

Internet Engineering Task Force
Internet-Draft
Intended status: Best Current Practice
Expires: May 24, 2019

N. McPherson
1&1 IONOS SE
T. Sattler, Editor
November 25, 2018

Registry Reporting Repository
draft-mcpherson-sattler-registry-reporting-repo-06

Abstract

This document describes a domain name registry reporting repository used to provide reports to accredited domain name registrars.

Status of This Memo

This Internet-Draft is submitted in full conformance with the provisions of BCP 78 and BCP 79.

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF). Note that other groups may also distribute working documents as Internet-Drafts. The list of current Internet-Drafts is at <https://datatracker.ietf.org/drafts/current/>.

Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress".

This Internet-Draft will expire on May 24, 2019.

Copyright Notice

Copyright (c) 2018 IETF Trust and the persons identified as the document authors. All rights reserved.

This document is subject to BCP 78 and the IETF Trust's Legal Provisions Relating to IETF Documents (<https://trustee.ietf.org/license-info>) in effect on the date of publication of this document. Please review these documents carefully, as they describe your rights and restrictions with respect to this document. Code Components extracted from this document must include Simplified BSD License text as described in Section 4.e of the Trust Legal Provisions and are provided without warranty as described in the Simplified BSD License.

Table of Contents

1. Introduction	2
2. Terminology and Definitions	2
2.1. Internationalized Domain Names	3
2.2. Dates and Times	3
3. SFTP Server	3
4. SFTP Account	3
5. SFTP Directory Structure	3
6. SFTP Checksum	4
7. SFTP Server Maintenance	4
8. IANA Considerations	4
9. Security Considerations	4
10. Implementation Status	4
11. References	5
11.1. Normative References	5
11.2. Informative References	5
Appendix A. Change History	5
A.1. Change from 00 to 01	5
A.2. Change from 01 to 02	5
A.3. Change from 02 to 03	5
A.4. Change from 03 to 04	6
A.5. Change from 04 to 05	6
A.6. Change from 05 to 06	6
Appendix B. Acknowledgements	6
Authors' Addresses	6

1. Introduction

Modern top-level domain registries provide a number of detailed reports and documents that their registrars require on a daily, weekly and monthly basis. These most commonly include transaction reports, as well as lists containing currently unavailable domains and current premium domains. These reports are critical for registrars' businesses and play an important role in accounting and operations processes as well as in sales and marketing activities. In the current set-up registrars must download these reports from each registry's intranet in a different manner according to each registry's own document management set up.

This document describes a domain registry reporting repository used to provide reports to accredited domain registrars.

2. Terminology and Definitions

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC2119] when specified in their uppercase forms.

2.1. Internationalized Domain Names

Top-level domains and domain names contained in a directory or file name MUST be written as A-LABEL according to [RFC5890].

2.2. Dates and Times

All dates and times attribute values MUST be expressed in Universal Coordinated Time (UTC) using the Gregorian calendar. The extended date-time form using upper case "T" and "Z" characters defined in ISO 8601 [RFC3339] MUST be used to represent date-time values.

One day is defined as one day in UTC+0. Therefore, months and years will also be calculated on this basis.

3. SFTP Server

Each domain name registry sets up and manages a SFTP (https://en.wikipedia.org/wiki/SSH_File_Transfer_Protocol) server. Every SFTP server MUST be reachable through a generic URI, such as `sftp://registry.example`, and MUST listen on port 22.

IP whitelisting to reach this SFTP server is RECOMMENDED.

4. SFTP Account

Each domain name registry MUST create one SFTP account for every accredited domain name registrar. If a registrar owns more than one registrar, then a registry SHOULD combine them in one account on request by the parent registrar or entity.

The authentication for a SFTP account should be done with an username and key instead of a password.

To avoid security risks, it is strongly RECOMMENDED to limit SFTP accounts to SFTP only and to exclude them from SSH functions, such as port forwarding, tunneling, SSH login or command execution.

5. SFTP Directory Structure

The home directory of a SFTP user MUST be its root. This can be achieved with e.g. chroot (<https://en.wikipedia.org/wiki/Chroot>) and prevents that a SFTP user can access other directories that are not owned by themselves. All directories MUST be lowercase.

