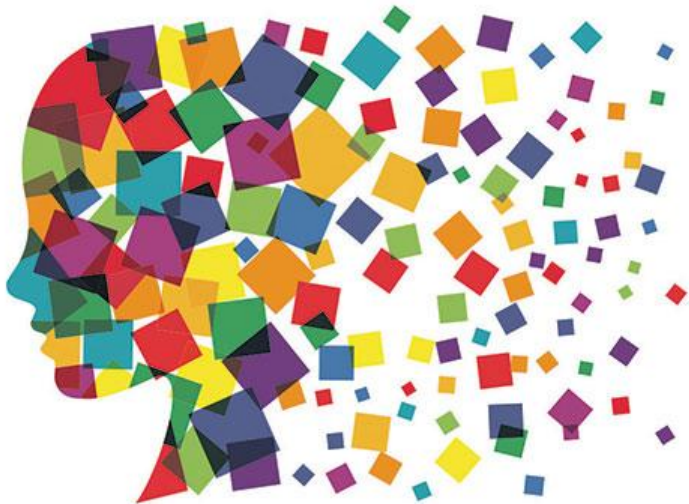# Internal Connections
FRN Line Items
Bulk Upload Guide

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What is the Internal Connections FRN Line Item Bulk Upload Feature?

- Creating FRNs with multiple Line Items and/or multiple Recipients of Service can be time consuming

- USAC created "Offline Templates" to assist with this task

- Templates are available for all service types, but Internal Connections is the most commonly used

- Advantages?
  - Allow you to doublecheck your calculations
  - Copy/paste from another spreadsheet
  - Assists with keeping track of school building C2 pre-discount budgets
  - Saves time

- Challenges?
  - Template contains macros
  - Must be sure to "validate" for errors prior to uploading

- Still must create the FRN online and link to Contract Record

What Data is Requested in Template?

- All FRN Line Item Data
  - Category
    - Wireless data distribution, data protection, cabling, etc.
  - Manufacturer
  - Model #
  - Unit price
    - Eligible and ineligible
  - Quantity
  - Recipients of Service
 - Amount per Model # (component) per Recipient of Service

General Process for Using IC Bulk Upload

- Create the Template
  - Validate for Errors, then Save if no errors
- Create the Form 471 and FRN
- At FRN Line Item screen, click "Bulk Upload"
  - Upload the Template, click Submit
  - System will return you to your Actions Page (out of the 471)
  - Cannot do any work on this 471 while system is reviewing the data
- EPC will create a task within 1 minute with the Bulk Upload Results
  - Click on Results and it will tell you if your Upload was successful
- Review all FRN Line Item data to ensure it is accurate
  - Can revise any data
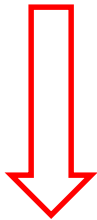 - Can also delete the FRN Line Item and upload a revised Template

1 Create Your Template

- Windows 10 (Excel 2013 and newer) Template available at:
  http://e-ratepa.org/wp-content/uploads/2014/03/Category-Two-Internal-Connections-Crashed-Fix-Version-16.4.xlsm

- All other versions of Excel Template:
  http://usac.org/_res/documents/sl/xls/window-hq/Category-Two-Internal-Connections.xlsm
  – This version will appear to work with Excel 2013 and newer, but ultimately will not allow you to upload

- Template has 3 tabs
  – Internal Connections
  – Recipients of Service (R/S)
  – List of Errors

Category 2 Internal Connections	Recipients of Service	List of Errors

- Macros require you to select from certain options
- Let's review each section of the Template
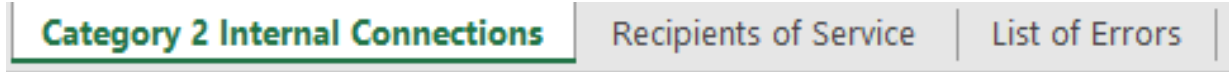
Reference Number Column

- System will populate Reference Numbers – one per row

- Used to identify components in Recipients of Service Tab

- Note: If you change data in the row later, the Reference Number will change
  - Simply highlight the column, right click, then "Clear Contents" and the numbers will return to normal

