

Welcome to the SSAC 2020 Skills Survey
(Version 7 – 17 January 2020)

Introduction

The purpose of this survey is to gain an understanding of areas of expertise of SSAC members and SSAC applicants. The individual responses will be shared with the SSAC Membership Committee and, for SSAC members, the SSAC Administrative Committee but will not be published, distributed or shared outside those Committees without the express permission of the individual. The aggregated skills survey information, which details the collective skills set of all current SSAC members, will be published on the public SSAC website.

The survey should take 20-25 minutes to complete. The survey will not save draft responses and needs to be completed and submitted in one session. The 41 survey questions are divided into 9 categories, with some categories containing multiple subject areas. Each subject area is further defined by examples of the topics which it would comprise. The examples are not an exhaustive list for the subject area and your skills may cover some, but not necessarily all of the example topics. For each subject area, we ask you to indicate your familiarity with it and your level of expertise on the following scale:

1 – None; 2 – Low; 3 – Medium; 4 – High; 5 – Expert

The survey also includes 7 demographic questions which will assist the SSAC to gauge its diversity in those aspects. The last question of the survey asks you to indicate your participation in complementary volunteer organizations. Please answer all of the questions. For questions requiring a written response please answer 'None' if you do not have any response.

If you need to go backwards or forwards in the survey, ensure that you use the “BACK” or “NEXT” buttons. Please do NOT use the back arrow in your browser or you will be returned to the first page of the survey and all your entries will be wiped.

Expected Commitment

In completing this survey, you are making a commitment (within reason for a volunteer organization) that, for subject areas where your expertise is ‘5 - Expert’ or ‘4 - High’, you are willing to lead or actively participate in working parties in that subject area; where your expertise is ‘3 - Medium’, you are willing to participate in working parties in that subject area, and where your expertise is ‘2 - Low’ or ‘1 - None’, you may volunteer to participate in working parties in that subject area, but you would not be expected to do so.

Skills Categories:

1. DNS
2. Security
3. Abuse
4. Root Server System
5. IP Addressing/Routing
6. Registration Services
7. IDNs
8. IT
9. Non-Technical

Contact Information

Name:

Email Address:

Category 1: DNS

1.1 DNS PROTOCOL

Protocol & standards (IETF, other)

None Low Medium High Expert

1.2 DNS DEVELOPMENT

Authoritative server development

Resolver development

Application Development using the DNS Protocol

None Low Medium High Expert

1.3 DNS (NAME SERVICE) OPERATIONS

Operating authoritative servers

Operating full service resolvers

Operating zones, contact with registrants

None Low Medium High Expert

1.4 LARGE SCALE DNS OPERATIONS

Large ISP

Major infrastructure operator

None Low Medium High Expert

1.5 DNS MONITORING OR TRAFFIC ANALYSIS

Data gathering

Statistics evaluation

Development or deployment of monitoring systems

DNS Protocol Research, Analysis and Forensics

None Low Medium High Expert

Category 2: Security

2.1 DNSSEC

DNSSEC protocol (IETF, other)

DNSSEC-aware DNS server software development

Deployment and operational experience

DNSSEC-aware applications development

None Low Medium High Expert

2.2 SECURITY STANDARDS AND PROTOCOLS

Security policy and auditing

NIST, ISO and other international security standards

None Low Medium High Expert

2.3 SECURITY SYSTEMS

Firewalls, Network Intrusion Detection Systems, Unified Threat Management

Application security gateways and security proxies

Endpoint and admission control (e.g., 802.1x, EAP variants)

Authentication and Identity Management

None Low Medium High Expert

2.4 SECURITY ATTACKS & COUNTERMEASURES (DEFENDER)

DDOS mitigation/abatement

Network vulnerability assessment

Application vulnerability assessment

Malware detection and mitigation

Threat source investigation and intelligence

CERT experience and operation

None Low Medium High Expert

2.5 SECURITY ASSESSMENT, ATTACK METHODS & COUNTERMEASURES (ATTACKER)

DDOS techniques

Network intrusion

Application reverse engineering

Attack tools

Reconnaissance

None Low Medium High Expert

2.6 BUSINESS CONTINUITY AND DISASTER RECOVERY

Critical systems identification

Planning

Plan Implementation

Running exercises

None Low Medium High Expert

2.7 CRYPTOGRAPHY

Cryptographical Standards

Deployment and operation

Key management

None Low Medium High Expert

Category 3: Abuse

3.1 CYBERCRIME

Research and analysis

Policy creation/evolution

Enforcement

Investigation

Prosecution

Intelligence

None Low Medium High Expert

3.2 DENIAL OF SERVICE

Research and analysis of attack vectors and infrastructure

Deployment and operation of mitigation technology

Attack traffic analysis

None Low Medium High Expert

3.3 MALWARE

Botnets

Ransomware

Drive-by-download

Data exfiltration

Remote Access Tools

None Low Medium High Expert

3.4 OTHER ABUSE

Click fraud

Potentially unwanted applications

Intellectual property theft

Spam

Scams

None Low Medium High Expert

Category 4: Root Server System and Provisioning

4.1 ROOT ZONE PROVISIONING

Root zone administration

Working knowledge of IANA functions automation

Working knowledge of IANA functions operations

None Low Medium High Expert

4.2 ROOT SERVER OPERATIONS

Support of one of the 13 Internet Root Servers

None Low Medium High Expert

Category 5: IP Addressing/Routing

5.1 ISP, ACCESS PROVIDER

Global Service Provider (transit) routing, operation, peering

Global Service Provider (transit) business model experience

Customer connectivity

Network Operations Center

Operation of a content delivery network

Cloud services

None Low Medium High Expert

5.2 NETWORK OPERATIONS

IETF routing protocol standards (BGP, ISIS, OSPF, etc)

