

## 5 Strategic Focus Areas

To achieve the goals identified, the strategy has been focused on three key areas as follows:

- DNS security and stability
- Domain name industry
- Internet governance ecosystem

These areas are discussed in more detail below.

### 5.1 DNS Security and Stability

From ICANN's perspective, Security and Stability of the naming and address allocation systems addresses three aspects<sup>1</sup>:

- Operational matters (e.g., matters pertaining to the correct and reliable operation of the root name system)
- Administrative matters (e.g., matters pertaining to address allocation and Internet number assignment)
- Registration matters (e.g., matters pertaining to registry and registrar services such as WHOIS)

Therefore, a regional strategy from the perspective of Internet DNS Security and Stability of ICANN in the Middle East should focus on engaging the region to strengthen operational, administrative and registration matters. Deliberations within the working group have identified that this engagement should develop capacity, technology and awareness.

#### 5.1.1 Stakeholders (Beneficiaries and Contributors)

In the context of Internet Security and Stability, stakeholders involved include at least the following:

- Registries
- Registrars
- Internet Service Providers (ISPs)
- System configuration managers
- Network operation and security managers, including Computer Emergency Response Teams (CERTs)
- Internet Exchange Points (IXPs)
- Internet related research and academic organizations
- Internet policy related organizations (ICANN, ISOC, RIRs, Regional TLD Organizations)
- Law Enforcement Agencies (LEA), Governmental and Inter-Governmental organizations related to the Internet, Information Technology, Telecommunications and their security (such as ministries, regulatory bodies, and others)

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<sup>1</sup> As per the charter of Security and Stability Advisory Committee of ICANN (<http://www.icann.org/en/groups/ssac>)

### 5.1.2 Current Status

As previously highlighted, the Middle East is currently served by multiple organizations for capacity development. Regional organizations include the operator groups SANOG, MENOG, AfNOG, regional TLD organizations including APTLD and AFTLD<sup>2</sup> and Regional Internet Registries, namely APNIC, AfriNIC and RIPE NCC. These organizations regularly hold training sessions, conferences and other activities in relevant areas, e.g. DNSSEC, IPv6 and other technical and operational matters.

However, as these organizations have a fairly large geographical mandate without specific focus on Middle East (except for more focused regional organizations like SANOG and MENOG), it is harder for stakeholders in the region to benefit from such activities on regular basis. Further, the region has common features that require these stakeholders to have a common “local” platform to address them. For example, the region (mostly) uses Arabic script and thus requires engagement that specifically addresses issues related to this script in operation, administration and registration of domain names. Developing a strategy that looks at the Middle East specifically will be very helpful in addressing such issues.

Apart from the organizations which are regionally focused, there are also specialized groups and discussion forums which are relevant generally in the context of the Internet and specifically for secure and stable development and operations of the DNS; e.g. DNS Operations Analysis and Research Center (OARC), DNS Security, Stability and Resilience (SSR) Symposium, etc. In addition, there are opportunities to engage on global platforms through online communities and meetings hosted by international organizations like ICANN, IETF, ISOC and others.

### 5.1.3 Objectives

The objective of ICANN’s engagement in the Middle East for DNS Security and Stability is to:

Develop relevant capacity, resources and Internet infrastructure in the region, in a coordinated, comprehensive and sustainable fashion, focused on addressing the needs of the region.

This can be divided into specific sub-objectives:

- 5.1.3.1 Build awareness and understanding of stakeholders, including policy makers, for the importance of security, stability, availability and resilience of the DNS and its benefits to economic growth and social prosperity.
- 5.1.3.2 Strengthen technical know-how and capacity of stakeholders through a comprehensive training program for relevant technologies and processes, especially those focused on secure, stable and resilient operations of the DNS as well as diagnosing and addressing its health.
- 5.1.3.3 Develop Internet infrastructure to strengthen security and stability of the DNS in the region.
- 5.1.3.4 Work with LEAs to cooperate in compliance with international best practice and due process for keeping the DNS secure and stable.

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<sup>2</sup> Some countries in the region are also members of CENTR, which is the European TLD organization.

