

Bandwidth required for using Spread

Check your possibilities in advance

Required Bandwidth for using Spread

Define your requirements

Investing in online meetings is an effective and cost saving way to improve teamwork within your organization. More importantly, it makes it much more easy to contact your customers and partners.

When planning and preparing online events, it is important to analyze the available infrastructure. This plays a significant role if important partners or customers will take part in your meeting or if periodical teamwork sessions are planned.

Generally, a stable internet connection without breaks in the signal is an important precondition. The agenda of your upcoming online event should be analyzed to answer the question in regards to the required bandwidth.

Different Spread functions will need various bandwidth values. Screen sharing and video streaming require much more bandwidth than simple chat messages or voting. The bandwidth that is required for special functions have to be considered beforehand when planning the online conference.

Please answer the following questions in advance:

Which functions do you want to use in your online meeting?

Are there any features that are of particular importance? Can you abandon features that require a lot of bandwidth?

Are the webcam videos important for all referees?

Is it important for your audience to see the video of all speakers all the time? Alternatively, the video and audio of the person who is currently speaking that will be transmitted.

What video quality do you need for your webcam-video?

Maybe a lower video resolution is sufficient for your online event.

What is the target group for your online event?

How much bandwidth do the participants have?



Connection check

Using the Spread Connection check you can determine the maximum bandwidth of your internet connection in advance of your online meeting. This usually takes about 90 seconds.

It determines whether you can use Spread without any problems.

To plan and prepare a online event in detail, please use the document shown below to find out the bandwidth required.

Please use the following link to check:

www.spread.com/connectioncheck

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Determine your bandwidth

Required function	Average bandwidth (Kbit/s)	
	 Downstream	 Upstream
Presentation		
Display a presentation file (i.e. PDF, Office, etc.) ^{1 3}	50 - 600	–
Preview and Pointer	irrelevant	irrelevant
Show a video presentation ²	1.000	–
Whiteboard	irrelevant	irrelevant
Chat	irrelevant	irrelevant
Screen sharing ^{3 5}	50 - 200	50 - 200
Remote control ³	50 - 200	50 - 200
Webcam video ⁵		
4 quality levels:		
Size: 240x144 px / 8 fps ⁴	50	50
Size: 256x154 px / 10 fps ⁴	100	100
Size: 320x192 px / 20 fps ⁴	512	512
Size: 640x384 px / 20 fps ⁴	1.000	1.000
Audio (VoIP) ⁴	20	20
Recording	irrelevant	irrelevant
Voting	irrelevant	irrelevant
Mind map	irrelevant	irrelevant
Presence control	irrelevant	irrelevant

Summary

¹ Only displaying your documents will require bandwidth capacity (Selection of documents). The display of additional slides requires no additional bandwidth.

² When presenting a FLV video file you have to consider the bandwidth, which was setup when converting the video. For all other video files the value indicated in the overview is valid.

³ Average values vary depending on content. For short periods higher values are possible (i.e. displaying an image in full screen mode). When broadcasting at low bandwidth fewer updates are transmitted. The Screen sharing client allows you to control the compression of the transferred images.

⁴ Value for one transferred webcam video or audio channel (i.e. 1 user sending video). If several participants are using the function, please multiply the value by the number of involved participants.

⁵ Please consider the bandwidth needed for upstream and downstream. More information is available in the hint box on the right.

Calculate the required bandwidth for the features you want to use simultaneously! Please have a look at the list on the left.



Upstream

All functions have to be considered regarding the transmission of data.

For example:

- Transmitting your own video and audio channel,
- Sending an image from your desktop (Screen sharing) or
- Accepting a request for remote control and thusly sending information (this concerns the user, whose PC will be accessed)



Downstream

Downstream refers to receiving data from the Spread service.

For example:

- Receiving video and audio data of participants,
- Viewing a presentation
- Viewing the desktop images of another participant (Screen sharing) or
- Controlling a PC of another participant by remotely viewing the desktop

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Evaluation

Please determine the required connection needs for your online event.

More than
1000 KBit/s



A **good LAN connection** is required to hold an event with these desired functions.

The transmission of large sized high quality webcam video is possible (320 x 192 px, 20 fps). It is recommended to set your connection setting⁵ to "High Quality (Upstream 500 kbit/s or more)".

500-1000 KBit/s



You need a **DSL connection** to hold your event.

