



BUREAU OF THE
Fiscal Service
U.S. DEPARTMENT OF THE TREASURY

G-Invoicing **Agency Options for In-Flight Orders**

Version 1.1.1
May 2, 2022

In-Flight Orders



Objective

- Provide options for agencies to create In-Flight Orders (IFO) in G-Invoicing, adjusted to account for Performance to-date

Policy

- Treasury Financial Manual (TFM) mandate for In-Flight Orders extending into FY 2024 to be established in G-Invoicing by October 1, 2023

Agency Options

- A. Manually convert IFOs in your Enterprise Resource Planning (ERP) system, for unpaid balances only
- B. Solicit help from your ERP provider or IT department to convert IFOs
- C. Enter IFOs directly into G-Invoicing's User Interface (UI)
- D. Use new Order Upload feature
- E. Conditionally, use 7600EZ for future billing on IFOs

API

UI

EZ

Recommendations for Options A-D

- Partners must agree on terms, including but not limited to:
 - GT&C with appropriate Order Originating Partner Indicator
 - FOB Point and Constructive Receipt Days
 - Number of Lines and Schedules
 - Unit of Measurement, Quantity and Unit Price
 - Prepaid Performance Quantity (PPQ) for Advances
- Consider negotiating one file per partnership (Requesting Agency/Service Agency)
 - Separate files facilitate a secure e-mail exchange of data between two partners



Note: Creating an Order is still a 2-step process, whether it's new or in-flight

- 1. Partner 1 creates and approves the Order*
- 2. Partner 2 updates and approves the Order*

Recommendations for Options A-D (cont.)

- Each pair of trading partners should plan their IFO strategy
 - When applicable, each agency should talk with their ERP vendor about what options are available to them
 - Your system may not be capable of pulling open IFO and/or Advance PPQ
 - An agency should talk with each of their trading partners to see which combination of options will be most effective
 - Best option for requesting side may be different than servicing side
 - Consider testing the options with a few Orders before committing full resources to the IFO effort
 - Negotiation of IFO data may occur over longer stretches of time
 - Agreement on remaining balances and Advance PPQs should occur “just in time” for creating the IFOs
 - Two partners should work quickly to get their IFOs to open status

API Options (A and B)

- Application Programming Interface (API) Prerequisites
 - Required data must be agreed upon, but strict (CSV) format is not necessary
 - Agencies should discuss options with their ERP vendor
 - Close out existing Orders pointing towards IPAC
- API Options
 - A. Manually convert IFOs in your ERP system to look like new ones
 - Open replacement Orders, using remaining (unpaid) balances
 - Fully performed lines can be omitted or marked as cancelled
 - ERP system will push Orders **and optionally Advance PPQ** to G-Invoicing
 - Advance Prepaid Performance Quantity **will be** supported through the API
 - B. Solicit help from your ERP provider or internal IT department
 - Convert IFOs within agency system
 - ERP system will push Orders to G-Invoicing



Recommendation

- *Agencies should talk with their ERP vendor and/or IT department about what API options are available to them*

User Interface Option C



C. Enter each IFO directly into G-Invoicing's UI

- Required data must be agreed upon, but a strict format is not necessary
- UI provides immediate feedback when data is invalid
- New feature will be added to identify Advance Performance as Prepaid
- Adjustments to Advance PPQ will be allowed through the UI
 - Adjustment may move funds or not, at user's discretion

Recommendations

- *Agencies should talk with their ERP vendor about what options are available to them*
 - Your system may not be capable of pulling open IFO and/or Advance PPQ
- *Agencies should talk with their trading partners to see which combination of options will be most effective*
- *Agencies should test their choices with a couple IFOs before committing full resources to the IFO effort*

User Interface Option D



D. Order Upload feature – Proposed process

1. Agree to both partners' data in one strictly formatted spreadsheet
2. Partner 1 includes their Order Tracking Number for each Order
3. Partner 1 uploads or drops off the file for processing
4. Partner 1 reviews results then cleanses data and repeats 3-4 until error free
5. Partner 1 creates Orders in Shared with Partner 2 (SP2) status
6. Partner 1 reviews the Order “batch” and reverses the upload, if necessary
7. Partner 1 may download Order file for Partner 2 to upload
8. Partner 2 reviews the Orders and asks Partner 1 to reverse, if necessary
9. Partner 2 updates the file provided by Partner 1, if necessary
10. Partner 2 uploads the file for processing
11. Partner 2 reviews results and cleanses data, repeating 9-10 until error free
12. Partner 2 moves Orders to Open status and uploads PPQ if applicable
13. Partners 1 & 2 review open Orders + Advance PPQ, adjusting as necessary

