Desktop Users Guide

End-user focused documentation

User Experience

Navigating Frame, Session Features

User Experience

Introduction

Frame may be a very robust and intricate platform, but being an end user is easy! The Getting Started Guide will outline important details for end users such as minimum system requirements, supported browser versions, and a glossary of common Frame terms to help you get comfortable with the jargon. We'll also show you how to access your Frame account.

Glossary of Frame Terms for End Users

Launchpad

Launchpad refers to the end-user-facing part of the Frame interface where users can go to launch and manipulate applications. End users can be given access to multiple **Launchpads** depending on the needs of their organization. For instance, one **Launchpad** may contain applications for word editing while another **Launchpad** houses only billing-specific apps. Administrators can configure multiple **Launchpad** interfaces to show what application sets specific end users see and what features are exposed to them. If enabled, end users can switch between **Launchpads** by clicking on the rectangular **Launchpad** list icon at the top of their screen. **Launchpads** are accessible via URL and may look something like this:

```
https://use.difr.com/customer-name/organization-name/account-name1/launchpad/desktop
```

Session

A Frame **session** refers to the connection between a user's browser and an instance/virtual machine. A **session** is created the moment a user requests a desktop or application in a Launchpad and ends as soon as the connection is closed. Once a session is closed for a non-persistent VM, the VM is rebooted and made available for the next user.

Instance

This is a commonly used industry term for a virtual machine which includes a complete operating system as well as installed applications. The **instance** may also be referred to as the “VM” (virtual machine), the “system,” or the “workload.” With public cloud and on-premises

hyper-converged infrastructure, multiple **instances** run on a single physical server. However, each **instance** operates independently of each other. An **instance** can come in a variety of types, with specifications that are like those for PCs and servers (e.g., defined by the number of CPUs, amount of RAM, and the number of GPUs). Frame supports many different **instance** types. Frame has named these **instance types** (e.g., “Air 4GB”, “Air 8GB”, “Pro 16GB”) to help differentiate them based on their specifications. Each Frame **instance** type name maps to an infrastructure provider-specific name.

Pool

Your administrator configures a **pool** of available instances for their group of end users based on the expected workload and activity. In an organization, for example, the billing department may start sessions from a **pool** of Air 4GB instance types while the graphic design department pulls from a **pool** of Pro 16GB instance types. The administrator can set the amount of available instances in the pool, including how many of those instances are buffered or “warmed up” and how many of each type are available to their end users at a given time.

Authenticate

Authenticating is how you prove your identity to access your Frame account. Your account administrator will decide how you **authenticate** to the platform. You may simply **authenticate** directly through the Frame platform with a user name and password or you may use a third-party SAML2 **authentication** method such as Okta.

Cloud Storage

Cloud storage refers to services such as Dropbox, Google Drive, Box, and Microsoft OneDrive which allow you to save your files on their public clouds as a service.

Disconnect and Close Sessions

When an end user exits a session, there are two options:

- **Disconnect** from the session but keep it active, in which case the user can return to the session.
- **Close Session** to completely end the session.

This distinction is important, so please read on:

- **“Disconnect”** is like disconnecting your monitor cable from a running PC. In this case, if the system is set up with an “idle timeout” setting, the session will continue running

and the user can connect back within the set time to resume their session.
- **“Close Session”** is equal to what you do at the end of a day with a PC: you save all of your work and then power off the system. In Frame's case, closing a production session will end the session completely. For most situations, your instance will be returned to the pool of production instances – making it available for someone else to use. For persistent desktop users, your persistent desktop can now be powered off safely.

System Requirements

Browser Requirements

The Frame Platform has been developed to deliver an application's graphical user interface through any HTML5/WebGL compatible browser. This includes support for the latest versions of Chrome, Firefox, Safari, and Edge on various desktops and mobile devices. While Frame may work on other HTML-capable browsers, Frame officially supports the latest version of the following browsers and operating systems. For the best performance and most feature-rich experience, it is recommended to use **Google Chrome** whenever possible.

Browser	Supported OS
Google Chrome	Windows, macOS, ChromeOS, Linux, iOS, Android
Mozilla Firefox	Windows, macOS, ChromeOS, Linux
Apple Safari	macOS, iOS
Microsoft Edge (Chromium)	Windows

> Internet Explorer and Opera browsers are not supported by the Frame platform.

Note

Mobile Browser Support The Frame platform is officially supported on mobile versions of Chrome, Microsoft Edge, and Safari at this time. Desktop mode is not supported on mobile browsers at this time.

