

.COM Agreement: Appendix 4

Registry Operator's Monthly Reports

(date to be inserted)

Registry Operator shall provide the following information for .com in three monthly reports as described below. Reports shall be submitted via email to <registry-reports@icann.org>. ICANN may request in the future that the report be delivered by other means. ICANN shall use reasonable commercial efforts to preserve the confidentiality of the information reported until three months after the end of the month to which the report relates.

(A) Monthly Report. File shall be in Portable Document Format (PDF). Report shall contain the following information:

1. Accredited Registrar Status. State the number of registrars in each of the following three categories: (1) operational, (2) ramp-up (registrars that have received a password for access to OT&E), and (3) pre-ramp-up (registrars that have requested access, but have not yet entered the ramp-up period).

2. Service Level Agreement Performance. Compare Service Level Agreement requirements with actual performance measures for the reporting month.

3. TLD Zone File Access Activity. State the total number of zone file access passwords at end of the reporting month.

4. Completed System Software Releases. Describe significant releases during the reporting month, including release name, features, and completion date.

5. Whois Service Activity. State the number of Whois queries during the reporting month separated by service (e.g., WHOIS port-43, web-based Whois).

6. Total Number of Transactions by Subcategory by Month. State the total number of transactions during the reporting month, in the following subcategories: adds, deletes, modifies, checks, renews, transfers, restores.

7. Daily Transaction Range. Tabulate the number of total daily transactions. The range of transaction volume should be shown for each month, along with the average daily transaction volume.

(B) Per-Registrar Activity Report. File shall be named "com-transactions-YYYYMM.csv"; where "YYYYMM" is the year and month being reported. This report shall be in comma separated-value format as specified in RFC 4180, using the following fields per registrar:

Field #	Field Name	Notes
01	registrar-name	registrar's full corporate name as registered with IANA
02	iana-id	http://www.iana.org/assignments/registrar-ids
03	total-domains	total domains under sponsorship
04	total-nameservers	total name servers registered
05	net-adds-1-yr	number of domains successfully registered with an initial term of one year (and not deleted within the add grace period)
06	net-adds-2-yr	number of domains successfully registered with an initial term of two years (and not deleted within the add grace period)
07	net-adds-3-yr	number of domains successfully registered with an initial term of three years (and not deleted within the add grace period)
08	net-adds-4-yr	number of domains successfully registered with an initial term of four years (and not deleted within the add grace period)
09	net-adds-5-yr	number of domains successfully registered with an initial term of five years (and not deleted within the add grace period)
10	net-adds-6-yr	number of domains successfully registered with an initial term of six years (and not deleted within the add grace period)
11	net-adds-7-yr	number of domains successfully registered with an initial term of seven years (and not deleted within the add grace period)
12	net-adds-8-yr	number of domains successfully registered with an initial term of eight years (and not deleted within the add grace period)
13	net-adds-9-yr	number of domains successfully registered with an initial term of nine years (and not deleted within the add grace period)
14	net-adds-10-yr	number of domains successfully registered with an initial term of ten years (and not deleted within the add grace period)
15	net-renews-1-yr	number of domains successfully renewed either automatically or by command with a new renewal period of one year (and not deleted within the renew grace period)
16	net-renews-2-yr	number of domains successfully renewed either automatically or by command with a new renewal period of two years (and not deleted within the renew grace period)
17	net-renews-3-yr	number of domains successfully renewed either automatically or by command with a new renewal period of three years (and

		not deleted within the renew grace period)
18	net-renews-4-yr	number of domains successfully renewed either automatically or by command with a new renewal period of four years (and not deleted within the renew grace period)
19	net-renews-5-yr	number of domains successfully renewed either automatically or by command with a new renewal period of five years (and not deleted within the renew grace period)
20	net-renews-6-yr	number of domains successfully renewed either automatically or by command with a new renewal period of six years (and not deleted within the renew grace period)
21	net-renews-7-yr	number of domains successfully renewed either automatically or by command with a new renewal period of seven years (and not deleted within the renew grace period)
22	net-renews-8-yr	number of domains successfully renewed either automatically or by command with a new renewal period of eight years (and not deleted within the renew grace period)
23	net-renews-9-yr	number of domains successfully renewed either automatically or by command with a new renewal period of nine years (and not deleted within the renew grace period)
24	net-renews-10-yr	number of domains successfully renewed either automatically or by command with a new renewal period of ten years (and not deleted within the renew grace period)
25	transfer-gaining-successful	transfers initiated by this registrar that were ack'd by the other registrar – either by command or automatically
26	transfer-gaining-nacked	transfers initiated by this registrar that were n'acked by the other registrar
27	transfer-losing-successful	transfers initiated by another registrar that this registrar ack'd – either by command or automatically
28	transfer-losing-nacked	transfers initiated by another registrar that this registrar n'acked
29	transfer-disputed-won	number of transfer disputes in which this registrar prevailed
30	transfer-disputed-lost	number of transfer disputes this registrar lost

31	transfer-disputed-nodecision	number of transfer disputes involving this registrar with a split or no decision
32	deleted-domains-grace	domains deleted within the add grace period
33	deleted-domains-nograce	domains deleted outside the add grace period
34	restored-domains	domain names restored from redemption period
35	restored-noreport	total number of restored names for which the registrar failed to submit a restore report
36	agp-exemption-requests	total number of AGP (add grace period) exemption requests
37	agp-exemptions-granted	total number of AGP (add grace period) exemption requests granted
38	agp-exempted-domains	total number of names affected by granted AGP (add grace period) exemption requests
39	attempted-adds	number of attempted (successful and failed) domain name create commands

The first line shall include the field names exactly as they appear in the table above as a "header line" as described in section 2 of RFC 4180. The last line of each report should include totals for each column across all registrars. The first field of this line shall read "Totals" while the second field shall be left empty in that line. No other lines besides the ones described above shall be included. Line breaks shall be "CRLF" (<U+000D, U+000A>) as described in RFC 4180.

(c) Registry Functions Activity Report. This report shall be compiled in a comma separated-value formatted file as specified in RFC 4180. The file shall be named "com-activity-yyyymm.csv", where "yyyymm" is the year and month being reported. The file shall contain the following fields:

Field #	Field Name	Description
01	operational-registrars	number of operational registrars at the end of the reporting period
02	ramp-up-registrars	number of registrars that have received a password for access to OT&E at the end of the reporting period
03	pre-ramp-up-registrars	number of registrars that have requested access, but have not yet entered the ramp-up period at the end of the reporting period
04	zfa-passwords	number of active zone file access passwords at the end of the

		reporting period
05	whois-43-queries	number of WHOIS (port-43) queries responded during the reporting period
06	web-whois-queries	number of Web-based Whois queries responded during the reporting period, not including searchable Whois
07	searchable-whois-queries	number of searchable Whois queries responded during the reporting period, if offered
08	dns-udp-queries-received	number of DNS queries received over UDP transport during the reporting period
09	dns-udp-queries-responded	number of DNS queries received over UDP transport that were responded during the reporting period
10	dns-tcp-queries-received	number of DNS queries received over TCP transport during the reporting period
11	dns-tcp-queries-responded	number of DNS queries received over TCP transport that were responded during the reporting period
12	srs-dom-check	number of SRS (EPP and any other interface) domain name “check” requests responded during the reporting period
13	srs-dom-create	number of SRS (EPP and any other interface) domain name “create” requests responded during the reporting period
14	srs-dom-delete	number of SRS (EPP and any other interface) domain name “delete” requests responded during the reporting period
15	srs-dom-info	number of SRS (EPP and any other interface) domain name “info” requests responded during the reporting period
16	srs-dom-renew	number of SRS (EPP and any other interface) domain name “renew” requests responded during the reporting period
17	srs-dom-rgp-restore-report	number of SRS (EPP and any other interface) domain name RGP “restore” requests responded during the reporting period
18	srs-dom-rgp-restore-request	number of SRS (EPP and any other interface) domain name RGP “restore” requests delivering a restore report responded during the reporting period
19	srs-dom-transfer-approve	number of SRS (EPP and any other interface) domain name “transfer” requests to approve transfers responded during the reporting period
20	srs-dom-transfer-cancel	number of SRS (EPP and any other interface) domain name “transfer” requests to cancel transfers responded during the reporting period
21	srs-dom-transfer-query	number of SRS (EPP and any other interface) domain name “transfer” requests to query about a transfer responded during the reporting period
22	srs-dom-transfer-reject	number of SRS (EPP and any other interface) domain name “transfer” requests to reject transfers responded during the reporting period
23	srs-dom-transfer-	number of SRS (EPP and any other interface) domain name

	request	“transfer” requests to request transfers responded during the reporting period
24	srs-dom-update	number of SRS (EPP and any other interface) domain name “update” requests (not including RGP restore requests) responded during the reporting period
25	srs-host-check	number of SRS (EPP and any other interface) host “check” requests responded during the reporting period
26	srs-host-create	number of SRS (EPP and any other interface) host “create” requests responded during the reporting period
27	srs-host-delete	number of SRS (EPP and any other interface) host “delete” requests responded during the reporting period
28	srs-host-info	number of SRS (EPP and any other interface) host “info” requests responded during the reporting period
29	srs-host-update	number of SRS (EPP and any other interface) host “update” requests responded during the reporting period
30	srs-cont-check	number of SRS (EPP and any other interface) contact “check” requests responded during the reporting period
31	srs-cont-create	number of SRS (EPP and any other interface) contact “create” requests responded during the reporting period
32	srs-cont-delete	number of SRS (EPP and any other interface) contact “delete” requests responded during the reporting period
33	srs-cont-info	number of SRS (EPP and any other interface) contact “info” requests responded during the reporting period
34	srs-cont-transfer-approve	number of SRS (EPP and any other interface) contact “transfer” requests to approve transfers responded during the reporting period
35	srs-cont-transfer-cancel	number of SRS (EPP and any other interface) contact “transfer” requests to cancel transfers responded during the reporting period
36	srs-cont-transfer-query	number of SRS (EPP and any other interface) contact “transfer” requests to query about a transfer responded during the reporting period
37	srs-cont-transfer-reject	number of SRS (EPP and any other interface) contact “transfer” requests to reject transfers responded during the reporting period
38	srs-cont-transfer-request	number of SRS (EPP and any other interface) contact “transfer” requests to request transfers responded during the reporting period
39	srs-cont-update	number of SRS (EPP and any other interface) contact “update” requests responded during the reporting period