Recommendations

- *Same recommendations as noted for Option C (Slide 6)*

Option E – 7600EZ

- Not technically an In-Flight Order, but can be used as substitute
- Two partners agree that all future billing will be < \$10,000
- Establish a GT&C to support EZ invoices
- Servicing Agency sends EZ Invoices through API or enters them through G-Invoicing's UI
- Buy/Sell transactions sent directly to IPAC will be considered noncompliant



Note: If you submit an invoice > \$10k, the standard EZ process will return an error

IFO Options Matrix

- Which combinations of IFO options work best for both partners?

		Partner 1				
		A	B	C	D	E
Partner 2	A	Replacement Orders look like new. Adv PPQ via G-Invoicing API or UI.	Replacement Orders look like new. Adv PPQ via G-Invoicing API or UI.	Adv PPQ via G-Invoicing UI or API. Can partner 1's ERP handle IFOs/PPQ?	Adv PPQ via G-Invoicing UI or API. Can partner 1's ERP handle IFOs/PPQ? Partner 1 may lose ability to reverse.	Both partners must agree upon EZ for it to be a viable option.
	B	Replacement Orders look like new. Adv PPQ via G-Invoicing API or UI.	Replacement Orders look like new. Adv PPQ via G-Invoicing API or UI.	Adv PPQ via G-Invoicing UI or API. Can partner 1's ERP handle IFOs/PPQ?	Adv PPQ via G-Invoicing UI or API. Can partner 1's ERP handle IFOs/PPQ? Partner 1 may lose ability to reverse.	Both partners must agree upon EZ for it to be a viable option.
	C	Adv PPQ via G-Invoicing UI or API. Can partner 2's ERP handle IFOs/PPQ?	Adv PPQ via G-Invoicing UI or API. Can partner 2's ERP handle IFOs/PPQ?	Good for small number of Orders. Partners key in Orders + Adv PPQ. Can both ERPs handle IFOs/PPQ?	Adv PPQ entered into G-Invoicing UI. Can partner 1's ERP handle IFOs/PPQ? Partner 1 may lose ability to reverse.	Both partners must agree upon EZ for it to be a viable option.
	D	Adv PPQ via G-Invoicing UI or API. Can partner 2's ERP handle IFOs/PPQ? Consider both using option D.	Adv PPQ via G-Invoicing UI or API. Can partner 2's ERP handle IFOs/PPQ? Consider both using option D.	Adv PPQ entered into G-Invoicing UI. Can both ERPs handle IFOs/PPQ? Consider both using option C or D.	Good for large number of Orders. Upload creates Orders and Adv PPQ. Can both ERPs handle IFOs/PPQ?	Both partners must agree upon EZ for it to be a viable option.
	E	Both partners must agree upon EZ for it to be a viable option.	Both partners must agree upon EZ for it to be a viable option.	Both partners must agree upon EZ for it to be a viable option.	Both partners must agree upon EZ for it to be a viable option.	Least amount of effort, but limited to \$10,000 Order balance. Works for API or UI.

Options	A: Manually convert IFOs in your ERP system to look like new ones
	B: Solicit help from your ERP provider or IT department to convert IFOs
	C: Enter each IFO directly into G-Invoicing's user interface
	D: Use new Order Upload feature
	E: Conditionally, use 7600EZ for future billing on IFOs

Recommendations: Talk to your ERP vendor about what options work best for your situation, then test those options.

Direct entry of PPQ into G-Invoicing should not be made if either partner's ERP system is unable to pull down and process PPQ.

Talk to your partners about what options will work for their agencies, then test the option(s) that you and your partners have chosen.

- Aside from option E, any combination can work
- Be sure to talk with your vendor, talk with your partners, and test before you commit major resources

Prepaid Performance Quantity (PPQ)

- Options A-B (API) support Advance PPQ
 - New parameter will identify PPQ, handled like Option C
- Option C (G-Invoicing UI)
 - UI will allow users to flag an Advance Performance as “Prepaid”
 - Prepaid Performance supported for Advances only
 - G-Invoicing will assign status PRE (i.e., Prepaid)
 - Advance PPQ will not go to PND (pending) or STL (settled) status
 - Subsequent adjustments to Advance PPQ are made in PND or PRE status, at the user’s discretion
- Option D (Order Upload feature)
 - Optional PPQs are:
 - Only for Advance Performance
 - Created immediately after all Orders pass validations
 - Created if all of Partner 2’s PPQs match Partner 1’s
 - Otherwise, the upload will stop and show the PPQs that don’t match
 - Adjusted through the Performance UI (see Option C above)
- Option E (EZ) does not support PPQ

