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## **The Internet Assigned Number Authority (IANA) Application Configuration Access Protocol (ACAP) Vendor Subtrees Registry draft-cridland-acap-vendor-registry-02**

### **Abstract**

The original ACAP specification included a vendor registry now used in other protocols. This document updates the description of this registry, removing the need for a direct normative reference to ACAP, and removing ambiguity.

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### 1. Conventions used in this document

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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 [\[KEYWORDS\] \(Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels," March 1997.\)](#).

Formal Syntax are to be considered normative, and are specified using [\[ABNF\] \(Crocker, D. and P. Overell, "Augmented BNF for Syntax Specifications: ABNF," January 2008.\)](#). Where a formal syntax and the prose are in conflict, the formal syntax takes precedence.

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### 2. Introduction

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The [\[ACAP\] \(Newman, C. and J. Myers, "ACAP -- Application Configuration Access Protocol," November 1997.\)](#) specification includes the specification and creation of the ACAP Vendor Registry, and this registry has subsequently been reused by several specifications, including both [\[ANNOTATE\] \(Daboo, C. and R. Gellens, "Internet Message Access Protocol - ANNOTATE Extension," June 2008.\)](#) and [\[METADATA\] \(Daboo, C., "The IMAP METADATA Extension," February 2009.\)](#), and is proving to be a useful mechanism for namespacing various names to within a specific vendor's scope.

The use of textual rather than numeric identifiers for vendors benefits engineers and operators who are diagnosing protocol problems by

allowing them some possibility of identifying the origin of a vendor attribute without having to look it up in a registry (although that remains a necessary fallback). As such engineers and operators already have to be familiar with international technical English to diagnose textual protocol problems, the restriction to ASCII may help and is not believed to harm that intended use. Exposure of vendor attributes directly in end-user user interfaces was not an intended use of the registry.

This document merely updates the registry to reduce ambiguity in the original specification, and dissociates it from the original document in all but name, allowing easier referencing. It replaces section 7.4 and portions of section 4, particularly 4.3, of [\[ACAP\] \(Newman, C. and J. Myers, "ACAP -- Application Configuration Access Protocol," November 1997.\)](#).

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### 3. The Vendor Subtree Registry

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A Vendor Token is a UTF-8 string beginning with "vendor.", and followed by the name of the company or product. This name MUST NOT contain any slash character, period, or the percent and asterisk characters typically used as wildcards.

Following this may be names, separated from the Vendor Token by a period, which need not be registered, thus forming a complete Vendor Name.

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#### 3.1. Internationalization

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Vendor Tokens are able to contain any valid Unicode codepoint, encoded as [\[UTF-8\] \(Yergeau, F., "UTF-8, a transformation format of ISO 10646," November 2003.\)](#), except the special characters. Since the publication of [\[ACAP\] \(Newman, C. and J. Myers, "ACAP -- Application Configuration Access Protocol," November 1997.\)](#), however, concerns have been raised on the handling and comparison of full Unicode strings, and therefore this specification restricts the current registrations to the ASCII subset of UTF-8.

Furthermore, characters such as ASCII control characters, most whitespace, and quotes are likely to be confusing and have been similarly restricted.

Therefore, this document allows only ASCII letters, digits, the hyphen, and space to be used (the <iana-vendor-tag> ABNF production in Section 3.2).

At the time of publication of this document, no existing registrations violate the new restricted syntax on characters allowed in registrations. [\[ACAP\] \(Newman, C. and J. Myers, "ACAP -- Application](#)

[Configuration Access Protocol," November 1997.](#)) required all Vendor Tokens to be registered with IANA, so the new restriction is not believed to introduce any interoperability issue. Finally, note that this document does not change the requirement on processors to accept other non-ASCII Unicode codepoints in Vendor Tokens (the <possible-vendor-tag> ABNF production in Section 3.2).

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### 3.2. Formal Syntax

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This syntax draws upon productions found within [\[ABNF\] \(Crocker, D. and P. Overell, "Augmented BNF for Syntax Specifications: ABNF," January 2008.\)](#) and [\[UTF-8\] \(Yergeau, F., "UTF-8, a transformation format of ISO 10646," November 2003.\)](#). Productions replace those in section 4.3 of [\[ACAP\] \(Newman, C. and J. Myers, "ACAP -- Application Configuration Access Protocol," November 1997.\)](#).

```
vendor-name      = vendor-token *("." name-component)

name-component   = *(name-char / UTF8-2 / UTF8-3 / UTF8-4)

name-char        = %x01-24 / %x26-29 / %x2B-2D / %x30-7F
                  ;; ASCII-range characters not including ".",
                  ;; "/", "%", or "*".

vendor-token     = "vendor." vendor-tag
                  ;; MUST be registered with IANA

vendor-tag       = iana-vendor-tag / possible-vendor-tag

iana-vendor-tag  = 1*(ALPHA / DIGIT / SP / "-")
                  ;; This production represents
                  ;; allowed forms for registrations
                  ;; under the rules specified in this
                  ;; document.

possible-vendor-tag = name-component
                  ;; This production represents what
                  ;; applications and specifications
                  ;; MUST be able to accept.
```

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### 3.3. Examples

A company Example Ltd might register the Subtree "vendor.example". This means it may use "vendor.example", or any name at all beginning "vendor.example.", such as "vendor.example.product".