The first line shall include the field names exactly as described in the table above as a “header line” as described in section 2 of RFC 4180. The last line of each report shall include totals for each column across all registrars; the first field of this line shall read “Totals” while the second

field shall be left empty in that line. No other lines besides the ones described above shall be included. Line breaks shall be <U+000D, U+000A> as described in RFC 4180.

.COM Agreement Appendix 5

Whois Specifications

(date to be inserted)

Public Whois Specification

Registry Operator will operate a WHOIS service available via port 43 in accordance with RFC 3912, and a web-based Directory Service providing free public query-based access to at least the following elements in the following format.

Registry Operator commits to participating in and supporting the work in the IETF to produce a Domain Name Registration Data Access Protocol [SAC 051]. Registry Operator shall implement the standard no later than 135 days after it is requested by ICANN if: 1) the IETF produces a standard (i.e., it is published, at least, as a Proposed Standard RFC as specified in RFC 2026); and 2) its implementation is commercially reasonable in the context of the overall operation of the registry.

Registry Operator's Whois service is the authoritative Whois service for all second-level Internet domain names registered in the .com top-level domain and for all hosts registered using these names. This service is available to anyone. It is available via port 43 access and via links at the Registry Operator's web site. It is updated daily. Registry Operator offers public IPv6 transport for its Whois.

To use Registry Whois via port 43 enter the applicable parameter on the command line as illustrated below:

- For a domain name: whois "domain verisign.com"
- For a registrar name: whois "registrar Go Daddy Software, Inc."
- For a nameserver: whois " DNS3.REGISTER.COM" or whois "nameserver 216.21.234.72"

By default, Whois performs a very broad search, looking in all record types for matches to your query in these fields: domain name, nameserver name, nameserver IP address, and registrar names. Use keywords to narrow the search (for example, 'domain root'). Specify only part of the search string to perform a "partial" search on domain. Every domain starting with the string will be found. A trailing dot (or dots) after your text or the partial keyword indicates a partial search. For example, entering 'mack.' will find "Mack", "Mackall", "Mackay", and so on.

To use Registry Whois using the web interface:

- Go to http://www.verisigninc.com/en_US/products-and-services/domain-name-services/whois/index.xhtml
- Click on the appropriate button ("domain," "registrar" or "nameserver")
- Enter the applicable parameter:
 - Domain name including the TLD (e.g., verisign.com)

- Full name of the registrar including punctuation, "Inc.", etc. (e.g., ABC Registrar, Inc.)
- Full host name or the IP address (e.g., NS.VERISIGN.COM or 198.41.0.196)
- Click on the "submit" button.

For all registered second-level domain names in .com, information as illustrated in the following example is displayed, where the entry parameter is the domain name (including the TLD):

Domain Name: VERISIGN.COM
Registrar: NETWORK SOLUTIONS, LLC.
Whois Server: whois.networksolutions.com
Referral URL: http://www.networksolutions.com
Name Server: A2.NSTLD.COM
Name Server: C2.NSTLD.NET
Name Server: D2.NSTLD.NET
Name Server: E2.NSTLD.NET
Name Server: F2.NSTLD.COM
Name Server: G2.NSTLD.COM
Name Server: H2.NSTLD.NET
Name Server: J2.NSTLD.NET
Name Server: K2.NSTLD.NET
Name Server: L2.NSTLD.COM
Name Server: M2.NSTLD.NET
Status: clientTransferProhibited
Status: serverDeleteProhibited
Status: serverTransferProhibited
Status: serverUpdateProhibited
Updated Date: 14-apr-2011
Creation Date: 02-jun-1995
Expiration Date: 01-jun-2012

>>> Last update of whois database: Fri, 11 Nov 2011 19:15:58 UTC<<<

For all ICANN-accredited registrars who are authorized to register .com second-level domain names through Registry Operator, information as illustrated in the following example is displayed, where the entry parameter is the full name of the registrar (including punctuation, "Inc.", etc.):

Registrar Name: SAMPLE REGISTRAR, INC. DBA SAMPLE NAMES
Address: 1234 Any Way, Anytown, VA 20153, US
Phone Number: 703-555-5555
Email: registrar-agent@samplenames.net
Whois Server: whois.registrar.samplenames.com

Referral URL: www.registrar.samplenames.com
Admin Contact: Jane Doe
Phone Number: 703-555-5556
Email: janedoe@samplenames.com
Admin Contact: John Smith
Phone Number: 703-555-5557
Email: johnsmith@samplenames.com
Admin Contact: Domain Name Administrator
Phone Number: 703-555-5558
Email: dns-eng@samplenames.com
Billing Contact: Petranella Jones
Phone Number: 703-555-5559
Email: pjones@samplenames.com
Technical Contact: Harry Nerd
Phone Number: 703 555-6000
Email: harrynerd@samplenames.com
Technical Contact: Harry Nerd II
Phone Number: 703-555-6001
Email: harrynerd@samplenames.com

>>> Last update of whois database: Fri, 11 Nov 2011 19:15:58 UTC <<<

For all hosts registered using second-level domain names in .com, information as illustrated in the following example is displayed, where the entry parameter is either the full host name or the IP address:

Server Name: DNS.MOMINC.COM
IP Address: 216.230.99.56
Registrar: ENOM, INC.
Whois Server: whois.enom.com
Referral URL: <http://www.enom.com>

>>> Last update of whois database: Fri, 11 Nov 2011 19:15:58 UTC <<<

Whois Provider Data Specification

Registry Operator shall provide bulk access to up-to-date data concerning domain name and nameserver registrations maintained by Registry Operator in connection with the Registry TLD on a daily schedule, only for purposes of providing free public query-based access to up-to-date data concerning domain name and nameserver registrations in multiple TLDs, to a party designated from time to time in writing by ICANN. The specification of the content and format of this data, and the procedures for providing access, shall be as stated below, until changed according to the Registry Agreement.

Content

The data shall be provided in three files:

A. *Domain file*. One file shall be provided reporting on the domains sponsored by all registrars. For each domain, the file shall give the domainname, servername for each nameserver, registrarid, and updateddate.

B. *Nameserver file*. One file shall be provided reporting on the nameservers sponsored by all registrars. For each registered nameserver, the file shall give the servername, each ipaddress, registrarid, and updateddate.

C. *Registrar file*. A single file shall be provided reporting on the registrars sponsoring registered domains and nameservers. For each registrar, the following data elements shall be given: registrarid, registrar address, registrar telephone number, registrar e-mail address, whois server, referral URL, updateddate and the name, telephone number, and e-mail address of all the registrar's administrative, billing, and technical contacts.

Format

The format for the above files shall be as specified by ICANN, after consultation with Registry Operator.

Procedures for Providing Access

The procedures for providing daily access shall be as mutually agreed by ICANN and Registry Operator. In the absence of an agreement, the files shall be provided by Registry Operator sending the files in encrypted form to the party designated by ICANN by Internet File Transfer Protocol.

Whois Data Specification – ICANN

Registry Operator shall provide bulk access by ICANN to up-to-date data concerning domain name and nameserver registrations maintained by Registry Operator in connection with the .com TLD on a daily schedule, only for purposes of verifying and ensuring the operational stability of Registry Services and the DNS.. The specification of the content and format of this data, and the procedures for providing access, shall be as stated below, until changed according to the Registry Agreement.

Content

The data shall be provided in three files:

A. *Domain file*. One file shall be provided reporting on the domains sponsored by all registrars. For each domain, the file shall give the domainname, servername for each nameserver, registrarid, and updateddate.

B. *Nameserver file.* One file shall be provided reporting on the nameservers sponsored by all registrars. For each registered nameserver, the file shall give the servername, each ipaddress, registrarid, and updateddate.

C. *Registrar file.* A single file shall be provided reporting on the registrars sponsoring registered domains and nameservers. For each registrar, the following data elements shall be given: registrarid, registrar address, registrar telephone number, registrar e-mail address, whois server, referral URL, updateddate and the name, telephone number, and e-mail address of all the registrar's administrative, billing, and technical contacts.

Format

The format for the above files shall be as specified by ICANN, after consultation with Registry Operator.

