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# URN Namespace for the North Atlantic Treaty Organization (NATO)

## Abstract

This document allocates a formal Uniform Resource Name (URN) namespace for assignment by the North Atlantic Treaty Organization (NATO), as specified in RFC 3406. At this time, the URN will be used primarily to uniquely identify Extensible Markup Language (XML) artefacts that provide information about NATO message text formats and service specifications as described in various NATO standards, instructions, and publications.

## Status of This Memo

This document is not an Internet Standards Track specification; it is published for informational purposes.

This document is a product of the Internet Engineering Task Force (IETF). It represents the consensus of the IETF community. It has received public review and has been approved for publication by the Internet Engineering Steering Group (IESG). Not all documents approved by the IESG are a candidate for any level of Internet Standard; see Section 2 of RFC 5741.

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## 1. Introduction

Historically, NATO has used standardized character-oriented message text formats (MTF) to interoperate, report, and exchange information both among its commands and with national entities, commercial partners, and Non-Governmental Organizations (NGOs). These MTFs are generated using the NATO Message Text Formatting System (FORMETS) in accordance with the rules, constructions, and vocabulary specified within the Allied Data Publication Number 3 (ADatP-3). Almost 400 NATO-defined messages that conform to ADatP-3 are contained in the Allied Procedural Publication Number 11 (APP-11) NATO Message Catalogue [7].

Prior to 2008, these messages were only available as slash-delimited textual messages. Since 2008, the APP-11 message catalogue also includes XML-MTF definitions for these messages, giving rise to a need to define and manage a URN namespace to name the XML namespaces. To address this need, this document requests that a formal URN space type be assigned as described in Section 4.3 of RFC 3406.

## 2. Specification Template

### 2.1. Namespace ID

The Namespace ID (NID) "nato" has been assigned by IANA.

### 2.2. Registration Information

Version 1
Date: 2014-09-11

### 2.3. Declared Registrant of the Namespace

Registering Organization:
Name: North Atlantic Treaty Organization (NATO)
Communications & Information Agency (NCIA)
Address: SHAPE, 7010, Belgium
Declared Contact: NATO Naming and Addressing Registration Authority (NRA)
Email: nra@ncia.nato.int

### 2.4. Declaration of Syntactic Structure

The Namespace Specific String (NSS) of all URNs that use the "nato" NID shall have the following structure:

```
<URN> ::= "urn:" "nato" ":" <NSS>

<NSS> ::= <Type> | <Type> ":" <Source> |
          <Type> ":" <Source> 1*( ":" <segment> )

<Type> ::= 1*<non-colon chars>

<Source> ::= 1*<non-colon chars>

<segment>  ::= 1*<non-colon chars>

<non-colon chars> ::= <non-colon trans> | "%" <hex> <hex>

<non-colon trans> ::= <upper> | <lower> | <number> |
                      <non-colon other>

<hex>         ::= <number> | "A" | "B" | "C" | "D" | "E" | "F" |
                  "a" | "b" | "c" | "d" | "e" | "f"

<non-colon other> ::= "(" | ")" | "+" | "," | "-" | "." |
                      "=" | "@" | ";" | "$" |"_" | "!" | "*" | "'"
```

The "Type" is the top-level segment of the NSS. It is a required US-ASCII string, subject to the above syntax, that conforms to the URN syntax requirements (see RFC 2141 [1]). It identifies a particular category or type of named resources, such as "mtf".

The "Source" is the second-level segment of the NSS, belonging to the "Type" context. At this time, not all "Type" segments have "Source" children, making "Source" an optional US-ASCII string, subject to the above syntax and conformant to the URN syntax requirements (see RFC 2141 [1]). "Source" identifies a particular standard, catalogue, or other relevant specifications.

The NATO Naming and Registration Authority (NRA) functions as a Local Internet Registry under RIPE NCC and will also serve as the responsible registrar for assigning the first two levels of segments within the NSS ("Type" and "Source"). The NRA may directly assign segments below these levels of the namespace hierarchy, or delegate assignment responsibilities for segments below the second level (i.e., below "Source") at its discretion. In either case, the NRA will ensure that a registry of the resulting namespace is maintained.

## 2.5. Relevant Ancillary Documentation

ADatP-3 - NATO, "Concept of NATO Message Text Formatting System (Conformets) - ADatP-3 (A)", STANAG 5500 - Edition 7, November 2010.

## 2.6. Identifier Uniqueness Considerations

The NRA, as registrar, shall directly ensure the global uniqueness of the assigned strings. Though responsibility for administration of sub-trees may be delegated, these shall not be published to the registry or be requested to be resolved by any URN resolver until the uniqueness of the resulting urn:nato URN has been validated against the existing contents of the registry. URN identifiers shall be assigned to one resource at most and not reassigned.

## 2.7. Identifier Persistence Considerations

The Registrar may assign URNs in sub-trees below the level of Type or Standard; however, once registered, URNs shall not be reassigned. Within the registry, their status as "active" or "archive" shall be recorded.

## 2.8. Process of Identifier Assignment

A namespace-specific string within the NATO namespace will only be assigned upon advancement of a relevant specification. The Registrar will check all requested identifiers against the existing registrations within urn:nato to ensure uniqueness and encourage relevance.