Frame App Requirements

Operating System	Supported Versions

Frame App for Windows 10	Windows 10 Home, Windows 10 Pro, Windows 10 Enterprise, Windows 10 IoT Enterprise
Frame App for Windows 11	Windows 11 Home, Windows 11 Pro, Windows 11 Enterprise, Windows 11 IoT Enterprise
Frame App for macOS	macOS Monterey (12.0+), macOS Big Sur (11.0+)
Frame App for Linux	Ubuntu 18.04, Ubuntu 20.04, and latest supported versions of IGEL OS, Stratodesk NoTouch OS, 10ZiG RepurpOS, 10ZiG PeakOS, and ZeeTim ZeeOS

Device Requirements

General

The device used to access Frame (also known as the endpoint device) will be dependent on your use-case requirements. The table below describes the optimal, recommended, and minimum hardware configurations required for running Frame in a browser or with Frame App.

Configuration	Optimal	Recommended	Minimum
CPU	Quad Core 3.0 GHz	Dual Core 2.4 GHz	Dual Core 1.5 GHz
Memory	8 GB	4 GB	4 GB
Discrete GPU	Yes	No	No

> Please note that use cases requiring 4K resolution, multiple monitors, high-fidelity multi-media, 3D rendering, video conferencing, etc., a discrete GPU on the endpoint device may be required to achieve the desired user experience.

Linux Devices

Configuration	Optimal	Required
CPU	Quad Core 3.0 GHz	Quad Core 3.0 GHz
Memory	8 GB	4 GB
Discrete GPU	Yes	No

> Since Linux operating systems do not offer GPU offloading support, Linux-based endpoint devices should have at least a quad core CPU.

Accessibility Features

Operation of the Frame software interface requires input via a standard text keyboard and computer mouse or touch screen. However, accessibility peripherals that can replace a standard keyboard/mouse/touchpad and enable text and positional input through alternative means can be supported for both administrators and end users of the platform. Accessibility peripherals for end-users must be recognized by their local device as a standard HID (Human Interface Device) peripheral.

Display Requirements

Frame supports the following display resolutions and number of displays based on the instance type used for the workload VM.

Instance Type	Maximum Display Resolution	Maximum Number of Displays
CPU-only	2560 x 1600	4
GPU	4096 x 2160	4

Network Requirements

The following requirements must be met in order for the end user to access a Frame session:

> 1. Support for HTTPS (TLS) connections on port 443 to the Frame Platform
> 2. Support for HTTPS (TLS) and Secure WebSockets through all firewalls to the Frame-managed workload VM
> 3. Support for UDP (DTLS) to the Frame-managed workload VM (FRP8)

Since the virtualized application window or desktop is streamed to the end user's browser over the network, a user needs to have sufficient network bandwidth between their browser and the Frame-managed workload VM running the virtualized applications and/or desktop. The following table provides high-level guidance on average bandwidth consumption per Frame session based on the applications to be used, VM instance type (CPU only or GPU-backed), display resolution, and frame rate.

Average Bandwidth (Mbps)	Applications	VM instance type	Display resolution	Frame rate
1	Office productivity applications	CPU-only	up to 1920 x 1080	up to 20 fps
5	CAD applications	GPU	up to 1920 x 1080	up to 60 fps
10	Video editing/animation/sustained playback	GPU	up to 1920 x 1080	up to 60 fps
20	Video editing/animation/sustained playback	GPU	up to 3840 x 2160	up to 60 fps

In addition to the bandwidth requirements, the best user experience is with network latencies under 100 ms. Network latencies over 250 ms are not recommended. Also, jitter (change in latency) should be kept at a minimum as significant changes in both available bandwidth and latency can result a very poor user experience.

Frame App

While Frame was designed to be accessed from an HTML5-enabled browser, some end users may access their Frame environment from Frame App. Frame App provides additional features to organizations that aren't available through a modern web browser. If you are accessing your account from Frame App, we will cover some of the basics here. If you are accessing your account from your web browser, you can move on to the next section.

To launch Frame App from your local machine, simply click on the icon:

Using Frame App is simple, and there are only a few differences from using Frame in a web browser.

Menu Options

Frame

Option	Description
About	Displays the current version information of Frame App.
Preferences	Opens the preferences window where your administrator configures startup URL and other settings for Frame App.
Quit	Closes the application window. If you're in an active session, selecting this option will disconnect your session. You can still access your session by relaunching Frame App.

Edit

Option	Description
Various standard options	Provides standard editing functions for text fields within the Frame App.

View

Option	Description
Reload	Refreshes the current page, similar to the refresh button in a web browser.
Back	Navigates to the previous page in your browsing history.
Forward	Navigates to the next page if you've used the Back function.
Toggle Full Screen	Enables or disables full-screen mode for the Frame App window.
Show Certificate	Displays the server SSL public key certificate information.

