



Work Item: Measuring Universal Acceptance (UA) Readiness of Popular Web Hosting Tools

Ver.: 2021-11-15

Purpose

This work will test the UA readiness of the Web Hosting Tools which are commonly used for hosting websites and enabling emails by the Internet Service Providers (ISPs). The aim of this work is to build capacity for small and medium businesses and organizations to provide Universal Acceptance in fairly simple websites and in the related email addresses which they operate. Their Universal Acceptance is constrained by the web servers, email servers, and other tools which the ISPs provide for their customers, and by the interface and configuration options which the ISP places in front of those building blocks.

This work will develop a method to assess the web hosting tools which the ISPs offer their customers. It tests to what extent the tools offer the capacity for customers to build websites and host emails with Universal Acceptance.

- UA Working Group proposing the work item: UA Measurement WG
- Reference to the Action plan: FY22
- Reference to work item(s): M2

Description of Work

There is a large variety of web hosting tools available and used by ISPs. They are also known as “control panels”. These include both open-source as well as proprietary tools. They can be configured to work with different web servers, email servers, backend databases and other tools. The web servers, email servers, and other tools provide the building blocks of the website’s functionality. The control panel provides the website operator an interface for setting parameters for those building blocks.

The following websites list popular web hosting tools:

URL for the 15 best cPanel alternatives: <https://www.guru99.com/best-cpanel-alternatives.html>

Russian regional list for hosting panels: <https://tagline.ru/hosting-panels-rating/>

Hostinger: <https://www.hostinger.com/tutorials/hosting-control-panels/>



The project conducts a pilot study to determine the UA-readiness of an initial set of tools arbitrarily selected from the more popular options, with a mixture of proprietary or open-source, and of usage in the different geographical areas.

An informal survey with UA local initiatives and community suggested following tools used in various regions.

| | |
|---------------------|---|
| Russia: | Commercial: ISPmanager, cPanel, Plesk, DirectAdmin, Interworx CP Non-Commercial: ISPConfig, Ajenti, VESTA CP, CentOS Web Panel, Brainy, FastPanel, Webmin |
| Middle East: | cPanel and Plesk |
| Africa: | ISPConfig and Webmin |
| India: | cPanel, Plesk and Webmin are mostly used. Other examples that are less used: Direct Admin, Webuzo, Vesta and BlueHost's proprietary tool. |
| Thailand: | Plesk and Direct Admin (mostly used by registrars and ISP's in Thailand) |
| China: | Several registrars and top cloud hosting providers in China mostly use tools developed by themselves, either totally self-developed or based on other open-source tools (e.g., OpenStack) |

Considering all these conditions above, the following tools will be tested in this pilot phase:

1. cPanel (commercial)
2. Plesk (commercial)
3. ISPConfig (open-source)

A total of nine configurations will be tested (= 3 web hosting tools x 3 configurations). Where possible, the mail servers which support internationalized email addresses should be chosen, as discussed in [UASG030A](#). The testing should include setting up web pages (HTML) and email accounts for possible consumers of ISPs, and other popular services. The vendor will include in the proposal which configurations they intend to assess in the project. Each configuration shall specify which email server, web server and database it includes.

The project will consist of two parts.

In the first part a detailed testing plan and test cases will be developed based on UA relevant use cases, for review and feedback from the community. The test cases should include all major uses of the web hosting tools which deal with input, validation, processing, storage and display of the different categories of domain names and email addresses identified as relevant for UA (including domain names with new TLDs, long TLDs, IDNs, and email addresses with Unicode@IDN and Unicode@ASCII-domain-name). Some additional details of the testing are available in the UA Readiness Framework report ([UASG026](#)), and example the test domains and email addresses in various scripts are included in [UASG004](#) (associated [data file](#)).



In the second part, once the test plan and test cases are finalized based on community input, the three web hosting tools will be tested (cPanel, Plesk and ISPConfig). For each web hosting tool, three popular configurations will be tested using different web servers, mail servers, and databases on different operating systems. At least two different web servers and mail servers will be tested in the three configurations for each tool and should be chosen based on what is popularly used by the ISPs using the web hosting tool. In this phase each configuration will be installed and tested using the test cases.

Vendor should pick combinations of components which are representative of what ISPs are likely to use in real life. The configurations should not be selected arbitrarily and be presented and justified in the proposal document.

After testing, a brief report should be compiled to share the test results, along with the detailed testing reports (as appendices in separate files) which can guide ISPs which tools to use and how to best configure them to be UA-ready.

In addition, the UA related bugs found should also be reported through the web hosting tools' bug reporting interfaces online.

Deliverables

Based on the work summarized above, the contractor will provide the following deliverables:

1. Draft test plan and detailed test cases for testing UA readiness of web hosting services.
2. Final test plan and test case suite for testing UA readiness (spreadsheet with test cases) incorporating community review.
3. Perform the test plan on the nine configurations defined in the proposal, and provide a detailed technical report of the test results. Include the tool versions tested. Provide enough details to permit another tester to reproduce the results.
4. Draft report on UA readiness web hosting tools, including the following
 - a. Executive summary
 - b. Tools and their configurations tested.
 - c. Scope of UA testing and summary of test cases.
 - d. Summary of the methodology used for testing.
 - e. UA readiness of these tools in different configurations (a total of 9 cases), covering Unicode processing, IDNs and EAI support, as listed above.
 - f. Recommendations
 - i. for ISPs to select tools and configurations,
 - ii. for consumers for selecting UA-ready ISPs.
 - g. Conclusions.



- h. Presentation (for use as training material) (using UASG PowerPoint template provided) covering the contents of the report, with explanation of testing and observations. In developing the training material consider the following:
 - i. Purpose: Provide a high-level reference of the test plan, methodology, process, results, and observations.
 - ii. Target audience: Technical manager (i.e. high level audience). Knowledgeable about Hosting Tools.
 - iii. Length: The material should be constrained to no longer than 45 minutes, measured by the time one person (within the target audience) would reasonably be expected to need to review the material at his/her own pace
5. Summary of the bug reporting done for the web hosting tools based on the testing conducted.

Timeline

- Tentative start date: Date of signing of the contract.
- Tentative end date: Three months of the contract start-date.

Conflict of Interest

To help avoid any perceived or actual conflict of interest (COI), UASG leaders, UASG Ambassadors, members holding working group's leadership positions in the UASG, and any organization(s) affiliated with individuals in these UASG roles, are prohibited from participating in this SOW. In addition, ICANN org COI applies.

Proposal Submission

The proposal should include the expertise of the organization with web hosting tools, the tool configurations being proposed (with justification), a high-level test plan (based on use cases) which demonstrates the expertise available and understanding of the UA related issues. The proposal should be submitted to: UAProgram@icann.org before the [submission due date](#).

References

URL for the 15 Best cPanel <https://www.guru99.com/best-cpanel-alternatives.html>
Russian regional list for hosting panels: <https://tagline.ru/hosting-panels-rating/>
Hostinger: <https://www.hostinger.com/tutorials/hosting-control-panels/>

UA Readiness Framework report ([UASG026](#))

Test domains and email addresses in various scripts [UASG004](#) ([data file](#))

EAI Software Test Results [UASG030A](#)

To refer to previous documents, see document inventory: <https://uasg.tech/wp-content/uploads/documents/UASG000-en-digital.pdf>