# SECTION C – DESCRIPTION / SPECS / WORK STATEMENT STATEMENT OF WORK/SPECIFICATIONS

The Contractor shall furnish the necessary personnel, materials, equipment, services and Facilities (except as otherwise specified) to perform the following Statement Work/Specifications.

# BACKGROUND

* + 1. The U.S. Department of Commerce (DoC), National Telecommunications and Information Administration (NTIA) has initiated this contract to maintain the continuity and stability of services related to certain interdependent Internet technical management functions, known collectively as the Internet Assigned Numbers Authority (IANA).
    2. Initially, these interdependent technical functions were performed on behalf of the Government under a contract between the Defense Advanced Research Projects Agency (DARPA) and the University of Southern California (USC), as part of a research project known as the Tera-node Network Technology (TNT). As the TNT project neared completion and the DARPA/USC contract neared expiration in 1999, the Government recognized the need for the continued performance of the IANA functions as vital to the stability and correct functioning of the Internet.
    3. The Contractor, in the performance of its duties, must have or develop a close constructive working relationship with all interested and affected parties to ensure quality and satisfactory performance of the IANA functions. The interested and affected parties include, but are not limited to, the multi-stakeholder, private sector led, bottom-up policy development model for the domain name system (DNS) that the Internet Corporation for Assigned Names and Numbers (ICANN) represents; the Internet Engineering Task Force (IETF) and the Internet Architecture Board (IAB); Regional Internet Registries (RIRs); top-level domain (TLD) operators/managers (e.g., country codes and generic); governments; and the Internet user community.
    4. The Government acknowledges that data submitted by applicants in connection with the IANA functions may be confidential information. To the extent required by law, the Government shall accord any confidential data submitted by applicants in connection with the IANA functions with the same degree of care as it uses to protect its own confidential information, but not less than reasonable care, to prevent the unauthorized use, disclosure, or publication of confidential information. In providing data that is subject to such a confidentiality obligation to the Government, the Contractor shall advise the Government of that obligation.

# CONTRACTOR REQUIREMENTS

* + 1. The Contractor must perform the required services for this contract as a prime Contractor, not as an agent or subcontractor. The Contractor shall not enter into any subcontracts for the performance of the services, or assign or transfer any of its rights or obligations under this Contract, without the Government’s prior written consent and any attempt to do so shall be void and without further effect. The Contractor shall be a) a wholly

U.S. owned and operated firm or fully accredited United States University or College operating in one of the 50 states of the United States or District of Columbia; b) incorporated within one of the fifty (50) states of the United States or District of Columbia; and c) organized under the laws of a state of the United States or District of Columbia. The Contractor shall perform the primary IANA functions of the Contract in the United States and possess and maintain, throughout the performance of this Contract, a physical address within the United States. The Contractor must be able to demonstrate that all primary operations and systems will remain within the United States (including the District of Columbia). The Government reserves the right to inspect the premises, systems, and processes of all security and operational components used for the performance of all Contract requirements and obligations.

* + 1. The Contractor shall furnish the necessary personnel, material, equipment, services, and facilities, to perform the following requirements without any cost to the Government. The Contractor shall conduct due diligence in hiring, including full background checks.
    2. The Contractor may not charge the United States Government for performance of the requirements of this contract. The Contractor may establish and collect fees from third parties provided the fee levels are approved by the Contracting Officer (CO) and are fair and reasonable. If fees are charged, the Contractor shall base any proposed fee structure on the cost of providing the specific service for which the fee is charged. The Contractor may propose an interim fee for the first year of the contract, which will expire one year after the contract award. The documentation must be based upon the anticipated cost for providing the specific service for which the fee is charged, including start up costs, if any, equipment, personnel, software, etc. If the Contractor intends to establish and collect fees from third parties beyond the first year of the contract, the Contractor must collaborate with the interested and affected parties as enumerated in Section C.1.3 to develop a proposed fee structure based on a methodology that tracks the actual costs incurred for each discrete IANA function enumerated and described in C.2.9. The Contractor must submit a copy of any proposed fee structure including tracking methodology and description of the collaboration and process efforts for fees being proposed after the first year contract award to the Contracting Officer. The performance exclusion C.8.3 shall apply to any fee proposed.
    3. The Contractor is required to perform the IANA functions, which are critical for the operation of the Internet’s core infrastructure, in a stable and secure manner. The IANA functions are administrative and technical in nature based on established policies developed by

