Private Networking with SGA (AHV)

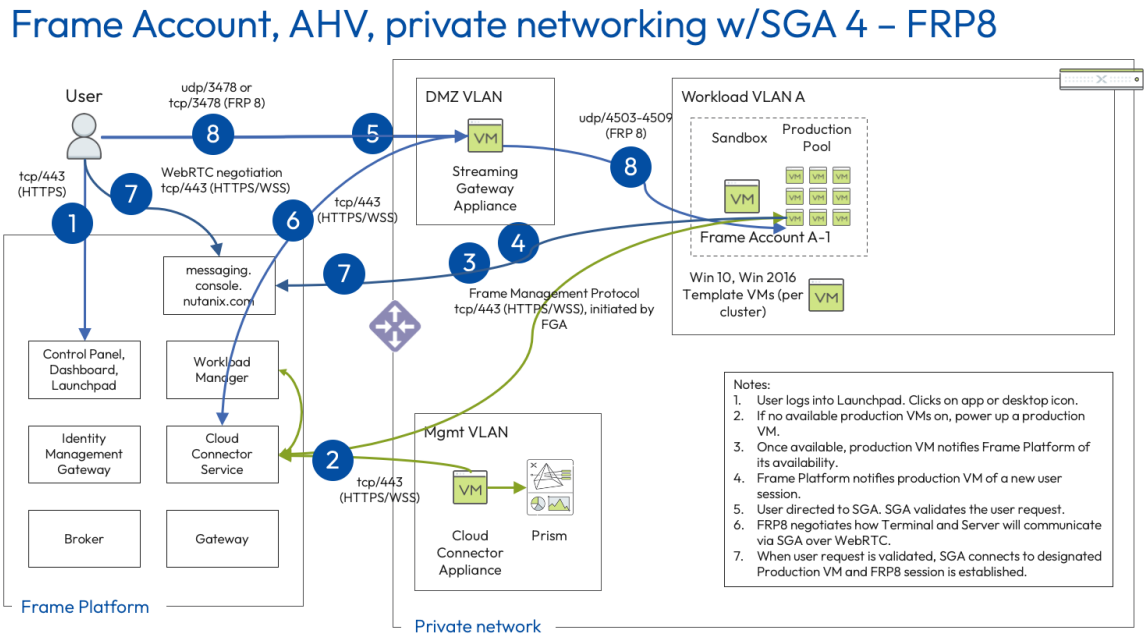
Customers using Nutanix AHV infrastructure can create a Frame account using Customer-managed networking, Private Networking with Streaming Gateway Appliance (SGA) so users can access the Frame workload VMs through the public IP address of the SGA VM. The Internet-accessible SGA VM serves as a reverse proxy for Frame sessions between the end users and their Frame workload VMs in the private network. The Frame workload VMs only have private IP addresses. Customers will also need to ensure these workload VMs, Cloud Connector Appliances (CCAs), and Streaming Gateway Appliances (SGAs) can communicate to the Frame control plane on the Internet.

> If a customer requires an outbound proxy server for any communication to the Internet, the outbound proxy server must support both HTTPS and Secure WebSocket (WSS) in order for the Frame Guest Agent (FGA), CCAs, and SGAs to establish HTTPS and WSS connections to Frame Platform.

> To ensure proper network communication to the Frame Platform there are two Backends available depending on which one should be used for the connection for services and VMs please refer to the corresponding networking requirements:
>
> USE (located in the United states- Location AWS us-east-1Virginia)
>
> DEU (located in European Union - Location AWS eu-central-1 Frankfurt)

FRP8 Networking (SGA 4)

FRP8 is a udp-based protocol for all communication between the end user and the Frame workload VMs.



Nutanix AHV - Private Networking with SGA (FRP8)

The following table describes the required protocols and ports for Frame accounts using Private Networking with SGA 4 and FRP8.

Dizzion is in the process of migrating from *.nutanix.com to *.difr.com domain. For the time being, the additional difr.com domains will need to be whitelisted in addition to the existing nutanix.com domains. At a later time, once Dizzion has confirmed there is no dependencies on the nutanix.com domains, we will send out a communication notifying customers that all nutanix.com domains can be safely removed from your whitelist configurations.

