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**LDAP Schema for supporting XMPP in White Pages**  
**draft-kille-ldap-xmpp-schema-05**

Abstract

The Extensible Messaging and Presence Protocol (XMPP) identifies users by use of JID (Jabber IDs). Lightweight Directory Access Protocol (LDAP) enables provision of a white pages service with schema relating to users and support for internet protocols. This specification defines schema to enable XMPP JIDs to be associated with objects in an LDAP directory so that this information can be used with white pages applications.

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## Table of Contents

|                             |   |                   |
|-----------------------------|---|-------------------|
| <a href="#">1.</a>          | Introduction . . . . .                      | <a href="#">2</a> |
| <a href="#">2.</a>          | Conventions Used in This Document . . . . . | <a href="#">2</a> |
| <a href="#">3.</a>          | Schema Definition . . . . .                 | <a href="#">2</a> |
| <a href="#">3.1.</a>        | Object Class . . . . .                      | <a href="#">2</a> |
| <a href="#">3.2.</a>        | Attribute . . . . .                         | <a href="#">3</a> |
| <a href="#">4.</a>          | IANA Considerations . . . . .               | <a href="#">3</a> |
| <a href="#">5.</a>          | Security Considerations . . . . .           | <a href="#">4</a> |
| <a href="#">6.</a>          | Normative References . . . . .              | <a href="#">5</a> |
| <a href="#">Appendix A.</a> | Acknowledgements . . . . .                  | <a href="#">6</a> |
|                             | Author's Address . . . . .                  | <a href="#">6</a> |

## [1.](#) Introduction

Extensible Messaging and Presence Protocol (XMPP) [[RFC6120](#)] identifies users by use of JID (Jabber IDs). Lightweight Directory Access Protocol (LDAP) [[RFC4510](#)] enables provision of a white pages service with schema relating to users and support for internet protocols defined in [[RFC4519](#)]. This specification defines schema to enable XMPP JIDs to be associated with LDAP directory objects so that this information can be used with white pages applications.

The LDAP schema for storing JIDs is defined to enable JIDs to be associated with any object stored in the directory. This is done by associating the new JID Attribute with a new Auxiliary Object Class (JIDObject).

## [2.](#) 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](#)].

## [3.](#) Schema Definition

This section defines the schema used to store JIDs in the directory.

### [3.1.](#) Object Class

This section defines a new Auxiliary Object Class (JIDObject) which MAY be associated with any structural Object Class. This Object Class is used to augment entries for objects that act or may act as an XMPP client. The JID attribute is optional, to enable configuring

Kille

Expires March 15, 2018

[Page 2]

an object that is allowed to have an associated JID but does not currently have one.

```
( TBA.1 NAME 'JIDObject'  
  AUXILIARY  
  MAY jid )
```

### **3.2. Attribute**

This section defines the JID attribute referenced by the JIDObject Auxiliary Object Class. The syntax of the JID attribute MUST follow the rules of [RFC7622]. The JID stored MUST be a bare JID (e.g., a JID such as romeo@shakespeare.lit representing a user) and not a full JID (e.g. a JID such as romeo@shakespeare.lit/AABBCC representing a specific client). Note that the LDAP directory server is NOT expected to enforce this syntax. The syntax rules are for LDAP clients setting this attribute, noting that human usage is a key target. Applications using this attribute should format that string in a manner appropriate to the application and XMPP applications SHOULD apply [RFC7622] to the attribute. The directory service doesn't enforce the JID syntax and values are compared according to the matching rules specified in the attribute definition.

NOTE: The directory string syntax and the caseIgnoreMatch matching rule are chosen to allow entry and matching of values according to common rules used within the directory, for convenience for users and administrators as well as implementors. As this syntax and matching rules differs from [RFC7622] false positive and false negative can possibly occur. This is not anticipated to cause operational issues (based on implementation experience with similar syntax/matching rule mismatches).

```
( TBA.2 NAME 'jid'  
  EQUALITY caseIgnoreMatch  
  SUBSTR caseIgnoreSubstringsMatch  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15 )
```

1.3.6.1.4.1.1466.115.121.1.15 refers to the Directory String syntax defined in [RFC4517].