Files in these directories MUST be stored in an appropriate subdirectory according to their creation date.

```
/YYYY-MM/example.csv.gz  
/YYYY-MM/domains/example.csv.gz  
/YYYY-MM/foo/bar/example.csv.gz
```

YYYY represents the year in which the file was created, format according to ISO 8601 [RFC3339]

MM represents the months in which the file was created, format according to ISO 8601 [RFC3339]

6. SFTP Checksum

All files stored on the SFTP server MUST have a sha256sum (<https://en.wikipedia.org/wiki/Shasum>) checksum.

The file name with the checksum MUST be the same as the file name with the content extended with the suffix .sha256.

File with content: example.csv.gz

File with sha256sum: example.csv.gz.sha256

7. SFTP Server Maintenance

Maintenance is important and necessary, especially to keep the SFTP server up to date and secure. It MUST be announced in advance. In this case the EPP registry maintenance specification [I-D.sattler-epp-registry-maintenance] is RECOMMENDED to use. The notification notice MUST be send at least 7 days in advance.

8. IANA Considerations

This document has no IANA actions.

9. Security Considerations

The registry reporting repository described in this document do not provide any security services beyond those described by SFTP. The security considerations described in these other specifications apply to this specification as well.

10. Implementation Status

Note to RFC Editor: Please remove this section and the reference to [RFC7942] before publication.

This section records the status of known implementations of the protocol defined by this specification at the time of posting of this Internet-Draft, and is based on a proposal described in [RFC7942]. The description of implementations in this section is intended to assist the IETF in its decision processes in progressing drafts to RFCs. Please note that the listing of any individual implementation here does not imply endorsement by the IETF. Furthermore, no effort has been spent to verify the information presented here that was supplied by IETF contributors. This is not intended as, and must not be construed to be, a catalog of available implementations or their features. Readers are advised to note that other implementations may exist.

According to [RFC7942], "this will allow reviewers and working groups to assign due consideration to documents that have the benefit of running code, which may serve as evidence of valuable experimentation and feedback that have made the implemented protocols more mature. It is up to the individual working groups to use this information as they see fit".

Add implementation details once available.

11. References

11.1. Normative References

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997, <<https://www.rfc-editor.org/info/rfc2119>>.
- [RFC5890] Klensin, J., "Internationalized Domain Names for Applications (IDNA): Definitions and Document Framework", RFC 5890, August 2010, <<https://www.rfc-editor.org/info/rfc5890>>.

11.2. Informative References

- [I-D.sattler-epp-registry-maintenance]
Sattler, T., Roger, C. and Kolker, J., "Registry Maintenance Notifications for the Extensible Provisioning Protocol (EPP)", <<https://tools.ietf.org/html/draft-sattler-epp-registry-maintenance>> (work in progress), July 2018
- [RFC3339] Klyne, G., Ed. and C. Newman, "Date and Time on the Internet: Timestamps", RFC 3339, July 2002, <<https://www.rfc-editor.org/info/rfc3339>>.
- [RFC7942] Sheffer, Y. and Farrel, A., "Improving Awareness of Running Code: The Implementation Status Section", RFC 7942, July 2016, <<https://www.rfc-editor.org/info/rfc7942>>.

Appendix A. Change History

A.1. Change from 00 to 01

Added reference to IDN A-LABEL. Added clarification on date delimitation. Added checksum requirement.

A.2. Change from 01 to 02

Updated Neal's author details.

A.3. Change from 02 to 03

Fixed formatting of the table of contents.

A.4. Change from 03 to 04

Added editor flag to author.

A.4. Change from 04 to 05

Minor formatting changes. Added security advice to SFTP.

A.5. Change from 05 to 06

Changed examples to reflect compressed files.

Appendix B. Acknowledgements

The authors wish to thank the following persons for their feedback and suggestions (sorted alphabetically by company):

- o Anders Henke, 1&1 IONOS
- o Thomas Keller, 1&1 IONOS
- o James Galvin, Afiliias
- o Andreas Huber, united-domains

Authors' Addresses

Neal McPherson
1&1 IONOS SE
Ernst-Frey-Str. 5
76135 Karlsruhe
DE

Email: neal.mcpherson@ionos.com
URI: <https://www.ionos.com>

Tobias Sattler

Email: tobias.sattler@me.com
URI: <https://tobiassattler.com>