IPv4 allocation, ASNs, RIR operations

IPv6 allocation, ASNs, RIR operations

BGP and global routing operations

None Low Medium High Expert

5.3 LARGE SCALE NETWORK ARCHITECTURE AND DESIGN

Large ISP

Major infrastructure provider

Large multi-campus enterprise

None Low Medium High Expert

5.4 IANA

Internet number resource management

IANA functions automation

IANA functions operations

None Low Medium High Expert

Category 6: Registration Services

6.1 DOMAIN REGISTRY OPERATIONS

Business experience

Operational experience

EPP experience

ccTLD experience

gTLD experience

ICANN Policy (e.g., PDP process, Registry Agreement)

None Low Medium High Expert

6.2 DOMAIN REGISTRAR OPERATIONS

Business experience

ccTLD experience

gTLD experience

ICANN policy (e.g., PDP process, Registrar Accreditation Agreement)

Mitigation of registration abuse, malicious registrations

None Low Medium High Expert

6.3 REGISTRATION DATA SERVICES

Internationalized registration data issues

ccTLD practices

Directory services standards and deployment (WHOIS, RDAP, others)

Registration data directory service operational experience

None Low Medium High Expert

Category 7: IDNs

7.1 INTERNATIONALIZED DOMAIN NAMES

IDN protocol, standards, guidelines (IETF, ICANN, other)

Software development

Operational experience

None Low Medium High Expert

Category 8: IT Skills

8.1 SOFTWARE ENGINEERING

Programming

Code specification and architecture

Software Development Life Cycle (SDLC)

None Low Medium High Expert

8.2 SOFTWARE TEST ENGINEERING

Testing in development environment

Testing of fielded software systems

None Low Medium High Expert

8.3 PC/LAPTOP OPERATING ENVIRONMENT SUPPORT

Desktop systems

None Low Medium High Expert

8.4 MOBILE OPERATING ENVIRONMENT SUPPORT

Smart phones

Mobility, location and presence applications

None Low Medium High Expert

8.5 RESOURCE CONSTRAINED OPERATING ENVIRONMENT SUPPORT

The Internet of Things (IoT)

Supervisory Control and Data Acquisition (SCADA)

Industrial Control Systems (ICS)

Operational Technology (OT)

None Low Medium High Expert

8.6 CLOUD OPERATING ENVIRONMENT SUPPORT

Content and service distribution networks

Software as a Service (SaaS)

Infrastructure as a Service (IaaS)

Platform as a Service (PaaS)

None Low Medium High Expert

8.7 HOSTING SERVICES

Hosting of web sites, mail or other services for customers

None Low Medium High Expert

Category 9: Non-Technical

9.1 ICANN

ICANN Strategic plan

ICANN Operating plan and budget

ICANN security, stability and resiliency plan

ICANN Compliance

Policy Development Process experience

None Low Medium High Expert

9.2 LEGAL EXPERTISE

Regulatory

Registry or Registrar

General contract law

Civil subpoena service

Criminal subpoena service/process

Data privacy regulations

None Low Medium High Expert

9.3 LEADERSHIP

Leading moderate to large groups or organizations

Leading technical activities or functions

Decision-making

Planning

Financial control

Delegation

None Low Medium High Expert

9.4 RISK MANAGEMENT

Risk Identification

Assessment

Evaluation

Mitigation planning and implementation

None Low Medium High Expert

9.5 TECHNOLOGY WRITING

Academic research papers

Technical advice documents

Technical process or procedure documents

None Low Medium High Expert

9.6 PUBLIC POLICY

Governmental or public institution policy development, implementation or audit

None Low Medium High Expert

9.7 BUSINESS SKILLS

Business planning

Financial planning

Project management

Negotiation

None Low Medium High Expert

9.8 COMMUNICATIONS

Product management

Marketing

External Communications

Public Relations

Customer support

None Low Medium High Expert

10. DEMOGRAPHIC QUESTIONS

10.1 Country of Residence:

10.2 Nationality:

10.3 Primary language spoken:

10.4 Other languages - spoken (please indicate fluency in each using the [Common European Framework of Reference for Languages](#) scale as guidance):

10.5 Other languages - written (please indicate fluency in each using the [Common European Framework of Reference for Languages](#) scale as guidance):

10.6 Stakeholder background (please indicate all that apply):
(e.g., registry, registrar, DNS operator, ISP, security professional or other)

10.7 Technology and work experience in/with other countries and cultures (please list):

11. PARTICIPATION IN COMPLEMENTARY VOLUNTEER ORGANIZATIONS

Please indicate complementary volunteer organizations in which you participate: