GFCE Implementation of Internet Standards Project

November 2020 Report

GFCE Triple-I Going Forward

GFCE Triple-I is a GFCE initiative for enhancing justified trust in Internet connections and email exchanges through awareness raising on a number of state-of-the-art open internet security standards and instigating take up of those building on good practice experience.

This GFCE initiative is meant to “facilitate” awareness raising and capacity building events in different regions of the world in order to “enhance justified trust” in the using of Internet and/or email in those regions (specific priorities to be determined by stakeholders in the region). Local and regional actors are stimulated and supported in setting up and running local/regional events between regional stakeholders, bringing in local expertise, when useful. The initiative builds on the experience of two years of events (2018, 2019).

Between September and November 2020, the GFCE Secretariat worked with leaders from the regions of Africa, Asian-Pacific, and Latin America and the Caribbean to explore how to take the capacity building effort forward. The report below reflects the thinking that was discussed and concluded during three workshops, one per region.

The Need to Continue Capacity Building

Internet infrastructure is the ecosystem of protocols, standards, technology, practices and organisations that keep the internet running. An open, stable and secure internet infrastructure is key to sustaining the economic growth and social benefits that were boosted by the internet. These internet-driven innovations require the continuation and improvement of trust in the cyber domain that is threatened by cyber-attacks (like Distributed Denial-of-Service attacks), cybercrime (hacking, malware, phishing, botnets, ransomware) and unwanted messages (like (e-mail) spam). The global exposure of these threats requires a collaborative, global response to secure the internet infrastructure to sustain the benefits of the internet.

An important contribution to a secure and resilient internet infrastructure is the adoption and deployment of security-related internet standards. An Internet standard is a specification that has been approved by the Internet Engineering Task Force (IETF). An Internet Standard is characterised by a high degree of technical maturity and by a generally held belief that the specified protocol or service provides significant benefits to all stakeholders of the Internet community. The adoption of these standards helps to promote a consistent, universal and secure use of the internet worldwide.

Whereas progress has been made since the start of the GFCE Triple-I initiative, it is clear that more work needs to be done to ensure the best possible response by stakeholders in all regions to the current and upcoming challenges of working with the internet and email. As priorities are different in different regions, as well as the current state of use of the internet and adoption of state-of-the-art standards, a regional approach continues to make sense. As lessons can be learned from global practices and practices in other regions, keeping track of this, and continuing to support this, fits very much within the scope of the GFCE.
Moving Forward with Events

In order to build on previous Triple-I activities and to discuss further opportunities for awareness raising and instigating take up of open standards that enhance security of web- and email traffic, it is important to meet with the local stakeholders “in the regions”.

In preparation of the events, GFCE Triple-I developed the following resources:
1. The GFCE Triple-I Handbook, highlighting which standards specifically require attention;
2. The GFCE Triple-I Event Playbook, a practical guide to the organization of GFCE Triple-I events, building on good practice experience;
3. The GFCE Triple-I pages on the GFCE website with reports and resources on standards and related good practices.

During October 2020, three coordination calls were held for which the purpose was to assess how we can build on the success of previous seven GFCE Triple-I workshops that took place during 2018 and 2019. During the calls, we engaged in an informal discussion to assess whether there is continued interest in arranging future meetings, in what shape or form this collaboration should continue, as well as how the GFCE as a platform for coordination of capacity building could help achieve this.

People invited to those calls were key people that had been involved with the organization of a previous event in the region, and region-relevant GFCE members. In preparation for the coordination call, a draft updated GFCE Triple-I playbook for events was sent around as a basis for the conversation. The call resulted in an update of this playbook, herewith attached as “Annex 1 – GFCE Triple-I Playbook”.

Main conclusions:
1. Continued interest in organizing more GFCE Triple-I events in the region;
2. Participants confirmed their interest to contribute to more Triple-I capacity building (aim: “increase justified trust in the use of the internet and email in the region through accelerated adoption of relevant state-of-the-art standards, in a multistakeholder fashion”);
3. General agreement that right now it would be the time to experiment with “virtual meetings” until we can go back to physical meetings;
   a. For future physical meetings, it was understood to be important to organize full day events at a time and place that (at least part of the) participants needed to be for related events (such as regional IGF events, and other events aimed at discussing internet governance issues);
   b. For virtual events, it was understood to be important to set up a series of events that were 90 minutes max; record them so they can be available for those who missed one or more of the events. Current thought is to plan three 90-minute events that content-wise complement each other, and after those three events evaluate on the best way forward, based on the experiences;

In previous years, GFCE has supported these events with providing administrative support (e.g. publishing of the agenda, sending out invitations, registration of participants, publishing of the results, and with contributions to cover the logistical costs for organizing the events (e.g. costs of room and refreshments, lunch) and with limited support to travel costs for key organizers and presenters that require this.
Over the last year, as the COVID-19 pandemic resulted in drastically reduced ability to travel, many international events have shifted to a virtual mode: using tools like ZOOM, or WEBEX. In line with this, GFCE Triple-I events may also benefit from these tools and be set up as virtual events. This approach has both advantages and disadvantages, though the idea is to capitalize on the opportunities for reaching a wider audience and mitigating issues such as diminished social interaction by making knowledge and expertise available and accessible online.

