

Content Provider Technical Requirements for Binge On & Video File Download Identification

T-Mobile wants to encourage as many content providers as possible to participate in these programs to maximize the efficiency of the network and the customer experience. In any event, there is no charge to the content provider regardless of your choice. Content providers can opt in or out of these programs by emailing BingeOn@T-Mobile.com.

Binge On. T-Mobile's Binge On video offering allows customers on qualifying rate plans who choose to receive standard DVD quality video (up to 1.5 Mbps, typically 480p) to receive zero-rated video streams from qualifying content providers. Content providers have 4 choices under the program:

1. Do nothing and the T-Mobile network, where possible, will optimize video if the customer has Binge On enabled; content is not zero rated ("data-saver");
2. Participate in zero rating, with T-Mobile providing the optimization when the customer has Binge On enabled ("streams free");
3. Participate in zero rating, with the content provider optimizing when the customer has Binge On enabled ("content provider-optimized"); or
4. Opt out of Binge On and work with T-Mobile to identify your video, after implementation of which your content will not be optimized and your content will not be zero rated regardless of the customer's Binge On election ("non-optimized").

Video Downloads. Video optimization may result in some video downloads being identified as streaming video and optimizing them accordingly (delivered at up to 1.5Mbps). Content providers may choose to contact us and elect to use a protocol to help identify its DVD quality video file downloads to ensure it is not treated as streaming video.

Content Provider Binge On Participation (Opt-in) (Choices #2 and #3)

To be included, a content provider's video delivery will meet the following requirements:

- For choices #2 and #3, video must be delivered over T-Mobile's network in a way that allows T-Mobile to identify the provider's video traffic. This requires that video detection signatures be present. T-Mobile will work with content providers to ensure that our networks work together to properly detect video. We will continue to work with content providers as new traffic identification means are needed in the event of future technology enhancement or changes. Use of technology protocols which make detection of video difficult such as https and UDP require additional collaboration with T-Mobile to enable the video detection.
- For choices #2 and #3, any changes to a content provider's video delivery that could knowingly impact T-Mobile's ability to identify the traffic and include the provider's content in the offering must be communicated to T-Mobile in advance. If T-Mobile is not aware of changes then we can't ensure correct treatment of zero rated content. T-Mobile reserves the right to suspend the content provider's participation in Binge On upon prior notice if such changes cannot be resolved in a timely manner and customer expectations cannot be met.
- For choices #2 and #3, the category of content (i.e. video) that is eligible under the program will be delivered by the content provider to T-Mobile in such a way that is distinguishable from other categories that are not qualified as eligible under the offering.

- For choices #2 and #3, the content provider will provide video over T-Mobile's network using adaptive bitrate technology where delivery bitrate is expected to adapt based on the capabilities of the data connection or as otherwise indicated by the T-Mobile network. The network limits the bandwidth available to detectable videos to a level currently at 1.5 Mbps and as a result, many video services will deliver videos at lower resolutions that will look good on mobile devices (DVD-quality, typically 480p) and that use less data. In the event that the content provider elects choice #2 but is unable to meet this requirement, T-Mobile will work with the content provider to explore choice #3.
- For choices #2 and #3, T-Mobile may require content providers to make technical modifications to support a high quality end-user experience and to improve the utilization of network bandwidth (e.g., bit rate set at approximately 1.5 Mbps per connection averaged over one minute of video).
- For choice #3, if you want to self-optimize video delivery, we will work with you to connect with our networks (upon acceptance of software API license) in such a way that your content delivery network can identify customer's Binge On Choice and thus deliver a video at a bitrate currently set at approximately 1.5 Mbps per connection averaged over one minute of video.
- For choice #3, T-Mobile reserves the right to resume optimization of your content in the event of consistent failure to manage the bitrate of your content within the guidelines and/or changing signatures, delivery networks, etc. and where practical, with prior notice and an opportunity to address the problem.
- Only lawful and licensed video content is eligible for the offering;
- The content provider may not use T-Mobile marks without express written consent.

To be listed as participating in the offer, all video from the provider must continuously meet these requirements; if the content provider does not continue to meet then-current requirements, T-Mobile may remove video from inclusion in our zero rating program.

Content Provider Binge On Opt-Out (Choice #4)

To be excluded so that a content provider's video is not optimized and content is not zero rated, regardless of a customer's current Binge On status, a content provider's video will meet the following requirements:

- Video must be delivered over T-Mobile's network in a way that allows T-Mobile to identify the provider's video traffic as video. This requires that video detection signatures be present. T-Mobile will work with content providers to ensure that our networks work together to properly detect video and we will continue to work with content providers as new traffic identification means are needed in the event of future technology enhancement or changes. Use of technology protocols which make detection of video difficult such as https and UDP require additional collaboration with T-Mobile to enable the video detection.
- Any changes to an opted-out content provider's video delivery that could knowingly impact T-Mobile's ability to identify the traffic and exclude the provider's content from any optimization related to Binge On must be communicated to T-Mobile in advance. If changes are made, then your content may be optimized. In such cases, T-Mobile will provide prompt notice and an opportunity to address the problem.
- After a provider has given notice that they wish to be excluded we will work with you to test the technical deployment to ensure our network is able to detect your video.

- Once technical implementation has been tested to the mutual satisfaction of both parties, we will move the solution to our production network at the same time we post the fact that your content is excluded from Binge On (typically once per calendar quarter).

Content Provider Video Download Opt-In

To be included, a content provider's video delivery will meet the following requirements:

- Video must be delivered over T-Mobile's network in a way that allows T-Mobile to identify the provider's video traffic and differentiate streaming video from video downloads. This requires that certain video detection signatures be present. T-Mobile will work with content providers to ensure that our networks work together to properly detect streaming video only. We will continue to work with content providers as new traffic identification means are needed in the event of future technology enhancement or changes. Use of technology protocols which make detection of video difficult such as https and UDP require additional collaboration with T-Mobile to enable the video detection.
- Any changes to a content provider's video delivery that could knowingly impact T-Mobile's ability to identify the traffic must be communicated to T-Mobile in advance. If T-Mobile is not aware of changes then we can't ensure correct treatment of video content. T-Mobile reserves the right to suspend the content provider's participation upon prior notice if such changes cannot be resolved in a timely manner.
- The category of content (i.e. standard definition video) that is eligible under the program will be delivered by the content provider to T-Mobile in such a way that is distinguishable from other categories that are not qualified as eligible under the offering.
- T-Mobile reserves the right to resume optimization of your content in the event of consistent failure to follow these guidelines. Where practical, T-Mobile will provide prior notice and an opportunity to address the problem.
- Only lawful and licensed video content is eligible;
- The content provider may not use T-Mobile marks without express written consent.

These criteria are current as of April 2020. The Binge On or Video Download offering may be discontinued at any time, and this document will be updated to reflect any changes to the programs or the technical requirements.