

## Advantech AE Technical Share Document

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<b>Category</b>	<input checked="" type="checkbox"/> FAQ <input type="checkbox"/> SOP	<b>Related OS</b>	N/A
<b>Abstract</b>	Are WISE-4000 Series Compatible with Cross Domain REST Request		
<b>Keyword</b>	WISE, ADAM, REST, GET, http method, OPTION, cross-domain communication		
<b>Related Product</b>	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:**

In the past, there is a customer use webpage of WISE-4060 to read and control digital input and output, and there is not any issue or problem about it.

However, when the customer use jQuery to design and deploy a Html webpage by himself, the user-built webpage cannot read or control digital input and output by using REST command, whose method includes **GET** and **PUT**, from web browser.

The error message of this issue is shown as below:

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."

And the above error message means when using XMLHttpRequest (GET and PUT) to communicate with another server whose IP is different from IP of the server of webpage, the browser will block the message to avoid virus from other server.

By the way, the concept of this issue is about **cross domain resource sharing, CROS**, and the browser usually block the cross domain resource because of security mentioned in CROS.

Finally, we build a new firmware version of WISE-4000 to make WISE-4000 be compatible with cross domain REST request. This document will describe why WISE-4000 can let other webpage get cross domain resource from WISE-4000 and the user must notice firmware version supporting this function.

■ **Brief Solution - Step by Step:**

For CROS, there is a solution to make webpage to GET or PUT other server whose domain, protocol, port are different from original server. The solution is that using a Proflight Request to send “OPTIONS” method before sending GET or PUT request.

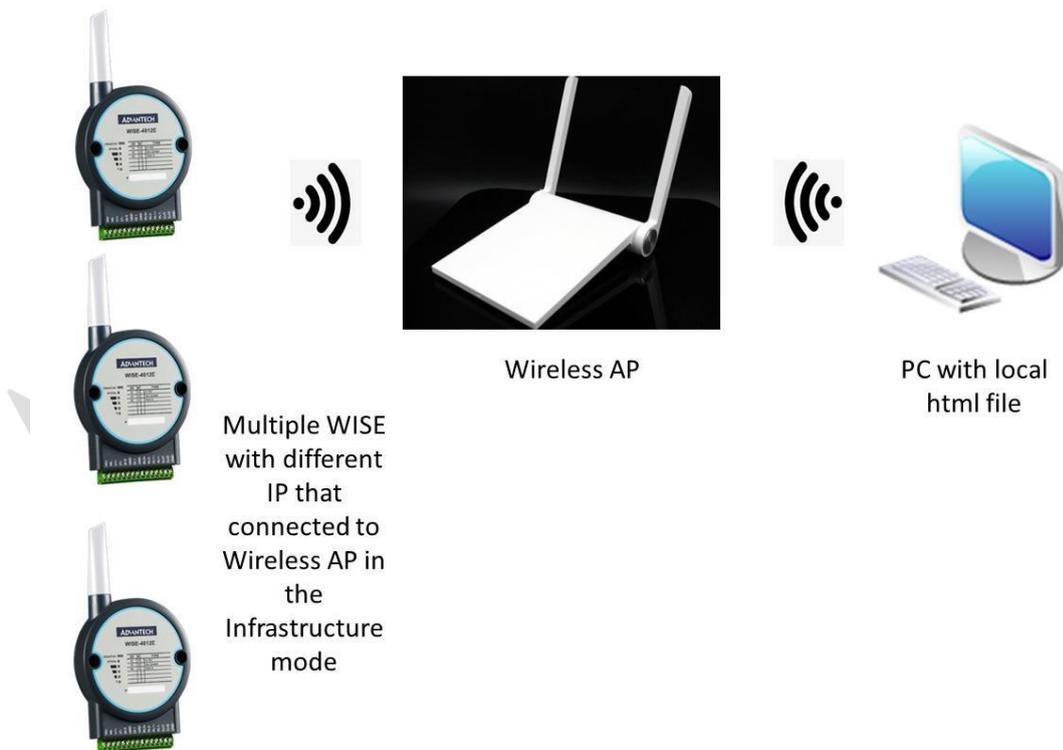
In principle, this “OPTIONS” method is sent by the browser to the server before the actual request, in order to determine whether the true request is safe to send.

Therefore, WISE-4000 start supporting “OPTIONS” method to let other webpage to check whether REST server of WISE-4000 is safe to send GET or PUT method. Then other webpage can get or control the digital input and output from WISE-4000 by using GET or PUT method.

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.

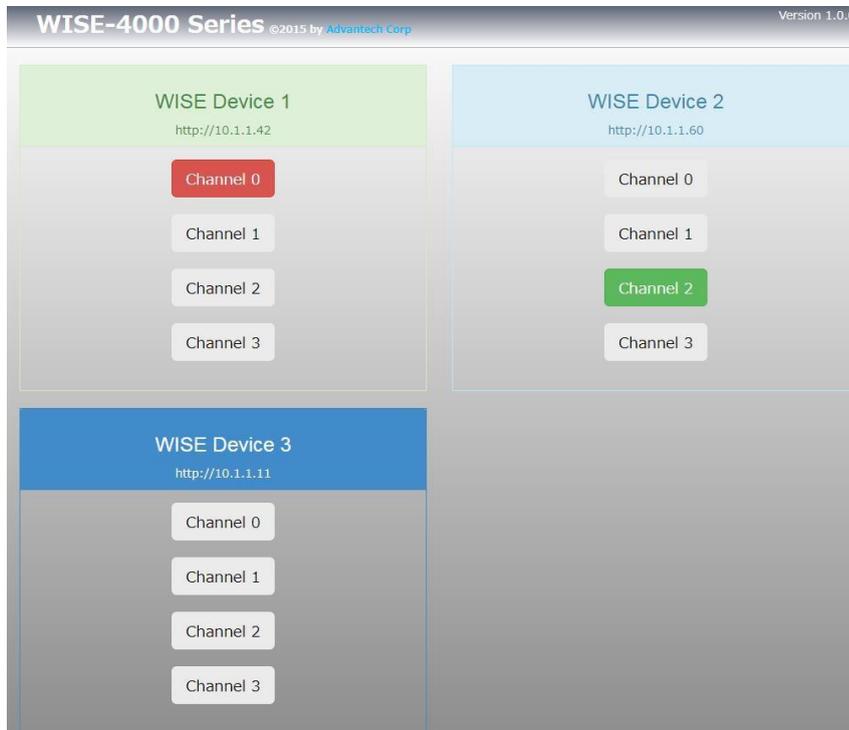
The html file is located at a local PC that connected to WISE through the wireless AP to monitor the status of all DI points at the same time. (**Figure 1.**)



**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**