Procedures for Providing Access

The procedures for providing daily access shall be as mutually agreed by ICANN and Registry Operator. In the absence of an agreement, an up-to-date version (encrypted using a public key supplied by ICANN) of the files shall be placed at least once per day on a designated server and available for downloading by ICANN by Internet File Transfer Protocol.

.COM Agreement Appendix 7

Functional and Performance Specifications

(date to be inserted)

These functional specifications for the Registry TLD consist of the following parts:

1. Registry Operator Registrar Protocol;
2. Supported initial and renewal registration periods;
3. Grace period policy;
4. Nameserver functional specifications;
5. Patch, update, and upgrade policy;
6. Performance Specifications;
7. Responsibilities of the Parties;
8. Additional Services; and
9. Implementation of New Standards

1. Registry Operator Registrar Protocol

1.1 Extensible Provisioning Protocol

Registry Operator shall maintain the Extensible Provisioning Protocol ("EPP") in conformance with the Proposed Standard and Informational RFCs 5730, 5731, 5732, 5734, 5910, and 3915 (and in the event Registry Operator accepts thick registration data RFC 5733) published by the Internet Engineering Task Force ("IETF") and/or any successor standards, versions, modifications or additions thereto as Registry Operator deems reasonably necessary. Registry Operator will support EPP in conformance with the aforementioned standards. If Registry Operator requires the use of functionality outside of EPP RFCs, Registry Operator must document EPP extensions using Internet-Draft format following the guidelines described in RFC 3735. Registry Operator is not required to submit documented EPP extensions to the IETF but to consider the recommendations on standardization described in section 2.1 of RFC 3735. Registry Operator will provide and update the relevant documentation of all the EPP objects and Extensions supported to ICANN prior to deployment.

Registry Operator shall be able to accept IPv6 addresses as glue records in its Registry System and publish them in the DNS. Registry Operator shall offer public IPv6 transport for its Shared Registration System (SRS) to any Registrar, no later than six months after receiving the first request in writing from a gTLD accredited Registrar willing to operate the SRS over IPv6.

Registry Operator shall take action to remove orphan glue records (as defined at <http://www.icann.org/en/committees/security/sac048.pdf>) when provided with evidence in written form that such records are present in connection with malicious conduct.

2. Supported initial and renewal registration periods

2.1. Initial registrations of Registered Names (where available according to functional specifications and other requirements) may be made in the registry for terms of up to ten years.

2.2. Renewal registrations of Registered Names (where available according to functional specifications and other requirements) may be made in the registry for terms not to exceed a total of ten years.

2.3. Upon change of sponsorship of the registration of a Registered Name from one Registrar to another, according to Part A of the ICANN Policy on Transfer of Registrations between Registrars, the term of registration of the Registered Name shall be extended by one year, provided that the maximum term of the registration as of the effective date of sponsorship change shall not exceed ten years.

2.4. The change of sponsorship of registration of Registered Names from one Registrar to another, according to Part B of the ICANN Policy on Transfer of Registrations between Registrars shall not result in the extension of the term of the registrations and Registry Operator may assist in such change of sponsorship.

3. Grace period policy

This section describes Registry Operator's practices for operational "Grace" and "Pending" periods, including relationships among sequential operations that occur within given time frames. A *Grace Period* refers to a specified number of calendar days following a Registry operation in which a domain action may be reversed and a credit may be issued to a Registrar. Relevant registry operations in this context are:

- Registration of a new domain,
- Renewal of an existing domain,
- Auto-Renew of an existing domain;
- Transfer of an existing domain; and
- Deletion of an existing domain.

Extension of a registration period is accomplished using the EPP RENEW command or by auto-renewal; registration is accomplished using the EPP CREATE command; deletion/removal is accomplished using the EPP DELETE command; transfer is accomplished using the EPP

TRANSFER command or, where ICANN approves a bulk transfer under Part B of the ICANN Policy on Transfer of Registrations between Registrars, using the procedures specified in that Part. Restore is accomplished using the EPP UPDATE command.

There are five grace periods provided by Registry Operator's Shared Registration System: *Add Grace Period*, *Renew/Extend Grace Period*, *Auto-Renew Grace Period*, *Transfer Grace Period*, and *Redemption Grace Period*.

A *Pending Period* refers to a specified number of calendar days following a Registry operation in which final Registry action is deferred before the operation may be completed. Relevant Registry operations in this context are:

- Transfer of an existing domain,
- Deletion of an existing domain, and
- Restoration of a domain name in Redemption Grace Period.

3.1 Grace Periods

3.1.1 Add Grace Period

The *Add Grace Period* is a specified number of calendar days following the initial registration of a domain. The current value of the *Add Grace Period* for all Registrars is five calendar days. If a Delete, Extend (EPP Renew command), or Transfer operation occurs within the five calendar days, the following rules apply:

Delete. If a domain is deleted within the *Add Grace Period*, the sponsoring Registrar at the time of the deletion is credited for the amount of the registration; provided, however, that Registry Operator shall have the right to charge Registrars a fee as may be set forth in its Registry-Registrar Agreement for disproportionate deletes during the *Add Grace Period*. The domain is deleted from the Registry database and is immediately available for registration by any Registrar. See Section 3.2 for a description of overlapping grace period exceptions.

Extend (EPP Renew command). If a domain is extended within the *Add Grace Period*, there is no credit for the add. The expiration date of the domain registration is extended by the number of years, up to a total of ten years, as specified by the Registrar's requested Extend operation.

Transfer (other than ICANN-approved bulk transfer). Transfers under Part A of the ICANN Policy on Transfer of Registrations between Registrars may not occur during the *Add Grace Period* or at any other time within the first 60 days after the initial registration. Enforcement is the responsibility of the Registrar sponsoring the domain name registration and is enforced by the SRS.

Bulk Transfer (with ICANN approval). Bulk transfers with ICANN approval may be made during the *Add Grace Period* according to the procedures in Part B of the ICANN Policy on Transfer of Registrations between Registrars. The expiration dates of transferred registrations are not affected. The losing Registrar's account is charged for the initial add.

3.1.2 Renew/Extend Grace Period

The *Renew/Extend Grace Period* is a specified number of calendar days following the renewal/extension of a domain name registration period through an EPP Command Renew. The current value of the *Renew/Extend Grace Period* is five calendar days. If a Delete, Extend, or Transfer occurs within that five calendar days, the following rules apply:

Delete. If a domain is deleted within the *Renew/Extend Grace Period*, the sponsoring Registrar at the time of the deletion receives a credit of the renew/extend fee. The domain immediately goes into the Redemption Grace Period. See Section 3.2 for a description of overlapping grace period exceptions.

Extend ("EPP Command 'Renew'"). A domain can be extended within the *Renew/Extend Grace Period* for up to a total of ten years. The account of the sponsoring Registrar at the time of the additional extension will be charged for the additional number of years the registration is extended.

Transfer (other than ICANN-approved bulk transfer). If a domain is transferred within the *Renew/Extend Grace Period*, there is no credit. The expiration date of the domain registration is extended by one year and the years added as a result of the Extend remain on the domain name up to a total of 10 years.

Bulk Transfer (with ICANN approval). Bulk transfers with ICANN approval may be made during the *Renew/Extend Grace Period* according to the procedures in Part B of the ICANN Policy on Transfer of Registrations between Registrars. The expiration dates of transferred registrations are not affected. The losing Registrar's account is charged for the Renew/Extend operation.

3.1.3 Auto-Renew Grace Period

The *Auto-Renew Grace Period* is a specified number of calendar days following an auto-renewal. An auto-renewal occurs if a domain name registration is not renewed by the expiration date; in this circumstance the registration will be automatically renewed by the system the first day after the expiration date. The current value of the *Auto-Renew Grace Period* is 45 calendar days. If a Delete, Extend, or Transfer occurs within the *Auto-Renew Grace Period*, the following rules apply:

Delete. If a domain is deleted within the *Auto-Renew Grace Period*, the sponsoring Registrar at the time of the deletion receives a credit of the Auto-Renew fee. The domain immediately goes into the Redemption Grace Period. See Section 3.2 for a description of overlapping grace period exceptions.

Extend. A domain can be extended within the *Auto-Renew Grace Period* for up to a total of ten years. The account of the sponsoring Registrar at the time of the additional extension will be charged for the additional number of years the registration is extended.

Transfer (other than ICANN-approved bulk transfer). If a domain is transferred within the *Auto-Renew Grace Period*, the losing Registrar is credited with the Auto-Renew charge and the year added by the Auto-Renew operation is cancelled. The expiration date of the domain is extended by one year up to a total maximum of ten and the gaining Registrar is charged for that additional year, even in cases where a full year is not added because of the 10-year registration term maximum limitation.

Bulk Transfer (with ICANN approval). Bulk transfers with ICANN approval may be made during the *Auto-Renew Grace Period* according to the procedures in Part B of the ICANN Policy on Transfer of Registrations between Registrars. The expiration dates of transferred registrations are not affected. The losing Registrar's account is charged for the Auto-Renew.

