Technical Test - Exercise 2: Bug investigation

1. Try to find where the issue is in this customer's page.

The customer's page has few issues listed below:
  a) No. of sources does not increase even after opening multiple tabs simulated users.
  b) DNA, Upload and Offload% does not change(increase/decrease) is zero as the video streams.
  c) Mesh Delivery graph remains unchanged due to the above issues.
The potential cause of this issues is no dnaConfig parameter not configured using contentIdGenerator option to generate P2P connection.

2. Write an email to our customer explaining the issue and when to expect a fix.

To : "Customer"

Subject: CDN Mesh Delivery and P2P Issue update

Hello Customer,

We would like to inform you an issue has been identified related to the CDN Mesh Delivery. The P2P upload is not configured properly which is causing lack of performance, multi sourcing of video delivery is not working efficiently which is further causing issues with load-balancing as shown in our mesh delivery graphs on flowplayer.

We understand the severity of the issue and we have prioritized the resolution.
The team is working on this incident and a priority 1 incident has been raised for the same.
We would be able to solve the issue within 30 mins, root cause analysis report with issue, cause and solution will be created and documented for future reference.

We would also open a bridge call and flash progress updates will be given every 10 mins by email.

Please let us know if you have any other concerns or queries.

Thanks & Regards
Uchit Raval

3. Write an Issue report for our developers to help them
reproduce and fix the issue as fast as possible.

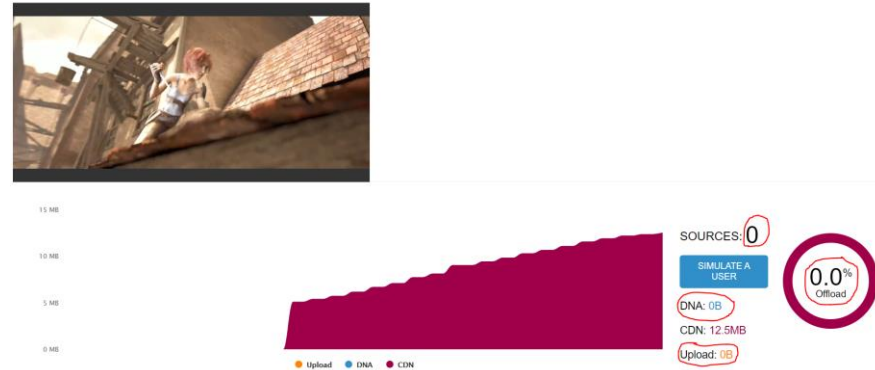| Reported by	Product Management Team
Date	15/06/2021
Problem Type	CDN Mesh Delivery and P2P upload issue with Flowplayer
Area / Department	Developer Team
Severity	Urgent
Priority	1

Summary of problem / request:	The customer's page has few issues listed below:
	  a) No. of sources does not increase even after opening multiple tabs simulated users.
	  b) DNA, Upload and Offload% does not change(increase/decrease) is zero as the video streams.
	  c) Mesh Delivery graph remains unchanged due to the above issues.

	The potential cause of this issues is no dnaConfig parameter not configured using contentIdGenerator option to generate P2P connection. The P2P upload is not configured properly which is causing lack of performance, multi sourcing of video delivery is not working efficiently which is further causing issues with load-balancing as shown in our mesh delivery graphs on flowplayer

For bug report:

Please describe the steps to reproduce the problem.
-launch the url https://test.streamroot.io/candidates/test.html in web browser.
-open multiple tabs by clicking on "simulate a user"
-observe the values of sources, DNA, Upload and offload %
-goto the source page and check the codes, find for dna configuration code and related issues

Please describe the observed result from the current system.
-while clicking on "simulate a user" and opening multiple tabs of the same video stream, count of sources is 0
-DNA, Upload and Offload% doesn't change because dna configuration is not configured correctly
-P2P contentidgenerator is not configured, hence the peer-to-peer connection is not established when multiple tabs are open of the same video stream
-in the source html code, streamroot plugin is not configured correctly
-contentid function is missing in the source html code

Please describe the correct/expected result.
-refer to this link - https://support.streamroot.io/hc/en-us/articles/360000908133-Flowplayer
-Use "Native" sources in the HTML <Head>
-change the streamroot plugin with the below script
<!-- **Streamroot plugin** -->
   <script src="//cdn.streamroot.io/flowplayer-hls-dna-plugin/1/stable/flowplayer-hls-dna-plugin.js?srKey=da32565b-dd31-4ae8-9be7-951d6ca79621"></script>
-add streamroot graphs in <Head>
<!-- Streamroot Graphs -->
   <script src="//tools.streamroot.io/usage-graphs/stable/graphs.js"></script>
-add contented function as mentioned below in <Head> to configure P2P connection for multiple users
<script>
    function contentIdFn(contentUrl) {
     var l = document.createElement("a");
     l.href = contentUrl;
     return l.pathname;
    }
    var dnaConfig = {
     contentIdGenerator: contentIdFn,
    };
    var hls = new Hls(hlsjsConfig);
    var wrapper = new HlsjsDnaWrapper(
     hls,
     "da32565b-dd31-4ae8-9be7-951d6ca79621",
     dnaConfig
    );
  </script>

Screen captures and mockups.

-screenshot of below flowplayer shows the 2 user tabs are open simultaneously but the values of Sources, DNA, Upload and Offload% Doesn't change, because the the issue with CDN mesh delivery and P2P upload not functional.
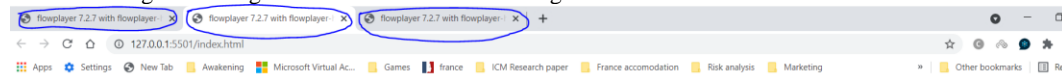

flowplayer with flowplayer-hls-dna-plugin from prod

-screenshot of the flowplayer after the changes mentioned in the "expected result" are implemented.
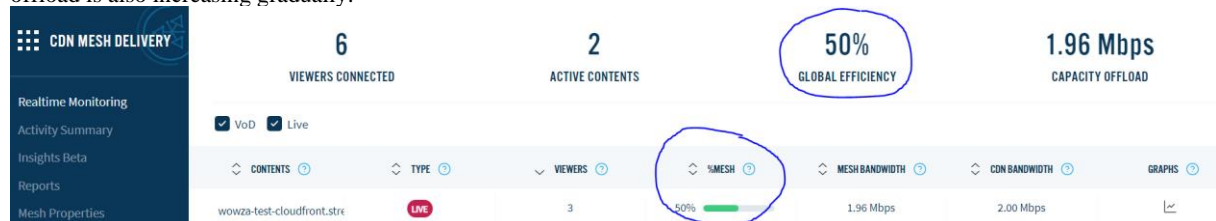the image below shows 3 simultaneous tabs open stream the same video, P2P connection is established Sources = 2, also load-balancing is working fine the offload% is increasing.

flowplayer with flowplayer-hls-dna-plugin from prod

-the screenshot below shows the CDN Mesh is working fine and global efficiency is achieved 50% and increasing, capacity offload is also increasing gradually.

Resolution Time: 30 mins – P1/Sev1