## **4. IANA Considerations**

The following registrations are requested in the LDAP Registry <<https://www.iana.org/assignments/ldap-parameters/ldap-parameters.xhtml>> in line with BP 64 [RFC4520]. This will lead to assignment of the two Object Identifiers, referenced as TBA.1 and TBA.2 in this draft.

Kille

Expires March 15, 2018

[Page 3]

## Object Identifier Registration

Subject: Request for LDAP OID Registration (Internet Directory Numbers)  
Person & email address to contact for further information: S. Kille <steve.kille@isode.com>  
Specification: This document  
Author/Change Controller: IESG  
Comments: Identifies the XMPP schema elements assigned

In the following two registrations, TBD is replaced with the OID assigned in the preceding registration.

### 'JIDObject' Descriptor Registration

Subject: Request for LDAP Descriptor Registration (Object Identifier Descriptors)  
Descriptor (short name): JIDObject  
Object Identifier: TBD.1  
Person & email address to contact for further information: S. Kille <steve.kille@isode.com>  
Usage: Object Class  
Specification: this document  
Author/Change Controller: IESG

### 'jid' Descriptor Registration

Subject: Request for LDAP Descriptor Registration (Object Identifier Descriptors)  
Descriptor (short name): jid  
Object Identifier: TBD.2  
Person & email address to contact for further information: S. Kille <steve.kille@isode.com>  
Usage: Attribute Type  
Specification: this document  
Author/Change Controller: IESG

## **5. Security Considerations**

XMPP JIDs are often personal identifiers enabling electronic communication, with similar considerations to email addresses. This schema enables publishing of this information in LDAP directories which may be corporate or public services. Care should be taken to only publish JID information which is acceptable to be linked to the LDAP object and be made accessible to all LDAP users. The general LDAP Security Considerations specified in [[RFC4510](#)] also apply.

Kille

Expires March 15, 2018

[Page 4]

## 6. Normative References

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), DOI 10.17487/RFC2119, March 1997, <<https://www.rfc-editor.org/info/rfc2119>>.
- [RFC4510] Zeilenga, K., Ed., "Lightweight Directory Access Protocol (LDAP): Technical Specification Road Map", [RFC 4510](#), DOI 10.17487/RFC4510, June 2006, <<https://www.rfc-editor.org/info/rfc4510>>.
- [RFC4517] Legg, S., Ed., "Lightweight Directory Access Protocol (LDAP): Syntaxes and Matching Rules", [RFC 4517](#), DOI 10.17487/RFC4517, June 2006, <<https://www.rfc-editor.org/info/rfc4517>>.
- [RFC4519] Sciberras, A., Ed., "Lightweight Directory Access Protocol (LDAP): Schema for User Applications", [RFC 4519](#), DOI 10.17487/RFC4519, June 2006, <<https://www.rfc-editor.org/info/rfc4519>>.
- [RFC4520] Zeilenga, K., "Internet Assigned Numbers Authority (IANA) Considerations for the Lightweight Directory Access Protocol (LDAP)", [BCP 64](#), [RFC 4520](#), DOI 10.17487/RFC4520, June 2006, <<https://www.rfc-editor.org/info/rfc4520>>.
- [RFC6120] Saint-Andre, P., "Extensible Messaging and Presence Protocol (XMPP): Core", [RFC 6120](#), DOI 10.17487/RFC6120, March 2011, <<https://www.rfc-editor.org/info/rfc6120>>.
- [RFC7622] Saint-Andre, P., "Extensible Messaging and Presence Protocol (XMPP): Address Format", [RFC 7622](#), DOI 10.17487/RFC7622, September 2015, <<https://www.rfc-editor.org/info/rfc7622>>.





## [Appendix A](#). Acknowledgements

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