IFO Examples

Advanced

In-Flight Order = \$1,000,000
 Adv = \$750,000
 Div = \$400,000

Replacement Order of
 \$600,000 entered or uploaded
 directly into G-Invoicing¹

Prepaid Advance of \$350,000
 created in G-Invoicing¹

Use Case: Adjust prepaid
 Advance by \$-50,000.
 Adjustments to prepaid
 Performance (in G-Invoicing)
 can optionally return funds.

FOB Source

In-Flight Order = \$1,000,000
 Div = \$400,000
 Rcv = \$200,000

Replacement Order for
 \$600,000 balance made in
 ERP system or directly in
 G-Invoicing¹

No Performance History

¹ Assumes that agency is not using ERP system, or their
 ERP system can pull down Order or prepaid Performance.

FOB Destination

In-Flight Order = \$1,000,000
 Div = \$400,000
 Rcv = \$200,000

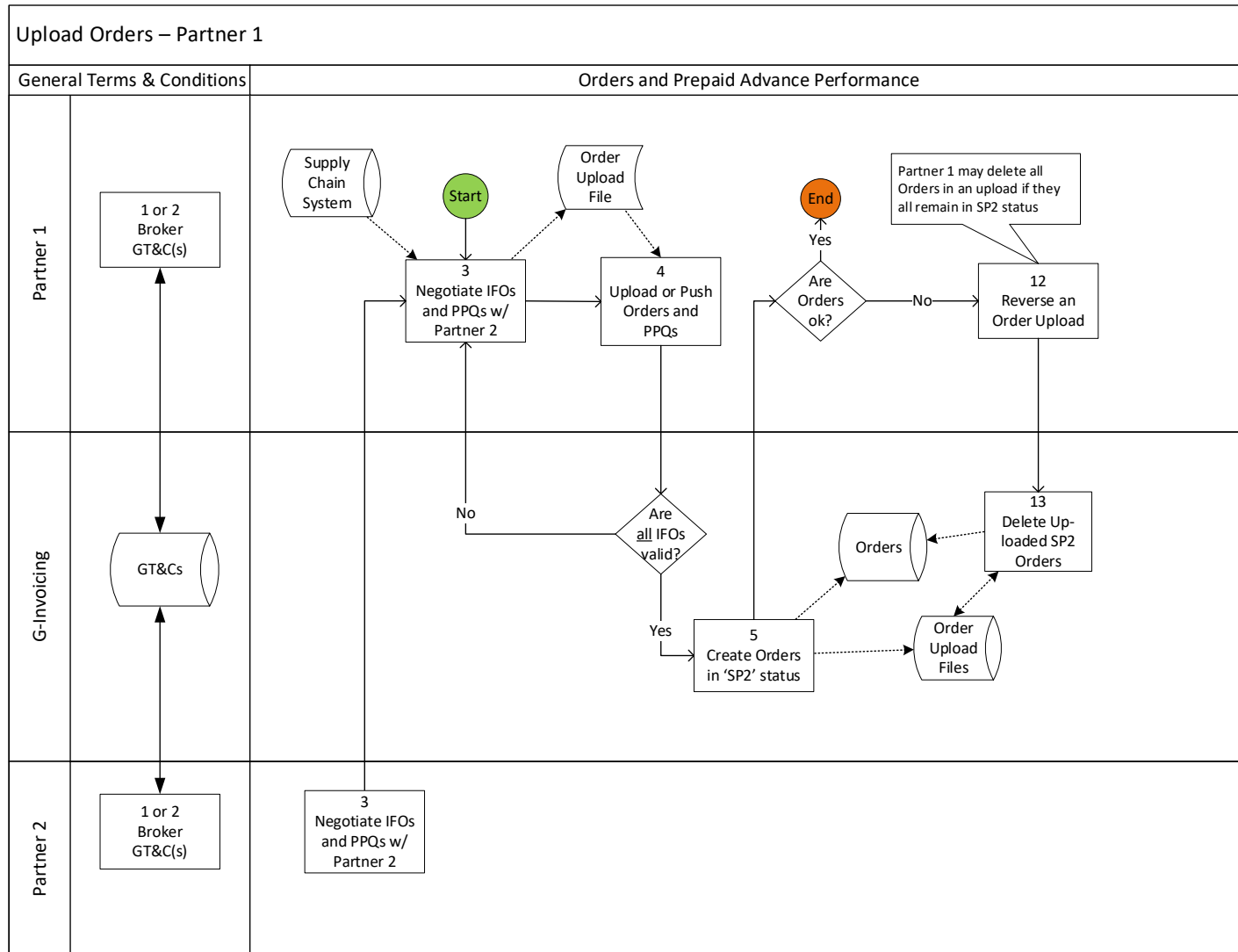
Replacement Order for
 \$800,000 balance made in
 ERP system or directly in
 G-Invoicing¹

