Frame Guest Agent (FGA)

Overview

Frame Guest Agent (FGA) is a collection of Frame-specific services that manage VM configuration and functionality. FGA provides the following services:

- Communication between the VM and Frame backplane.
- VM configuration, orchestration, and session management.
- Session customization and scripting (stateful/stateless sessions, scripting, etc.)
- Verification, migration, and upgrade orchestration.
- Collection of server diagnostics and a variety of logs.
- Frame Remoting Protocol (FRP) which is responsible for the capture, encoding, and streaming of virtual applications/desktops to end user devices.

Network

The required ports/protocols for Frame Guest Agent 8 (using FRP7 or FRP8) are documented in the Networking Requirements based on your Frame account's deployment model.

OS Firewall

If your configuration relies on an OS-level firewall (e.g., Windows Firewall with Advanced Security or a third-party firewall) on a Sandbox, Utility Server, and/or persistent desktops, you will need to update firewall configurations on those workload VMs. For non-persistent Frame accounts, update the Windows Firewall on the Sandbox VM and publish, or use a GPO.

For example, using Windows Firewall with Advanced Security, Frame administrators would enable an inbound rule `UDP ports 4503-4509` (either via GPO or directly within the workload VMs) for FRP8.

1. Go to Windows Firewall with Advanced Security
2. Select “Inbound Rules”
3. Right click > “New Rule…”
4. Port > UDP > Specific local ports: `4503-4509` > Allow the connection > Check all, Domain, Private, Public > Enter a name > Finish

> Refer to the [Networking Requirements](/platform/networking/requirements) for the complete list of inbound and outbound protocols/ports your OS firewall must allow for your workload VMs, specific to your deployment model, to work with your end users and Frame Platform using FRP7 and/or FRP8.

Windows Updates

For non-persistent Frame accounts, Frame requires Windows updates to be applied in the Sandbox. Frame admins can then publish those updates to their test or production pools. During the provisioning of test or production workload VMs (triggered by a publish or the increase in the max Default Capacity), the Frame Guest Agent will disable Windows Update Services in the newly-provisioned non-persistent workload VMs.

Frame does not disable Windows Update Services in Sandbox, Utility server, or persistent desktop VMs.

Windows OS Performance Counters

Frame administrators can monitor the behavior of Frame Agent in Windows OS workload VMs through a set of performance counters, as described in the following table. Admins can use Windows Reliability and Performance Monitor (perfmon) or third-party monitoring tools to capture and report on these counters.

Name	Description	FRP Version	Value Range
AverageFrameQP-DisplayX	Average Quantization Parameter (QP) value for the specific display. Lower values result in lower compression and higher image quality.	FRP8	0 - 51
CaptureFrameRate-DisplayX	Real-time video capture rate (fps) of captured video on the Frame workload VM for the specific display.	FRP8	>0

Name	Description	FRP Version	Value Range
EncoderFramerate-DisplayX	Real-time video encoding rate (fps) of captured video on the Frame workload VM for the specific display.	FRP8	>0
EstimatedBandwidth-DisplayX	Estimated real-time bandwidth (kbps) required to send encoded data (audio and video) from Frame workload VM via Frame Remoting Protocol for the specific display.	FRP8	>0
Framerate-DisplayX	Real-time rate (fps) that encoded video is being sent via Frame Remoting Protocol for the specific display.	FRP8	0 - 60 fps
Height-DisplayX	Current height (pixels) of specific display.	FRP8	>0
MaxAudioBitrate-DisplayX	Max audio bitrate (kbps) that can be achieved during the session for the specific display.	FRP8	0 - 128 kbps
NumberOfActiveDisplays	Number of active displays within the session (1-4).	FRP8	1 - 4
PixelRatio-DisplayX	Current pixel ratio (ratio between available logical pixels in the session versus available physical pixels on the end-user device) for the specific display.	FRP8	1 - 3
VideoCapture-DisplayX	Video capture method used by the session for specific display	FRP8	1 = DXGI 2 = GDI 4 = X11 6 = NvFBC 7 = DXGI GPU
VideoCodec-DisplayX	Video codec used by the session for specific display.	FRP8	0 = H.264 1 = MPEG2 2 = MPEG1 3 = VP9

Name	Description	FRP Version	Value Range
VideoEncoder-DisplayX	Video encoder used by the session for specific display.	FRP8	1 = x264 3 = NVENC 4 = FFMPEG (CPU)
Width-DisplayX	Current width (pixels) of specific display.	FRP8	>0

Troubleshooting

Frame Guest Agent logs can be found in the `C:\ProgramData\Nutanix\Frame` directory within the session.

FGA Logs Location

After filing a support ticket, you may be asked by Frame support personnel to provide these logs, if available.

Revision #4
Created 1 October 2025 04:53:38
Updated 13 January 2026 14:40:59 by Dominik Conrad