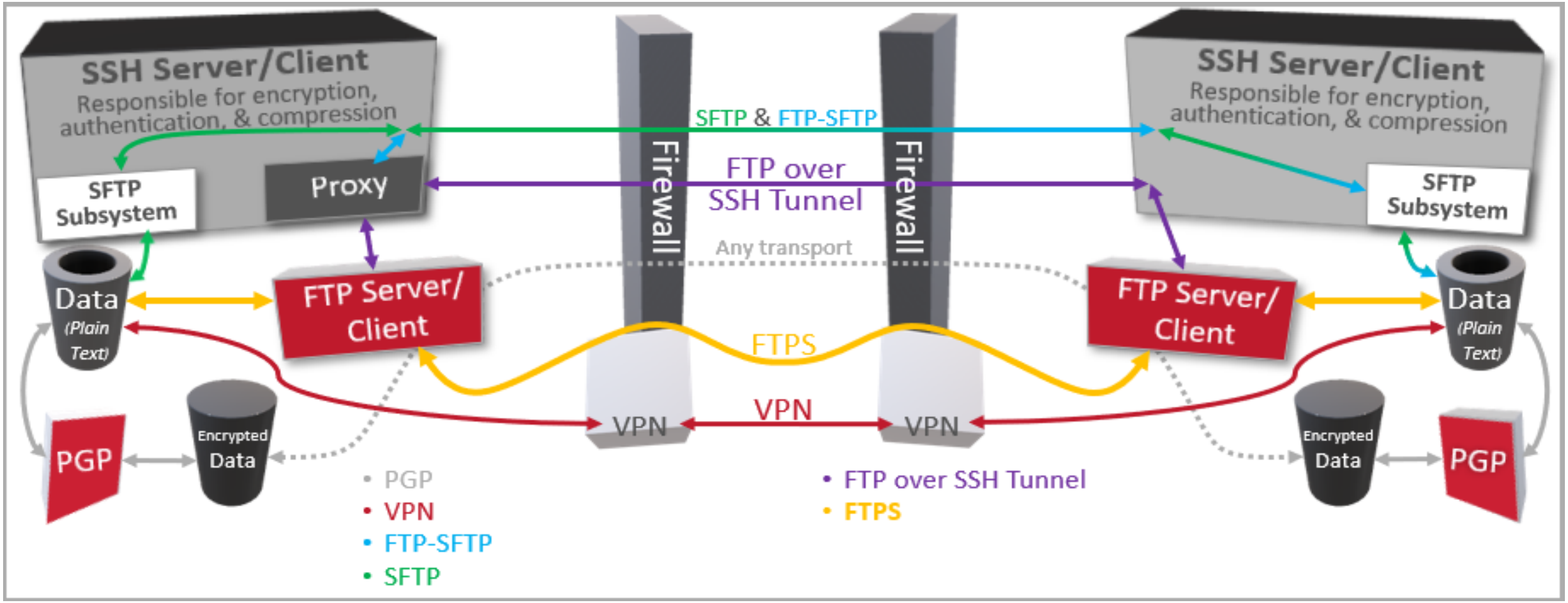
Securing Your FTP Transmissions
Putting it all Together
FTPS



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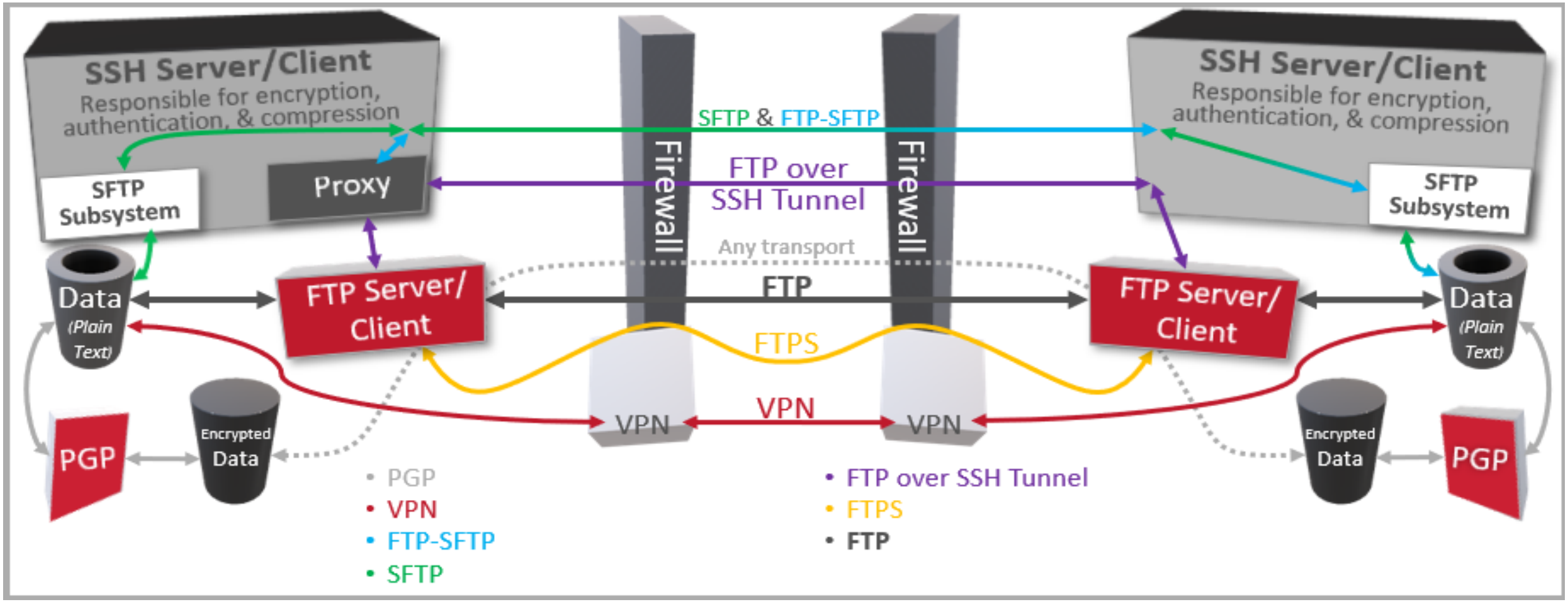
Securing Your FTP Transmissions
Putting it all Together

