Spok Go® - File Upload Specifications
Device Info

Version 3.0

Table of Contents

Introduction

This document is intended to be a guide to help the reader understand the Spok Go Device Info Upload.

Scope

This document describes the requirements and technical specifications for the proper use of the data file upload.

Intended Audience & Use

This document is intended for all personnel involved in the administration and support of the data file upload (specific to Device Info data) as well as the users of the Spok Go system to which the uploaded Device Info data will be inserted or updated. The document has the following intended uses:

- Validation of data to be loaded and understanding of the processes and requirements/business rules for the data file upload.

- Understanding by Spok's Professional Services Group (PSG) as well as the Spok Go customer regarding the technical specification and supported layout of the data file upload.

- A development specification and reference for the data file upload.

Requirements

The following sections will outline the various requirements for the success of the Spok Go Device Info File Upload.

System Requirements

The following are system requirements.

- A comma separated file called `deviceinfodataload.[CCYYMMDDHHMMSS].csv` (where [CCYYMMDDHHMMSS] is the date/time of the file's creation by the source system) with fields in the order that is defined later in this document.

- An SFTP client (SFTP enables file transfers over SSH) that is capable of transferring files to Spok Go's on-premises Gateway.

Resource Requirements

The following resources will be required for implementation of the Spok Go Device Info File Upload:

- A Customer's Source System Data Administrator - this resource is responsible for the creation of the previously mentioned `deviceinfodataload.[CCYYMMDDHHMMSS].csv` as well as for the data integrity of the file.

- Spok Professional Service Group (PSG) resource - this resource is responsible for enabling the Spok Go File Upload connector for the Customer's Spok Go system as well as for guiding the Customer through using these specifications for the creation and transfer of the Device Info file.

Connection Requirements

The following are the connection parameters to the on-premise Gateway for the Spok Go Device Info File Upload:

GATEWAY	: [FQDN or IP address of the Gateway's Load Balancer]
USERNAME	: [Auto-generated during setup, provided by PSG resource]
PASSWORD	: [Auto-generated during setup, provided by PSG resource]
PORT	: 22

File Formatting Expectations

Each row in the CSV file represents one Device Info record. The v3.0 version of the Spok Go Device Info File Upload specifications supports a maximum of 30 fields and therefore expects 29 "," commas to delimit the first 29 fields.

Then, instead of a "," comma, the 26th or last field for each record should be terminated with a carriage return/line feed combo (CRLF) unless it is the last or only record in a file in which case the terminating CRLF is optional.

Field Formatting Expectations

The `deviceinfodataload.[CCYYMMDDHHMMSS].csv` file will utilize a simple set of three characters to separate fields, sub-fields separators and repetitions within fields.

- A "," comma is used to separate fields
- A ";" semi-colon is used to separate sub-fields within a single field
- A "|" pipe character is used to separate one-to-many repetitions of data in a single field
- A "~" tilde is used to separate sub-fields within a single **sub** field
- A ":" colon character is used to separate one-to-many repetitions of data in a single **sub** field

The use of any of these characters as actual data within any of the fields that are defined below is not supported.

Other Considerations

1. Pre-loaded users with external IDs (if associating devices to users)
2. Pre-loaded with Care Team Roles (if associating pagers to Care Team Roles)

Operation Field

This file supports two types of operations. This can be specified in column 3 (C):

- 'FULL' = This operation will process all supported fields in the specification.
- 'STATUS' = This operation will only process the 'Status' field for an existing record. All other fields will be ignored. This operation looks at users by unique ID. If no record is found, an error is logged.
  - Refer to column Operation STATUS Required

Field Mapping

The following table shows which Device Info details can be loaded into the Spok database in the field order that follows.

Fields in this table are both numbered and lettered (ex: 5(E)) to aid in counting and referring to specific fields as well as for providing an easy cross-reference to alpha column headers if the file is viewed in a spreadsheet application.

