

Default TCP and UDP Port Usage

FileWave software uses the below-listed TCP/IP ports. These are default settings and may be configured to listen on different ports if required. Consider [FileWave Server should not have IPv6 enabled](#) for the best experience.

Port Testing

Please consider downloading the [FileWave Port Testing](#) macOS/Windows utility to confirm communication of Google Cloud Messaging, Apple Push Notifications and connectivity between device network(s) and Server/Boosters.

The following may be run from the server to confirm Apple, Microsoft, and FileWave services:

Server Command Line

```
sudo /usr/local/filewave/python/bin/python /usr/local/filewave/django/manage.pyc check_connections
```

TeamViewer Ports

TeamViewer has an additional set of ports to consider:

<https://community.teamviewer.com/English/kb/articles/4139-ports-used-by-teamviewer>

FileWave Server Ports

 MDM default port is now 20445 as shown throughout this KB. On older versions of FileWave, this was 20443. To confirm the defined port, check the Port setting in FileWave Central > Preferences > Mobile > MDM Server > Port

Server Ports	Service	Protocol	Server In/Out	Description
80	HTTP	TCP	Outgoing	FileWave Software Updates (apple.com & microsoft.com) ***
443	HTTPS	TCP	Outgoing	FileWave License Server (fwks.filewave.com & logstash.filewave.com) FileWave Software Updates (apple.com) *** FileWave/TeamViewer Session Server (rcs.filewave.com) FileWave/TeamViewer Push Notification Server (fwpn.filewave.com) FileWave Kiosk (*.filewave.cloud)
443	HTTPS	TCP	Incoming	API endpoints - Anywhere API (v2 API) Device to Server (Enrollment URL) - Google/Azure/Okta
20015	Proprietary	TCP	Incoming	FileWave Client to Server; Legacy but should be used as the port by the Agent. SSL traffic will run on 20017. (Server does not listen to this port in FileWave 15.4+)
20016	SSL	TCP	Incoming	FileWave Central to Server
20017	SSL	TCP	Incoming	FileWave Client to Server: Secure
20019	SSL	TCP	Incoming	Booster to Server: Priority Traffic
20022	SSL**	TCP	Incoming	FileWave Central to Server: NATS FileWave Client to Server: NATS IVS to Server: NATS
20023	SSL**	TCP	Incoming	FileWave Booster to Server: NATS
20124	SSL	TCP	Incoming	FileWave Server JSON Websockets (JWT)

				Websocket connections for NATS SERVER used between FW Anywhere and FW Server. (Added 14.10.0)
20441	Proprietary	TCP	Incoming	FileWave Client to Server: Remote Client Monitor
20443	HTTPS	TCP	Incoming	FileWave Client to Server: Profiles Booster to Server: Inventory/Discovery API endpoints - Command Line API (v1) Kiosk App to Server
20445	HTTPS	TCP	Incoming	FileWave Client to Server: Inventory Booster to Server: Inventory/Discovery API endpoints - Command Line API (v1) Kiosk App to Server
20446	HTTPS	TCP	Incoming	FileWave Central and FileWave Anywhere to Dashboard

- NATS includes: Remote Control Publishing, Remote Control Routing, device renaming, revoking device certificates, push notifications
 - ** Only encrypted when compatibility mode is disabled
 - *** Also used by FileWave Central to vendor Software Update Servers.



Configuring port 20015 automatically configures port 20017(SSL)[port entered +2]. 20017 took priority if available. Do not configure Client/Booster to use port 20017. 20015 is now deprecated and 20017 will be used where 20015 is set.