The assignment may include delegated registration activities for the sub-tree if underpinned by supporting agreements. Otherwise, such responsibilities remain with the NRA as the overarching Registrar. In any case, the URN must be registered with appropriate metadata before an authorized request for URN resolution can be initiated (if necessary).

## 2.9. Process for Identifier Resolution

The namespace is not currently listed with a Resolution Discovery System (RDS) [3]. In the future, URNs from this namespace may be resolved using a NATO listing in an RDS, using a third-party-listed resolver, an unlisted private resolver, or some combination of these. The resolution method for each segment will be registered with the NRA Registrar.

## 2.10. Rules for Lexical Equivalence

No special considerations. The rules for lexical equivalence specified in RFC 2141 apply.

## 2.11. Conformance with URN Syntax

No special considerations.

## 2.12. Validation Mechanism

None specified. It will be conducted as part of the application for identifier registration as indicated in preceding paragraphs.

## 2.13. Scope

Global.

## 3. Namespace Considerations

In addition to the large number of XML message specifications that now exist in APP-11, there are other existing and emerging NATO standard messages expressed as XML, as well as ongoing Web service specification development. With no single NID registered to NATO, some of these specifications may be established within locally relevant, self-generated URN namespaces. Not only does this inhibit the portability and adoption intended by standards development [5], it risks name collisions when exposed to the global context of the federation of partners for which these messages are destined.

The use of Uniform Resource Names with an appropriate Namespace ID will enable the various NATO standards committees and working groups [6] to use unique, relevant, reliable, permanent, managed, and accessible namespace names for their XML products.

A dedicated namespace also provides NATO the opportunity to leverage the use of URNs for persistent naming of non-XML resources.

## 4. Community Considerations

The NATO standards development community, and those implementing such standards, will benefit from publication of this namespace by having more permanent and reliable names for the XML namespaces defined within STANAGs, the MTF catalogue (APP-11), and other published standards [5].

Though these are NATO-published standards [5], they represent the consensus of multi-national working groups, are implemented in commercial products, and are used by partners within the international community.

In the case of MTF standards [7], the responsibility for its development and maintenance belongs to the NATO C3 Board’s Message Text Formats (MFT) Capability Team [6]. This team is "open to all recognized NATO Partners around the Globe in principle. The term ’Partners around the Globe’ summarizes all partners that are listed on the NATO webpage: Euro-Atlantic Partnership Council (EAPC), NATO’s Mediterranean Dialogue (MD), Istanbul Cooperation Initiative (ICI) and Partners across the globe" [8].

## 5. Security Considerations

Since the URNs in this namespace are opaque, there are no additional security considerations other than those normally associated with the use and resolution of URIs and URNs in general (see the Security Considerations in Internet STD 66 [4], RFC 2141 [1], and BCP 66 [2]).

It is noted, however, that resolution algorithms and rules for handling invalid URNs are opaque. Therefore, attempting to resolve a NATO URN through a resolver other than one operated or delegated by NATO may return outdated, incorrect, or confusing results.

Distribution of NATO information in any form is subject to its security policies. Nonetheless, this specification is for public use and not subject to any NATO security policies.

## 6. IANA Considerations

This document registers the formal URN NID "nato", which has been entered into the "Formal URN Namespaces" IANA registry [9]. Per Section 4.3 of RFC 3406 [2], formal NIDs are assigned via IETF Consensus and are subject to IESG review and acceptance. The registration template is given in Section 2.

## 7. Conclusions

It is necessary that NATO ensures its messages, service specifications, and other XML artefacts are based in namespaces that can be described using unique, persistent, and managed URNs. Considering its role as an information broker between many disparate communities, this document registers a formal namespace identifier (NID) "nato" for Uniform Resource Names (URN) associated with NATO information products and vocabularies: urn:nato.

## 8. References

### 8.1. Normative References

[1] Moats, R., "URN Syntax", RFC 2141, May 1997, <http://www.rfc-editor.org/info/rfc2141>.

[2] Daigle, L., van Gulik, D., Iannella, R., and P. Faltstrom, "Uniform Resource Names (URN) Namespace Definition Mechanisms", BCP 66, RFC 3406, October 2002, <http://www.rfc-editor.org/info/rfc3406>.

[3] Sollins, K., "Architectural Principles of Uniform Resource Name Resolution", RFC 2276, January 1998, <http://www.rfc-editor.org/info/rfc2276>.

[4] Berners-Lee, T., Fielding, R., and L. Masinter, "Uniform Resource Identifier (URI): Generic Syntax", STD 66, RFC 3986, January 2005, <http://www.rfc-editor.org/info/rfc3986>.

### 8.2. Informative References

[5] NATO, "List of Current NATO Standards", <http://nso.nato.int/nso/nsdd/listpromulg.html>.

[6] NATO, "NATO HQ C3 Staff Main Page", <https://nhqc3s.hq.nato.int/Default.aspx>.

[7] NATO, "NATO Message Catalogue - APP-11(C) Change 1" STANAG 7149, Edition 5, September 2010.

[8] NATO, "Request to open MTF CaT to all NATO Partners", document AC/322-N(2014)0091-AS1, 2014. Available from the NATO Public Diplomacy Division.

[9] IANA, "Uniform Resource Names (URN) Namespaces", <http://www.iana.org/assignments/urn-namespaces>.

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