#### **5.1.4 Recommendations**

Though there are multiple activities that should be undertaken to address these objectives, discussions among members of the working group prioritize them as follows:

- 5.1.4.1 Undertake awareness activities on policy and coordination needs for addressing the security and stability of the DNS infrastructure for policy makers, LEAs and other stakeholders.
- 5.1.4.2 Undertake awareness activities on operational and coordination needs for addressing the security and stability of the DNS infrastructure for registries, registrars and other stakeholders.
- 5.1.4.3 Develop and strengthen DNS infrastructure and operations in the region including those for registries, registrars, and network service providers. This should include a broader set of stakeholders, including those related to operations, policy and law enforcement.
- 5.1.4.4 Collaborate to develop the requisite IDN infrastructure (IDN label generation rules; registration data conventions; IDN variants, etc.) for effective, stable and secure deployment of IDNs.
- 5.1.4.5 Provide technical assistance to LEAs and CERTs in understanding the DNS and ICANN policies for more effective cross border coordination to combat cybercrime particularly with the use of mutual legal assistance treaties (MLATs), existing conventions and best practices in coordination with the latter.

#### 5.1.5 Actions

No.	Action	Relevant Recommendations	Timeline (Yr1/Yr 2/ Yr3)	Stakeholders
1	Conduct awareness training on challenges associated with DNS security and stability, and policy and practice to address these challenges	5.1.4.1 5.1.4.2	Yr1	Policy makers, LEAs, Local CERTs, Registries
2	Conduct awareness training on use of MLATs, conventions and best practices for more effective cross border coordination to combat cybercrime, as well as DNS emergency response	5.1.4.1	Yr1	Policy makers, LEAs, Local CERTs, Registries, ISPs, Network Operators
3	Identify and train on tools for assessing and reporting on the health of the DNS and to identify any potential threats to the system	5.1.4.3	Yr1	CERTs, Registries, Registrars, ISPs, Network Operators, Academic and Research Organizations
4	Identify and train to use the software, tools and processes to plan and manage DNS availability and resilience, and to address any threats to the DNS	5.1.4.3 5.1.4.4	Yr2	LEAs, CERTs, Registries, registrars, ISPs, Network Operators, Academic and Research Organizations
5	Plan and conduct contingency and coordination exercises to prepare for	5.1.4.3 5.1.4.4	Yr3	LEAs, CERTs, Registries

	threats to DNS and prepare CERTs			
6	Organize training and programs to adopt relevant technologies, including DNSSEC, RPKI and IPv6	5.1.4.3	Yr1	Registries, Registrars, ISPs, Academic and Research Organizations, Government and Regulatory Authorities
7	Adopt “train the trainer” model to develop local competencies that can sustain capacity building activities in the future. These should build capacity in academia and relevant R&D organizations to integrate the training into coursework for preparing new professionals, with collaboration of LEAs and CERTs	5.1.4.3	Yr1/Yr2	Academic and Research Organizations, LEAs, CERTs, ISPs
8	Promote secondary DNS hosting in the region, especially for IDN ccTLDs	5.1.4.3	Yr2	Registries
9	Increase number of root server instances in the region	5.1.4.3	Yr1	ISPs, IXPs
10	Coordinate and develop an IDN Label Generation Ruleset(LGR) to ensure stable and secure use of IDNs and Variants for Arabic script	<b>Error! Reference source not found.</b>	Yr1	Arabic Script Community, Academic and Research Organizations, Registries
11	Coordinate and participate in the registration data definition and validation efforts at ICANN and other organizations to contribute the requirements for Arabic script community	<b>Error! Reference source not found.</b>	Yr1	Registries, Registrars, Policy Makers, LEAs, CERTs
12	Identify challenges in using IDNs and variants (especially in the context of tools and applications to address the security and stability of the DNS), develop requirements to address these challenges and engage with technical community for the solutions	<b>Error! Reference source not found.</b>	Yr2	Registrars, Registries, Academic and Research Organizations, CERTs, LEAs

#### 5.1.6 Metrics

- Number of awareness and training activities addressing DNS security and stability for policy makers and LEAs
- Number of awareness and training activities addressing DNS security and stability for technical community
- Number of trainers trained on DNS security and stability aspects

- Number of trainings conducted by previous trainees
- Number of secondary ccTLD hosting instances in the region
- Increased number of root server instances in the region
- Arabic script LGR for the root
- Report on Arabic script requirements/conventions for registration data
- Training and dissemination material related to security and stability challenges and recommendations in using Arabic script IDNs and publishing registration data

## 5.2 Domain Name Industry

Domain name registrations, participation of private sector from the region at ICANN as well as numbers and sustainability of current registries and registrars, all demonstrate the need for concerted efforts to develop this industry in the region. Domain name industry was therefore identified to be a strategic area of focus in ICANN strategy for the Middle East. The strategy would focus on highlighting opportunities, addressing challenges, facilitating information and experience sharing, in order to help develop the domain name industry and ensure active participation of private sector from the region.