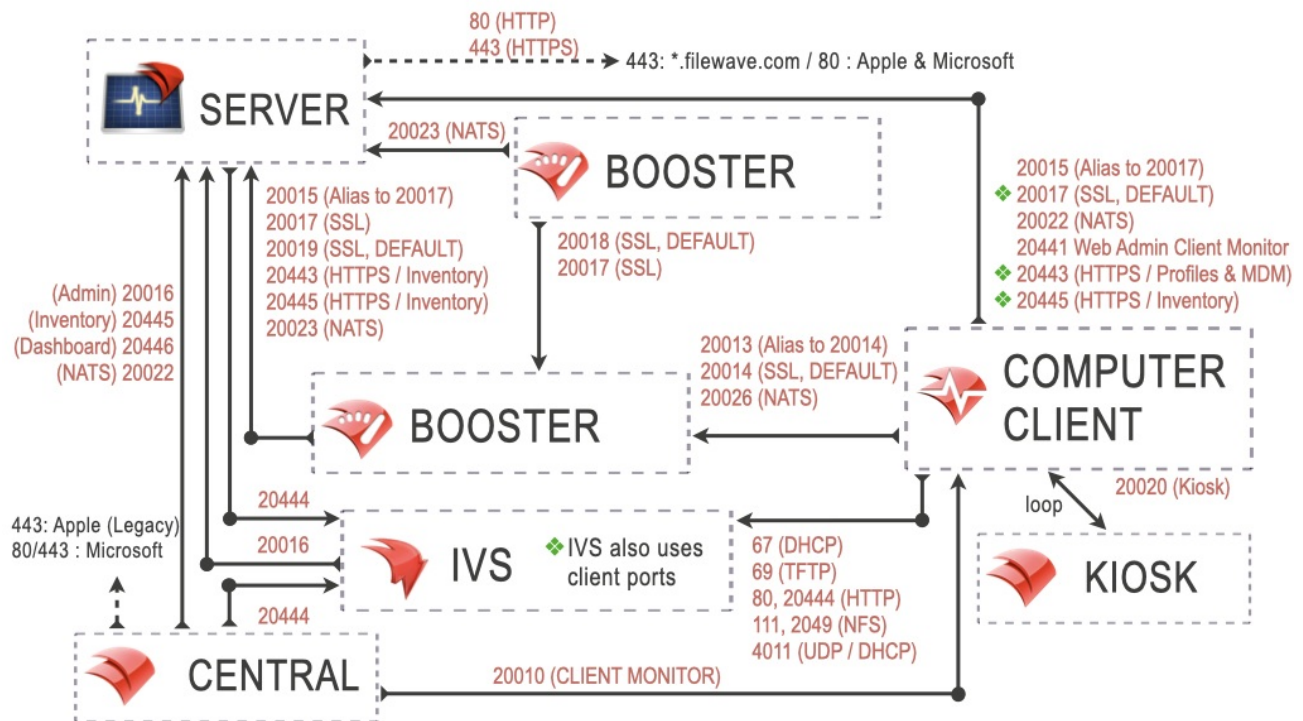
FileWave Kiosk Ports

Kiosk Ports	Service	Protocol	In/Out	Description
443	HTTPS	TCP	Out	Devices to *.filewave.cloud (To download the Kiosk App)
20443	HTTPS	TCP	Out	Devices to FileWave Server
20445	HTTPS	TCP	Out	Devices to FileWave Server

FileWave Client Ports

Client Ports	Service	Protocol	In/Out	Description
20010	Proprietary	TCP	In	FileWave Central to Client: Client Monitor: macOS, Windows & Android APK

FileWave Client



FileWave Booster Ports

Booster Ports	Service	Protocol	Server In/Out	Description
20013	Proprietary	TCP	Incoming	FileWave Client to Booster; legacy (Booster does not listen to this port in FileWave 15.4+)
20014	SSL	TCP	Incoming	FileWave Client to Booster: Secure (Booster Priority fallback)
20018	SSL	TCP	Incoming	Booster to Booster: Priority Traffic
20026	SSL ††	TCP	Incoming	FileWave Client to Booster connections using NATS Server