interested and affected parties, as enumerated in Section C.1.3. The Contractor shall treat each of the IANA functions with equal priority and process all requests promptly and efficiently.

* + 1. **Separation of Policy Development and Operational Roles --** The Contractor shall ensure that designated IANA functions staff members will not initiate, advance, or advocate any policy development related to the IANA functions. The Contractor’s staff may respond to requests for information requested by interested and affected parties as enumerated in Section C.1.3 to inform ongoing policy discussions and may request guidance or clarification as necessary for the performance of the IANA functions.
    2. **Transparency and Accountability --** Within six (6) months of award, the Contractor shall, in collaboration with all interested and affected parties as enumerated in Section C.1.3, develop user instructions including technical requirements for each corresponding IANA function and post via a website.
    3. **Responsibility and Respect for Stakeholders –** Within six (6) months of award, the Contractor shall, in collaboration with all interested and affected parties as enumerated in Section C.1.3, develop for each of the IANA functions a process for documenting the source of the policies and procedures and how it will apply the relevant policies and procedures for the corresponding IANA function and post via a website.
    4. **Performance Standards --** Within six (6) months of award, the Contractor shall develop performance standards, in collaboration with all interested and affected parties as enumerated in Section C.1.3, for each of the IANA functions as set forth at C.2.9 to C.2.9.4 and post via a website.
    5. **Internet Assigned Numbers Authority (IANA) Functions --** include (1) the coordination of the assignment of technical Internet protocol parameters; (2) the administration of certain responsibilities associated with the Internet DNS root zone management; (3) the allocation of Internet numbering resources; and (4) other services related to the management of the ARPA and INT top-level domains (TLDs).
       1. **Coordinate The Assignment Of Technical Protocol Parameters including the management of the Address and Routing Parameter Area (ARPA) TLD --** The Contractor shall review and assign unique values to various parameters (*e.g.,* operation codes, port numbers, object identifiers, protocol numbers) used in various Internet protocols based on established guidelines and policies as developed by interested and affected parties as enumerated in Section C.1.3. The Contractor shall disseminate the listings of assigned parameters through various means (including on-line publication via a website) and shall review technical documents for consistency with assigned values. The Contractor shall operate the ARPA TLD within the current registration policies for this TLD, as documented in RFC 3172-Management Guidelines & Operational Requirements for the Address and Routing Parameter Area Domain,

and any further clarification of this RFC. The Contractor shall also implement DNSSEC in the ARPA TLD.