### 5.2.1 Stakeholders (Beneficiaries and Contributors)

- ASCII ccTLD Registries
- IDN ccTLD Registries
- New gTLD applicants
- gTLD Registries
- Governments and regulators
- Research centers and academia
- Registrars
- Registrants
- Civil Society
- Business (ISPs, and others)
- Legal experts
- International and regional organizations

### 5.2.2 Current Status

The region enjoys a big population and has a huge potential Internet market. It has more than 178 million Internet users that sum up to 7.41% of the total number of Internet users worldwide. While Internet penetration is picking up in the region, with a current penetration of around 27%<sup>3</sup>, the case is not the same when it comes to the domain name industry. The region has around 660,000 domain name registrations under ccTLDs, both ASCII and IDNs combined, which sum up to only 0.62% of the total number of ccTLD registrations.

The region's 25 countries have a total of only 6 ICANN accredited registrars, 5 within the 22 Arab states (1 in Jordan, 1 in Kuwait, 1 in Morocco, and 2 in UAE), and one in Pakistan. It is obvious that private sector from the region does not see potential in the domain name industry; even with the launch of the new gTLD program. There is also lack of awareness on requirements to become a gTLD registry as well as requirements to become an ICANN accredited registrar.

There is also lack of dispute resolution policies and domain name appeal and arbitration mechanisms as means to resolve domain name disputes; mainly for terms and trademarks widely familiar within the region. Those are mostly needed for ASCII and IDN ccTLDs. As for gTLDs, ICANN and the Internet community have already instilled some mechanisms for current TLDs. ICANN has also set additional mechanisms as part of the new gTLDs program

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<sup>3</sup> It is worth noting that there is huge discrepancy, with countries of penetration as low as 5% and others of penetration as high as 86%.

such as the Uniform Rapid Suspension (URS) and Trademark Clearinghouse (TMCH) mechanisms.

Finally, as previously mentioned, not all countries in the region are members of the same regional TLD organization. While some countries are members of APTLD, others – mainly in Africa – are members of AfTLD. Additionally, Palestine, Iran and Afghanistan are also members of CENTR; the European TLD organization.

### **5.2.3 Objectives**

The objective of ICANN's engagement in the Middle East for Domain Name Industry is to build the domain name industry in the region and strengthen the overall ecosystem by achieving the following sub-objectives:

- 5.2.3.1 Raise awareness among local stakeholders including registries, registrars, registrants and policy makers, of the domain name industry and associated opportunities.
- 5.2.3.2 Foster collaboration among TLD operators in the region to exchange best practices and discuss issues of relevance that could further develop the industry in the region.
- 5.2.3.3 Stimulate innovation and entrepreneurships in the domain name industry and auxiliary industries in order to grow the overall Internet economy in the region.

### **5.2.4 Recommendations**

- 5.2.4.1 Create awareness campaigns on the potential opportunities of the domain name industry highlighting its impact on the further promotion of online services as well as e-commerce in the region.
- 5.2.4.2 Create more awareness pertaining to the new gTLD program including financial support mechanisms, thus encouraging more applicants from the region in future rounds.
- 5.2.4.3 Facilitate best practice sharing among ccTLD registries, both ASCII and IDNs in areas such as policy development, marketing and promotion, technical infrastructure, emerging technologies such as IPv6 and DNSSEC.
- 5.2.4.4 Engage with the relevant business community in the region, aware them and encourage them to expand into business related to and including registries and accredited registrars.
- 5.2.4.5 Help develop regional expertise and know-how related to the different components of the domain name ecosystem such as policy-making, legal aspects and dispute resolution.



