

APPARENT 

HTTP/JSON API Developer Guide

For Doxie Q and Doxie Go SE

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Introduction

Doxie Q and Doxie Go SE Wi-Fi are Apparent's battery-powered, wireless mobile document scanners. Doxie is intended for use with the Doxie apps, but it can also be accessed programmatically to develop custom workflow solutions. Doxie's API is available on port 80 and uses HTTP and JSON. This document explains how to communicate with the scanner, obtain status information, access scans, and delete scans. The `curl` command is used extensively in this documentation to demonstrate use of the API, but any HTTP socket implementation may be used.

Use of this API is provided subject to the terms of the Doxie license agreement found in the Doxie desktop app. This API is provided as-is and is subject to change without notice.

Use of this API requires specific knowledge of HTTP/JSON APIs and requires a suitable environment for programmatically executing commands – this API is not intended for typical users of the Doxie products. Doxie Customer Care provides limited email support for this API. Contact help@getdoxie.com for assistance.

Note: This API is applicable to Doxie Q and Doxie Go SE Wi-Fi only. The API for the discontinued Doxie Go Wi-Fi is available [here](#). For more information on how this version is different, see Appendix at the end of this document.

Network Modes

By default Doxie creates its own Wi-Fi network with a name such as "Doxie_042D6A". The last six characters of the Wi-Fi network name are based on the unique MAC address assigned to each unit. After joining your device to Doxie's network, Doxie's API will be accessible at 10.10.100.1 on port 80.

Doxie can also be configured with the Doxie desktop app or iOS app to join an existing network. Typical configurations will have Doxie lease an IP via DHCP, but Doxie can also be configured to use a static IP. Devices joined to the same network as Doxie can access the API via the scanner's IP (pulled via DHCP or statically assigned) on port 80. Take note that the scanner cannot be configured to join existing networks via the API.

Doxie's memory is network accessible when the Wi-Fi module is on and ready:

- **Doxie Q:** Hold down the *Scan* button on the control panel for 3 seconds. If the beeper is on, you will hear three beeps. When the network is ready, the blue LED will light up, and a wireless icon will appear solid on the LCD screen.
- **Doxie Go SE:** Tap the back button. Doxie's light quickly blinks white as the Wi-Fi feature turns on. Doxie's light turns to a slow white flash when Wi-Fi is ready.

Auto Discovery

Doxie supports the Simple Service Discovery Protocol (SSDP), which is a part of Universal Plug and Play (UPnP). Doxie periodically broadcasts its services via NOTIFY messages as well as responding to matching M-SEARCH search requests. The SSDP packets include model number and Wi-Fi firmware version number in the datagrams (e.g., "DoxieDX300/1.0" or "DoxieDX255/1.08").

SSDP is supported in both networking modes. When using Doxie's direct network, it may be easier to attempt to communicate with the scanner at 10.10.100.1 rather than relying on SSDP for discovery.

Authentication

By default Doxie does not require authentication for API access, but a password can be configured by using the Doxie desktop app or iOS app. If a password is set on the scanner, API commands (except GET /hello.json) will require the password to be provided via HTTP basic access authentication with "doxie" as the username:

```
$ curl -D - -u doxie:MyPassword http://10.10.100.1/scans/recent.json
HTTP/1.0 200 OK
Date: Mon Oct  2 09:33:01 2017
Server: GoAhead-Webs/2.1.1
Content-type: application/json
Content-length: 36
Connection: close

{
  "path": "/DOXIE/JPEG/IMG_0026.JPG"
}
```

Omitting the authorization header or providing an incorrect password will return a 401 Unauthorized error:

```
$ curl -D - http://10.10.100.1/scans/recent.json
HTTP/1.1 401 Unauthorized
Server: GoAhead-Webs
Date: Mon Oct  2 09:32:14 2017
WWW-Authenticate: Basic realm="Wireless Access Point"
Pragma: no-cache
Cache-Control: no-cache
Content-Type: text/html

<html><head><title>Document Error: Unauthorized</title></head>
<body><h2>Access Error: Unauthorized</h2>
when trying to obtain <b>/scans/recent.json</b><br><p>Access to this document
requires a User ID</p></body></html>
```

Reset Mechanism

Resetting Doxie's Wi-Fi module will restore settings including the network configuration, scanner name, and scanner password to factory defaults. Resetting Doxie will not remove any existing scans. Click on the links to find instructions on how to reset Wi-Fi for [Doxie Q](#) and [Doxie Go SE](#).