General commitment was given by participants to the call to help make this happen, and to consider together what would be best for next steps. Specific commitment from the GFCE Secretariat was given to support these events in the best way possible, in particular with regards to providing access to current knowledge at GFCE, publishing the event, preparing and sending out the invitation; and taking registrations.

Updated GFCE Triple-I Handbook

This GFCE Triple-I Handbook on *Global Good Practice on Internet Infrastructure* helps policy-makers and political leaders in defining sustainable and efficient efforts to stimulate adoption of open internet standards. It provides a set of good practices to develop an effective national and regional internet infrastructure deployment program, that is aligned in the international Internet Infrastructure Initiative. The following standards are discussed:

**Website**

**E-mail**

**IPv6.** Enables more users and devices to connect to the Internet

**RPKI.** Prevents route hijacking and other routing attacks through use of a trust anchor

**DNSSEC.** Prevents the redirection of users to malicious sites or mailservers

**TLS (HTTPS & DANE).** Protects the privacy and integrity of data transmitted through web browsing

**TLS (STARTTLS & DANE).** Protects the privacy and integrity of data transmitted through e-mailing

**SPF, DKIM and DMARC.** Prevents domain misuse and combats spam and phishing

Fig. 1- Standards promoted by GFCE Triple-I

The Handbook has undergone a general update, and specifically a section on RPKI and ROA has been integrated. Going forward, it will be important to (continue to) keep this Handbook up-to-date, and it was suggested to set up a feedback possibility so that feedback can be taken into account at regular intervals. In addition, it was suggested to explore whether the GFCE technical working groups can integrate such a review and update in their annual work plan.
A good asset in this is the website www.internet.nl which helps to check whether internet is up to date. In the African region and the Pacific region, initiatives are underway to develop a regional variant of the internet.nl website, using the code developed for the testing that has been made available. From the Latin American region, interest has been expressed to develop a Spanish language version. The GFCE Secretariat will further explore with the Dutch Platform Internet Standards and the service provider what can usefully be done to make this happen.

Next Steps
Improving justified trust in the Internet through adoption and implementation of Open Standards has the interest of the global Technical Community who are willing to work with the Global Forum on Cyber Expertise partners to help organize local workshops towards capacity building. During the first series of seven events, the following parties contributed: AfriNIC, AfricaCERT, AFNOG, APRICOT, APNIC, ICANN, Internet Society and several of its local/regional chapters, Indian School for Internet Governance (INSIG), LACIGF, LACTLD, LACNIC, LACAAWG, nic.br/cgi.br, RIPE NCC, WACREN, the Indian Ministry of Electronics and IT (MeitY), and the Dutch Ministry of Economic Affairs and Climate.

In summary, parties have expressed the intent to move forward in the following ways:

1. Capacity building workshops: In the preparation for GFCE Triple-I going forward, most previous involved parties reconfirmed their willingness to continue to support further GFCE Triple-I events, in principle. Several key people and organizations came together in the three regions Africa, Asian-Pacific, and Latin America and Caribbean, facilitated by the GFCE Secretariat, and committed to “experimenting” with a series of three webinars in their region over the coming months. After the three webinars, the “experiment” will be evaluated and next steps will be proposed.

2. Supporting material: in support of these activities, the GFCE Triple-I Handbook of standards and good practices and the GFCE Event Playbook will inform any organizer/initiator. The GFCE Secretariat stands ready to receive feedback that may lead to updates of these documents, and will explore how the GFCE Technical working groups can contribute to ensuring the Handbook of Standards continues to reflect current state-of-the-art. In addition, information on events (upcoming and past) continues to be available from the Triple-I dedicated pages on the GFCE website.

3. Testing website: the broad appreciation for the testing facility provided by the website www.internet.nl has generated interest in developing region-specific versions, using the open source code that is made available freely by internet.nl. The GFCE Secretariat will explore how to best support this.

GFCE is committed to support these Triple-I capacity building activities at its best ability – support level to be agreed per event via a clear email exchange between the local organizer/initiator and the GFCE Secretariat. For more information on the GFCE Internet Infrastructure Initiative: https://thegfce.org/initiatives/internet-infrastructure-initiative/, or contact Elliot Mayhew (elliot.mayhew@thegfce.org) at the GFCE Secretariat.