3.1.4 Transfer Grace Period

The *Transfer Grace Period* is a specified number of calendar days following the transfer of a domain according to Part A of the ICANN Policy on Transfer of Registrations between Registrars. The current value of the *Transfer Grace Period* is five calendar days. If a Delete, Extend, or Transfer occurs within that five calendar days, the following rules apply:

Delete. If a domain is deleted within the *Transfer Grace Period*, the sponsoring Registrar at the time of the deletion receives a credit of the transfer fee. The domain immediately goes into the Redemption Grace Period. See Section 3.2 for a description of overlapping grace period exceptions.

Extend. If a domain registration is extended within the *Transfer Grace Period*, there is no credit for the transfer. The Registrar's account will be charged for the number of years the registration is extended. The expiration date of the domain registration is extended by the number of years, up to a maximum of ten years, as specified by the Registrar's requested Extend operation.

Transfer (other than ICANN-approved bulk transfer). If a domain is transferred within the *Transfer Grace Period*, there is no credit. The expiration date of the domain registration is extended by one year up to a maximum term of ten years. The ICANN Policy on Transfer of Registrations between Registrars does not allow transfers within the first 60 days after another transfer has occurred; it is the Registrar's responsibility to enforce this restriction.

Bulk Transfer (with ICANN approval). Bulk transfers with ICANN approval may be made during the *Transfer Grace Period* according to the procedures in Part B of the ICANN Policy on Transfer of Registrations between Registrars. The expiration dates of transferred registrations are not affected. The losing Registrar's account is charged for the Transfer operation that occurred prior to the Bulk Transfer.

3.1.5 Bulk Transfer Grace Period

There is no grace period associated with Bulk Transfer operations. Upon completion of the Bulk Transfer, any associated fee is not refundable.

3.1.6 Redemption Grace Period

A domain name is placed in REDEMPTIONPERIOD status when a Registrar requests the deletion of a domain that is not within the Add Grace Period. A name that is in REDEMPTIONPERIOD status will not be included in the zone file. A Registrar cannot modify or purge a domain in REDEMPTIONPERIOD status. The only action a Registrar can take on a domain in REDEMPTIONPERIOD is to request that it be restored. Any other Registrar requests to modify or otherwise update the domain will be rejected. Unless restored, the domain will be held in REDEMPTIONPERIOD status for a specified number of calendar days. The current length of this Redemption Period is 30 calendar days.

3.2 Overlapping Grace Periods

If an operation is performed that falls into more than one grace period, the actions appropriate for each grace period apply (with some exceptions as noted below).

- If a domain is deleted within the Add Grace Period and the Extend Grace Period, then the Registrar is credited the registration and extend amounts, taking into account the number of years for which the registration and extend were done.
- If a domain is auto-renewed, then extended, and then deleted within the Extend Grace Period, the Registrar will be credited for any Auto-Renew fee charged and the number of years for the extension.

3.2.1 Overlap Exception

- If a domain registration is extended within the Transfer Grace Period, then the current Registrar's account is charged for the number of years the registration is extended.

Note: If several billable operations, including a transfer, are performed on a domain and the domain is deleted within the grace periods of each of those operations, only those operations that were performed after the latest transfer, including the latest transfer, are credited to the current Registrar.

3.3 Pending Periods

3.3.1 Transfer Pending Period

The *Transfer Pending Period* is a specified number of calendar days following a request from a Registrar (Registrar A) to transfer a domain in which the current Registrar of the domain (Registrar B) may explicitly approve or reject the transfer request. The current value of the *Transfer Pending Period* is five calendar days for all Registrars. The transfer will be finalized upon receipt of explicit approval or rejection from the current Registrar (Registrar B). If the current Registrar (Registrar B) does not explicitly approve or reject the request initiated by Registrar A, the Registry Operator will approve the request automatically after the end of the *Transfer Pending Period*. During the *Transfer Pending Period*:

- a. EPP TRANSFER request or EPP RENEW request is denied.
- b. SYNC is not allowed.
- c. EPP DELETE request is denied.
- d. Bulk Transfer operations are allowed.
- e. EPP UPDATE request is denied.

After a transfer of a domain, the EPP TRANSFER request may be denied for 60 days.

3.3.2 Pending Delete Period

A domain name is placed in PENDING DELETE status if it has not been restored during the Redemption Grace Period. A name that is in PENDING DELETE status will not be included in the zone file. All Registrar requests to modify or otherwise update a domain in PENDING DELETE status will be rejected. A domain name is purged from the registry database a specified number of calendar days after it is placed in PENDING DELETE status. The current length of this Pending Delete Period is five calendar days.

4. Nameserver functional specifications

Nameserver operations for the Registry TLD shall comply with RFCs 1034, 1035, 1982, 2181, 2182, 2671, 3226, 3596, 3597, 4343, and 5966 published by the Internet Engineering Task Force ("IETF") and/or any successor standards, versions, modifications or additions thereto.

Registry Operator shall sign its TLD zone files implementing Domain Name System Security Extensions ("DNSSEC"). Registry Operator shall comply with RFCs 4033, 4034, 4035, 4509 and their successors, and the parties agree that best practices described in RFC 4641 and its successors are recommended but not mandatory. If Registry Operator implements Hashed Authenticated Denial of Existence for DNS Security Extensions, it shall comply with RFC 5155 and its successors. Registry Operator shall accept public-key material from child domain names in a secure manner according to industry best practices. Registry shall also publish in its website the DNSSEC Practice Statements (DPS) describing critical security controls and procedures for key material storage, access and usage for its own keys and secure acceptance of registrants' public-key material. Registry Operator shall publish its DPS following the format described in the "DPS-framework" (currently in draft format, see <http://tools.ietf.org/html/draft-ietf-dnsop-dnssec-dps-framework>) within 180 days after the "DPS-framework" becomes an RFC.

Registry Operator shall offer public IPv6 transport for, at least, two of the Registry's name servers listed in the root zone with the corresponding IPv6 addresses registered with IANA. Registry Operator should follow "DNS IPv6 Transport Operational Guidelines" as described in BCP 91 and the recommendations and considerations described in RFC 4472.

For domain names which are either not registered, or the registrant has not supplied valid records such as NS records for listing in the DNS zone file, or their status does not allow them to be published in the DNS, the use of DNS wildcard Resource Records as described in RFCs 1034 and 4592 or any other method or technology for synthesizing DNS Resources Records or using redirection within the DNS by the Registry Operator is prohibited. When queried for such

domain names the authoritative name servers must return a "Name Error" response (also known as NXDOMAIN), RCODE 3 as described in RFC 1035 and related RFCs. This provision applies for all DNS zone files at all levels in the DNS tree for which the Registry Operator (or an affiliate engaged in providing Registration Services) maintains data, arranges for such maintenance, or derives revenue from such maintenance but this provision shall not apply to the provision of nameservice or any other non-registry service for a domain or zone used for other than registration services to unaffiliated third parties by a single entity (including its affiliates) for domain names registered through an ICANN-Accredited Registrar.

If the Registry Operator offers Internationalized Domain Names ("IDNs"), it shall comply with RFCs 5890, 5891, 5892, 5893 and their successors. Registry Operator shall comply with the ICANN IDN Guidelines at <<http://www.icann.org/en/topics/idn/implementation-guidelines.htm>>, as they may be amended, modified, or superseded from time to time. Registry Operator shall publish and keep updated its IDN Tables and IDN Registration Rules in the IANA Repository of IDN Practices.

5. Patch, update, and upgrade policy

Registry Operator may issue periodic patches, updates or upgrades to the Software, EPP or APIs ("Licensed Product") licensed under the Registry-Registrar Agreement (the "Agreement") that will enhance functionality or otherwise improve the Shared Registration System under the Agreement. For the purposes of this Section 5 of Appendix 7, the following terms have the associated meanings set forth herein.

5.1 A "Patch" means minor modifications to the Licensed Product made by Registry Operator during the performance of error correction services. A Patch does not constitute a Version.

5.2 An "Update" means a new release of the Licensed Product which may contain error corrections, minor enhancements, and, in certain circumstances, major enhancements, and which is indicated by a change in the digit to right of the decimal point in the version number of the Licensed Product.

5.3 An "Upgrade" means a new release of the Licensed Product which involves the addition of substantial or substantially enhanced functionality and which is indicated by a change in the digit to the left of the decimal point in the version of the Licensed Product.

5.4 A "Version" means the Licensed Product identified by any single version number.

Each Update and Upgrade causes a change in version.

* Patches do not require corresponding changes to client applications developed, implemented, and maintained by each Registrar.

* Updates may require changes to client applications by each Registrar in order to take advantage of the new features and/or capabilities and continue to have access to the Shared Registration System.

* Upgrades require changes to client applications by each Registrar in order to take advantage of

the new features and/or capabilities and continue to have access to the Shared Registration System.

Registry Operator, in its sole discretion, will deploy Patches during scheduled and announced Shared Registration System maintenance periods.

For Updates and Upgrades, Registry Operator will give each Registrar notice prior to deploying the Updates and Upgrades into the production environment. The notice shall be at least ninety (90) days. Such notice will include an initial notice before deploying the Update that requires changes to client applications or the Upgrade into the Operational Test and Evaluation ("OT&E") environment to which all Registrars have access. Registry Operator will maintain the Update or Upgrade in the OT&E environment for at least thirty (30) days, to allow each Registrar the opportunity to modify its client applications and complete testing, before implementing the new code in the production environment.