IMPORTANT: For IMG Domains, Customers can whitelist new IMG difr domains but should NOT change SAML 2 configurations to use new difr.com domains. SAML 2 configurations should continue to use img.console.nutanix.com and img.frame.nutanix.com until further direction from Dizzion

USE: Nutanix AHV - Private Networking with Streaming Gateway 4

Source to Destination	Source IP address	Destination FQDN(s)	Protocol/ port
Cloud Connector Appliance (CCA) to Frame Platform	Public IP address	• use.difr.com • api.use.difr.com • console.nutanix.com • cpanel-backend.console.nutanix.com • gateway-external-api.console.nutanix.com	tcp/443 (HTTPS)
Cloud Connector Appliance (CCA) to Frame Platform	Public IP address	• hub.use.difr.com • cch.console.nutanix.com	tcp/443 (HTTPS, WSS)
Prism Central to Frame Platform	• Public IP address	• downloads.difr.com • downloads.console.nutanix.com	tcp/443 (HTTPS)
CCA to Prism Central	Private IP address	• Prism Central IP address	tcp/443 (HTTPS)
Workload VMs to Frame Platform	Public IP address	• api.use.difr.com • hub.deu.difr.com • logging.use.difr.com • downloads.difr.com • download.visualstudio.microsoft.com • gateway-external-api-prod.frame.nutanix.com • downloads.console.nutanix.com • logging.console.nutanix.com • cch.console.nutanix.com • download.visualstudio.microsoft.com	tcp/443 (HTTPS)

Source to Destination	Source IP address	Destination FQDN(s)	Protocol/ port
Workload VMs to Frame Platform	Public IP address	• hub.use.difr.com • logging.use.difr.com • api.use.difr.com • cch.console.nutanix.com • logging.console.nutanix.com • messaging.console.nutanix.com	tcp/443 (HTTPS, WSS)
End user to Frame Platform	Public IP address	• use.difr.com • api.use.difr.com • img.use.difr.com • assets.use.difr.com • login.use.difr.com • logging.use.difr.com • downloads.difr.com • console.nutanix.com • img.frame.nutanix.com • img.console.nutanix.com • cpanel-backend.console.nutanix.com • terminal-prod.frame.nutanix.com • logging.console.nutanix.com • login.console.nutanix.com (for Frame IdP, if used)	tcp/443 (HTTPS)
End user to Frame Platform	Public IP address	• api.use.difr.com • messaging.console.nutanix.com	tcp/443 (HTTPS, WSS)
SGA VMs to Frame Platform	Public IP address	• hub.use.difr.com • cch.console.nutanix.com • ntp.ubuntu.com • api.snapcraft.io (Canonical Snapcraft)	tcp/443 (HTTPS, WSS)
End user to SGA VM	Public IP address	• SGA VM-specific public IP address	udp/3478 and tcp/3478
SGA VM to End user	Public IP address	• End user-specific public IP address	udp/49152–65535

Source to Destination	Source IP address	Destination FQDN(s)	Protocol/ port
SGA VM to Workload VM	Private IP address	• Dynamic private IP address within VPC/VNET	udp/4503 –4509
Workload VM to SGA VM	Private IP address	• SGA VM-specific private IP address	udp/4915 2–65535

FRP8 Networking (SGA 4)

The following table lists the required protocols and ports for Frame accounts using Private Networking with SGA 4 and FRP8, specifically for organizations electing to use Dizzion's EU control plane.

DEU: Nutanix AHV - Private Networking with Streaming Gateway 4

Source to Destination	Source IP address	Destination FQDN(s)	Protocol /port
Cloud Connector Appliance (CCA) to Frame Platform	Public IP address	• deu.difr.com • api.deu.difr.com	tcp/443 (HTTPS)
Cloud Connector Appliance (CCA) to Frame Platform	Public IP address	• hub.deu.difr.com	tcp/443 (HTTPS, WSS)
Prism Central to Frame Platform (not required starting with PC 2023.4)	Public IP address	• downloads.difr.com	tcp/443 (HTTPS)

Source to Destination	Source IP address	Destination FQDN(s)	Protocol /port
Workload VMs to Frame Platform	Public IP address	• api.deu.difr.com • hub.deu.difr.com • logging.deu.difr.com • downloads.difr.com • download.visualstudio.microsoft.com	tcp/443 (HTTPS)
Workload VMs to Frame Platform	Public IP address	• hub.deu.difr.com • logging.deu.difr.com • api.deu.difr.com	tcp/443 (HTTPS, WSS)
End user to Frame Platform	Public IP address	• deu.difr.com • api.deu.difr.com • img.deu.difr.com • assets.deu.difr.com • login.deu.difr.com • logging.deu.difr.com • downloads.difr.com	tcp/443 (HTTPS)
End user to Frame Platform	Public IP address	• api.deu.difr.com	tcp/443 (HTTPS, WSS)
SGA VMs to Frame Platform	Public IP address	• hub.use.difr.com • ntp.ubuntu.com • api.snapcraft.io (Canonical Snapcraft)	tcp/443 (HTTPS, WSS)
End user to SGA VM	Public IP address	• SGA VM-specific public IP address	udp/3478 and tcp/3478
SGA VM to End user	Public IP address	• End user-specific public IP address	udp/49152–65535
SGA VM to Workload VM	Private IP address	• Dynamic private IP address within VPC/VNET	udp/4503–4509
Workload VM to SGA VM	Private IP address	• SGA VM-specific private IP address	udp/49152–65535

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