* + - 1. **Perform Administrative Functions Associated With Root Zone Management --** The Contractor shall facilitate and coordinate the root zone of the domain name system, and maintain 24 hour-a-day/7 days-a-week operational coverage. The process flow for root zone management involves three roles that are performed by three different entities through two separate legal agreements: the Contractor as the IANA Functions Operator, NTIA as the Administrator, and VeriSign (or any successor entity as designated by the U.S. Department of Commerce) as articulated in Cooperative Agreement Amendment 11, as the Root Zone Maintainer. The Requirements are detailed at Appendix 1 entitled Authoritative Root Zone Management Process that is incorporated by reference herein as if fully set forth. The Contractor shall work collaboratively with NTIA and the Root Zone Maintainer, in the performance of this function.
         1. **Root Zone File Change Request Management --** The Contractor shall receive and process root zone file change requests for TLDs. These change requests include addition of new or updates to existing TLD name servers (NS) and delegation signer (DS) resource record (RR) information along with associated 'glue' (A and AAAA RRs). A change request may also include new TLD entries to the root zone file. The Contractor shall process root zone file changes as expeditiously as possible.
         2. **Root Zone “WHOIS” Change Request and Database Management --** The Contractor shall maintain, update, and make publicly accessible a Root Zone “WHOIS” database with current and verified contact information for all TLD registry operators. The Root Zone “WHOIS” database, at a minimum, shall consist of the TLD name; the IP address of the primary nameserver and secondary nameserver for the TLD; the corresponding names of such nameservers; the creation date of the TLD; the name, postal address, email address, and telephone and fax numbers of the TLD registry operator; the name, postal address, email address, and telephone and fax numbers of the technical contact for the TLD registry operator; and the name, postal address, email address, and telephone and fax numbers of the administrative contact for the TLD registry operator; reports; and date record last updated; and any other information relevant to the TLD requested by the TLD registry operator. The Contractor shall receive and process root zone “WHOIS” change requests for TLDs.
         3. **Delegation and Redelegation of a Country Code Top Level-Domain (ccTLD**) **--**The Contractor shall apply existing policy frameworks in processing requests related to the delegation and redelegation of a ccTLD, such as RFC 1591 Domain Name System Structure and Delegation, the Governmental Advisory Committee (GAC) Principles And Guidelines For The Delegation And Administration Of Country Code Top Level Domains, and any further clarification of these policies by interested and affected parties as enumerated in Section C.1.3. If a policy framework does not exist to cover a specific instance, the Contractor will consult with the interested and affected parties, as enumerated in Section C.1.3; relevant public authorities;

and governments on any recommendation that is not within or consistent with an existing policy framework. In making its recommendations, the Contractor shall also take into account the relevant national frameworks and applicable laws of the jurisdiction that the TLD registry serves. The Contractor shall submit its recommendations to the COR via a Delegation and Redelegation Report.

**C.2.9.2d Delegation and Redelegation of a Generic Top Level Domain (gTLD) --** The Contractor shall verify that all requests related to the delegation and redelegation of gTLDs are consistent with the procedures developed by ICANN. In making a delegation or redelegation recommendation, the Contractor must provide documentation verifying that ICANN followed its own policy framework including specific documentation demonstrating how the process provided the opportunity for input from relevant stakeholders and was supportive of the global public interest. The Contractor shall submit its recommendations to the COR via a Delegation and Redelegation Report.

* + - * 1. **Root Zone Automation --** The Contractor shall work with NTIA and the Root Zone Maintainer, and collaborate with all interested and affected parties as enumerated in Section C.1.3, to deploy a fully automated root zone management system within nine (9) months after date of contract award. The fully automated system must, at a minimum, include a secure (encrypted) system for customer communications; an automated provisioning protocol allowing customers to manage their interactions with the root zone management system; an online database of change requests and subsequent actions whereby each customer can see a record of their historic requests and maintain visibility into the progress of their current requests; and a test system, which customers can use to meet the technical requirements for a change request ; an internal interface for secure communications between the IANA Functions Operator; the Administrator, and the Root Zone Maintainer.
        2. **Root Domain Name System Security Extensions (DNSSEC) Key Management --**The Contractor shall be responsible for the management of the root zone Key Signing Key (KSK), including generation, publication, and use for signing the Root Keyset. As delineated in the Requirements at Appendix 2 entitled Baseline Requirements for DNSSEC in the Authoritative Root Zone that is incorporated by reference herein as if fully set forth. The Contractor shall work collaboratively with NTIA and the Root Zone Maintainer, in the performance of this function.
        3. **Customer Service Complaint Resolution Process (CSCRP) --**The Contractor shall work with NTIA and collaborate with all interested and affected parties as enumerated in Section C.1.3 to establish and implement within six (6) months after date of contract award a process for IANA function customers to submit complaints for timely resolution that follows industry best practice and includes a reasonable timeframe for resolution.
      1. **Allocate Internet Numbering Resources --**The Contractor shall have responsibility for allocated and unallocated IPv4 and IPv6 address space and Autonomous System Number (ASN)