This notice period shall not apply in the event Registry Operator's system is subject to the imminent threat of a failure or a material security threat, the discovery of a major security vulnerability, or a Denial of Service (DoS) attack where the Registry Operator's systems are rendered inaccessible by being subject to:

- i) excessive levels of data traffic
- ii) unauthorized traffic
- iii) data traffic not conforming to the protocols used by the Registry

6. Performance Specifications

These Performance Specifications provide a means to measure Registry Operator's delivery of SRS, DNS Name Server and Whois services for the Registry TLD and serve as the basis for the Service Level Agreements Credits ("**SLA Credits**") set forth in Appendix 10.

6.1 Definitions. Capitalized terms used in this Section 6 and not otherwise defined shall have the meaning ascribed to them in the Registry Agreement.

6.1.1 "Core Internet Service Failure" means an extraordinary and identifiable event beyond the control of Registry Operator affecting the Internet services to be measured pursuant to this Section 6. Such events include, but are not limited to congestion collapse, partitioning, power grid failures, and routing failures.

6.1.2 "Credit Level" means the credit levels set forth in the Table SLA Credits in Section 2 of Appendix 10 that outlines the total credits, penalties and/or liabilities that may be assessed to Registry Operator and sole remedies available to ICANN-Accredited Registrars for Registry Operators failure to meet Performance Specifications outlined in this Appendix 7.

6.1.3 "DNS Name Server" means the service complying with RFC 1034, 1035 and related RFCs made available on TCP/UDP port 53 on Registry Operator's selected servers.

6.1.4 "ICANN-Accredited Registrar" means an ICANN-Accredited Registrar that has a Registry-Registrar Agreement in effect with Registry Operator.

6.1.5 "Monthly Timeframe" means each single calendar month beginning and ending at 0000 Coordinated Universal Time (UTC).

6.1.6 "Performance Specifications" means a description of the measurable functional attributes of a particular System Services.

6.1.7 "Registrar Community" means all of the ICANN-Accredited Registrars who have Registry-Registrar Agreements in effect with Registry Operator for the Registry TLD and who have registered greater than 150 net new .com domain names in the prior thirty (30) calendar day period.

6.1.8 "Round-trip" means the amount of measured time that it takes for a reference query to make a complete trip from the SRS gateway, through the SRS system, back to the SRS gateway.

6.1.9 "Service Level Agreement (SLA)" means the service level agreements attached as Appendix 10 to the Registry Agreement outlining performance standards levels.

6.1.10 "SRS" means the Shared Registration System, a system that the Registry Operator provides to the Registrar Community via a defined protocol (EPP) for registry-registrar interaction. Specifically, it refers to the ability of ICANN-Accredited Registrars to add, modify, and delete (create, update and delete) information associated with registered domain names and associated DNS Name Servers.

6.1.11 "System Services" means the SRS, DNS Name Server and Whois services for the Registry TLD for which availability and Performance Specifications are established.

6.1.12 "Whois" refers to the Registry Operator's Whois service provided in accordance with Appendix 5.

6.2 Service Availability. Service availability is defined as the time, in minutes, that the Registry Operator's System Services are each individually responding to its users ("**Service Availability**") as further defined in Sections 6.2.1 through 6.2.4.

6.2.1 Service Availability is measured as follows:

Service Availability % = $\{[(MTM - POMU) - UOM] / (MTM - POMU)\} * 100$ where:

MTM = Monthly Timeframe Minutes calculated as the number days in that month times 24 hours times 60 minutes. For example, the MTM for January is 31 days * 24 hours * 60 minutes or MTM = 44,640 minutes.

POMU = Planned Outage Minutes Used equals the number of minutes of a Planned Outage (as defined in Section 6.3 below) or Extended Planned Outage (as defined in Section 6.4 below) for

that Monthly Timeframe for each individual System Service. No Monthly Timeframe shall have both a Planned and an Extended Planned Outage.

UOM = Unplanned Outage Minutes equals the total number of minutes the System Services is unavailable excluding any Planned Outages (as defined in Section 6.3 below) or Extended Planned Outage (as defined in Section 6.4 below) for that Monthly Timeframe.

The Service Availability calculation shall be calculated by the Registry Operator and the results reported for each Monthly Timeframe for SRS, Whois and DNS Name Server availability. For Service Availability Performance Specifications measured by calendar year, Yearly Timeframe Minutes (YTM) shall be substituted for Monthly Timeframe Minutes (MTM) in the calculation above. Yearly Timeframe Minutes calculated as 365 days * 24 hours * 60 minutes = 525,600 minutes. Results will be reported to the Registrar Community via e-mail and to ICANN according to Appendix 4.

6.2.2 Service Availability--SRS = 99.99% per calendar year. Service Availability as it applies to the SRS refers to the ability of the SRS to respond to ICANN-Accredited Registrars that access the SRS through the EPP protocol. SRS unavailability, except for Planned Outages (as defined in Section 6.3 below) and Extended Planned Outages (as defined in Section 6.4 below), will be logged with the Registry Operator as Unplanned Outage Minutes. Unavailability will not include any events affecting individual ICANN-Accredited Registrars locally.

SRS unavailability as it applies to the SRS shall mean when, as a result of a failure of systems within the Registry's control, an ICANN-Accredited Registrar is unable to establish a session with the SRS gateway; provided, however, that SRS unavailability shall not include an ICANN-Accredited Registrar's inability to establish a session with the SRS gateway that results from it exceeding its designated number of sessions. Establishing a session with the SRS gateway shall be defined as:

- a) successfully complete a TCP session start,
- b) successfully complete the SSL authentication handshake, and
- c) successfully complete the Extensible Provisioning Protocol (EPP) login command.

Registry Operator will log SRS unavailability once an ICANN-Accredited Registrar reports an occurrence to Registry Operator's customer service help desk in the manner required by the Registry Operator (i.e., e-mail, fax, telephone). The committed Service Availability for SRS is 99.99% per calendar year. The SRS Service Availability metric is a Credit Level 2.

6.2.3 Service Availability--DNS Name Server = 100% per Monthly Timeframe. Service Availability as it applies to the DNS Name Server refers to the ability of the DNS Name Server to resolve a DNS query from an Internet user. DNS Name Server unavailability will be logged with the Registry Operator as Unplanned Outage Minutes. Registry Operator will log DNS Name Server unavailability (a) when such unavailability is detected by monitoring tools, or (b) once an ICANN-Accredited Registrar reports an occurrence to Registry Operator's customer service help

desk in the manner required by the Registry Operator (i.e., e-mail, fax, telephone) and Registry Operator confirms that the occurrence is not unique to the reporting Registrar.

DNS Name Server unavailability shall mean less than eight (8) sites on the Registry Operator's constellation are returning answers to queries with less than 1% packet loss averaged over a Monthly Timeframe or 5% packet loss for any five minute period.

The committed Service Availability for DNS Name Server is 100% per Monthly Timeframe. The DNS Name Server Service Availability metric is a Credit Level 1.

6.2.4 Service Availability--Whois = 100% per Monthly Timeframe. Service Availability as it applies to Whois refers to the ability of Internet users to access and use the Whois. Whois unavailability, except for Planned Outages (as defined in Section 6.3 below) and Extended Planned Outages (as defined in Section 6.4 below), will be logged with the Registry Operator as Unplanned Outage Minutes. Registry Operator will log Whois unavailability (a) when such unavailability is detected by Registry Operator's monitoring tools, or (b) once an ICANN-Accredited Registrar reports an occurrence to Registry Operator's customer service help desk in the manner required by the Registry Operator (i.e., e-mail, fax, telephone). The committed Service Availability for Whois is 100% per Monthly Timeframe. The Whois Service Availability metric is a Credit Level 2.

6.3 Planned Outage. From time to time the Registry Operator will require an outage for regular maintenance or the addition of new functions or features ("**Planned Outage**").

6.3.1 Planned Outage Duration. Planned Outage duration defines the maximum allowable time, in minutes, that the Registry Operator is permitted to take the System Services out of service for regularly scheduled maintenance ("**Planned Outage Duration**"). Planned Outages are planned in advance and the Registrar Community is provided notification prior to an outage.

The Planned Outage Duration for the System Services is as follows:

- (i) Planned Outage Duration - SRS = 45 minutes per Monthly Timeframe;
- (ii) Planned Outage Duration - DNS Name Server = no Planned Outages allowed; and
- (iii) Planned Outage Duration - Whois = no Planned Outages allowed.

The Planned Outage Duration metric is a Credit Level 6.

6.3.2 Planned Outage Timeframe. The Planned Outage Timeframe defines the hours and days in which a Planned Outage may occur ("**Planned Outage Timeframe**"). The Planned Outage Timeframe for the System Services is as follows:

- (i) Planned Outage Timeframe - SRS = 0100-0900 UTC Sunday;
- (ii) Planned Outage Timeframe - DNS Name Server = no Planned Outages allowed; and

(iii) Planned Outage Timeframe - Whois = no Planned Outages allowed.

The Planned Outage Timeframe metric is a Credit Level 5.

