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                    RTC Provisioning Requirements
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Abstract

   Real Time Communications (RTC) tools are becoming as prevalent and
   essential for users on the Internet as email. While RTC tools can,
   like email, be implemented directly by users in a point-to-point
   fashion, they are often provided for or on behalf of a community of
   users within an administrative domain. As the use of these tools

grows, users increasingly have the need to communicate with users not
only within their own community but with those in other communities
as well. In practice, each community is controlled by some
authority, and so there is a need to provide for easier establishment
of connectivity between communities, and the management of the inter-
community link. This document contains an initial list of
requirements for provisioning and managing connectivity between
communities.

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1. Requirements notation

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].

[2](#). **Introduction**

   Real Time Communications (RTC) tools are becoming as prevalent and
   essential for users on the Internet as email. While RTC tools can,
   like email, be implemented directly by users in a point-to-point
   fashion, they are often provided for or on behalf of a community of
   users within an administrative domain. As the use of these tools
   grows, users increasingly have the need to communicate with users not
   only within their own community but with those in other communities
   as well. In practice, each community is controlled by some
   authority, and so there is a need to provide for easier establishment
   of connectivity between communities, and the management of the inter-
   community link. This document contains an initial list of
   requirements for provisioning and managing connectivity between
   communities.

   The following terminology will be used in the document:

   o Single community - A server or a set of servers (e.g. an
      enterprise or a consumer domain) that provides service to a single
      community of users. Users connect to a server within the
      community in order to get RTC services from the community.

   o Clearing house - A service that facilitates interaction between
      multiple communities. The communities connect to the clearing
      house and this clearinghouse provides transitive connectivity to
      any of the other communities connected to and receiving service
      from the clearing house.

   o Provisioning - The ability to supply in whatever means or
      protocols a set of attributes that are required for smoother and
      safer establishment of connectivity between communities. The
      requirements that are provided in this document are targeted to
      enable two communities to connect to each other while knowing in
      advance what is the expectation of the other community regarding
      connectivity and other features that are part of the federation
      between the communities. In the clearing house model the
      intention is to enable each community that connects to the
      clearing house to know what services to accept from the clearing
      house.

   The requirements in this document are divided into core requirements
   and requirements that are nice to have or can be implemented in the
   future.

   The following categories of requirements are considered as out of
   scope requirements for this document (at least for this version):

o The establishment of any out of band agreements agreement between
   the various communities that participate in the federation

o Quality of Service (QoS) requirements

o Billing requirements

3. **Core Requirements**

The requirements that are listed in this section are considered as
core requirements and are intended to enable easier and safer
connectivity between communities

CORE-REQ-001: It should be possible to push and pull provisioning
data between communities

CORE-REQ-002: It should be possible to secure the pushing and pulling
of provisioning data. Provisioning data should be provided only to
the appropriate community and only on a need to know basis.

CORE-REQ-003: It should be possible to provide the FQDN of the edge
proxies of the other community.

CORE-REQ-004: It should be possible to provide necessary details
regarding firewall and NAT that will enable easier connection of
other communities to the community

CORE-REQ-005: It should be possible to provide the details of the how
to contact the other community's administrator(s). Phone number,
email etc.

CORE-REQ-006: It should be possible to provide the details of the
certificates that are expected by the other community. I.e. common
name, certificate issuer and expiration.

CORE-REQ-007: It should be possible to provide the details of the
certificates that are acceptable by the community. E.g. certificate
authority.

CORE-REQ-008: It should be possible to provide the possible
encryption methods that are expected by the community.

CORE-REQ-009: It should be possible to provide the possible
compression methods that are expected by the community.

CORE-REQ-010: It should be possible to provide the maximum number of
allowed concurrent connection that are acceptable by the community.

4. **Additional Requirements**

   The requirements that are listed in this section are more "nice to
   have" requirements. Although the services can be established without
   them, these requirements can increase the quality and reduce the
   overhead of providing services between communities.

   ADD-REQ-001: It should be possible to provide the list of services
   that are provided by the community. E.g. N- way chat, file
   transfer.

   ADD-REQ-002: It should be possible to provide the characteristic for
   each service that is provided by the community. These characteristic
   should include additional info on each service provided

   ADD-REQ-003: It should be possible to provide the expected policy
   regarding various parameters that may affect the service between the
   communities. These SHOULD include the following:

   o A flag if the community supports polling (fetches i.e. SUBSCRIBE
      with duration 0) for presence information

   o The time limits for periodic operations as re-subscriptions

   o The time period in which a user-ID that was removed from the
      community will not be reassigned to another user. This period can
      affect the maximum duration of subscription. for example a
      community may keep subscription open for half of the above period
      and reassert it every half of the period

   o The error codes that are to be expected for certain conditions

   ADD-REQ-004: it should be possible to provide the intended usage
   profile. for example the expected number of subscriptions, message
   rate per second and more. These parameters should be the highest
   limit and provisioning requests that are below this limit should be
   expected to succeed, and could be performed automatically without
   user intervention.

   ADD-REQ-005: It should be possible to provide updates regarding
   changes to provisioning parameters immediately as they are changed

   ADD-REQ-006: A clearing house should be able to provide the list of
   communities that are enabled to connect to it

   ADD-REQ-007: It should be possible for a community that connects the
   clearing house to provide whether it should be listed in the list of
   the communities that can connect to the clearing house

ADD-REQ-008: It should be possible for a community that connects the
clearing house to provide a white or a black list of communities to
the clearing house. if the community provides a white list then only
the communities that are listed in the white list are allowed to
connect to that community. if the community provides a black list
then only the communities that are not listed in the black list are
allowed to connect to that community. if neither a white or nor black
list is provided then the community imposes no restrictions on
connecting to it from the clearing house

5. Security Considerations

   This document discusses requirements for provisioning between
   communities. Some of these requirements may have security
   implications when they are provided for. for example the ability to
   securely connect between communities and making sure that the other
   community is the community it claims to be. When these requirements
   will be addressed the security implications of them should be
   addressed also.

6. References

   [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate
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