Option	Description
Show WebRTC Internals	Opens a diagnostic window that provides technical information about WebRTC connections.
Show Media Internals	Shows detailed information about media components and processing.
Show GPU Internals	Displays detailed information about graphics hardware acceleration status and driver configurations.
Show USB Internals	Displays information about USB device connections and status.
Show Developer Tools	Opens developer console for advanced users.

History

Option	Description
Back	Navigates to the previous page, similar to back button in web browsers.
Forward	Navigates to the next page, similar to forward button in web browsers.
Reload	Refreshes the current page, equivalent to the "refresh" button in a web browser.

Tips for Using Frame App

- The Frame Console window provides access to all menu options and settings.
- For optimal performance, use the Toggle Full Screen option when working in applications.
- If you experience connection issues, try using the Reload option before contacting support.
- The various "Show Internals" options are primarily for troubleshooting and may be requested by support staff.

Frame App Release Notes

Interested in reading about the latest changes to Frame App? Use the links below to learn

more:
https://support.dizzion.com/hc/en-us/categories/39016314427405-Announcements

The section below will outline how you can log in to your Frame account.

Accessing your Account

It's finally time to sign in to your Frame account. Depending on how your administrator has configured your account, there are two methods you can use to set up and access your account:

Method 1: Through a Third-party IdP

Many organizations choose to leverage a third-party identity provider (IdP) to control their users' access to various tools and platforms. There is no need to set up your account credentials since your organization can simply provide Frame access to you through the third-party IdP. Frame integrates with most SAML2 identity providers, which means you may access your Frame account in a variety of ways. Accessing Frame through your IdP is simple, we will outline the different methods below.

Sign In

If your administrator has configured the Frame account to authenticate users through your organization's SAML2 provider, they will typically provide you with a login URL which should look something like this:

```
https://use.difr.com/customer-name/organization-name/
```

If you are not already authenticated with your IdP, your sign on screen may look something like this:

assets/eu_saml1.png

Notice the “Sign in with Okta” button with the yellow lock symbol

In this example, Okta is the identity provider. Your administrator may use another provider such as Microsoft Azure AD, Microsoft ADFS, Google Suite, or others. Click on the “Sign in with \\\\” button to authenticate to the platform. You will be redirected to your identity provider's login page where you'll be prompted to enter your IdP credentials. Once you log in, you will automatically be taken to the Frame platform.

URL Authentication

Your administrator may have optimized your Frame login URL to authenticate through your IdP. If so, the URL they provide you may look something like this:

```
https://use.difr.com/customer-name/organization-name/
```

Launch Frame from IdP

Identity providers often supply end users with a landing page where they can select from their available applications and launch them, pre-authenticated. As an end user, you may see Frame as an option. Using Okta as an example, you may be able to select your Frame “chiclet” from the Okta “My Apps” page. In this case, starting Frame is as simple as clicking on the button. Many IdPs provide a similar interface to their end users.

Password Management

If you are signing in using your organization's third-party identity provider and forget your password or need to change your password, you need to perform those tasks in your organization's identity provider.

Method 2: Sign In with Frame IdP

If your admin has opted to use the built-in Frame Basic Authentication feature, you will set your own credentials to access your account. The first thing you will need to do is check your email to see if you have received your invitation.

assets/eu_invite1.png

You've been invited! Open the email and click the blue button to proceed.

assets/eu_invite2.png

Fill in your user details and click “Set Password.”

assets/eu_invite3.png

Once you've set your user name and password, click “Proceed to Login.” You'll be asked to log in with your new credentials.

From this point forward, you can log in to your Frame platform account by going to **https://frame.nutanix.com/** and clicking “Sign in with email/password.”

assets/eu_basiclogin.png

Password Management

If you are signing in using Frame Basic Authentication and you have forgotten your password, simply click on the “Forgot your password?” link and follow the prompts to receive an email with reset password instructions.

assets/eu_basiclogin.png

The email will contain a hyperink that you use to reset your password.

To change your password, provided you have already logged in using your Frame Basic Authentication credentials, go to your User Profile. Under the General tab, you can enter your current and new password.

Now that you have successfully logged into Frame, click **Next** below to learn how to Navigate Frame!

User Experience

Navigating Frame

It is time to move on to the main event: Navigating your Frame account. While there are many variables you can encounter with your Frame account, there are some universal basics that need to be understood first. In this guide we will review how you may access your session, basic session characteristics, basic account management, how to understand session performance, and much more.