	Reference Number	Type of Internal Connection	Installation Included in Price?	Type of Product	Make	Enter the Make (If Other)	Model	Lease or Non-Purchase Agreement?
1	Category 2 Internal Connections - Version 16.4							
2								
3	Reference Number	Type of Internal Connection	Installation Included in Price?	Type of Product	Make	Enter the Make (If Other)	Model	Lease or Non-Purchase Agreement?
4	For Reference only - Not Imported	Required	Required	Required	Required	Required if "Other" is selected as Make	Required	Required
5								
6								
7								
8								

Tab 1, Section 1: Equipment Details

- First 6 columns (peach) require equipment details
  - After creating one row, you can copy rows instead of clicking on each cell
  - Example:

Reference Number	Type of Internal Connection	Installation Included in Price?	Type of Product	Make	Enter the Make (If Other)	Model	Lease or Non-Purchase Agreement?
For Reference only - Not Imported	Required	Required	Required	Required	Required if "Other" is selected as Make	Required	Required
1	Data Distribution	No	Switch	Meraki		MS350-24P-HW	No
2	Data Distribution	No	Switch	Meraki		MS225-48LP-HW	No
3	Data Distribution	No	Switch	Meraki		MS425-16-HW	No
4	Data Distribution	No	Switch	Meraki		LIC-MS350-24P-5YR	No
5	Data Distribution	No	Switch	Meraki		LIC-MS225-48LP-5YR	No
6	Data Distribution	No	Switch	Meraki		LIC-MS425-16-5Y	No
7	Data Distribution	No	Switch	Meraki		MA-SFP-1GB-SX	No
8	Data Distribution	No	Switch	Meraki		MA-PWR-640WAC	No
9	Data Distribution	No	Switch	Meraki		MA-PWR-250WAC	No
10	Data Distribution	No	Switch	Meraki		MA-CBL-40G-50CM	No
11	Data Distribution	No	Switch	Meraki		MA-SFP-10GB-LR	No

Type of IC & Type of Product

- Choices for Type of Product will change, depending on the Type of Internal connection chosen
- Choices are:

Type of Internal Connection	Type of Product
Required	**Required**
Cabling/Connectors	Cabling
Cabling/Connectors	Connectors
Caching	Caching Equipment
Data Distribution	Switch
Data Distribution	Router
Data Protection	UPS/ Battery Backup
Data Protection	Firewall Services & Components
Racks	Racks & Cabinets
Software	Operating System Software of Eligible Equipment
Wireless Data Distribution	Access Point
Wireless Data Distribution	Antenna
Wireless Data Distribution	LAN Controller
Wireless Data Distribution	Wireless Controller
Miscellaneous	Installation, Activation, & Initial Configuration
Miscellaneous	Training
Miscellaneous	Fees, Taxes, etc.

Tab 1, Section 2: Monthly Recurring Costs

- Next five columns (dark blue) must be completed, even for Internal Connections Templates
  - Most answers will be $0.00
  - Doesn't matter which Unit Type is selected
  - System requires at least 1 month to be selected
    - This is meaningless data, so it doesn't matter what is listed