Field	Description	Required for FULL Operation	Supports Repeats for FULL Operation	Required for STATUS Operation	Format	Spok attribute
1(A) Targeted Spec Version	Version of the specs that the provided file is targeting	✓		✓	Expected value: 3.0	
2(B) File Type	Specifies the file's purpose for subsequent processing within Spok Go	✓		✓	Expected value: DEVICEINFO	
3(C) Operation	Indicates whether the import will be a full metadata import or status only	✓		✓	Expected value: "FULL" or "STATUS"	
4(D) Unique ID	A unique ID for an employee from the file's source system			✓ If not available, the name will suffice in 6(F)	ExternalID	External reference ID(s) and Attribute(s)
5(E) Timestamp	Date and time the new/updated row was written to the file	✓			CCYYMMDDHHMMSS	
Device Classification Info - Fields that are required in order to create or update a device classification record are noted with an "✓"						
6(F) Device Classification Name	A user friendly name to describe a group of devices	✓				Free text
7(G) Device Type	Indicates whether the device is a pager or a smart device	✓			"ANDROID", "iOS" or "PAGER"	
8(H) Device Manufacturer	The name of the device's manufacturer					Free text
9(I) Pager Type	The type of pager	✓			"NUMERIC", "ALPHANUMERIC", or "TWOWAY"	
10(J) Max Supported Characters	The maximum number of characters that the pager can support	✓			A numeric value between 1 and 1000	
11(K) Encrypted Device	Does the device support encrypted messages?	✓			"ENCRYPTED" or other	Any value other than "ENCRYPTED" will result in the device classification being set as unencrypted.

Field	Description	Required for FULL Operation	Supports Repeats for FULL Operation	Required for STATUS Operation	Format	Spok attribute
12(L) Device Classification Status	Sets the active/inactive status for a group of devices	✓		✓	"ACTIVE" or "INACTIVE"	An inactive status for a device classification will affect all devices that are associated to the classification. Devices cannot be added to an inactive device classification.

Field	Description	Required for FULL Operation	Supports Repeats for FULL Operation	Required for STATUS Operation	Format	Spok attribute
13(M) Device Name	A user friendly name for a device	✓				Free text
14(N) Device Ownership	Indicates the device's ownership	✓			"PERSONAL" or "SHARED"	
15(O) Device Model	Identifies the device's model number					Free text
16(P) Device Dialer Type	The protocol for which the device uses to make calls.	✓			"TEL" or "SIP"	Dialer. Default is "TEL" for smart device. Not used for pagers.
17(Q) Device Number (Pager ID)	The number used to contact the device, usually a phone number or a pager ID	✓			Numeric values only. Must be between 3 and 32 characters for Pager or TEL, 6-254 for SIP.	Must be unique within a tenant/organization
18(R) Department Association	Tenant-related department to which the device is associated				Department name	Department
19(S) Department External Id	Unique ID from the source system for the Department if one exists				External Id	External Id for the department to associate
20(T) Location Association	Location to which a device is associated				LocationType;LocationName	Example: Region;West|Facility:Fairview|Building; Urgent Care Building Must match existing location record in Spok Go in order to be associated with a Location. The type for the Location that is being associated to the device must be configured to be an allowed entity association.
21(U) Location External Id	Unique ID from the source system for the facility if one exists If this field is populated, column 20(T) is not needed.				ExternalId	Location external ID

Field	Description	Required for FULL Operation	Supports Repeats for FULL Operation	Required for STATUS Operation	Format	Spok attribute
22(V) Device Status	Sets the active/inactive status of the device	✓		✓	"ACTIVE", "INACTIVE" or "BLACKLISTED"	Only active devices can be assigned to a user or care team role.

Field		Description	Required for FULL Operation	Supports Repeats for FULL Operation	Required for STATUS Operation	Format	Spok attribute
		User Info - User info fields should not be populated for devices that will be assigned to a care team role - A device cannot simultaneously be assigned to both a user and a care team role - Inactive devices cannot be assigned to a user					
23(W)	Device User	Name and unique identifier for a device's known user				staffUniqueId; lastName; firstName	A device user's status will be inherited from their user's directory status.
24(X)	Activity Types	Type of messages allowed to go to device				"CHAT", "ALERT" or "NOTIFICATION"	If not specified, all are enabled.
25(Y)	Priority Levels	Priority levels allowed to go to device				"HIGH", "NORMAL","LOW"	Critical always enabled. If not specified, all are enabled.
26(Z)		Quiet Time Details: A multi-component field to communication a user's preferred quiet times. A user's quiet time handling will default to inactive unless quiet time details are received.					
	.1 Quite Time Day(s)	Day(s) for which quiet hours will be enforced for the user	Quiet Time Details are not required; however, all three of the field's components are required to create quiet time(s) for a user.	✓	✓ Field 22(V) is one field that is made up of 3 sub-fields, all of which can be repeated as many times as needed, in order, for each of a user's pagers. Snapshot Update [2]	"Mon", "Tue", "Wed", "Thu", "Fri", "Sat" and/or "Sun"	Required for saving day-specific quiet hours.
	.2 Quiet Time Start Time	The start time for quiet hours for each indicated day.		✓		HHMMSS (expressed in 24 hour time format)	The quiet time start time must be in local time. If all day is desired set start to 12:00AM and end to 11:59PM
	.3 Quiet Time Stop Time	The end time for quiet hours for each indicated day.		✓		HHMMSS (expressed in 24 hour time format)	The quiet time end time must be in local time. If all day is desired set end to 11:59PM