General Commands

Scanner Status

`GET /hello.json` returns status information for the scanner, firmware, network mode, and password configuration. Accessing this command does not require a password if one has been set. The values returned depend on whether the scanner is creating its own network or joining an existing network.

```
$ curl http://192.168.0.100/hello.json
{
  "model": "DX255",
  "name": "Doxie_3c7fb4",
  "firmware": "0.17",
  "firmwareWiFi": "0108",
  "hasPassword": true,
  "MAC": "74:72:f2:3c:7f:b4",
  "mode": "AP",
  "network": "Apparent",
  "ip": "192.168.0.100"
}
```

- **model:** DX300 for Doxie Q, or DX255 for Doxie Go SE.
- **name:** The name of the scanner, which defaults to the form "Doxie_XXXXXX". The name of a scanner can be changed by using the Doxie desktop app or iOS app.
- **firmware:** The scanner firmware version.
- **firmwareWiFi:** The Wi-Fi firmware version.
- **hasPassword:** Indicates whether a password has been set to authenticate API access. Passwords can be set and removed by using the Doxie desktop app or iOS app.
- **MAC:** The MAC address of the scanner as shown on the scanner's bottom label.
- **mode:** "AP" if the scanner is creating its own network or "Client" if the scanner is joining an existing network.
- **network:** If the scanner is in "Client" mode, this is the name of the network it has joined.
- **ip:** If the scanner is in "Client" mode, this is the IP of the scanner on the network it has joined.

Restart Wi-Fi System

`GET /restart.json` returns 204 No Content and then restarts the scanner's Wi-Fi system.

- **Doxie Q:** The blue Wi-Fi LED turns off and back on during restart.
- **Doxie Go SE:** The LED starts to repeat two quick white flashes during restart. Wi-Fi is ready when the LED returns to a slow white flash

```
$ curl -D - http://10.10.100.1/restart.json
HTTP/1.0 204 No Content
Date: Mon Oct 2 09:34:12 2017
Server: GoAhead-Webs/2.1.1
Content-type: application/json
Content-length: 0
Connection: close
```

Scan Commands

List All Scans

`GET /scans.json` returns an array of all scans currently in the scanner's memory. After scanning a document, the scan will be available via the API several seconds later.

```
$ curl http://10.10.100.1/scans.json
[
  {
    "name": "/DOXIE/JPEG/IMG_0001.JPG",
    "size": 241220,
    "modified": "2017-05-01 00:10:06"
  },
  {
    "name": "/DOXIE/JPEG/IMG_0002.JPG",
    "size": 265085,
    "modified": "2017-05-03 00:09:26"
  },
  {
    "name": "/DOXIE/PDF/IMG_0001.PDF",
    "size": 273522,
    "modified": "2017-05-01 00:09:44"
  }
]
```

Calling this function immediately after scanning something may return a blank result, even if there are other scans on the scanner, due to the scanner's memory being in use. Consider retrying if a successful HTTP status code is returned along with a blank body.

Check for New Scans

`GET /scans/recent.json` returns the path to the last scan if available. Monitoring this value for changes provides a simple way to detect new scans without having to fetch the entire list of scans:

```
$ curl -D - http://10.10.100.1/scans/recent.json
HTTP/1.0 200 OK
Date: Mon Oct 2 09:34:12 2017
Server: GoAhead-Webs/2.1.1
Content-type: application/json
Content-Length: 36
Connection: close

{
  "path": "/DOXIE/JPEG/IMG_0003.JPG"
}
```

If there is no recent scan available (e.g., the scanner was just turned on or there are no scans), this function will return 204 No Content:

```
$ curl -D - http://10.10.100.1/scans/recent.json
HTTP/1.0 204 No Content
Date: Mon Oct 2 09:34:12 2017
```

```
Server: GoAhead-Webs/2.1.1
Content-type: application/json
Content-length: 0
Connection: close
```

