Advantech AE Technical Share Document

Date	2018/3/16	SR#	1-2280808513
Category	■FAQ □SOP	Related OS	N/A
Abstract	Can WISE and ADAM accept the REST http request from different IP address		
Keyword	WISE, ADAM, REST, GET, http method, OPTION, cross-domain communication		
Related Product	WISE-4012, WISE-4012E, WISE-4050, WISE-4060, WISE-4010/LAN, WISE-4050/LAN, WISE-4060/LAN, ADAM-6050, ADAM-6051, ADAM-6052, ADAM-6060, ADAM-6066		

■ **Problem Description:**

I have been trying to get the WISE-4060 module working with JSON communication.

The unit worked fine when reading Digital Inputs/Outputs through the web server.
There is no problem to toggle Digital Outputs from web server either.
I can basically achieve the same functionality through Chrome Advanced Rest Client – using GET request to read DI/DO and PUT request to set/reset Digital Output.

However, when I'm trying to toggle Digital Output from HTML using jQuery, I'm getting the following error message:
  "No 'Access-Control-Allow-Origin' header is present on the requested resource. Origin 'null' is therefore not allowed access. The response had HTTP status code 400."

The html file is on my PC (no web server).
As far as I understood since I'm doing an XMLHttpRequest to a different domain than my page is on (in my case on my local PC) the browser is blocking it as it usually allows a request in the same origin for security reasons.

Would you have a solution to this problem (e.g. JSONP)?

■ **Brief Solution - Step by Step:**

A user agent(for example: external html file) make a cross-origin HTTP request when it request a resource from a different domain, protocol, or port than the one from which the current document originated.

When users want to do this kind of cross-domain application, a "preflight" requests first send an HTTP "OPTIONS" method to the resource on the other domain, in order to determine whether the actual request is safe to send.

Besides http methods like "GET", "PUT" and "PATCH", actually WISE also support "OPTIONS" method for the cross domain application structure. On the ADAM side, we support not only "GET", "POST" method, we also support "OPTIONS" method for our D version modules. You can check the FW and modules support table in *Table 1.*

Here's an example to get the DI status from multiple WISE-4060 with an external html file on the PC.
The html file is located at a local PC that connected to WISE through the wireless AP to monitor the status of all DI points at the same time. (*Figure 1*.)
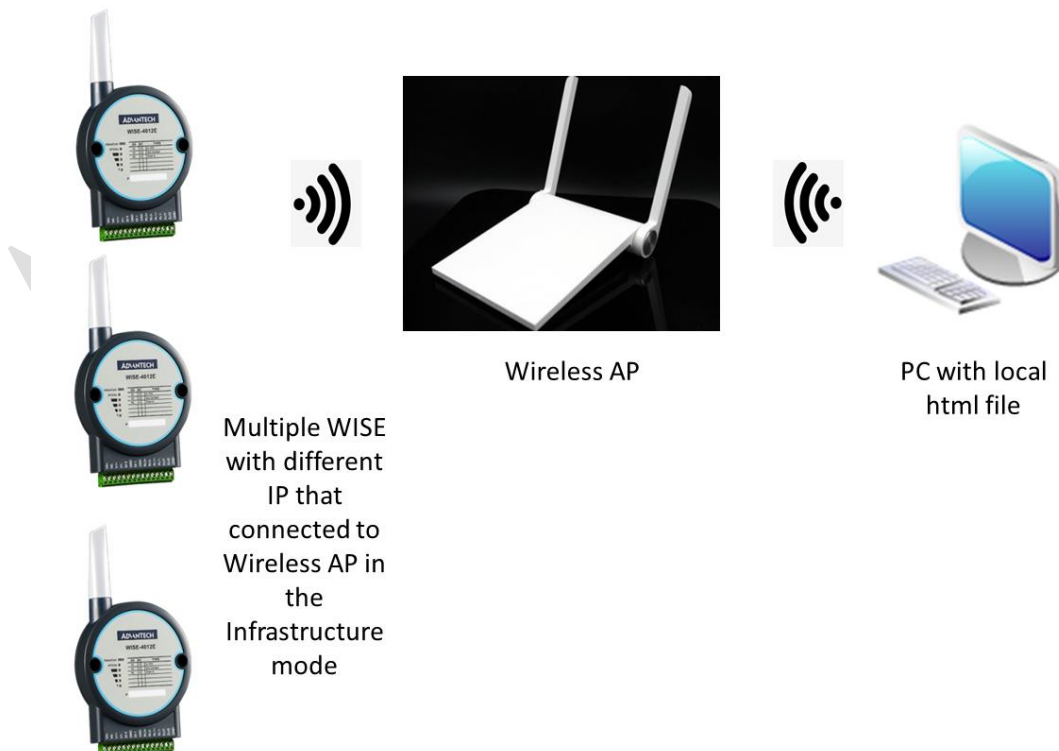