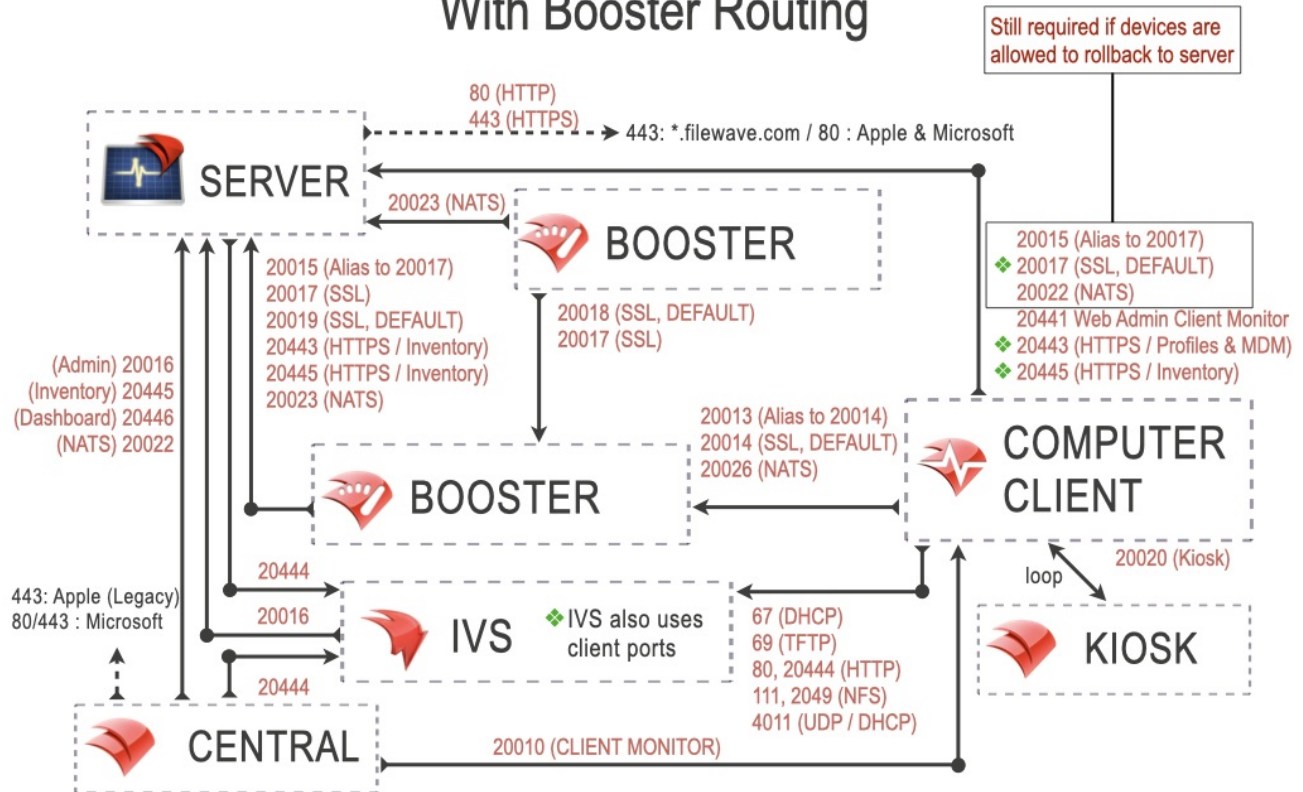
† NATS includes: Remote Control Publishing, Remote Control Routing, device renaming, revoking device certificates, push notifications

†† Only encrypted when compatibility mode is disabled



Configuring port 20013 automatically configures port 20014(SSL) [port entered +1]. 20014 took priority if available. Do not configure Client/Booster to use port 20014. 20013 is now deprecated and 20014 will be used where 20013 is set.