Field	Description	Required for FULL Operation	Supports Repeats for FULL Operation	Required for STATUS Operation	Format	Spok attribute
	Care Team Role Info - Care team role fields should not be populated for devices that will be assigned to a user - A device cannot simultaneously be assigned to both a user and a care team role - Care team roles support the assignment of shared pagers only, not shared smart devices - Inactive devices cannot be assigned to a care team role					
27(AA)	Care Team Role Name	Functional role for the care team role				
28(BB)	Location Associtaion	Location to which a care team role is associated				LocationType;LocationName	Example: Region;West|Facility:Fairview|Building; Urgent Care Building Must match existing location record in Spok Go in order to be associated with a Location.
29(CC)	Care Team Role Unique Identifier						Care Team Role Unique Identifier
30(DD)	Care Team Role External Id	Unique ID from the source system for the Care Team Role if one exists				External Id	External Id of the Care Team Role

Data Upload Details

The following section explains field-level specifics that should help ensure the successful implementation of the Spok Go Device Info File Upload.

Fields and/or sub-fields that are grayed-out are reserved for future use and will not be used when adding or updating a Spok Go user's info at this time. However, these fields and sub-fields can still be populated in preparation for their planned purpose without negatively impacting the processing of a user record.

1) Note that if this file is viewed in a spreadsheet application, these fields may not display as intended due to the application's default field formatting. Changing the displayed format of these fields' columns should allow a reviewer to see the column's contents as expected.

2) Repeating fields noted with "Snapshot Update" will replace existing values with new values as they are received in one of these fields. This handling also applies to the receipt of empty fields which will remove any existing data for a previously populated field.

Integration Risks

The following are possible risks that have been identified:

- Non-curated source data with duplicates or inaccurate data.

- Irregular or inconsistent output of files from source system.

- Poorly formatted CSV files

- Inclusion of incorrect data that cannot be corrected by subsequent Device Info file uploads (ex: incorrect device classification name)

Integration Success Criteria

The integration will be considered successful if the following criteria are met:

- The Spok Go Device Info File Upload is implemented per the specifications in this document and Device Info for both shared and personal devices have been added to Spok Go as expected.

Revision History

The table that follows will provide a history of changes that are made to this document.

Date	Comment(s)	Author
2020.05.26	Initial v1.0 of these specs	Todd Thomas
2020.07.21	Updated Care Team Role name info and added Pager Type field.	Todd Thomas
2020.07.28	Updated Quiet Hours fields and scoped out. Not expected in console integration and is a user specified field. Updated details in Priority and Activity Type.	Joe Decker
2020.07.29	Added region, needed to find correct facility. Updated care team role with required attributes.	Joe Decker
2020.08.05	Revised layout of quiet time related fields	Todd Thomas
2020.08.05	Added field level details/descriptions/formatting tips where tips were missing.	Todd Thomas
2020.08.10	Change "TWO-WAY" pager type to "TWOWAY"	Todd Thomas
2020.08.20	Inserted Dialer Type 14(N). Updated # of characters allowed to match validation. Changed to v1.1	Joe Decker
2020.11.10	Added field to represent external ID's from Spok consoles or other third party systems	Zach Hanson
2020.11.24	Added "Operation" field to indicate a full update or a status update on the entity. Also changed version to 2.0 to be in synch with other import specifications.	Zach Hanson
2020.12.9	Added additional explanation on 'Operation' functionality and new column for 'Operation Status Required'. Cleaned up requirement fields.	Paola Gonzalez
2020.1.20	Create 2.1 version of the spec.	Sunil Bhujle
2021.9.20	Updated to version 3.0 of the spec to support flexible location associations	Zach Hanson Paola Gonzalez