space based on established guidelines and policies as developed by interested and affected parties as enumerated in Section C.1.3. The Contractor shall delegate IP address blocks to Regional Internet Registries for routine allocation typically through downstream providers to Internet end-users within the regions served by those registries. The Contractor shall also reserve and direct allocation of space for special purposes, such as multicast addressing, addresses for private networks as described in RFC 1918-Address Allocation for Private Internets, and globally specified applications.

* + - 1. **Other services --** The Contractor shall operate the INT TLD within the current registration policies for the TLD. Upon designation of a successor registry by the Government, if any, the Contractor shall cooperate with NTIA to facilitate the smooth transition of operation of the INT TLD. Such cooperation shall, at a minimum, include timely transfer to the successor registry of the then-current top-level domain registration data. The Contractor shall also implement modifications in performance of the IANA functions as needed upon mutual agreement of the parties.
    1. The performance of the IANA functions as articulated in Section C.2 Contractor Requirements shall be in compliance with the performance exclusions enumerated in Section C. 8.
    2. The Contracting Officer’s Representative(COR) will perform final inspection and acceptance of all deliverables and reports articulated in Section C.2 Contractor Requirements. *Prior to publication/posting of reports the Contractor shall obtain approval from the COR.* The COR shall not unreasonably withhold approval.
    3. **Program Manager.** The contractor shall provide trained, knowledgeable technical personnel according to the requirements of this contract. All contractor personnel who interface with the CO and COR must have excellent oral and written communication skills. "Excellent oral and written communication skills" is defined as the capability to converse fluently, communicate effectively, and write intelligibly in the English language. The IANA Functions Program Manager organizes, plans, directs, staffs, and coordinates the overall program effort; manages contract and subcontract activities as the authorized interface with the CO and COR and ensures compliance with Federal rules and regulations and responsible for the following:
       - Shall be responsible for the overall contract performance and shall not serve in any other capacity under this contract.
       - Shall have demonstrated communications skills with all levels of management.
       - Shall meet and confer with COR and CO regarding the status of specific contractor activities and problems, issues, or conflicts requiring resolution.
       - Shall be capable of negotiating and making binding decisions for the company.
       - Shall have extensive experience and proven expertise in managing similar multi-task contracts of this type and complexity.
       - Shall have extensive experience supervising personnel.
       - Shall have a thorough understanding and knowledge of the principles and methodologies associated with program management and contract management.

**C.2.12.b** The Contractor shall assign to this contract the following key personnel: IANA Functions Program Manager (C.2.9); IANA Function Liaison for Technical Protocol Parameters Assignment (C.2.9.1); IANA Function Liaison for Root Zone Management (C.2.9.2); IANA Function Liaison for Internet Number Resource Allocation (C.2.9.3).

# SECURITY REQUIREMENTS

* + 1. **Secure Systems --** The Contractor shall install and operate all computing and communications systems in accordance with best business and security practices. The Contractor shall implement a secure system for authenticated communications between it and its customers when carrying out all IANA function requirements. The Contractor shall document practices and configuration of all systems.
    2. **Secure Systems Notification --** The Contractor shall implement and thereafter operate and maintain a secure notification system at a minimum, capable of notifying all relevant stakeholders of the discrete IANA functions, of such events as outages, planned maintenance, and new developments. In all cases, the Contractor shall notify the COR of any outages.
    3. **Secure Data --** The Contractor shall ensure the authentication, integrity, and reliability of the data in performing each of the IANA functions.
    4. **Security Plan --**The Contractor shall develop and execute a Security Plan that meets the requirements of this contract and Section C.3. The Contractor shall document in the security plan the process used to ensure information systems including hardware, software, applications, and general support systems have effective security safeguards, which have been implemented, planned for, and documented. The Contractor shall deliver the plan to the COR after each annual update.
    5. **Director of Security --** The Contractor shall designate a Director of Security who shall be responsible for ensuring technical and physical security measures, such as personnel access controls. The Contractor shall notify and consult in advance the COR when there are personnel changes in this position. The Director of Security shall be one of the key personnel assigned to this contract.