### 5.2.5 Actions

No.	Action	Relevant Recommendations	Timeline (Yr1/Yr2 / Yr3)	Stakeholders
1	ICANN to partner with regional stakeholders and to assist with funding to conduct road shows, workshops, seminars and training programs on Registry / Registrar model	5.2.4.2 5.2.4.3 5.2.4.4	Yr1	ASCII & IDN ccTLD Registries, gTLD Registries, Registrars
2	ICANN to partner with regional stakeholders and to assist with funding to conduct road shows, workshops, seminars and training programs on dispute resolution policies and WHOIS	5.2.4.5	Yr1/Yr2	ASCII & IDN ccTLD Registries, gTLD Registries, Registrars Registrants Legal experts
3	ICANN to partner with regional stakeholders and to assist with funding to conduct road shows, workshops, seminars and training programs on new gTLD program	5.2.4.2	Yr2/Yr3	gTLD Registries, new gTLD applicants, Registrars
4	ICANN to partner with regional stakeholders and to assist with funding to conduct road shows, workshops, seminars and training programs on best practices of ccTLD operations, ASCII and IDNs	5.2.4.3	Yr1	ASCII & IDN ccTLD Registries, Registrars
5	ICANN to partner with regional stakeholders and to assist with funding to conduct road shows, workshops, seminars and training programs on the impact of the domain name industry on further promotion of online services as well as e-commerce	5.2.4.1	Yr2	Registries, Registrars, Registrants, Business, Government, Regulators, Academia, civil society, Legal experts
6	Carry out a baseline survey and economic study identifying the potential of ASCII domain name and IDN industry for the region	5.2.4.2 5.2.4.3 5.2.4.4	Yr2	Registries, Registrars, Registrants, Business Government, Regulators
7	Establish strategic partnerships with governments and SME incubators in the region and study the possibility of financing initiatives in this field	5.2.4.2 5.2.4.3 5.2.4.4	Yr2	Registries, Registrars, Business Government, Regulators
8	Provide guidance and support to current ICANN accredited registrars	5.2.4.4	Yr1	Registrars

	from the region to address their sustainability issues			
9	Work on tackling financial, legal and technical challenges faced by new registrars passing through ICANN Accreditation process, in order to facilitate and speed up new accreditations from the region	5.2.4.4	Yr2/Yr3	Business

### 5.2.6 Metrics

- Increase in number of ASCII ccTLD registrations
- Increase in number of IDN ccTLD registrations
- Increase in number of Arabic script IDN ccTLDs
- Increase in number of registrations under new gTLDs from the region
- Increase in number of ccTLD registrars
- Increase in number of ICANN accredited registrars from the region
- Number of successful new gTLD applications from the region
- Number of registrants per capita, compared to other regions
- Number of domain names per online business (how many of those domains registered under ccTLDs and how many under gTLDs)

## 5.3 Internet Governance Ecosystem

The Middle East region has witnessed increased interest in Internet Governance issues by various stakeholders. The innate multi-stakeholder nature of the Internet space necessitates improved engagement in the Internet Governance ecosystem, whether in quantities, quality or variety, in order to ensure that the needs, priorities and specificities of the region are properly reflected in global policy making platforms. The role of ICANN in supporting, complementing and promoting Internet Governance processes, whether internal or external to ICANN, is highly important.

### 5.3.1 Stakeholders (Beneficiaries and Contributors)

In the context of the Internet Governance Ecosystem, the relevant stakeholders include at least the following:

- Civil society, Non-Governmental Organizations (NGOs), and Internet users at large;
- Internet technical community and academia;
- Governments and regulators;
- Private sector and trade and industry associations;
- ISPs
- New gTLD applicants
- gTLD registries
- ccTLD registries
- Registrars
- Registrants
- Intergovernmental and regional organizations such as the League of Arab States, the United Nations Economic and Social Commission for Westerns Asia (UN-ESCWA), UN-ECA, the African Union, and the South Asian Association for Regional Cooperation (SAARC)
- International organizations whether technical or non-technical including but not limited to ISOC, IETF, RIRs, NOGs, the IGF Secretariat, Diplo Foundation and others

### 5.3.2 Current Status

The growth of the Internet in the Middle East region has been quite significant whereby an estimated 7.4% of all Internet users worldwide are from this region (2012). In light of the technical and geographic proliferation of the Internet, its governance emerged as a complex and controversial issue particularly due to the calls and general consensus to have a multi-stakeholder approach towards Internet Governance. As a result, a number of processes and structures have been developed and established to serve the formulation of public policy as well as the dialogue on Internet Governance. These currently form the Internet Governance ecosystem and include among others: ICANN constituencies, technical and standardization institutions such as the IETF, and regional and national IGFs.

The term Internet governance is a broad term used in many different contexts such as the coordination of technical standards, the operation of critical infrastructure, development, regulation, legislation, management, etc. The existence of the Internet Governance ecosystem led to increased interest by governments in the region to engage in international Internet public policy and governance settings on how to govern the Internet as a global resource as well as the roles various stakeholders in these countries can play.

