

Click-to-Call (Web RTC)

Admin Guide

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Click-to-Call and StarLeaf Cloud

StarLeaf Cloud allows for video calling to take place within a web browser. We call this Click-to-Call. Video calling within a browser is sometimes known as WebRTC (Web Real-Time Communication).

People who want to join a StarLeaf conference (and who do not have their own video equipment) can use Click-to-Call to do so.

- Anyone can now directly dial in to a StarLeaf conference from their web browser, simply by clicking a link
- Anyone can now directly call any StarLeaf Cloud endpoint from their web browser. This includes StarLeaf room systems, StarLeaf desktops, StarLeaf Breeze, and any H.323 or SIP endpoint that is registered to the StarLeaf Cloud

Guest invites include a link to call the person who sent the invite point-to-point from a web browser.

If you are a StarLeaf user, you can include a link in your email signature (or elsewhere) that launches a browser ready to call you.

You can also create links to allow video calls to anyone in your organization from your web sites or applications. For more information, refer to [Browser Click-to-Call links](#).

Browser support for Click-to-Call

To use Click-to-Call, video callers need at least:

- Chrome 46
- Internet Explorer 11 (requires add-in)
- Firefox 55

For best support and compatibility, StarLeaf recommends using Chrome or Internet Explorer for Click-to-Call.

Safari no longer supports plugins and therefore cannot be used for Click-to-Call.

Browsers running on iOS (iPhone and iPad) do not support any WebRTC. Therefore, you cannot use Click-to-Call on these devices.

Chrome

Chrome users do not need a add-in to use Click-to-Call, but they need a to install an extension if they will share their screens whilst using Click-to-Call.

To be able to share your screen from Chrome, you will be prompted to use the **Screen Share for StarLeaf Click-to-Call** extension. Chrome users can find the add-in here:

<https://chrome.google.com/webstore/detail/screen-share-for-starleaf/dliccfbpegdcmflaidhnhnloeofgdnce>.

Internet Explorer

Internet Explorer users will be prompted by their browser to download the **StarLeaf Browser Add-in** when they load the Click-to-Call page in their browser. This enables the browser to

use Click-to-Call and also use screen share.

Firefox

From Firefox version 59, the ability to share your screen using Click-to-Call is no longer supported. StarLeaf no longer recommends using Firefox with Click-to-Call.

Safari

Safari no longer supports plugins and, therefore, you cannot use it for Click-to-Call.

Content share for browser-based video calling

Users of StarLeaf Click-to-Call browser video calling can share their screen with the person or conference at the other end of the call.

The picture below shows a browser-based call with shared content.



TCP media support

StarLeaf browser-based video calling does not require UDP ports to be open on your firewall; however, StarLeaf calls prefer to use UDP if possible because that provides superior call quality.

The use of TCP ports allows:

- successful browser-based calling even where there is a corporate firewall that is configured to block UDP traffic
- better performance where there is limited bandwidth

Firefox users must have access to UDP as, currently, Firefox browser calling does not work with TCP port 443.

To find more information about ports used by Click -to-Call, refer to [Firewall configuration for StarLeaf endpoints.](#)

Dynamic bandwidth support

StarLeaf Click-to-Call uses dynamic bandwidth. This effectively prevents video browser calls from overusing your Internet connection. Where you have low or fluctuating bandwidth, Click-to-Call automatically and dynamically adjusts bandwidth use to avoid packet loss.

Dynamic bandwidth support also means that where there are good network conditions with high bandwidth availability, Click-to-Call will scale up resolution and provide a much better video experience.

The dynamic bandwidth algorithm used by Click-to-Call is designed by Google, and this is implemented in all browsers we support. For more information about that algorithm, refer to [A Google Congestion Control Algorithm for Real-Time Communication on the WWW](#).

Proxy support

Click-to-Call supports connections through proxies that support the use of **HTTP CONNECT** on port 443. The StarLeaf Cloud uses **HTTP CONNECT** to open an end-to-end TCP connection between the browser and the StarLeaf Cloud Border Controller. Click-to-Call will use the proxy settings that are configured in the user's browser settings.

The proxy must allow connections to **<subdomain>.call.sl**.

Browser Click-to-Call links

The StarLeaf Cloud allows browser-based video calling.

You can create links that, when clicked, cause a browser-based video call to be initiated. These links are URLs. To create the correct URL, you need to know the video address of the entity that you want the link to call. For example, this could be a user registered to the StarLeaf Cloud, a video endpoint registered to the StarLeaf Cloud, a hunt group within an organization on the StarLeaf Cloud, or a conference scheduled on the StarLeaf Cloud.

URLs can only be sent over the Internet using the ASCII character-set. Video addresses often contain characters outside the ASCII set. Therefore, you must convert the video address into a valid ASCII format. For example the at sign (@) becomes %40.

You can find information and tools online to help you to do this (for example: https://www.w3schools.com/tags/ref_urlencode.asp)

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Browsers running on iOS (iPhone and iPad) do not support any WebRTC. Therefore, you cannot use Click-to-Call on these devices.