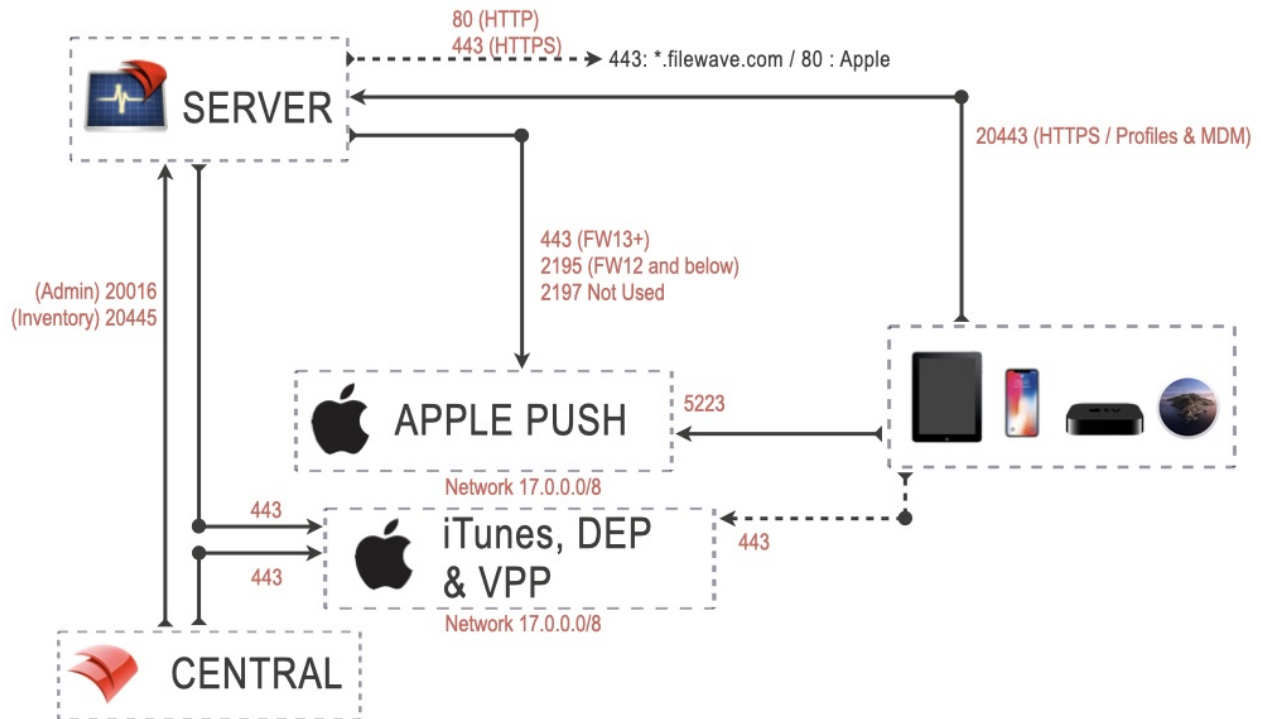
FileWave Client With Booster Routing



Apple MDM Ports

Apple MDM Ports	Service	Protocol	Server In/Out	Description
443	HTTPS	TCP	Outgoing	FileWave Server to Apple's servers (17.0.0.0/8) FileWave Admin to iTunes, DEP & VPP (17.0.0.0/8) Device to iTunes, DEP & VPP (17.0.0.0/8)
443	HTTPS	TCP	Incoming	VPP v2 <u>Notifications</u> from Apple
5223	APNS	TCP	Outgoing	FileWave Server to Apple's servers (17.0.0.0/8)
20443	HTTPS	TCP	Incoming	Device to Server: Profiles & MDM
20445	HTTPS	TCP	Incoming	FileWave Central to Server