6.3.3 Planned Outage Notification. The Registry Operator shall notify all ICANN-Accredited Registrars of any Planned Outage ("**Planned Outage Notification**"). The Planned Outage Notification shall set forth the date and time of the Planned Outage. The number of days prior to a Planned Outage that the Registry Operator shall notify the Registrar Community is as follows:

(i) Planned Outage Timeframe - SRS = 30 days for general maintenance and 90 days for Updates or Upgrades as defined in the Patch, Update and Upgrade Policy in Section 5 of this Appendix 7;

(ii) Planned Outage Timeframe - DNS Name Server = no Planned Outages allowed; and

(iii) Planned Outage Timeframe - Whois = no Planned Outages allowed.

The Planned Outage Notification metric is a Credit Level 5.

6.4 Extended Planned Outage. In some cases, such as major software upgrades and platform replacements, an extended maintenance timeframe is required ("**Extended Planned Outage**"). Extended Planned Outages will be less frequent than Planned Outages but their duration may be longer.

6.4.1 Extended Planned Outage Duration. The Extended Planned Outage duration defines the maximum allowable time, in hours and minutes that the Registry Operator is permitted to take the System Services out of service for extended maintenance ("**Extended Planned Outage Duration**"). Extended Planned Outages are planned in advance and the Registrar Community is provided notification in accordance with Section 6.4.3. Extended Planned Outage periods may not occur in the same Monthly Timeframe as a Planned Outage. The Extended Planned Outage Duration for the System Services is as follows:

(i) Extended Planned Outage Duration - SRS = 4 hours (240 minutes) per calendar year and one Extend Planned Outage of 8 hours (480) minutes every 3 years;

(ii) Extended Planned Outage Duration - DNS Name Server = no Extended Planned Outages allowed; and

(iii) Extended Planned Outage Duration - Whois = no Extended Planned Outages allowed.

The Extended Planned Outage Notification metric is a Credit Level 6.

6.4.2 Extended Planned Outage Timeframe. The Extended Planned Outage Timeframe defines the hours and days in which the Extended Planned Outage may occur ("**Extended Planned Outage Timeframe**"). The Extended Planned Outage Timeframe for the System Services is as follows:

- (i) Extended Planned Outage Timeframe - SRS = 0100 - 1300 UTC Sunday;
- (ii) Extended Planned Outage Timeframe - DNS Name Server = no Extended Planned Outages allowed; and
- (iii) Extended Planned Outage Timeframe - Whois = no Extended Planned Outages allowed.

The Extended Planned Outage Notification metric is a Credit Level 5.

6.4.3 Extended Planned Outage Notification. The Registry Operator must notify the Registrar Community of any Extended Planned Outage ("**Extended Planned Outage Notification**"). The Extended Planned Outage Notification shall set forth the date and time of the Extended Planned Outage. The number of days prior to an Extended Planned Outage that the Registry Operator must notify ICANN-Accredited Registrars is as follows:

- (i) Extended Planned Outage Timeframe - SRS = 90 Days;
- (ii) Extended Planned Outage Timeframe - DNS Name Server = no Extended Planned Outages allowed; and
- (iii) Extended Planned Outage Timeframe - Whois = no Extended Planned Outages allowed.

The Extended Planned Outage Notification metric is a Credit Level 5.

6.5 Processing Time. Processing time is a measurement of Service Availability and equals the Round-trip for the System Services ("**Processing Time**"). The Registry Operator will log the Processing Time for all of the protocol transactions (i.e. Check, Add/Create, Modify/Update and Delete). Processing Time will be measured in a Monthly Timeframe and reported on a monthly basis to ICANN in accordance with Appendix 4. Should the total volume of protocol transactions (measured individually) added by all ICANN-Accredited Registrars for a Monthly Timeframe exceed Registry Operator's actual volume of protocol transactions for the previous Monthly Timeframe by more than 20%, then ICANN-Accredited Registrars shall not be eligible for any SLA credit, and Registry Operator shall have no liability to ICANN, if Registry Operator fails to meet a Processing Time Performance Specification set forth in this Section 6.5.

6.5.1 Processing Time--Check Domain = 25 milliseconds for 95%.

- (i) The Processing Time for Check Domain is applicable to the SRS as accessed through the defined protocol (EPP) for registry-registrar interaction and measures the Processing Time for an availability check of a specific domain name.
- (ii) The performance specification for Check Domain is 25 milliseconds Round-trip for 95% of the transactions during a Monthly Timeframe.

The Processing Time for Check Domain metric is a Credit Level 3.

6.5.2 Processing Time--Add/Create = 50 milliseconds for 95%.

(i) The Processing Time for Add/Create is applicable to the SRS as accessed through the defined protocol (EPP) for registry-registrar interaction and measures the Processing Time for add/create transactions associated with domain names.

(ii) The Performance Specification for Add/Create is 50 milliseconds for Round-trip for 95% of the transactions processed during a Monthly Timeframe.

The Processing Time for Add/Create metric is a Credit Level 3.

6.5.3 Processing Time--Modify/Update and Delete Domain = 100 milliseconds for 95%.

(i) The Processing Time for Modify/Update and Delete is applicable to the SRS as accessed through the defined protocol (EPP) for registry-registrar interaction and measures the Processing Time for Modify/Update and Delete transactions associated with domain names.

(ii) The Performance Specification for Modify/Update and Delete is 100 milliseconds Round-trip for 95% of the transactions processed during a Monthly Timeframe.

The Processing Time for Modify/Update and Delete metric is a Credit Level 3.

6.5.4 Processing Time--Whois Query = 5 milliseconds for 95%.

(i) The Processing Time for Whois query is applicable to the Whois and measures the Processing Time for a Whois query.

(ii) The Performance Specification for a Whois query is 5 milliseconds for 95% of the transactions during a Monthly Timeframes. That is, 95% of the transactions during a Monthly Timeframe will take 5 milliseconds or less from the time the Whois receives a query to the time it responds.

The Processing Time for Whois Query metric is a Credit Level 3.

6.5.5 Processing Time--DNS Name Server Resolution = 100 milliseconds for 95%.

(i) The Processing Time for DNS Name Server Resolution is applicable to the DNS Name Server and measures the processing time for a DNS query.

(ii) The Performance Specification for DNS Name Server Resolution is 100 milliseconds for 95% of the transactions during a Monthly Timeframe. That is, 95% of the transactions during a Monthly Timeframe will take 100 milliseconds or less from the time the name server receives the DNS query to the time it provides a response.

The Processing Time for the DNS Name Server metric is a Credit Level 3.

6.6 Update Frequency. The Registry Operator makes timely updates to the data on the DNS Name Servers and Whois. ICANN-Accredited Registrars record these updates through the SRS. The SRS then updates the DNS Name Server and the Whois. Registry Operator processes this updates on a near real time basis.

The committed performance specification with regards to Update frequency for both the DNS Name Server and the Whois is 3 minutes for 95% of the transactions during a Monthly Timeframe. That is, 95% of the updates to the DNS Name Servers and Whois during a Monthly Timeframe will be completed within 3 minutes. Update frequency is measured from the time that the Registry Operator confirms the update to the time the update appears in the DNS Name Server and Whois. Update frequency performance will be reported on a monthly basis to ICANN in accordance with Appendix 4.

6.6.1 Update Frequency--DNS Name Server = 3 minutes for 95% during a Monthly Timeframe.

The Update frequency--DNS Name Server is 3 minutes for 95% during a Monthly Timeframe.

The Update frequency metric for DNS Name Server is Credit Level 4.

6.6.2 Update Frequency--Whois - 3 minutes for 95% during a Monthly Timeframe.

The Update frequency--Whois is 3 minutes for 95% during a Monthly Timeframe.

The Update frequency metric for Whois is Credit Level 4.

6.7 Cross-Network Name Server Performance Requirements. DNS Name Server Round-trip and packet loss from the Internet are important elements of the quality of service provided by the Registry Operator. These characteristics, however, are affected by Internet performance and, therefore, cannot be closely controlled by Registry Operator. Accordingly, these requirements are not matters subject to SLA Credits under the Service Level Agreement set forth on Appendix 10 or obligations upon which a breach by Registry Operator of the Registry Agreement may be asserted.

The committed performance specification for cross-network name server performance is a measured Round-trip of under 300 milliseconds and measured packet loss of under 1% averaged over the course of a Monthly Timeframe and no greater than 5% for any five (5) minute period over the course of the Monthly Timeframe. Cross-network name server performance measurements may be conducted by ICANN at the times of its choosing, in the following manner:

6.7.1 The measurements may be conducted by sending strings of DNS request packets from different measuring locations to each of the .com DNS Name Servers and observing the responses from the .com DNS Name Servers. (These strings of requests and responses are referred to as a "**CNNP Test**".) The measuring locations will be distributed around the Internet.

6.7.2 Each string of request packets will consist of UDP or TCP packets requesting nameserver (NS) records for arbitrarily selected .com second-level domains, preselected to ensure that the names exist in the Registry TLD and are resolvable. The packet loss (i.e. the percentage of response packets not received) and the average Round-trip time for response packets received may be noted.

6.7.3 To meet the packet loss and Round-trip requirements for a particular CNNP Test, all three of the following must be true:

6.7.3.1 The Round-trip and packet loss from each measurement location to at least one .com name server must not exceed the required values;

6.7.3.2 The packet loss to each of the .com name servers from at least one of the measurement locations must not exceed the required value; and

6.7.3.3 Any failing CNNP Test result obtained during an identified Core Internet Service Failure shall not be considered.