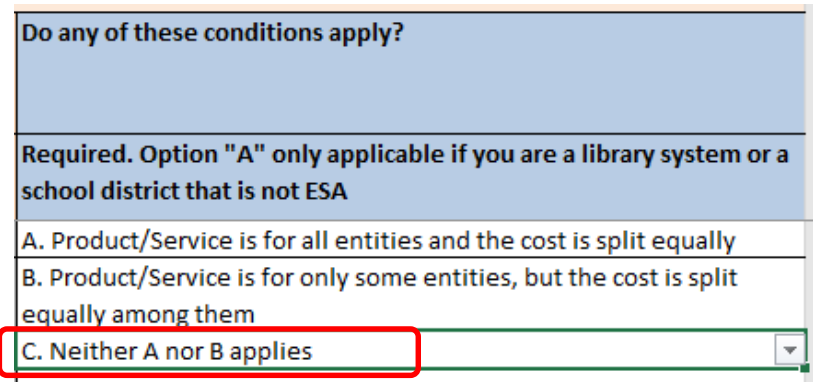| Identify the Monthly Costs								
Monthly Recurring Unit Costs	Monthly Recurring Unit Ineligible Costs	Estimated Monthly Recurring Unit Eligible Costs	Monthly Quantity	Units	Estimated Total Monthly Eligible Recurring Costs	Estimated Months of Service	Estimated Total Eligible Recurring Costs
Required	Required	For Reference only - Not Imported	Required	Required	For Reference only - Not Imported	Required	For Reference only - Not Imported
$0.00	$0.00	$0.00	0	Each	$0.00	1	$0.00
$0.00	$0.00	$0.00	0	Each	$0.00	1	$0.00
$0.00	$0.00	$0.00	0	Each	$0.00	1	$0.00
$0.00	$0.00	$0.00	0	Each	$0.00	1	$0.00
$0.00	$0.00	$0.00	0	Each	$0.00	1	$0.00
$0.00	$0.00	$0.00	0	Each	$0.00	1	$0.00
$0.00	$0.00	$0.00	0	Each	$0.00	1	$0.00
$0.00	$0.00	$0.00	0	Each	$0.00	1	$0.00
$0.00	$0.00	$0.00	0	Each	$0.00	1	$0.00
$0.00	$0.00	$0.00	0	Each	$0.00	1	$0.00

Tab 1, Section 3: One-Time Costs

- Next 3 columns (light blue) will identify the:
  - Total Cost of each component
  - Ineligible Cost of each component
  - Quantity of components

Hint: If gray columns don't calculate, type the Unit Costs by hand

Identify the One-time Costs				
One-time Unit Costs	One-time Unit Ineligible Costs	Estimated One-time Unit Eligible Costs	One-time Quantity	Estimated Total Eligible One-time Costs
Required	Required	For Reference only - Not Imported	Required	For Reference only - Not Imported
$2,937.00	$0.00	$2,937.00	7	$20,559.00
$2,290.00	$0.00	$2,290.00	55	$125,950.00
$6,370.00	$0.00	$6,370.00	2	$12,740.00
$450.00	$0.00	$450.00	7	$3,150.00
$331.00	$0.00	$331.00	55	$18,205.00
$975.00	$0.00	$975.00	2	$1,950.00
$227.00	$0.00	$227.00	108	$24,516.00
$432.00	$0.00	$432.00	7	$3,024.00
$204.00	$0.00	$204.00	2	$408.00
$45.00	$0.00	$45.00	57	$2,565.00
$1,817.00	$0.00	$1,817.00	6	$10,902.00

Tab 1, Section 3: Which Condition Applies

- The final column is trying to identify how to allocate the costs to the Recipients of Service
  - If A is selected, the system will assume that all entities in your EPC profile will be using the equipment and the costs should be split equally
    - This Reference Number should not be listed on the R/S Tab
    - Be cautious choosing this condition because it will not weight the costs by enrollment
  - If B is selected, the system will require you to list the Reference Number on the R/S Tab, identify who will be using the equipment, but will not require you to identify costs/school
    - Be cautious choosing this condition because it will not weight the costs by enrollment
    - Good choice if all equipment listed in the Template is going to the same school
  - If C is selected, the system will require you to enter all of the data on the Recipients of Service Tab
    - Note: This is the most common choice

Do any of these conditions apply?
Required. Option "A" only applicable if you are a library system or a school district that is not ESA
A. Product/Service is for all entities and the cost is split equally
B. Product/Service is for only some entities, but the cost is split equally among them
C. Neither A nor B applies

Tab 2: Recipients of Service

| Category 2 Internal Connections | **Recipients of Service** | List of Errors |

- Cross references each "Reference Number Row" with entities using the equipment
- Identifies the cost/entity for that "row"
- Rows can/should be listed multiple times
- Recipient's E-rate Entity Number (BEN) must be listed
  - Name of BEN not required or uploaded by you'll want to include
  - Don't know a building's BEN? Look on your EPC Landing Page