These names might be used in several protocols, and are reserved in all the relevant protocols, so "vendor.example" might be an ACAP dataset class name, and "/vendor/vendor.example" might be a tree of IMAP ANNOTATE entries.

Example Ltd is free to use either "vendor.example", and group specific products under it using the relevant protocol's hierarchy - perhaps "/shared/vendor/vendor.example/product", or using more specific names, such as "/shared/vendor/vendor.example.product".

Note that the solidus ("/") characters in the examples above are protocol delimiters which are themselves not part of the vendor token itself.

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### 3.4. Changes from RFC 2244

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This non-normative section details changes from RFC 2244's original specification of the registry.

- \*Vendor tokens are restricted to ASCII for registration purposes.

- \*Clarifications that "vendor.<company/product name>" means "vendor.company name" or "vendor.product name" - "vendor.company/product" is and always has been illegal.

- \*Made "vendor.company" a name in its own right - RFC 2244 only refers to a prefix of "vendor.company".

- \*Added example registration, in line with [\[EXAMPLES\] \(Eastlake, D. and A. Panitz, "Reserved Top Level DNS Names," June 1999.\)](#).

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## 4. IANA Considerations

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This specification updates the IANA registry named the ACAP Vendor Subtrees Registry. IANA is requested to update the registry to point at this document.

Vendors may reserve a portion of the ACAP namespace, which is also used as the namespace for several other protocols, for private use. Vendor Names are reserved for use by that company or product, wherever used, once registered. Registration is on a first come, first served basis.

Whenever possible, private attributes and classes should be eschewed in favour of improving interoperable protocols.

Vendors may only use names conforming to iana-vendor-tag at the current time, future revisions of this specification may change this.

To: [iana@iana.org](mailto:iana@iana.org)

Subject: Registration of ACAP vendor subtree

Private Prefix: vendor.name

Person and email address to contact for further information:

(company names and addresses should be included where appropriate)

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#### 4.1. Example Registration

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IANA is requested to add the following registration, for use by specification authors in examples, similarly to the domains specified in [\[EXAMPLES\] \(Eastlake, D. and A. Panitz, "Reserved Top Level DNS Names," June 1999.\)](#):

To: [iana@iana.org](mailto:iana@iana.org)

Subject: Registration of ACAP vendor subtree

Private Prefix: vendor.example

Person and email address to contact for further information:

Dave Cridland <[dave.cridland@isode.com](mailto:dave.cridland@isode.com)>

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#### 5. Security Considerations

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There are no known security issues with this registry. Individual protocols using vendor subtree names may have security issues, and the introduction of Unicode has in itself security implications - the restriction of this is thought to mitigate these.

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## 6. Acknowledgements

Thanks must go to Chris Newman, John Myers, and the other designers of ACAP for the initial creation of the registry. Thanks also to Alexey Melnikov for advice on this revision.

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## 7. References

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### 7.1. Normative References

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[ABNF]	Crocker, D. and P. Overell, " <a href="#">Augmented BNF for Syntax Specifications: ABNF</a> ," STD 68, RFC 5234, January 2008 ( <a href="#">TXT</a> ).
[ACAP]	<a href="#">Newman, C.</a> and <a href="#">J. Myers</a> , " <a href="#">ACAP -- Application Configuration Access Protocol</a> ," RFC 2244, November 1997 ( <a href="#">TXT</a> ).
[KEYWORDS]	<a href="#">Bradner, S.</a> , " <a href="#">Key words for use in RFCs to Indicate Requirement Levels</a> ," BCP 14, RFC 2119, March 1997 ( <a href="#">TXT</a> , <a href="#">HTML</a> , <a href="#">XML</a> ).
[UTF-8]	Yergeau, F., " <a href="#">UTF-8, a transformation format of ISO 10646</a> ," STD 63, RFC 3629, November 2003 ( <a href="#">TXT</a> ).

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### 7.2. Informative References

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[ANNOTATE]	Daboo, C. and R. Gellens, " <a href="#">Internet Message Access Protocol - ANNOTATE Extension</a> ," RFC 5257, June 2008 ( <a href="#">TXT</a> ).
[EXAMPLES]	<a href="#">Eastlake, D.</a> and <a href="#">A. Panitz</a> , " <a href="#">Reserved Top Level DNS Names</a> ," BCP 32, RFC 2606, June 1999 ( <a href="#">TXT</a> ).
[METADATA]	Daboo, C., " <a href="#">The IMAP METADATA Extension</a> ," RFC 5464, February 2009 ( <a href="#">TXT</a> ).

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