6.7.4 To ensure a properly diverse testing sample, ICANN will conduct the CNNP Tests at varying times (i.e. at different times of the day, as well as on different days of the week). Registry Operator may only be deemed to have persistently failed to meet the cross-network name server performance requirement only if the .com DNS Name Servers fail the CNNP Tests (see Section 6.7.3 above) with no less than three consecutive failed CNNP Tests.

6.7.5 In the event of persistent failure of the CNNP Tests, ICANN will give Registry Operator written notice of the failures (with backup data) and Registry Operator will have sixty days to cure the failure.

6.7.6 Sixty days prior to the commencement of testing under this provision, ICANN will provide Registry Operator with the opportunity to evaluate the testing system to be used by ICANN. In the event that Registry Operator raises concerns regarding such system, ICANN will work directly with Registry Operator to attempt to address those concerns.

7. Responsibilities of the Parties.

7.1 Except in the case of DNS Name Server performance measurements, Registry Operator will perform monitoring from internally located systems as a means to verify that the availability and performance measurements in this document are being met.

7.2 The Registry Operator will provide system performance and availability reports monthly to the Registrar Community via e-mail and to ICANN according to Appendix 4.

7.3 The Registry Operator will provide the Whois Service as specified in Appendix 5.

7.4 The Registry Operator will use commercially reasonable efforts to restore the critical systems of the System Services within 24 hours after the termination of a force majeure event and restore

full system functionality within 48 hours after the termination of a force majeure event. Outages due to a force majeure will not be considered service unavailability for purposes of this Appendix 7 or the SLA.

7.5 Registry Operator shall not be liable to ICANN or ICANN-Accredited Registrars for any credits or penalties or be deemed to be in breach of any of its obligations under the Registry Agreement if it fails to meet a Performance Specification as a result of its compliance with any Consensus Policy established after the Effective Date to the extent and for so long as the failure to meet a Performance Specification is unavoidable by commercially reasonable efforts due to Registry Operator's compliance with such Consensus Policy.

7.6 Registry Operator shall provide to ICANN and publish on its website its accurate contact details including a valid email and mailing address as well as a primary contact for handling inquiries related to malicious conduct in the TLD, and will provide ICANN with prompt notice of any changes to such contact details.

8. Additional Services

8.1 Bulk Transfer After Partial Portfolio Acquisition (BTAPPA)

Bulk Transfer After Partial Portfolio Acquisition (BTAPPA) is a Registry service available to consenting Registrars in the circumstance where one ICANN-Accredited Registrar purchases, by means of a stock or asset purchase, merger or similar transaction, a portion but not all, of another ICANN-Accredited Registrar's domain name portfolio in the .com top-level domain.

At least fifteen days before completing a BTAPPA, the losing Registrar must provide to all domain name registrants for names involved in the bulk transfer, written notice of the bulk change of sponsorship. The notice must include an explanation of how the Whois record will change after the bulk transfer occurs, and customer support and technical contact information of the gaining Registrar.

If a domain is transferred under the BTAPPA service during any applicable Grace Period as described in Section 3 above, there is no credit. The expiration dates of transferred registrations are not affected.

Domain names in the following statuses at the time of the Transfer Request will not be transferred in a BTAPPA: "pending transfer", "redemption grace period (RGP)", or "pending delete". Domain names that are within the auto-renew grace window are subject to bulk transfer, but Verisign may decline to provide a credit for those names deleted after the bulk transfer, but prior to the expiration of the auto-renew grace window.

Verisign has discretion to reject a BTAPPA request if there is reasonable evidence that a transfer under BTAPPA is being requested in order to avoid fees otherwise due to Verisign or ICANN, or if a Registrar with common ownership or management or both has already requested BTAPPA service within the preceding six-month period.

9. Implementation of New Protocols

Registry Operator and ICANN agree to engage in good faith negotiations at regular intervals (at least once every eighteen months following the Effective Date) regarding possible implementation of new RFCs related to the matters addressed in Appendices 1 (Escrow Specifications), 5 (Whois) and 7 (Technical and Functional Specifications).

.COM Agreement Appendix 10 Service Level Agreement (SLA) (date to be inserted)

Verisign, Inc. ("**Registry Operator**") strives to provide a world-class level of service to its customers. This Service Level Agreement ("**SLA**") provides remedies in the form of SLA Credits (as defined in section 2 below) should the operational performance of Registry Operator fall below certain Performance Specifications identified in Appendix 7.

1. Definitions.

Capitalized terms used herein and not otherwise defined shall have the definitions ascribed to them in the Registry Agreement, including, but not limited to Appendix 7.

2. SLA Credits.

If the Registry Operator fails to meet the Performance Specifications defined in Appendix 7, Section 6 thereof, to which Credit Levels apply, the Registry Operator shall pay credits to ICANN-Accredited Registrar(s) in accordance with the identified Credit Level for such failed Performance Specifications metrics, calculated in accordance with the Credit Level tables set forth in this Section 2 ("**SLA Credit**"). The SLA Credit due to each ICANN-Accredited Registrar shall be paid as an offset to registrations and other fees owed to Registry Operator by the ICANN-Accredited Registrar. SLA Credits represent the total credits, penalties and/or liabilities that may be assessed to the Registry Operator for a breach of the Performance Specifications set forth in Appendix 7. All SLA Credits shall be paid in U.S. Dollars. The Credit Level Table (Refer to Table SLA Credits) indicates the corresponding Credit Level for each Performance Specification to which Credit Levels apply. This SLA will be reconciled on a quarterly basis and unless otherwise specified in this SLA, SLA Credits will be issued on a quarterly basis.

App. 7 Reference	Performance Specification	SRS	Name Server	Whois
6.2.2, 6.2.3, 6.2.4	Service Availability	Level 2	Level 1	Level 2
6.3.1	Planned Outage - Duration	Level 6	NA	NA
6.3.2	Planned Outage - Timeframe	Level 5	NA	NA
6.3.3	Planned Outage - Notification	Level 5	NA	NA
6.4.1	Extended Planned Outage - Duration	Level 6	NA	NA
6.4.2	Extended Planned Outage - Timeframe	Level 5	NA	NA
6.4.3	Extended Planned Outage - Notification	Level 5	NA	NA
6.5.1	Processing Time - Check Domain	Level 3	NA	NA
6.5.2	Processing Time - Add/Create Domain	Level 3	NA	NA
6.5.3	Processing Time - Modify/Update and Delete Domain	Level 3	NA	NA
6.5.4	Processing Time - Whois Query	NA	NA	Level 3

6.5.5	Processing Time - DNS Name Server Resolution	NA	Level 3	NA
6.6.1	Update Frequency - DNS Name Server	NA	Level 4	NA
6.6.2	Update Frequency - Whois	NA	NA	Level 4

2.1 Credit Level 1 - Credit Level 1 is assessed for DNS Name Server Service Availability less than 100% per Monthly Timeframe. If the DNS Name Server Service Availability Performance Specification is not met, the SLA Credit for Credit Level 1 shall be payable to active ICANN-Accredited Registrars 30 days after the applicable calendar month in which the Service Availability Performance Specification was not met. For purposes of this Appendix 10, an "active" ICANN-Accredited Registrar is one who has registered greater than 150 net new .com domain names in the previous Monthly Timeframe.

Each active ICANN-Accredited Registrar that meets the requirements of Section 3 below would be credited an amount equal to such active ICANN-Accredited Registrar's net new .com domain name registrations during the applicable Monthly Timeframe divided by the net amount of new .com domain name registrations for all active ICANN-Accredited Registrars within the applicable Monthly Timeframe times the Monthly Credit Amount set forth in Table Credit Level 1.

Table Credit Level 1

	<30 sec.'s	30-60 sec.'s	1-2 min.'s	2-10 min.'s	10-30 min.'s	over 30 min.'s
SLA Credit Amount	\$100,000	\$175,000	\$250,000	\$400,000	\$750,000	\$1,000,000

2.2 Credit Level 2 - Credit Level 2 is assessed for SRS Service Availability less than 99.99% per calendar year and for Whois Service Availability less than 100% per Monthly Timeframe. If a Service Availability Performance Specification metrics are not met, the SLA Credit for Credit Level 2 shall be credited directly to active ICANN-Accredited Registrar(s) that meet the requirements of Section 3 below in an amount equal to the duration of the outage times (OT) times the average daily number of .com registrations over the previous three (3) months (NRAvg) times the .com wholesale fee divided by the number of minutes per day (1,440 minutes).

Active ICANN-Accredited Registrar would be credited:

$$\frac{(.com \text{ Registry Fee}) * (OT) * (NRAvg)}{(1,440 \text{ minutes})}$$

Additionally, for any month where the total combined Unplanned Outage of SRS and Whois is greater than 30 minutes, Registry Operator will credit active ICANN-Accredited Registrars that meet the requirements of Section 3 below One Thousand Dollars (\$1,000).

2.3 Credit Level 3 - Credit Level 3 is assessed for failure to meet the Performance Specifications for the Processing Time for check domain, add/create, modify/update and delete domain commands, and DNS Name Server Resolution and Whois queries. If the Processing Time

Performance Specifications metrics are not met, the SLA Credit for Credit Level 3 (Refer to Table Credit Level 3) shall be payable to active ICANN-Accredited Registrars in an amount based upon the % of time that the Processing Time exceeds the applicable Performance Specifications metric.