Transmitting webcam video is easily possible with an average size and quality (320 x 192 px, 20 fps). Your connection setting⁵ should be set to "Medium Quality (Upstream 500 kbit/s or more)".

100-500 Kbit/s



For your event you will need at least a **DSL Light connection**.

Transmitting quality video is possible but in a low quality (256 x 154 px, 10 fps). The connection setting⁵ for your meeting should be set to "Low Quality (Upstream 100 bit/s or more)".

50 - 100 Kbit/s



Spread meetings of this type require an **ISDN connection**.

Transmitting webcam video of a small size (240 x 144 px) and a minimum quality (8 fps frame rate) is possible. The connection settings⁵ in your meeting room should be set to "Bandwidth Saver (Upstream 50 kbit/s or more)".

Up to 50 Kbit/s



Your planned event can be held with a **simple internet connection** (i.e. modem).

Video transmission is generally not possible. Please select "No video (disable all videos)" in the connection settings⁵ of your meeting room.



Your participants should also have a sufficient connection to attend your online event. Optimally, their connection should come close to your calculated requirements.

If a participant has a slower connection, Spread will turn down the connection settings⁶ automatically. So they can still attend your event but with limited video quality.

⁶ The connection settings can be changed in the menu bar under "Settings".

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General recommendation

Our experience has shown that the following connection is sufficient for most of the online events:

50 - 100 Kbit/s



This bandwidth setting enables the implementation of most event features.

Details on these connection conditions can be found on the previous page.

Tips for an optimum capacity utilization



Here are some tips on how to keep the utilization of bandwidth to a minimum.

Reduce video and audio channels

If multiple moderators are in the meeting, they should switch off their video and audio while they are not speaking. This saves bandwidth.



Freeze video images

If necessary, each participant can locally freeze the webcam videos of other participants by clicking on the camera icon of the video image.

This will display a video still of the participant.

Use your portrait

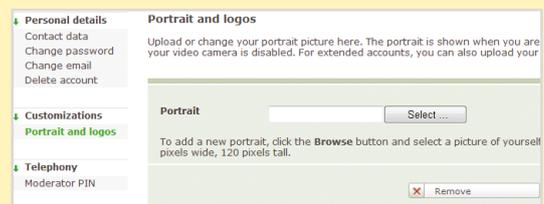
As the host of a meeting you can upload a portrait photo in "My Spread" (Tab "Settings" / "Portraits and Logos").

If your video is switched off and your audio is on you can show your portrait instead of your webcam video (menu "Tools" / "Show Portrait").

This gives your guests a personal picture of you without the need for using too much bandwidth.

How it works:

<http://www.youtube.com/watch?v=V0YChNFhsF0>



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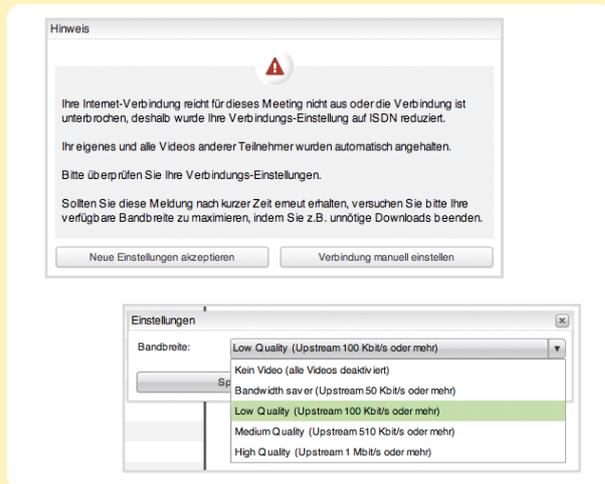
Upload presentations and files before the meeting starts

Upload all files for presenting and sharing in advance and select the first slide before your participants join the meeting.

Adjust connection settings

Select your connection settings according to your available Internet connection. Should your connection not be sufficient Spread will ask you to automatically adjust your settings.

This will adjust the quality of all videos, for your available bandwidth so you can follow the event with reduced quality. The connection settings can be changed in the menu point "Settings" / "Connection settings" in the meeting room.



Use RTMP network protocol

You should use RTMP network protocol to connect to Spread.

To check whether you are using RTMP, please use the [Spread Connection check](#).

If you have additional questions we can, individually, consult with you. Just contact us. We are looking forward to hearing of you.



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Further questions?

Click here. We call you in a few seconds at our cost - worldwide. Please keep your phone ready!

[Call now](#)