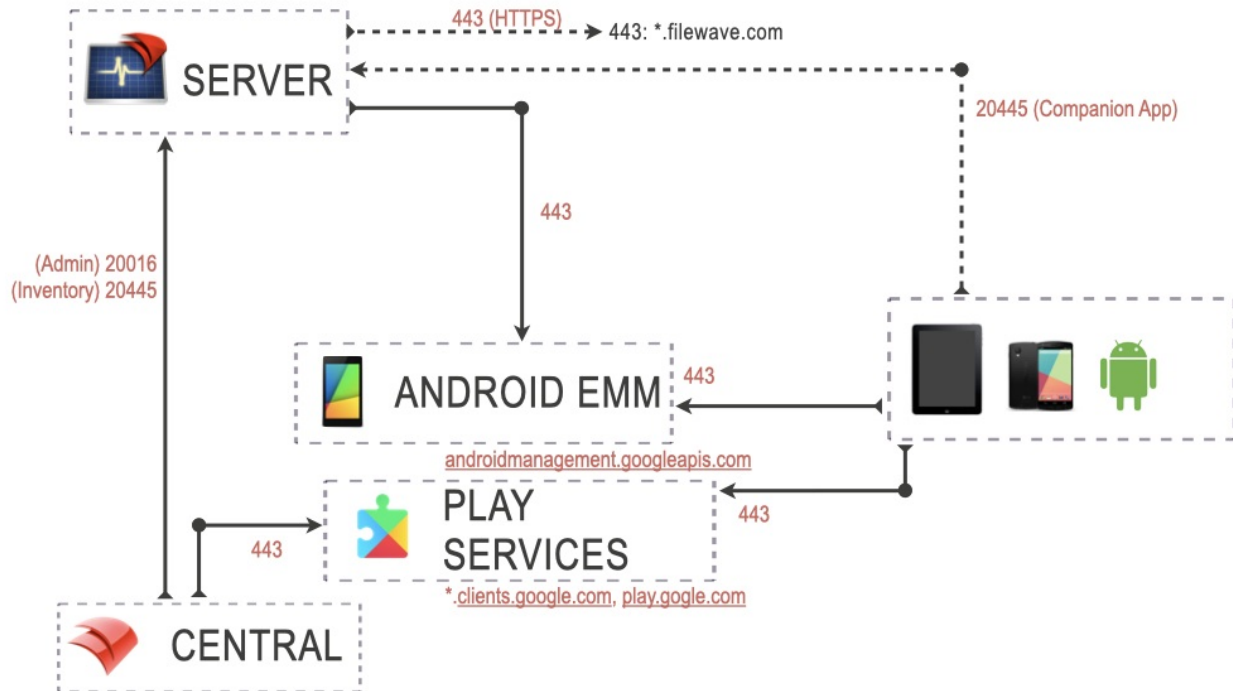
Apple MDM



Android EMM Ports

Android EMM Ports	Service	Protocol	Server In/Out	Description
443	HTTPS	TCP	Outgoing	Server to EMM commands (androidmanagement.google.apis.com) Device to Activation servers (*.clients.google.com) Device to Play Store (play.google.com) EMM commands (androidmanagement.google.apis.com) FileWave Central to Play Store (play.google.com)
20016	SSL	TCP	Incoming	FileWave Central to Server
20445	HTTPS	TCP	Incoming	FileWave Central to Server: Inventory Companion App to Server: Location Tracking

