Domino Freebusy Service

Developer Guide

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Version 0.02

1. Introduction

The Domino freebusy service is now included in the extension library. The freebusy service lets you send HTTP requests to:

- find busy time for a given user
- find an available room for a given site, time slot and other characteristics (e.g. room capacity)
- find the list of sites in a directory

The freebusy service is a member of the family of REST services collectively called Domino Access Services (DAS). Like other DAS services, the freebusy service needs to be enabled by a Domino administrator. See section 2 for details.

If you are familiar with other DAS services, you should find the freebusy service easy to work with. It shares some of the same URL parameters and other conventions. The following sections help you get started with the freebusy service. As the freebusy service evolves, we will publish a more complete reference document.

2. Enabling the Freebusy Service

After you install the 9.0.1 version of the extension library, the freebusy service is loaded whenever the Domino HTTP task is started. However, an administrator typically doesn't want the freebusy service to handle requests on every Domino server. You need to deliberately enable the freebusy service in the appropriate Internet Site document.

To enable the freebusy service:

- Use a Notes client to open the server's public address book.
- In the Domino Directory navigator, select Configuration – Web – Internet Sites.
- Open the Internet Site document for your server.
- Click the Edit Web Site action.
- Select the Configuration tab.
- At the bottom of the form, look for a section labeled Domino Access Services.
- In the Enabled services field, add the Freebusy keyword:

- Save your changes and restart the HTTP task.

NOTE: The above instructions assume you are using Internet Sites. If you are not using Internet Sites, you can enable the freebusy service in the server document. See the Domino Access Services documentation for more information on enabling DAS services:

http://www-10.lotus.com/ldd/ddwiki.nsf/xpAPIViewer.xsp?lookupName=IBM+Domino+Access+Services+9.0.1#action=openDocument&res_title=Enabling_IBM_Domino_Access_Services_on_a_server_das901&content=apicontent

3. Freebusy Service Reference

3.1 FreeBusy Root Resource

The address of the freebusy root resource is:

/api/freebusy

You send a GET request to the root resource to read the list of the other resources provided by the freebusy service. The service responds with a list of link objects in JSON format. The following is a sample response:

```
{
  "links": [
    {
      "rel": "busytime",
      "href": "/api/freebusy/busytime"
    },
    {
      "rel": "freerooms",
      "href": "/api/freebusy/freerooms"
    },
    {
      "rel": "directories",
      "href": "/api/freebusy/directories"
    }
  ]
}
```

This example shows there are three top-level resources provided by the freebusy service. The busy time resource is described in section 3.2. The free rooms resource is described in section 3.3.

You use the directories resource to get the URLs for each sites resource. The directories resource is described in section 3.4 and the sites resource is described in section 3.5.

3.2 Busy Time Resource

The address of the busy time resource is:

/api/freebusy/busytime

To read the busy time for a given user, you send a GET request to the busy time resource. To specify the user, you must include the **name** parameter. For example the following request reads the busy time for deanmelnyk@acme.com in JSON format:

GET /api/freebusy/busytime?name=deanmelnyk@acme.com

The service responds with busy time data in JSON format:


```
{
  "start": {
    "date": "2013-11-05",
    "time": "20:08:35",
    "utc": true
  },
  "end": {
    "date": "2013-12-05",
    "time": "20:08:35",
    "utc": true
  },
  "busyTimes": [
    {
      "start": {
        "date": "2013-11-05",
        "time": "20:08:35",
        "utc": true
      },
      "end": {
        "date": "2013-11-05",
        "time": "20:05:00",
        "utc": true
      }
    },
    {
      "start": {
        "date": "2013-11-05",
        "time": "22:00:00",
        "utc": true
      },
      "end": {
        "date": "2013-11-06",
        "time": "14:00:00",
        "utc": true
      }
    },
    ...
}
```


Optionally, you can request the busy time data in iCalendar format. The following request is similar to the previous one. The only difference is the **format** parameter:

GET /api/freebusy/busytime?name=deanmelnyk@acme.com&format=icalendar

In this case, the following is a sample response:

```
BEGIN:VCALENDAR
PRODID:-//IBM Corporation//NONSGML Domino 9.0//EN
VERSION:2.0
BEGIN:VFREEBUSY
DTSTAMP:20131105T204317Z
DTSTART:20131105T201317Z
DTEND:20131205T201317Z
FREEBUSY:20131105T201317Z/20131105T201000Z
FREEBUSY:20131105T220000Z/20131106T140000Z
FREEBUSY:20131106T170000Z/20131106T180000Z
FREEBUSY:20131106T220000Z/20131107T140000Z
FREEBUSY:20131107T170000Z/20131107T180000Z
FREEBUSY:20131107T220000Z/20131108T140000Z
...
END:VFREEBUSY
END:VCALENDAR
```

By default, the freebusy service returns busy time data for a period of thirty days starting from the current time (the time of the request). You can change the time period with the **since**, **before**, and **days** parameters. Each of the available URL parameters is described in Table 3.2.1.