Each active ICANN-Accredited Registrar that meets the requirements of Section 3 below would be credited an amount equal to such active ICANN-Accredited Registrar's net new .com domain name registrations during the applicable Monthly Timeframe divided by the net amount of net new .com domain name registrations for all active ICANN-Accredited Registrars within the applicable Monthly Timeframe times the SLA Credit Amount set forth in Table Credit Level 3 within 30 days after the applicable calendar month.

Table Credit Level 3

	5 - <10%	10 - <25%	25 - <50%	≥50%
SLA Credit Amount	\$500	\$1,000	\$2,000	\$5,000

2.4 Credit Level 4 - Credit Level 4 is assessed for failure to meet the Performance Specifications for Update frequencies for DNS Name Server and Whois. If the Update frequency Performance Specifications metrics are not met, the SLA Credit for Credit Level 4 (Refer to Table Credit Level 4) shall be payable to active ICANN-Accredited Registrars in an amount based upon the % of time that the Update frequency exceeds the applicable Performance Specifications metric.

Each active ICANN-Accredited Registrar that meets the requirements of Section 3 below would be credited an amount equal to such active ICANN-Accredited Registrar's net new .com domain name registrations during the applicable Monthly Timeframe divided by the net amount of new .com domain name registrations for all active ICANN-Accredited Registrars within the applicable Monthly Timeframe times the SLA Credit Amount set forth in Table Credit Level 4.

Table Credit Level 4

	Up to <15 minutes over	15 minutes to <1 hour	1 hour to <12 hours	≥ 12 hours
SLA Credit Amount	\$500	\$1,000	\$2,000	\$5,000

2.5 Credit Level 5 - Credit Level 5 is assessed for failure to meet the Performance Specifications for Planned Outage Timeframe, Planned Outage Notification, Extended Planned Outage Timeframe and Extended Planned Outage Notification. If the Performance Specifications metrics are not met, the SLA Credit for Credit Level 5 shall be payable to each active ICANN-Accredited Registrar that meets the requirements of Section 3 below in an amount equal to such active ICANN-Accredited Registrar's net new .com domain name registrations during the applicable Monthly Timeframe divided by the net amount of new .com domain name registrations for all active ICANN-Accredited Registrars within the applicable Monthly Timeframe times One Thousand Dollars (\$1,000).

2.6 Credit Level 6 - Credit Level 6 is assessed for failure to meet the Performance Specifications for Planned Outage Duration and Extended Planned Outage Duration. If the Performance Specifications are not met, the SLA Credit for Credit Level 6 shall be payable directly to active ICANN-Accredited Registrar(s) that meet the requirements of Section 3 below in an amount equal to the Average Daily Volume (ADM) of net .com new adds as averaged over the course of the previous three months times the Planned Duration Overage (PDO) in minutes times the SLA Credit graduated financial penalty set forth in Table Credit Level 6. For purposes of this Appendix 10, PDO is calculated by subtracting the maximum allowable time in hours and minutes for a Planned Outage Duration or Extended Planned Outage Duration, as applicable, from the total outage in hours and minutes.

Table Credit Level 6

	1 to <15 minutes	15 minutes to <1 hour	1 to <3 hours	3 –to <6 hours	≥ 6 hours
SLA Credit	ADM*PDO*\$0.25	ADM*PDO*\$0.5	ADM*PDO*\$1	ADM*PDO*\$1.50	ADM*PDO*\$2

3. Registrar Responsibilities.

In order for ICANN-Accredited Registrars to claim SLA Credits outlined in this Appendix 10, the procedures of this Section 3 must be strictly followed.

3.1 The affected ICANN-Accredited Registrar must report each occurrence of alleged failure by Registry Operator to meet a Performance Specification and make a request for SLA Credit to the Registry Operator's customer service help desk in the manner required by the Registry Operator (i.e., e-mail, fax, telephone) in order to be eligible for a SLA Credit. An affected ICANN Accredited Registrar must initiate a request for SLA Credits within three months of the end of the calendar year in which the failure to meet a Performance Specification occurred.

3.2 Each ICANN-Accredited Registrar must inform the Registry Operator any time its estimated volume of transactions (excluding check domain commands) is expected to exceed the ICANN-Accredited Registrar's previous month's volume by more than 25%. In the event that an ICANN-Accredited Registrar fails to inform Registry Operator of a forecasted increase of volume of transactions of 25% or more and the ICANN-Accredited Registrar's volume increases 25% or more over the previous month, and should the total volume of transactions for the Registry Operator for all ICANN-Accredited Registrars for that month exceed the Registry Operator's actual volume of the previous month's transactions by more than 20%, then the ICANN-Accredited Registrar will not be eligible for any SLA Credits outlined in this SLA in that Monthly Timeframe. An ICANN-Accredited Registrar shall provide such forecast at least 30 days prior to the first day of the applicable calendar month. Registry Operator agrees to provide monthly transaction summary reports to ICANN-Accredited Registrars via e-mail.

3.3 The affected ICANN-Accredited Registrar must provide documentation to support its claim for a SLA Credit. An ICANN-Accredited Registrar shall provide documentation in the form of either:

a) ICANN-Accredited Registrar initiated notification(s) to the Registry Operator of a Performance Specification that exceeded SLA limits or failed to meet SLA requirements, including the trouble ticket number issued by the Registry Operator. The closing ticket(s) should be included as well in order to determine the total downtime (unless the trouble ticket includes this); or

b) Notification from the Registry Operator (with trouble ticket number attached) of a Performance Specification that exceeded SLA limits or failed to meet SLA requirements. The closing ticket(s) should be included as well in order to determine the total downtime (unless the trouble ticket includes this).

3.4 In order to calculate credits, the affected ICANN-Accredited Registrar must include volume figures for the past three (3) calendar months (or, if less, such amount of time that the ICANN-Accredited Registrar has been authorized to register names in the .com registry) and a certification that these numbers accurately reflect the minimum number of registrations that would be covered during the affected period.

3.5 Registry Operator shall perform the required measurements in order to corroborate the total SLA Credits requested by ICANN-Accredited Registrar. Such measurements and associated documentation shall be delivered by e-mail to each of the ICANN-Accredited Registrars requesting a SLA Credit.

3.6 When the above steps have been accurately completed, Registry Operator shall provide notification of the number of SLA Credits that will be entered in the affected ICANN-Accredited Registrar's account that can be used immediately toward .com domain name registrations and other fees owed to Registry Operator by the ICANN-Accredited Registrar.

4. Obligations.

4.1 Except in the case of cross-network name server performance (which is not a subject of this Service Level Agreement), Registry Operator will perform monitoring from at least two external locations and a minimum of one internal location as a means to verify that a) sessions can effectively be established and b) EPP commands can be successfully completed.

4.2 In the event that all ICANN-Accredited Registrars are affected by a SRS unavailability, the Registry Operator is responsible for opening a blanket trouble ticket and immediately notifying all ICANN-Accredited Registrars of the trouble ticket number and details.

4.3 In the event that the System Services are unavailable to an individual ICANN-Accredited Registrar, Registry Operator will use commercially reasonable efforts to re-establish the affected System Services for such ICANN-Accredited Registrar as soon as reasonably practicable. Any System Services unavailability attributable to any individual ICANN-Accredited Registrar that does not represent a System Services outage will not result in SLA Credits or be subject to this SLA.

4.4 ICANN-Accredited Registrar(s) and the Registry Operator agree to use reasonable commercial good faith efforts to establish the cause of any alleged System Services unavailability. If it is mutually determined to be a Registry Operator problem, the System Services unavailability will be subject to this SLA.

4.5 The Registry Operator will use commercially reasonable efforts to restore any System Services within 24 hours after the termination of a force majeure event and restore full system functionality within 48 hours after the termination of a force majeure event. Outages due to a force majeure will not be considered System Services unavailability, impact the Performance Specifications set forth in Appendix 7, or be subject to this SLA.

4.6 The Registry Operator will open incident trouble tickets within a commercially reasonable period of time and will treat all system performance problems in order of decreasing severity and fix them within a commercially reasonable period of time. Incidents flagged by the measurement system will also qualify as ticketed events and will be subject to this SLA.

4.7 The Registry Operator will publish monthly system performance and Service Availability reports.

5. Miscellaneous.

5.1 This SLA is independent of any rights, obligations or duties set forth in the Registry Agreement. In the event of any conflict between the terms and conditions of this SLA and the Registry Agreement, the Registry Agreement shall control.

5.2 As an addendum to the Registry-Registrar Agreement ("RRA"), no provision in this SLA is intended to replace any term or condition in the RRA.

5.3 Dispute Resolution will be handled per RRA Section 6.7.

5.4 Any interruption of System Services that occurs, as a direct result of RRA Sections 2.13 (Resolution of Technical Problems), 5.4 (Non-Payment of Fees), or 6.3 (Force Majeure) or any other applicable provision within the RRA or Registry Operator's compliance with any Consensus Policy established after the Effective Date, will not be subject to this SLA, but only to the extent and for so long as such interruption of System Services is unavoidable by commercially reasonable efforts due to Registry Operator's compliance with such provisions within the RRA or any Consensus Policy established after the Effective Date.