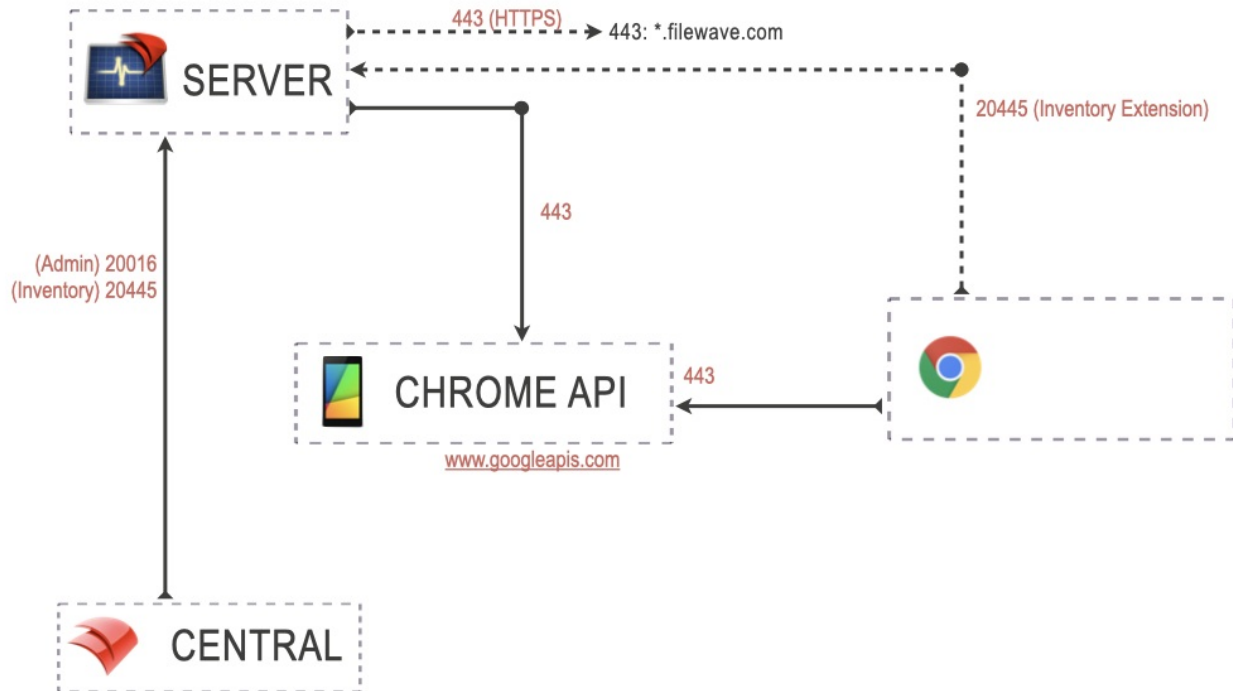
Android EMM



Chromebook Ports

Chromebook Ports	Service	Protocol	Server In/Out	Description
443	HTTPS	TCP	Outgoing	Server to Chrome API Chromebook to Chrome API (www.googleapis.com)
20016	SSL	TCP	Incoming	FileWave Central to Server
20445	HTTPS	TCP	Incoming	FileWave Central to Server Chromebook Inventory Extension to Server

