

# Browser End-User Monitoring

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Use browser instrumentation through automatic JavaScript Agent injection and enable Real User Monitoring (RUM) for SAP Fiori, WebDynpro, WebGUI (SAPGUI for HTML), and BSP (CRM WebUI, etc.) applications.

## Prerequisites

- Set up [Browser RUM](#)
- [Obtain the App Key before enabling Browser instrumentation through JavaScript Agent injection](#)

## Configure Browser Instrumentation

You can customize browser Instrumentation from **Instrumentation settings > Browser Instrumentation** tab using SAP transaction code `/DVD /APPD_CUST`.

The screenshot shows the 'Browser instrumentation' configuration window. It has several tabs: 'Match rules', 'Data collectors', 'RFC settings', 'Snapshot settings', 'Error filter', and 'Browser instrumentation' (which is selected). The 'Hosting options' dropdown is set to 'AppDynamics CDN'. Below it, there are input fields for 'Agent Version', 'XHR Exclusion Pattern', and 'API Key' (containing 'AA-BBB-CCC-DDD'). At the bottom, there are five checked checkboxes: 'Cross Domain Correlation', 'UI5 Instrumentation is Active', 'WebDynpro Instrumentation is Active', 'WebGUI Instrumentation is Active', and '(BETA) BSP Instrumentation is Active'.

The following table describes the fields and descriptions for **Instrumentation Settings**:

Field	Description
Hosting options	Determines where the JavaScript Agent files are to be hosted. See <a href="#">JavaScript Agent configuration</a> . <ul style="list-style-type: none"><li>• <b>AppDynamics CDN:</b> All the JavaScript Agent files are from the host <code>cdn.appdynamics.com</code>. It is a simple and helpful option for testing purposes.</li><li>• <b>Self-Hosting:</b> Hosts all of the JavaScript Agent files. It provides more control and is recommended for production.</li><li>• <b>Shared Hosting:</b> Hosts the main file <code>adrum.js</code>. Other files, that are loaded asynchronously, are from the AppDynamics CDN. It offers control of the most important file of the JavaScript Agent. It is ideal for small to medium-sized businesses that don't have the resources or prefer not to host the entire JavaScript Agent.</li><li>• <b>Custom snippet:</b> Allows to enter the complete code snippet for the JavaScript injection. All parameters are maintained in the code snippet when this hosting option is used.</li></ul>
Agent Version	It is provided when AppDynamics CDN hosting is selected. The default value is <code>adrum-latest.js</code> . This field is hidden for hosting options other than AppDynamics CDN where the default value is <code>adrum.js</code> .
Custom host	It is provided when Self-Hosting or Shared Hosting is selected. It is a mandatory field and the value should not contain prefixes like <code>HTTP://</code> or <code>HTTPS://</code> .

XHR Exclusion Pattern	URL filter for excluding XHR calls from monitoring, use semicolon (;) as a separator to enter multiple patterns such as <code>.*foo.*;.*bar.*</code> See <a href="#">Filter XHR Calls by URLs</a>
API Key	This value is obtained when Browser RUM is set up
Cross domain correlation	Flag to enable session correlation across multiple domains. See <a href="#">Session Correlation Across Multiple Domains</a>
UI5 Instrumentation active	Flag to enable instrumentation of SAP Fiori (UI5) applications using the JavaScript Agent.
WebDynpro instrumentation active	Flag to enable instrumentation of WebDynpro applications using the JavaScript Agent.
WebGUI instrumentation active	Flag to enable instrumentation of WebGUI (SAPGUI for HTML) applications using the JavaScript Agent.
(Beta) BSP instrumentation active	Flag to enable instrumentation of BSP pages (covers also CRM WebUI) using the JavaScript Agent.

## Custom Code Snippet

Choose **Custom snippet** from the **Hosting Options** drill-down menu and enter the custom snippet for the JavaScript agent injection.

The Custom Code Snippet hosting option allows you to use more options like specifying the on-premise EUM server. See [Configure the JavaScript Agent](#)

Match rules | Data Collectors | Snapshot settings | **Browser instrumentation**

Hosting options: Custom Snippet

UI5 Instrumentation is Active  
 WebDynpro Instrumentation is Active  
 WebGUI Instrumentation is Active

```
<script charset='UTF-8'>
window['adrum-start-time'] = new Date().getTime();
(function(config){
  config.appKey = 'AA-BBB-CCC-DDD';
  config.adrumExtUrlHttp = 'http://cdn.appdynamics.com';
  config.adrumExtUrlHttps = 'https://cdn.appdynamics.com';
  config.beaconUrlHttp = 'http://col.eum-appdynamics.com';
  config.beaconUrlHttps = 'https://col.eum-appdynamics.com';
  config.xd = {enable : true};
})(window['adrum-config'] || (window['adrum-config'] = {}));
</script>
<script src='//cdn.appdynamics.com/adrum/adrum-latest.js'></script>
```

## Limitations

C++ SDK used in HTTP SDK currently does not support correlation with Browser RUM.

Browser instrumentation is supported from SAP NetWeaver release 7.40.

## Known Issue with Fiori Launchpad

In older versions, the JavaScript Agent prevents Fiori Launchpad to be loaded correctly when XHR request monitoring is enabled. This is resolved as of version 4.5.17.

Following are the available workarounds:

1. Exclude the XHR calls from monitoring either by entering value .\* into the **XHR Exclusion Pattern** field in the SAPUI5 settings.
2. Use the following code in the custom snippet:

```
(function(xhr) {  
  xhr.exclude = {  
    urls: [{  
      pattern: ".*"  
    }  
  ]  
};  
})(config.xhr || (config.xhr = {}));
```

See [Filter XHR Calls by URLs](#).

## Limitation for WebDynpro applications

WebDynpro applications started via the Internet Explorer run in compatibility mode, which causes newer versions of the JavaScript Agent to end with syntax errors when trying to instrument the source code.

The latest compatible JavaScript Agent version is *adrum-4.5.7.1910.js*. Specify this version in the settings if you use the Internet Explorer for WebDynpro applications.

Match rules	Data collectors	RFC settings	Snapshot settings	Error filter	Browser instrumentation
Hosting options:	AppDynamics CDN				
Agent Version:	adrum-4.5.7.1910.js				
XHR Exclusion Pattern:					
API Key:	AA-BBB-CCC-DDD				
<input checked="" type="checkbox"/>	Cross Domain Correlation				
<input checked="" type="checkbox"/>	UI5 Instrumentation is Active				
<input checked="" type="checkbox"/>	WebDynpro Instrumentation is Active				
<input checked="" type="checkbox"/>	WebGUI Instrumentation is Active				
<input checked="" type="checkbox"/>	(BETA) BSP Instrumentation is Active				