Servicing agency must
 provide Delivered/Performed
 of \$200,000 to support
 receipt

Appendix D: Order Upload Details

- Option D Example: Both partners agree to use Option D, but not all Orders are approved by Partner 2
 1. Partner 1 uploads 60 In-Flight Orders in SP2 status, all for Partner 2
 2. Partner 1 uploads 40 more
 3. Partner 2 notices 10 they disagree with (out of the 100 SP2 Orders)
 - Method 1: They talk, then Partner 1 deletes all 100 and starts over
 - Method 2:
 - 1) Partner 2 rejects the 10 through UI (Option C) or API (Option A)
 - 2) Partner 2 uploads the 90 good ones (Option D)
 - 3) Partner 1 modifies the 10 bad ones, or uploads the corrected 10
- Assumptions:
 - Both partners either have no ERP system or their system can pull down open Orders for processing
 - Users for each partner have been granted access to upload Orders directly into G-Invoicing
- The remaining slides further describe Option D
- Details are intended for developers and agency users who are considering using Option D

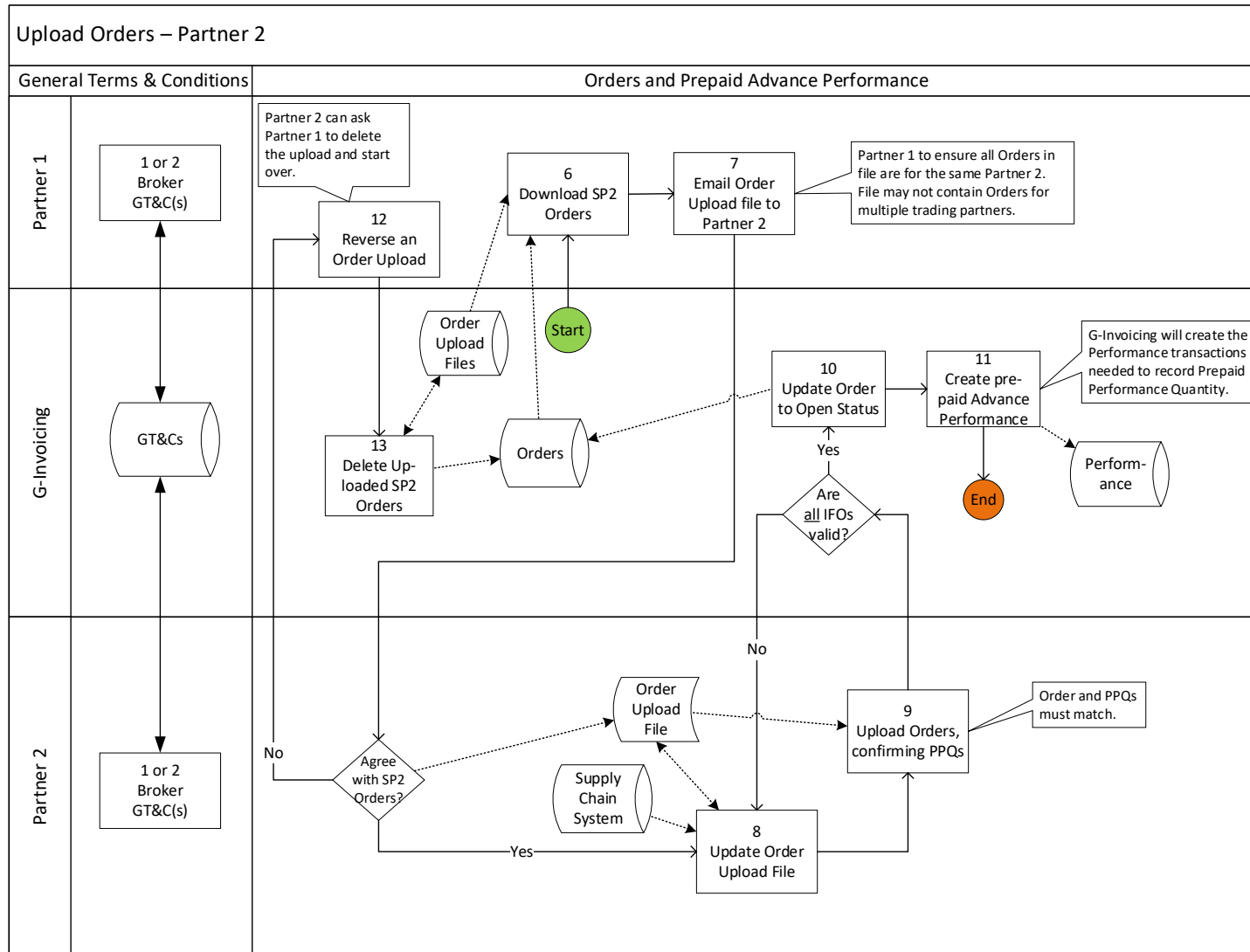
Appendix D: Order Upload – Partner 1



Appendix D: Partner 1 Upload (Step 4)

- Every Order in the upload file must pass all validations for SP2 status (Shared with Partner 2) before any Orders can be uploaded
 - Multiple errors per Order will be returned, but not necessarily all errors at once
 - Some validations are conditional on other data values
- The size of the Upload Order file will be capped at 25mb
 - Small file sizes better support the one fail / all fail approach
- Data contained in Order Upload files will be staged in G-Invoicing
 - Errors and other messages will be retained, and associated with the file upload
- Once cleansed, Partner 1 will request IFOs be uploaded in SP2 status
 - Partner 2's Order Tracking Number will be set to 'Order Upload' + Batch ID
 - Temporarily identifies Orders created via the Order Upload feature
 - Users can filter/export their Order Summary list by ALC, Tracking ID and Status
 - Partner 2 may leave their Order Tracking Number as 'Order Upload' + Batch ID, or override it
- Partner 1 may reverse an upload
 - This physically deletes the SP2 Orders associated with that upload