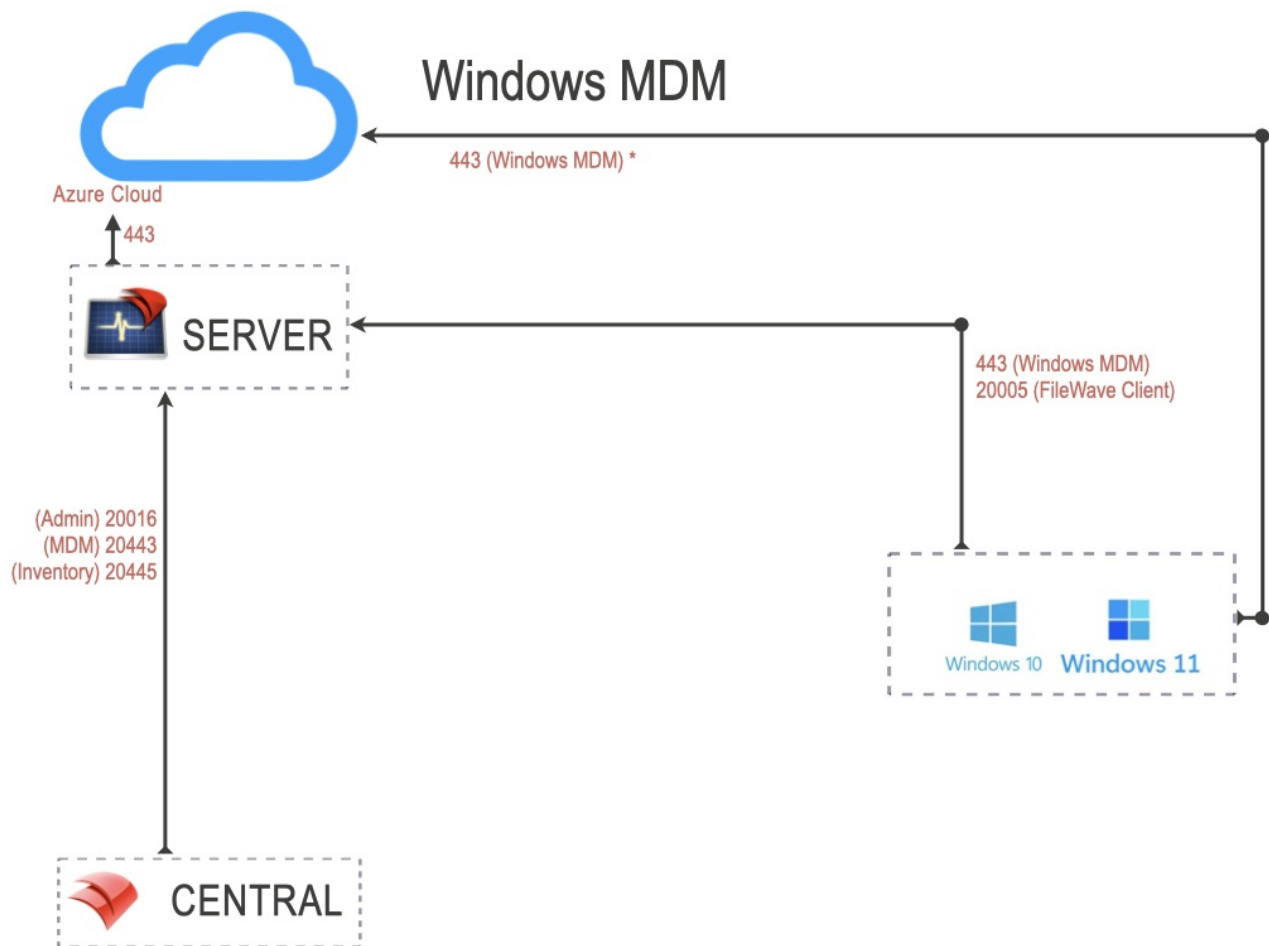
Chromebook



Windows MDM Ports

Windows MDM Ports	Service	Protocol	Server In/Out	Description
443	HTTPS	TCP	Incoming	Device to Server (Enrollment URL)
443	HTTPS	TCP	Outgoing	Server to Windows MDM (*.azure.com) Device to Windows MDM (*.azure.com)

NOTE: The FileWave client will also be installed and all previously listed FileWave client ports are required.



FileWave IVS Ports

IVS (Imaging) Ports	Service	Protocol	Server In/Out	Description
67	DHCP	UDP		Client to IVS ^{††}
69	TFTP	UDP		Client to IVS ^{††}
80	HTTP	TCP		Client to IVS
111	NFS	TCP/UDP		Client to IVS [‡]
4011	DHCP	TCP/UDP		Client to IVS: UEFI PXE [‡]
2049	NFS	TCP/UDP		Client to IVS [‡] (Removed in FileWave 15.5+)
20490	VPN	TCP/UDP		Client to IVS [‡]
20015	Proprietary	TCP	Incoming	IVS to Server (Removed in FileWave 15.4+)
20016	SSL	TCP	Incoming	IVS to Server
20017	SSL	TCP	Incoming	IVS to Server: Secure
20022	SSL	TCP	Incoming	Imaging Server to FileWave Server NATS
20443	HTTPS	TCP	Incoming	IVS to Server: Inventory
20444	HTTPS	TCP	Incoming	Server to IVS Client to IVS FileWave Anywhere interface (Appliance only)
20445	HTTPS	TCP	Incoming	IVS to Server: Inventory

TCP/IP & UDP
UDP only

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