FTP



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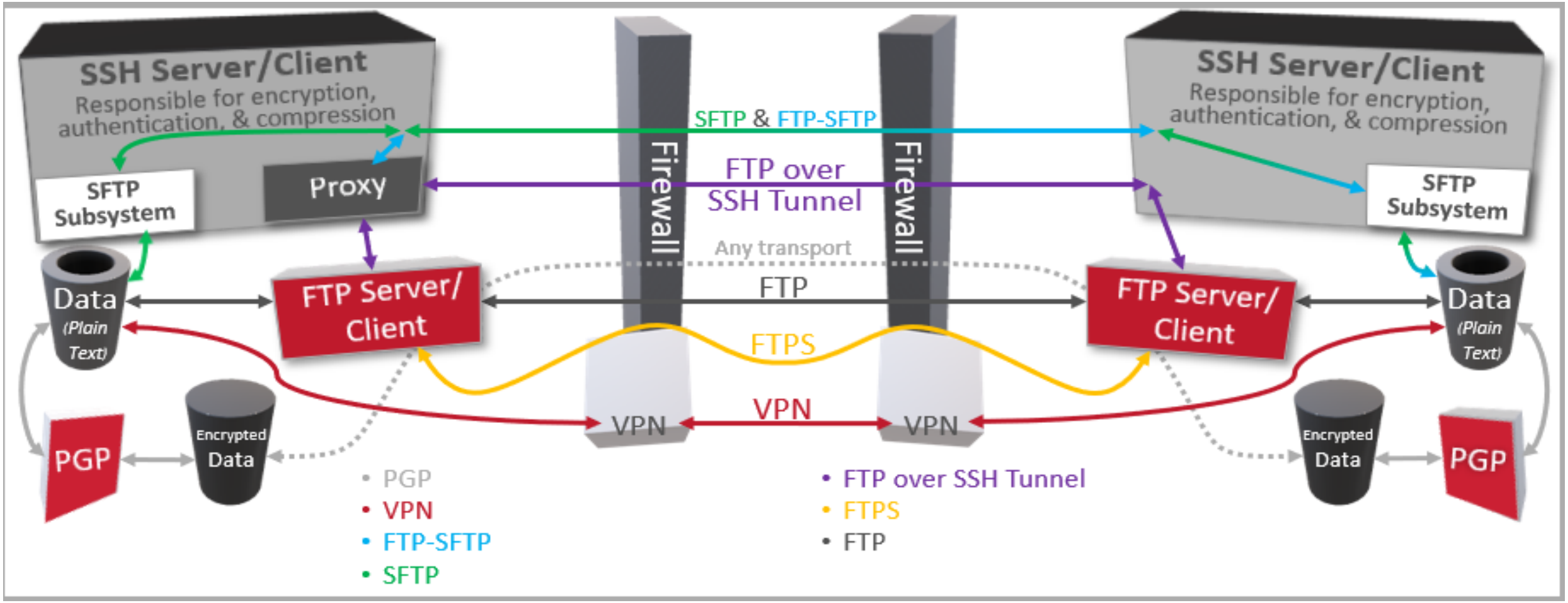
Securing Your FTP Transmissions
Putting it all Together
All of the Solutions



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LIVE DEMO

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QUESTIONS ?

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