Category 2 Internal Connections - Version 16.4			
Recipients of Service			
Reference Number	**BEN**	**Name**	**Eligible Cost per BEN**
Required- Not Imported	**Required**	**For Reference only - Not Imported**	**Required**

Tab 2: Recipients of Service

- Completed Example:

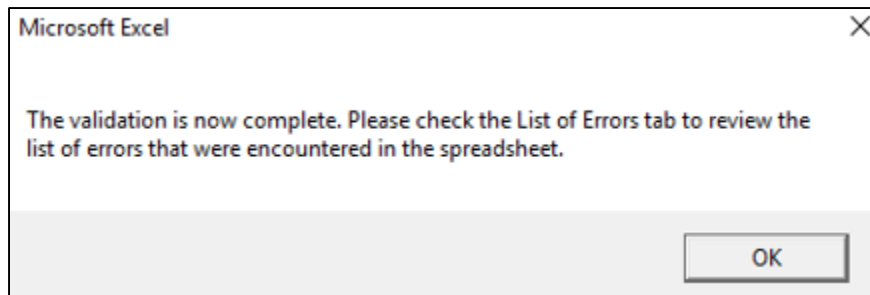| Recipients of Service			
Reference Number	**BEN**	**Name**	**Eligible Cost per BEN**
Required- Not Imported	**Required**	**For Reference only - Not Imported**	**Required**
1	21089	AMANDA E STOUT ELEM (AS)	$8,811.00
1	21151	MILLMONT ELEM (MM)	$11,748.00
2	21089	AMANDA E STOUT ELEM (AS)	$34,350.00
2	21151	MILLMONT ELEM (MM)	$22,900.00
2	16055732	READING INTERMEDIATE HS (CIT)	$68,700.00
3	16055732	READING INTERMEDIATE HS (CIT)	$12,740.00
4	21089	AMANDA E STOUT ELEM (AS)	$1,350.00
4	21151	MILLMONT ELEM (MM)	$1,800.00
5	21089	AMANDA E STOUT ELEM (AS)	$4,965.00
5	21151	MILLMONT ELEM (MM)	$3,310.00
5	16055732	READING INTERMEDIATE HS (CIT)	$9,930.00
6	16055732	READING INTERMEDIATE HS (CIT)	$1,950.00
7	21089	AMANDA E STOUT ELEM (AS)	$4,540.00
7	21151	MILLMONT ELEM (MM)	$6,356.00
7	16055732	READING INTERMEDIATE HS (CIT)	$13,620.00
8	21089	AMANDA E STOUT ELEM (AS)	$1,296.00
8	21151	MILLMONT ELEM (MM)	$1,728.00
9	16055732	READING INTERMEDIATE HS (CIT)	$408.00
10	21089	AMANDA E STOUT ELEM (AS)	$675.00
10	21151	MILLMONT ELEM (MM)	$450.00
10	16055732	READING INTERMEDIATE HS (CIT)	$1,440.00
11	21089	AMANDA E STOUT ELEM (AS)	$3,634.00
11	21151	MILLMONT ELEM (MM)	$3,634.00
11	16055732	READING INTERMEDIATE HS (CIT)	$3,634.00

Tab 2: Validating Data

- After Recipients of Service Tab is complete and totals match with totals from Equipment Tab, click the Validate Box

Click to Validate

- System will show "Validation is Now Complete" window

Microsoft Excel   ✕

The validation is now complete. Please check the List of Errors tab to review the list of errors that were encountered in the spreadsheet.

OK

- Then click on 3rd Tab: "List of Errors" to see if your data has been perfectly validated

Category 2 Internal Connections | Recipients of Service | **List of Errors**

Tab 3: Finding Errors

- If your 3rd Tab looks like this, your data is perfect! Quickly save it to a folder you'll remember!

