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**URN Namespace for the North Atlantic Treaty Organization (NATO)
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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](#). The current primary use is for uniquely identifying Extensible Markup Language (XML) artifacts

that provide information about NATO message text formats and service specifications as described in various NATO standards, instructions and publications.

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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) message catalogue [6].

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, a request for a formal URN space type is being
made as described in [Section 4.3 of RFC 3406](#).

2. Specification Template

2.1. Namespace ID

The Namespace ID "nato" is requested.

2.2. Registration Information

Version 1

Date: 2014-09-11

2.3. Declared Registrant of the Namespace

Registering Organization:

North Atlantic Treaty Organization (NATO)

Communications & Information Services Agency (NCIA)

Address: SHAPE, 7010, Belgium

Declared Contact:

Role: NATO Naming and Addressing 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> ::= "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 source of 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, NRA will ensure a registry of the resulting namespace is maintained.

[2.5. Relevant Ancillary Documentation](#)

AdatP-3 - The message text format standard promulgated under STANAG 5500 ed. 7

The interim NATO Metadata Registry and Repository (NMRR) webpage can be found at <https://nmrr.ncia.nato.int/home.htm>

2.6. Identifier Uniqueness Considerations

The NRA, as registrar, shall directly assure 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 at most one resource and not reassigned.

2.7. Identifier Persistence Considerations

The Registrar may assign URNs in sub-trees below the level of Type or Standard, but once registered, URNs shall not be re-assigned. 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 checks 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 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, using 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 [4], 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 [5] 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 [4].

Though these are NATO-published standards [4], they represent the consensus of multi-national working groups, are implemented in commercial products and used by partners within the international community.

In the case of MTF standards [5], the responsibility for its development and maintenance belongs to the NATO C3 Board's Message Text Formats (MTF) Capability Team [5]. 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" [AC/322-N(2014)0091-AS1].

5. Security Considerations

This document introduces no additional security considerations beyond those associated with the use and resolution of URNs in general.

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 defines a formal URN NID registration of "nato", which is requested to be entered into the IANA registry [Uniform Resource Names (URN) Namespaces]. Per [RFC 3406](#) [2] Sec. 4.3, 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 artifacts 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 recommends a formal namespace identifier (NID) urn:nato for Uniform Resource Names (URN) associated with NATO information products and vocabularies.

8. References

8.1. Normative References

- [1] Moats, R., "URN Syntax", [RFC 2141](#), May 1997.
- [2] Daigle, L., van Gulik, D., Iannella, R. and P. Faltstrom, "Uniform Resource Name (URN) Namespace Definition Mechanisms", [BCP 66](#), [RFC 3406](#), October 2002.

- [3] Sollins, K., "Architectural Principles of Uniform Resource Name Resolution", [RFC 2276](#), January 1998.

8.2. Informative References

- [4] List of Current NATO Standards (publicly available hosted by NATO Standardization Office):
<http://nso.nato.int/nso/nsdd/listpromulg.html>
- [5] The Message Text Format Capability Team website:
<https://nhqc3s.hq.nato.int/Default.aspx>
- [6] APP-11 - the ADatP-3 message catalogue promulgated under NATO Standardization Agreement (STANAG) 7149 ed.5
- [AC/322-N(2014)0091-AS1] NATO notice which specifies that partners that have, or intend to introduce, systems interoperable with NATO MTFs may join the respective NATO working group, subject to the approval of the C3 Board.

[Uniform Resource Names (URN) Namespaces] This is the the Official IANA Registry of URN Namespaces located at:
<http://www.iana.org/assignments/urn-namespaces/urn-namespaces.xhtml>

9. Acknowledgments

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