Directory Lookup Service REST

API reference

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What is the Directory Lookup Service API?

The Directory Lookup Service REST API provides a service to retrieve specific attributes from Microsoft Active Directory. You can also specify whether to search the personal contact folder when a directory lookup is performed.

REST function

Function: lookupuser

REST call URI: http(s)://server/api/lookupuser

Verb: POST

Comments: Required request is JSON

```
{
"Account":"testuser@example.com",
"SearchKey":"Tom",
"MaxNumber":10,
"SearchContacts":"true"
"UserShape":[attribute1, attribute2, attribute3, and so on]
}
```

The following table describes the request properties you can include in the REST function JSON file:

Name	Type	Description
Account	String	This property specifies the email or SMTP address of the requestor.
SearchKey	String	This property specifies the search string to look for.
MaxNumber	Integer	This property specifies the maximum number of users or objects to return in the search query. If the maximum number is less than or equal to zero, BEMS returns all the users with the search key.
SearchContacts	Boolean	This property specifies whether to search for users in the private contact folder in addition to the company directory.
UserShape	String Array	This property specifies the list of attributes to return in the search results. See the following table for a list of user shape options.

BEMS tries to match the user key against the following user data stored in the company directory (typically Microsoft Active Directory):

- Last Name
- Display Name
- Full Name
- Alias
- Email Address
- Phone number*

  * To allow users to search for other users in the GAL using a phone number, see Searching for users by phone number.

The following table describes the user shapes you can use when you specify the UserShape request property:

Name	Type	Example	Alternative name
FullName	String	"James Lambier”	
DisplayName	String	"James Lambier”	
GivenName	String	"James”	FirstName
Surname	String	"Lambier"	Lastname
EmailAddress	String	"jlambier@example.com"	Email
AlternativeEmailAddresses	String array	`["x400:C=US;A= ;P=Example Technology;O=SF Bay Area;S=Lambier;G=James;", "X400:C=US;A= ;P=BlackBerry Limited;O=SF Bay Area;S=Lambier;G=James;", "EUM:7910;phone-context=SVL Dial Plan.example.com"]`	
PhysicalAddresses	Object array	`[{"Street":"3001 Bishop Dr", "City":"San Ramon", "State":"CA","Country":"United States"}]`	Addresses
PhoneNumbers	Object array	`[{"Key":"Business", "Value":"+1-519-555-0100"}, {"Key":"Home", "Value":"+1-519-555-0100"}]`	
Department	String	"Development"	
JobTitle	String	"KB Page Writer	Title
CompanyName	String	"BlackBerry"	Company
OfficeLocation	String	"SANRAMON"	Location, Office
HasPhoto	Bool	True	HasPicture
Photo	Base64 string	"dG9tIGp1bmp1biBsaXUncyBwaG90bw=="	Picture
Alias	String	"jsmith"	
SMIMECertificate	Base64 string	"dG9tIGp1bmp1biBsaXUncyBwaG90bw=="	
ManagerDisplayName	String	"Jeff Holleran"	ManagerName

Name	Type	Example	Alternative name
ManagerEmailAddress	String	"jholleran@example.com"	ManagerEmail
DirectReports	Object array	`[{"Name": "James Lambier", "Email": "jlambier@example.com"}, {"Name": "Paul Morley", "Email":"pmorley@example.com"}]`	

Searching for users by phone number

BEMS supports users searching for other users in the GAL by phone number.

To allow BEMS to support this feature, your environment must meet the following requirements:

- The Microsoft Active Directory phone attributes must be indexed and enabled for ANR
- The phone number must be in one of the following formats:
  - +1 (555) 123 4567
  - +1.555.123.4567
  - +1-555-123-4567
  - 15551234567
  - 555.123.4567
  - +1 5551234567

By default, the phone attribute is disabled for GAL search.

Enable contact lookup by phone number

To allow users in your environment to lookup contacts using their phone number, use the Microsoft Active Directory schema MMC snap-in to index and enable ANR for the applicable phone attributes.

Before you begin: The phone number must be in a supported format. For a list of supported formats, see Searching for users by phone number.

1. Click the **Attributes** folder in the snap-in.
2. In the right panel, right-click the desired attribute, and then click **Properties**.
3. Select the **Index this attribute** check box.
4. Select the **Ambiguous Name Resolution (ANR)** check box.
5. Click **OK**.
6. If you have multiple phone attributes, repeat steps 2 to 5 for each attribute.

HTTP response codes

Code	Description
200	Succeeded
401	The auth token is invalid, or for any reason the user can't pass the token verification. **Note:** It is possible for the server to return a 200 code and an empty user list in the response body at the same time. This indicates that the service runs, but it can't find any user with the given search key.
500	Internal server error.

Code example

Device submit a HTTP POST request to BEMS.

[Http Header]

Contains the auth information.

The following are the headers of an example request:

```
POST /api/lookupuser HTTP/1.1 Host: localhost:8443 Connection:
 keep-alive Content-Length: 141 Accept: application/
json, text/javascript, */*; q=0.01 X-Good-GD-AuthToken:
 M3xtYXR0bG9jMUBleDM2NS5xYWdvb2QuY29tfDY4MzE2MzExLUJBN0MtNDU0NC05R...oRT0= User-
Agent: Mozilla/5.0 (Windows NT 6.1; Win64; x64) Content-Type: application/json;
 charset=UTF-8 Accept-Encoding: gzip, deflate Accept-Language: en-US,en;q=0.8,zh-
CN;q=0.6,zh;q=0.4
```

[POST body]

```
{"Account":"testuser@example.com","SearchKey":"James","MaxNumber":10,"UserShape":
["GivenName", "Surname", "Photo","WeddingAnniversary"]}
```

[Response Header]

```
HTTP/1.1 200 OK Content-Type: application/json; charset=UTF-8 Transfer-Encoding:
 chunked
```

[Response Body]

```
[{"GivenName":"James", "Surname":"Lambier",
 "Photo":"dG9tIGp1bmp1biBsaXUncyBwaG90bw=="}, {"GivenName":"James",
 "Surname":"Lambier"}]
```

If the device requests any property not yet understood by the BEMS server (for example,"WeddingAnniversary"), BEMS will retrieve as many properties as possible and include only those properties that are found, understandable, and supported in the JSON response. If an unexpected error occurred during the lookup handling, BEMS returns a non 200 HTTP response code.

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