Tab	Column and Row	Error

- If your 3rd Tab looks like this, review the Error Comments, correct the data, and Validate again

Click to Validate

Tab	Column and Row	Error
Recipients of Service	D7	[Reference Number: 2] For this FRN line item, you will not need to allocate costs per BEN because the system will automatically split the cost equally between the recipients listed for this line item.
Recipients of Service	D8	[Reference Number: 2] For this FRN line item, you will not need to allocate costs per BEN because the system will automatically split the cost equally between the recipients listed for this line item.
Recipients of Service	D9	[Reference Number: 2] For this FRN line item, you will not need to allocate costs per BEN because the system will automatically split the cost equally between the recipients listed for this line item.

After Template is Validated

- Now it's time to create your FRN in the Form 471 and Bulk Upload your Template
- Remember, before you can upload your Template, you must create the umbrella FRN and link to your Contract Record

❷ Creating the Funding Request

Funding Request Key Information

Please enter a Funding Request Nickname here ❓ *

Switches - Integra1

Is this Funding Request a continuation of an FRN from a previous funding year?

Yes   No ✓

Service Type

What is the service type of the product and services that you are requesting?

Internal Connections ▼

FRN Contract

How are the services for this FRN being purchased?
Contract information is stored in your Profile; you can add a new Contract at any time.

Contract ✓   Tariff   Month-to-Month

Associate a Contract   ⊟

Search by Creating Organization BEN
126265

Search by Nickname (All or Partial)

Search by Contract ID

Search by Contract No.

☐	Contract ID	Contract Number	Nickname		Clear Filters	Search
☐	78511		2016 - Meraki - ePlus Contract			
☐	78521		2016 - HP Switches 3 - Integra1			
☑	78644		2016 - Switches 2 - HP - Integra1			
☐	127887		2017 - Structured Cabling - CRCS			
☐	130273		2017 - Switches - HP Aruba - Integra1			

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Entering Accurate Dates

System will show 7/1/2017 as Service Start Date. Change this to 4/1/2017 (or the date you signed your contract, whichever is later). This will allow you to purchase the equipment prior to 7/1/2017 if you want to.

Contract Expiration Date: List 9/30/2018

Contract Information (Additional)

What is the service start date? *

7/1/2017

Enter the date when services will start for this Funding Year

What is the date your contract expires for the current term of the contract? ❓ *

M/d/yyyy

Contract Information (Additional)

What is the service start date? *

4/1/2017

Enter the date when services will start for this Funding Year

What is the date your contract expires for the current term of the contract? ❓ *

9/30/2018

3 Finding Bulk Upload Button

- After FRN is created, the screen will look like this:

Funding Requests

To create or update specific FRN Line Item(s), please click on the FRN number hyperlink.

☐	**FRN** ↓	**Nickname**	**Number of FRN Line Items**
☐	1799017405	Switches - HP Aruba - Integra1	0

- Click on FRN number (not the check box) to move to FRN Line Item page

Select Template File

- Click "Bulk Upload"

FRN Line Items for FRN #1799017405 - Switches - HP Aruba - Integra1

	FRN Line Item Number	↓	Type of Internal Connection	Type of Product	Quantity	One-time Quantity	Total Eligible FRN Line Item Cost
☐							

You haven't created any FRN Line Items yet. Click the 'Add New FRN Line Item' button to start creating your first FRN Line Item.

Add New FRN Line Item Remove FRN Line Item Bulk Upload

- Then choose the Template file you saved, then "Submit," then "Yes, you want to proceed"

Bulk Upload

Upload File*

Choose File   No file chosen
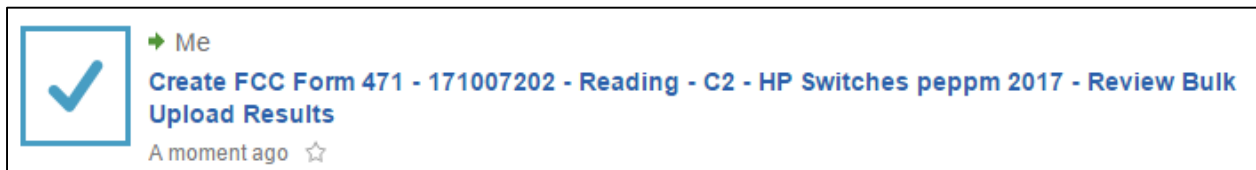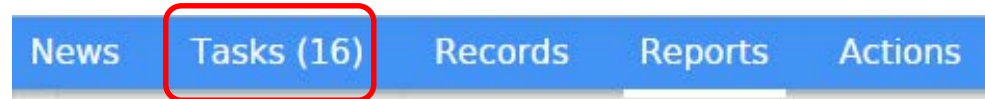
➡️