# PERFORMANCE METRIC REQUIREMENTS

* + 1. **Meetings --** Program reviews and site visits shall occur annually.
    2. **Monthly Performance Progress Report --** The Contractor shall prepare and submit to the COR a performance progress report every month (no later than 15 calendar days following the end of each month) that contains statistical and narrative information on the performance of the IANA functions (*i.e.*, assignment of technical protocol parameters; administrative functions associated with root zone management; and allocation of Internet numbering resources) during the previous calendar month. The report shall include a narrative summary of the work performed for each of the functions with appropriate details and particularity. The report shall also describe major events, problems encountered, and any projected significant changes, if any, related to the performance of requirements set forth in C.2.9 to C.2.9.4.
    3. **Root Zone Management Dashboard --** The Contractor shall work collaboratively with NTIA and the Root Zone Maintainer, and all interested and affected parties as enumerated in Section C.1.3, to develop and make publicly available via a website, a dashboard to track the process flow for root zone management within nine (9) months after date of contract award.
    4. **Performance Standards Reports --** The Contractor shall develop and publish reports for each discrete IANA function consistent with Section C.2.8. The Performance Standards Metric Reports will be published via a website every month (no later than 15 calendar days following the end of each month) starting no later than six (6) months after date of contract award.
    5. **Customer Service Survey (CSS) --**The Contractor shall collaborate with NTIA to develop and conduct an annual customer service survey consistent with the performance standards for each of the discrete IANA functions. The survey shall include a feedback section for each discrete IANA function. No later than 30 days after conducting the survey, the Contractor shall submit the CSS Report to the COR.
    6. **Final Report --** The Contractor shall prepare and submit a final report on the performance of the IANA functions that documents standard operating procedures, including a description of the techniques, methods, software, and tools employed in the performance of the IANA functions. The Contractor shall submit the report to the CO and the COR no later than 30 days after expiration of the contract.
    7. **Inspection and Acceptance --** The COR will perform final inspection and acceptance of all deliverables and reports articulated in Section C.4. *Prior to publication/posting of reports, the Contractor shall obtain approval from the COR*. The COR shall not unreasonably withhold approval.

# AUDIT REQUIREMENTS

* + 1. **Audit Data --** The Contractor shall generate and retain security process audit record data for one year and provide an annual audit report to the CO and the COR. All root zone management operations shall be included in the audit, and records on change requests to the root zone file. The Contractor shall retain these records in accordance with the clause at

52.215-2. The Contractor shall provide specific audit record data to the CO and COR upon request.

* + 1. **Root Zone Management Audit Data --** The Contractor shall generate and publish via a website a monthly audit report based on information in the performance of *Provision C.9.2(a-g) Perform Administrative Functions Associated With Root Zone Management*. The audit report shall identify each root zone file and root zone “WHOIS” database change request and the relevant policy under which the change was made as well as identify change rejections and the relevant policy under which the change request was rejected. The Report shall start no later than nine (9) months after date of contract award and thereafter is due to the COR no later than 15 calendar days following the end of each month.
    2. **External Auditor - -** The Contractor shall have an external, independent, specialized compliance audit which shall be conducted annually and it shall be an audit of all the IANA functions security provisions against existing best practices and Section C.3 of this contract.
    3. **Inspection and Acceptance --** The COR will perform final inspection and acceptance of all deliverables and reports articulated in Section C.5. *Prior to publication/posting of reports, the Contractor shall obtain approval from the COR*. The COR shall not unreasonably withhold approval.