Multiple WISE with different IP that connected to Wireless AP in the Infrastructure mode

Wireless AP

PC with local html file

Figure 1.

For more detail information, the customer can download our sample html file (for WISE series) with the following link:

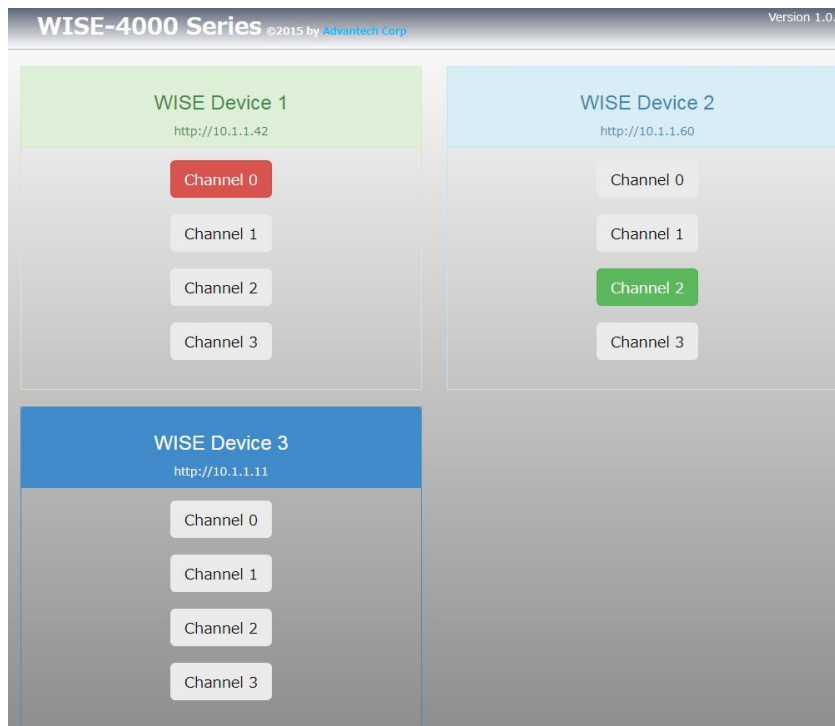https://www.dropbox.com/s/rlffdq3t5bmjz78/WISE.zip?dl=0

Figure 2. **WISE CROS example html file**

Following is a TABLE for the module and FW version support "OPTIONS" method for the cross domain request. (P.S. Please upgrade the FW to the latest version on our support portal first when you encounter in any error.)

WISE-4012	ALL
WISE-4012E	ALL
WISE-4050	ALL
WISE-4060	ALL
WISE-4010/LAN	vA111B00 and higher version
WISE-4050/LAN	vA111B00 and higher version
WISE-4060/LAN	vA111B00 and higher version
ADAM-6050-D	v601B13 and higher version
ADAM-6051-D	v601B13 and higher version
ADAM-6052-D	v601B13 and higher version
ADAM-6060-D	v601B13 and higher version
ADAM-6066-D	v601B13 and higher version

Table 1. **module and FW support table**