Bulk Upload

Upload File*

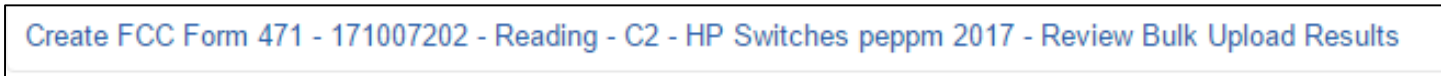Switches - 470-RFP Template 2017 a.xlsm (104.35 KB) ✕

➡️

Submit

The system will now process your file. Remember that this may take a few minutes. You will receive an email once the process is complete with next steps. Do you wish to proceed?

No   Yes

4 Obtaining Bulk Upload Results

- After submitting uploaded Template for review, system will return to EPC
  - After 30 seconds, you will receive an e-mail notification with a link to the Bulk Upload Results
  - A "Task" also will appear in your Task Page

| News | Tasks (16) | Records | Reports | Actions |

→ Me
Create FCC Form 471 - 171007202 - Reading - C2 - HP Switches peppm 2017 - Review Bulk Upload Results
A moment ago ☆

  - Task also will be showing on Landing Page under My Tasks

Create FCC Form 471 - 171007202 - Reading - C2 - HP Switches peppm 2017 - Review Bulk Upload Results

Success?

- If your page looks like this, you're Bulk Upload was successful! Click Submit!

Confirmation

Congratulations! Your file was uploaded successfully. The data is now available for review in the FRN, where you can review and edit it as needed. To view your FRN Line Items, click the Submit button.

Submit

- If the page doesn't look like this, either you made changes after "saving" your validated Template, or you are using an incorrect version of the template
  - Go back to the template and make changes, or
  - Use a different version of the template. Then…
  - Start Bulk Upload process over

⑤ Be Sure to Review Data

- It's important to ensure all uploaded data is showing and is accurate
  - If data is inaccurate, you can make changes directly on the 471, delete individual FRN Line Items or the entire FRN and start over

FRN Line Items for FRN #1799017405 - Switches - HP Aruba - Integra1

	FRN Line Item Number ↓	Type of Internal Connection	Type of Product	Quantity	One-time Quantity	Total Eligible FRN Line Item Cost
☐	1799017405.011	Data Distribution	Switch	0	6	$10,902.00
☐	1799017405.010	Data Distribution	Switch	0	57	$2,565.00
☐	1799017405.009	Data Distribution	Switch	0	2	$408.00
☐	1799017405.008	Data Distribution	Switch	0	7	$3,024.00
☐	1799017405.007	Data Distribution	Switch	0	108	$24,516.00
☐	1799017405.006	Data Distribution	Switch	0	2	$1,950.00
☐	1799017405.005	Data Distribution	Switch	0	55	$18,205.00
☐	1799017405.004	Data Distribution	Switch	0	7	$3,150.00
☐	1799017405.003	Data Distribution	Switch	0	2	$12,740.00
☐	1799017405.002	Data Distribution	Switch	0	55	$125,950.00

|◄ ◄ 1-10 of 11 ► ►|

Tips for Success

- Make sure that you are using the correct version of the template
- If you run the process multiple times for a single FRN, each upload will create new FRN line items, regardless of data that has previously been uploaded
  - Meaning, it won't "override" the original data
- Once the upload is successful, you will be able to make any additional edits within your FCC Form 471
- Please ensure that after your final, clean validation, you save the file immediately before clicking in or editing cells throughout the spreadsheet, or else you must click the "Validate Button" again before saving
- Please let me know if you have any questions! jtschell@comcast.net