Table 3.2.1. Busy Time URL Parameters

Parameter	Required	Example	Description
name	Yes	name=fred@acme.com	The email address of the user.
format	No	format=icalendar	The desired format of the response. If you omit this parameter, the default format is JSON.
since	No	since=2013-06-01T00:00:00Z	The start date for the busy time data. If you omit this parameter, the default start date is the time of the request minus 30 minutes.
before	No	before=2013-06-15T00:00:00Z	The end date for the busy time data. If you omit both the **before** and **days** parameters, the default end date is 30 days after the start date.
days	No	days=45	The requested number of days of busy time data. The **before** and **days** parameters are mutually exclusive.

3.3 Free Rooms Resource

The address of the free rooms resource is:

/api/freebusy/freerooms

To find an available room for a specific time, you send a GET request to the free rooms resource. You must also include the sit**e**, **start** and **end** parameters. For example the following request searches for free rooms in the "Boston Building 1" site between the given start and end times:

GET /api/freebusy/freerooms?site=Boston%20Building%201&start=2013-06-01T13:00:00Z&end=2013-06-01T14:00:00Z

The service returns a list of free rooms in JSON format:

```
{
  "rooms": [
    {
      "displayName": "Room 1001",
      "distinguishedName": "Room 1001/Boston Building 1",
      "email": "bos1-room1001@acme.com",
      "capacity": 10
    },
    {
      "displayName": "Room 1002",
      "distinguishedName": "Room 1002/Boston Building 1",
      "email": "bos1-room1002@acme.com",
      "capacity": 8
    }
  ]
}
```

Each of the available URL parameters is described in Table 3.3.1.

Table 3.3.1. Free Rooms URL Parameters

Parameter	Required	Example	Description
site	Yes	site=Boston%20Building%201	The site to search (URL encoded). See section 3.5 for information about getting the list of sites in a directory.
start	Yes	start=2013-06-01T13:00:00Z	The start date for the free rooms search.
end	Yes	end=2013-06-01T14:00:00Z	The end date for the free rooms search.
capacity	No	capacity=12	The minimum required room capacity. If you omit this parameter, the default capacity is 5.

3.4 Directories Resource

The address of the directories resource is:

/api/freebusy/directories

To get a list of directories on the target server, you send a GET request to the directories resource. The service returns a list of directories in JSON format:

```
{
  "directories": [
    {
      "links": [
        {
          "rel": "sites",
          "href": "/api/freebusy/sites/CN%3DZealand%2FO%3DPeaks%21%21names.nsf"
        }
      ],
      "displayName": "Peaks's Directory"
    },
    {
      "links": [
        {
          "rel": "sites",
          "href": "/api/freebusy/sites/CN%3DGlobal%2FO%3DPeaks%21%21gnames.nsf"
        }
      ],
      "displayName": "Global Directory"
    }
  ]
}
```


The example above shows two directories, each with a displayName and a links property. The links array includes a link to the sites resource for the directory.

3.5 Sites Resource

The address of the sites resource is:

/api/freebusy/sites/{directory}

To get a list of sites in the target directory, you send a GET request to the sites resource. The {directory} path segment identifies the target directory. You should not attempt to create this identifier yourself. Instead, you should get the URL of the sites resource from the directory resource (see section 3.4).

For example the following request get a list of sites in the directory identified by CN %3DZealand%2FO%3DPeaks%21%21names.nsf:

GET /api/freebusy/sites/CN%3DZealand%2FO%3DPeaks%21%21names.nsf

The service returns a list of sites in JSON format:


```
{
  "sites": [
    {
      "displayName": "Boston Building 1"
    },
    {
      "displayName": "New York Building 1"
    }
  ]
```

```
}
```

Although each site currently just has a display name, more properties may eventually be added to the output.