Nevertheless, the representation and active participation of the Middle East region in these structures remain considerably limited when compared to other regions and countries as summarized below:

- 17 countries are represented in the GAC which currently has a total of 120 member countries;
- The following regional organizations are observers in the GAC: League of Arab States and Economic Commission of Africa;
- 17 ccTLD operators are members of ccNSO;
- Out of the 140 At-large structures globally, there are 11 At-large Structures in 8 different countries from the region;
- Participation of the region in the Global IGF started out quite limited in 2006 but has been improving in recent years noting that the 2009 IGF in Sharm El Sheikh witnessed the highest percentage of participation from the region;
- It was only in 2012 when a number of regional IGFs were launched including the Arab IGF, Africa IGF, and North Africa IGF.

### **5.3.3 Objectives**

The objective of ICANN's engagement in the Middle East for Internet Governance Ecosystem is to promote engagement with and participation of relevant stakeholders in relevant for a by achieving the following sub-objectives:

- 5.3.3.1 Promote multi-stakeholder Internet governance mechanisms;
- 5.3.3.2 Foster healthier representation from the region in ICANN constituencies;
- 5.3.3.3 Increase and strengthen engagement and effective participation from the Internet community in the region in various constituencies of the Internet Governance ecosystem.

### **5.3.4 Recommendations**

- 5.3.4.1 Strengthen ICANN representation in the region, foster relationships with regional and national stakeholders, and build trust in ICANN's stewardship.
- 5.3.4.2 Stimulate engagement in global and regional Internet related fora such as ICANN, ISOC, IETF, RIRs, NOGs, the global, regional and national IGFs including the Arab IGF.
- 5.3.4.3 Promote and support national and regional multi-stakeholder initiatives such as national and regional IGFs.
- 5.3.4.4 Improve ICANN outreach and raise awareness of ICANN in the region.

### 5.3.5 Actions

No.	Action	Relevant Recommendations	Timeline (Yr1/Yr2 / Yr3)	Stakeholders
1	Increase ICANN fellowship opportunities for the region	5.3.4.2 5.3.4.4	Yr1	Civil society, Governments, Private sector, Technical community, and Academia
2	Establish ICANN ambassador program in the region	5.3.4.1 5.3.4.4	Yr2	Civil society, Governments, Private sector, Technical community, and Academia, Regional organizations
3	Complement, liaise with and support existing Internet governance mechanisms such as the Arab IGF	5.3.4.2 5.3.4.3	Yr1 / Yr2	All
4	Develop and sponsor outreach programs and initiatives in partnership with national and regional stakeholders in order to stimulate interest and ensure effective participation in ICANN and Internet Governance fora	5.3.4.2 5.3.4.4	Yr1 / Yr2	All
5	Develop and sponsor capacity building programs to simulate models for a multi-stakeholder, bottom-up, consensus-driven policy development process	5.3.4.2	Yr1 / Yr2	All
6	Support the creation of remote hubs in the region for attending ICANN meetings	5.3.4.2 5.3.4.4	Y2	Civil society, Governments, Private sector, Technical community, and Academia, Regional organizations
7	Train the trainers and help develop training materials that may be integrated in academic curricula within the region	5.3.4.2 5.3.4.4	Y2	All

### 5.3.6 Metrics

- Increase in ICANN outreach to the region in terms of number of events and orientations/capacity building workshops held in the region
- The number and nature of stakeholder representation of organizations and/or individuals invited to participate in the events and orientation/capacity building

workshops held in the region

- The number and nature of stakeholder representation of speakers invited to participate in events in the region
- The number and nature of stakeholder representation of instructors invited to participate in orientation/capacity building workshops in the region
- The number of attendees and frequency of attendance at ICANN meetings from the region
- The number of individuals from the region being granted Fellowship Program support to attend ICANN meetings
- The number of new regional members joining ICANN SOs/ACs (including new regional ALSes) in addition to stakeholder groups and constituencies of the GNSO
- The number of individuals nominated to and selected by NomCom, or elected through their constituencies to become members of ICANN Board and SO/AC Councils.
- More effective participation from the region in terms of roles, responsibilities and contributions in joining working groups or leading certain activities.
- Number of comments received from the region through ICANN public comments process
- Increase in ICANN presence in the region in terms of staff, ambassadors and/or offices for outreach in the region
- Increase in participation from the region in other relevant fora such as ISOC, IETF, RIRs, NOGs as well as global, regional and national IGFs including the Arab IGF