Use the table of contents listed on the right side of this guide to navigate through different sections of this guide. ➡

Launch your Session

As we defined it in the glossary of the previous guide, the Launchpad refers to the end-user-facing part of the Frame interface where users can go to launch and manipulate applications. There are a couple of different ways your administrator may have given you to access your Frame environment. After signing in, you will likely be taken to your Application or Desktop Launchpad.

An Application Launchpad

A Desktop Launchpad

To start a session, simply click on the application you would like to launch. If your Launchpad shows only the "Desktop" icon, you will launch the entire desktop environment and can access all of your apps within the session. If you see individual applications, simply click on the app you would like to run. Application Launchpads only allow end users to run the application selected from the Launchpad. For Application Launchpad users, closing the application window within the Frame session will **disconnect** you and take you back to your Launchpad. When a session is disconnected, it will still be running and accessible from the Launchpad.

System Indicators

The system status indicator is located in the bottom right corner of your Launchpad. The indicator color and status lets you know the state of your session:

Status Indicator Color	Meaning
Green	Green indicates that a virtual machine is powered on and available. Your Frame session will start in seconds, as the resources are already available.
Yellow	Yellow indicates that a virtual machine is available, but will take a couple of minutes to power on for you to use.
Red	Red indicates that there are no virtual machines available for you to use. If you cannot access a virtual machine, you will need to contact your account administrator.

Multiple Launchpads

Your administrator may have provided you with access to multiple Launchpads. Switching between Launchpads is simple. Click on the Launchpad icon in the top center of your browser window.

> Your Launchpad selector displays the account name, IaaS provider, and Launchpad name for each Launchpad.

You can verify you are using the correct Launchpad by referencing the breadcrumbs in the upper left corner of your window.

> Breadcrumbs
>
> As shown here, we're using the "Applications" Launchpad of our test account.

Switch your System Type

If your administrator has granted you access to more than one system (instance) type, you can switch system types based on the needs of your application. For example, you may normally work on text-based applications like Word and Excel, but occasionally need access to 3D design apps like Autodesk Maya. Text-based applications will do well with an Air 4GB instance type; however, if you need to access to a GPU to run a graphically-intensive app, you can switch to a Pro 16GB system with 4 CPU cores and an NVIDIA GRID GPU.

To switch your system type from your Launchpad, click on the arrow next to your current system type in the bottom right portion of your screen.

A list of available system types will appear, select the desired system type.

Whether you are launching to a desktop environment or launching an app, your session will start with the most recently selected system type.

> If your Launchpad appears “grayed out” (see below) and the system status is listed as “unavailable” after switching, your administrator may not have set up capacity for that system type. Contact your administrator if you feel this is an error.

Session Basics

In this section, we will outline how to perform basic actions and how to interpret the UI elements in your session. You will likely see some additional details not covered here. Don't worry! The next guide will go into more detail about some of the session settings and features that your administrator may have enabled for your account. For now, we'll start with the basics.

Start your Session

As mentioned in the section above, launching a session is as simple as clicking on an icon on your Launchpad. Once you have selected your application/desktop session, your session will launch in a couple of minutes or a couple of seconds, depending on your system status.

> Our session is "powering on" which means that backend resources are powering on to create a session for us.{" "}

For this example, we launched Chrome from our Application Launchpad. After a minute or two, we can now use Chrome in our Frame session.

> A browser within a browser window!

Frame Start Menu

Put simply, end users may open any applications that are available to them from the Frame Start Menu.

image.png

Frame Menu

End users can adjust their Frame session (or "terminal") settings by clicking the latency meter in the top center portion of the window.

image.png

Icon	Name	Function
	Quit	Closes your session and ends it completely. Unlike Disconnect, this fully terminates the session. Only use after saving your work.
	Disconnect	Takes you back to your Launchpad but leaves the session running in the background. Similar to turning off your monitor while your computer continues running.
	Settings	Launches a new window within your session where you can manipulate streaming variables and other session configuration options. Refer to Terminal Settings for further details.
	Displays	Allows you to manage your Frame displays on one or more physically-attached monitors if using Chrome, Chromium-based Edge, or Frame App.
	Sound	Controls audio settings for your Frame session.
	Language	Language selection for your session interface.

Icon	Name	Function
	Clipboard	Manages clipboard functionality between your local system and the Frame session.
	Upload	Allows you to upload files from your local system to the Frame session.
	Stats	Toggles the display of session statistics. Shows current bitrate in the bottom right corner of the status bar, with additional details available when clicked. More details listed below.
	Full Screen	Toggles the Frame session to display in fullscreen mode, utilizing your entire monitor.

Session Stats