

Namespace Considerations and Registries for GSS-API Extensions
draft-ietf-kitten-gssapi-extensions-iana-00.txt

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Abstract

This document describes the ways in which the GSS-API may be extended and directs the creation of IANA registries for various GSS-API namespaces.

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1. Conventions used in this document

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

There is a need for generic and mechanism-specific extensions to the Generic Security Services Application Programming Interface (GSS-API). As such extensions are designed and standardized, both at the IETF and elsewhere, there is a non-trivial risk of namespace pollution and conflicts. To avoid this we set out guidelines for extending the GSS-API and create IANA registries of GSS-API namespaces.

The registration of name prefixes and constant value ranges is allowed so as to save the IANA the trouble of registering every GSS-API name and constant, and to allow for reservation of portions of some GSS namespaces for private extensions or extensions which lack IETF Standards-Track extensions.

3. Extensions to the GSS-API

Extensions to the GSS-API can be categorized as follows:

- o Generic
- o Implementation-specific
- o Mechanism-specific
- o Language binding-specific
- o Any combination of two or all three of the last three

Extensions to the GSS-API may be purely semantic, without effect on the GSS-API's namespaces. Or they may introduce new functions, constants, types, etc...; these clearly affect the GSS-API namespaces.

Extensions that affect the GSS-API namespaces should be registered with the IANA.

4. Generic GSS-API Namespaces

All the function, constant and type names, as well as all the constant values specified in the base GSS-API specification for the basic generic GSS-API namespace.

The generic GSS-API namespaces are:

- o Type names
- o Function names

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- o Constant names for each type
- o Constant values for each type
- o Mechanism OIDs
- o Name Type OIDs
- o Mechanism Attribute OIDs (see [[EXTENDED-INQUIRY](#)])

5. Language Binding-Specific GSS-API Namespaces

<Add text; discuss header, module, library, class, method namespaces and whatever else comes up that is language-specific and appropriate for registration with the IANA.>

6. Extension-Specific GSS-API Namespaces

Extensions to the GSS-API may create additional namespaces. Instructions to the IANA should included for the handling of such namespaces.

7. Registration Form(s)

Registrations for GSS-API namespaces SHALL take the following form:

Registration Field	Possible Values	Description
Registration type	'Individual', 'Prefix', 'Range'	Indicates whether this entry reserves a given symbol name or constant value or whether it reserves an entire sub-namespace (the name is a "prefix") or constant value range.
Bindings	'Generic', 'C-bindings', 'Java', 'C#', etc...	Indicates the language bindings that this registration is for, or, if 'Generic', that this is an entry for the generic GSS-API, not specific to any programming language.
Object Type	'Symbol',	Indicates whether

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	'Constant-Value'	this registration is for a symbol (e.g., function, constant name(s)) or constant value.
Object Programming Type	'Data-Type', 'Function', 'Method', 'Integer', 'String', 'OID'	Indicates the type of the object(s) whose symbolic name or constant value is this entry registers.
Object Name	<Symbol name or name prefix>	The name(s) of symbols or values being registered.
Object Value	<Constant value> or <constant value range>	[Only for Constant-Value registrations.] The value(s) registered.
Description	<Text>	Description of object(s) being registered.
Reference	<Reference>	Reference to document that describes the object(s) being registered.
Status	'Standards-Track', 'Informational', 'Experimental', 'Obsolete'	
+-----+-----+-----+		

The IANA should create a single GSS-API namespace registry, or multiple registries, one for symbolic names and one for constant values, or it may create a registry per-programming language, at its convenience.

Entries in these registries should consist of all the fields from their corresponding registration entries.

Entries SHOULD be sorted by object type, programming language, symbol name.

<Add text on guidelines for IANA consideration of registration applications, particularly with respect to entries lacking normative references, "magic" entries (e.g., special values of 'time' types which indicate something other than absolute or relative time, such

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as GSS_C_INDEFINITE), expert review requirements (if any) for registrations lacking normative references, etc....>

8. Initial Namespace Registrations

<Add registration entries for namespaces (name prefixes) for [RFC2743](#)/[RFC2744](#)/RFC2853.>

<Add registration entries for private namespaces (name prefixes) for implementation- and/or platform-specific extensions.>

9. Security Considerations

This document has no security considerations.

10 Normative

[EXTENDED-INQUIRY]

Williams, N., "Extended Generic Security Service Mechanism Inquiry APIs",
[draft-ietf-kitten-extended-mech-inquiry-00.txt](#) (work in progress).

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.

[RFC2743] Linn, J., "Generic Security Service Application Program Interface Version 2, Update 1", [RFC 2743](#), January 2000.

[RFC2744] Wray, J., "Generic Security Service API Version 2 : C-bindings", [RFC 2744](#), January 2000.

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