Create a link to call a hunt group

If you want to create a browser link to call a hunt group, the link has the format:

`https://portal.starleaf.com/webrtc?target=<hunt_group_name>%40<org_subdomain_name>.call.sl`

For example, a link that calls the StarLeaf technical support team is:

<https://portal.starleaf.com/webrtc?target=support%40starleaf.call.sl>

An example link to call your sales team hunt group with the video address sales@xampleco.call.sl would be:

`https://portal.starleaf.com/webrtc?target=sales%40xampleco.call.sl`

Create a link to call a conference

If you want to create a browser link to call into a conference, the link has the format:

`https://portal.starleaf.com/webrtc?target=<7_digit_conference_number>`

For example, a link that calls a StarLeaf demo conference (that has conference number 7789634) is:

<https://portal.starleaf.com/webrtc?target=7789634>

Create a link to call a StarLeaf user

You can create a browser link that makes a point-to-point video call from a browser to a StarLeaf user. The user might be using the software client Breeze or they might have StarLeaf desktop system. Note that the target endpoint does not need to be a StarLeaf endpoint, but it does need to be an endpoint that is registered with the StarLeaf Cloud. To create the link, you need to know the user's email address. This is the email address with which the user is registered with the StarLeaf Cloud.

The link has the format:

<https://portal.starleaf.com/webrtc?target=<email address>>

Note: When you create the URL, you must URL-encode the email address.

For example, to call Alexis Reena at Xampleco, the link looks like this:

<https://portal.starleaf.com/webrtc?target=alexis.reena%40xampleco.com>

Note: Users can use such a link in their email signatures.

Create a link to call a room system

You can create a browser link that makes a point-to-point video call from a browser to a room system. Note that the target endpoint does not need to be a StarLeaf endpoint, but it does need to be an endpoint that is registered with the StarLeaf Cloud. The link uses the video address of the room system, which is in the format:

[<meeting_room_name>@<org_subdomain>.call.sl](https://portal.starleaf.com/webrtc?target=<meeting_room_name>@<org_subdomain>.call.sl)

The link has the format:

https://portal.starleaf.com/webrtc?target=<video_address>

Note: When you create the URL, you must URL-encode the video address of the room system.

For example, to call a room system in your organization, where the video address of the meeting room is **greenroom@xampleco.call.sl**, the link looks like this:

<https://portal.starleaf.com/webrtc?target=greenroom%40xampleco.call.sl>

Additional parameters

When you are creating links, you can add additional parameters to set the language of the browser page and to set the name with which the participant makes the call.

- **Locale:** To set the language of the page, use the **locale** parameter
For a list of available locale codes, refer to [Locales \(p10\)](#). If you do not set a locale, the language defaults to US English.
- **Name:** To set a participant name, use the **name** parameter
- **Read-only name:** To set an uneditable participant name, instead of **name**, use the **roname** parameter (a read-only version of the name parameter)

For example, you can see in the picture below that the language of the page is English and the participant name has been preset to Sarah.



Note: If you are creating a link that sets the participant's language to be a language other than your own and you have previously used the StarLeaf Portal in your own language, when you test the link, the Portal shows you your own language as there is a cookie in your browser that controls language. To test the link, use an alternative browser/computer.

Conferences

For a conference link using additional parameters, the format of the link is:

https://portal.starleaf.com/webrtc?locale=<locale_code>&name=<participant_name>&target= <7_digit_conference_number>

For example, to dial into the demo conference with participant name **Sarah** and with the browser page in **French**, the link is:

https://portal.starleaf.com/webrtc?locale=fr_fr&name=Sarah&target=7789634

For example, to dial into the demo conference with the **read-only** participant name Sarah and with the browser page in French, the link is:

https://portal.starleaf.com/webrtc?locale=fr_fr&roname=Sarah&target=7789634

Hunt groups

For a hunt group link using additional parameters, the format of the link is:

https://portal.starleaf.com/breezelinks/webrtc?locale=<locale_code>&name=<participant_name>&target=<hunt_group_name>%40<org_subdomain_name>.call.sl

For example, to dial the StarLeaf technical support team with participant name Sarah and with the browser page in German, the link is:

https://portal.starleaf.com/webrtc?locale=de_de&name=Sarah&target=support%40starleaf.call.sl

Locales

These are the locale codes you can use in browser links to set a locale for the participant joining a conference. This causes the browser video calling page to be in the language of the specified locale.

The **locale** parameter is the code used in the Cloud API to set the language for a user and also controls the formatting of time and date.

Parameter	Description
en_us	US English
en_int	US English with 24 hour clock
fr_fr	French
fr_ca	Canadian French
es_es	Spanish
jp_jp	Japanese
ru_ru	Russian
de_de	German
zh_hans	Simplified Chinese
zh_hant	Traditional Chinese
pl	Polish
id	Indonesian
it	Italian
da	Danish
sv	Swedish
pt	Brazilian Portuguese
cs	Czech
ro	Romanian
no	Norwegian
nl	Dutch
fi	Finnish
tr	Turkish
ko	Korean

Legal information

Third party software acknowledgments

Acknowledgments of third-party software are available at:

www.starleaf.com/support/legal

Disclaimers and notices

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