 - Reversal only allowed if all Orders in the upload still in SP2 status

Appendix D: Order Upload – Partner 2



Appendix D: Partner 2 Upload (Step 8)

- Options A through D (from slide 2) are available for Partner 2
 - They can approve Orders through the API, in the UI or by uploading a file
 - If Partner 2 chooses Option D:
 - The SP2 Orders (created by Partner 1) can be exported from G-Invoicing
 - They may obtain Partner 1's Order Upload file (outside of system)
 - G-Invoicing will add the new Order Numbers into the exported SP2 Order File
- If Partner 2 finds disagreeable SP2 Orders, they have two options:
 1. Ask Partner 1 to reverse the entire upload, correct it and reprocess it
 - Only possible if all Orders still in SP2 status
 2. Upload the Orders they approve of, and reject the others via UI or API
 - Partner 1 may then modify the rejected Orders or submit new ones
- Every Order in the upload file must pass all validations
 - Partner 2 must supply their data and agree with Partner 1's PPQs
 - Prepaid Advances will be created for the agreed-upon Orders and PPQs
 - PPQ is optional, and zero is allowed, for which no Performance is created

Version History

Version	Date	Release	Description
v0.1	11/30/2021	TBD	Original version, reviewed by Treasury, CGI and Oracle
v0.2	12/7/2021	TBD	Merged new presentation format in with technical details
v0.3	12/15/2021	TBD	Raised questions on viability of PPQ following vendor reviews
v0.4	12/22/2021	TBD	Highlighted issues to be resolved and created discussion slide (17)
v0.5	1/11/2022	TBD	Proposed solutions to PPQ issues in prep for talking with vendors
v0.6	2/7/2022	TBD	Single PPQ for Advances, and added IFO Options matrix
v0.7	2/10/2022	TBD	Following internal FRB and Treasury reviews
v0.8	2/14/2022	TBD	Changed IFO flag to 'Order Upload' using Agency Tracking Identifier
v0.9	2/17/2022	TBD	Revised following Treasury review
v1.0	2/24/2022	TBD	Updated IFO Options Matrix following Treasury review. Published.
v1.1	4/25/22	5.0	Advance PPQ will be supported via API. Option D steps have changed.
v1.1.1	5/2/22	5.0	Corrected slide 9 options to include Advance PPQ via API