Get Scan

`GET /scans/DOXIE/JPEG/IMG_XXXX.JPG` and `GET /scans/DOXIE/PDF/IMG_XXXX.PDF` (Doxie Q only) returns the scan at the specified path or 404 Not Found. Use a path found via `/scans.json` or `/scans/recent.json` prepended with `/scans`.

```
$ curl -O http://10.10.100.1/scans/DOXIE/JPEG/IMG_0001.JPG
```

```
$ curl -O http://10.10.100.1/scans/DOXIE/PDF/IMG_0001.PDF
```

Get Thumbnail

`GET /thumbnails/DOXIE/JPEG/IMG_XXXX.JPG` and `GET /thumbnails/DOXIE/PDF/IMG_XXXX.PDF` (Doxie Q only) returns a thumbnail of the scan at the specified path or 404 Not Found. Use a path found via `/scans.json` or `/scans/recent.json` prepended with `/thumbnails`.

```
curl -O http://10.10.100.1/thumbnails/DOXIE/JPEG/IMG_0001.JPG
```

```
curl -O http://10.10.100.1/thumbnails/DOXIE/PDF/IMG_0001.PDF
```

Thumbnails are constrained to fit within 240x240 pixels. Thumbnails for new scans are not generated until after the scan has been made available in `/scans.json` and `/scans/recent.json`. This function will return 404 Not Found if the thumbnail has not yet been generated. Retrying after a delay is recommended to handle such cases.

Delete Scan

`DELETE /scans/DOXIE/JPEG/IMG_XXXX.JPG` and `DELETE /scans/DOXIE/PDF/IMG_XXXX.PDF` (Doxie Q only) deletes the scan at the specified path and returns 204 No Content if successful or 404 Not Found on error.

```
$ curl -D - -X DELETE http://10.10.100.1/scans/DOXIE/JPEG/IMG_0001.JPG
HTTP/1.0 204 No Content
Date: Wed Sep 27 09:23:32 2017
Server: GoAhead-Webs/2.1.1
Content-type: application/json
Content-length: 0
Connection: close
```

```
$ curl -D - -X DELETE http://10.10.100.1/scans/DOXIE/JPEG/IMG_9999.JPG
```

```
HTTP/1.1 404 Not Found
Date: Wed Sep 27 09:23:09 2017
Server: GoAhead-Webs/2.1.1
Content-type: application/json
Content-length: 0
Connection: close
```

Deleting takes several seconds because a lock on the internal storage must be obtained and released. Deleting may fail if the lock cannot be obtained (e.g., the scanner is busy), so consider retrying on failure conditions. When deleting multiple scans, use `/scans/delete.json` for best performance.

Delete Multiple Scans

`POST /scans/delete.json` deletes multiple scans in a single operation. This is much faster than deleting each scan individually. Multiple scans are referenced using a JSON array of paths:

```
[
  "/DOXIE/JPEG/IMG_0001.JPG",
  "/DOXIE/JPEG/IMG_0002.JPG",
  "/DOXIE/PDF/IMG_0001.PDF"
]
```

The array of paths must be provided as the body of the POST request:

```
$ curl -D - -d '["/DOXIE/JPEG/IMG_0001.JPG", "/DOXIE/JPEG/IMG_0002.JPG", "/DOXIE/JPEG/IMG_0003.JPG"]' http://10.10.100.1/scans/delete.json
HTTP/1.0 204 No Content
Date: Wed Sep 27 09:23:32 2017
Server: GoAhead-Webs/2.1.1
Content-Length: 0
Connection: close
```

This function returns `204 No Content` if successful or `403 Forbidden` on error.

Appendix: Updates from Previous Version of Doxie API

This section is for those who have previously used the Doxie API for Doxie Go Wi-Fi (model DX250; now discontinued). This version of the Doxie API is very similar to the previous version, but it is a new implementation with a few notable differences:

1. The default IP address for Doxie changed from `192.168.1.100:8080` to `10.10.100.1:80`. Note the port change from 8080 to 80.
2. Doxie Q supports scans in PDF format, and the API has been updated to work with the new PDF directory at `/DOXIE/PDF`. The JPEG directory is still at `/DOXIE/JPEG`.
3. The `GET /hello.json` command was expanded to include all the available status information, including the scanner's firmware version. The `GET /hello_extra.json` command is no longer used.