



# Attachment to IMF MeF Schemas for Tax Year 2018

**August 2018  
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## Document History

Date	Summary of Changes
7/5/2017	<ul style="list-style-type: none"><li>• Updated Tax Years and dates.</li><li>• Updated references to Vendor Control Number length.</li><li>• Removed section on Security Summit Element Testing.</li></ul>
8/8/2017	<ul style="list-style-type: none"><li>• Updated appendices with Device ID code implementations and attached code.</li><li>• Added Section 4 Return Header Element Modifications and Clarifications.</li><li>• Updated IP Port Timestamp information.</li></ul>
9/12/2017	<ul style="list-style-type: none"><li>• Updated introductory text.</li><li>• Attached most current version of Device ID code in Appendices A – C and updated Appendix C instructions.</li><li>• Updated Section 2.1 with update on new NIST Digital Identity Guidelines.</li></ul>
11/2/2017	<ul style="list-style-type: none"><li>• Added Trusted Customer documents</li><li>• Added VCN Prefix request information</li></ul>
12/12/2017	<ul style="list-style-type: none"><li>• Updated Section 5.2 to explain RefundProductCodeTxt element usage.</li></ul>
7/18/2018	<ul style="list-style-type: none"><li>• Updated Section 2.3 with guidance on populating the AuthenticationReviewCd element</li><li>• Updated embedded Trusted Customer documents in Section 3.1</li><li>• Updated Section 7.1 AuthenticationReviewCd enumeration description.</li></ul>
8/31/2018	<ul style="list-style-type: none"><li>• Updated Section 1.2.1 with URL for IPv6 multicast addresses.</li><li>• Updated Appendix C with new Browser Based Device ID code.</li></ul>

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This document provides a single source that users can consult to understand the security summit elements that have been incorporated into the IMF Return Header schemas for Tax Year 2016 / Processing Year 2017 as well as any subsequent updates. This document will accompany each schema update and be distributed through the Secure Object Repository (SOR). Please send questions to the [mefmailbox@irs.gov](mailto:mefmailbox@irs.gov).

Because of our partnership with you and other industry leaders, the number of confirmed identity theft returns has declined significantly since 2015. We are making progress. If we are to continue our momentum, we need your help again for the 2018 filing season. To assist the IRS and states in determining whether the e-filed return is coming from a legitimate submitter, the Security Summit has developed trusted customer requirements for tax preparation software used by tax professionals. These authentication/trusted customer fields have been added to federal and state XML schemas. As part of these requirements, software industry will provide the IRS and states with information fields gathered during the tax return preparation process. Some of these fields are new and some are from last year. Your participation is key to our success. Here's why:

- These fields have high correlation with fraudulent returns: We've verified this data through return analysis and/or back-tested with industry assistance during filing season.
- Additionally, other elements have high correlation with good returns: Correct values provide high confidence of taxpayer's legitimacy.

Many of the Security Summit data fields are optional in the sense that there are no reject conditions associated with these fields. However, the expectation and commitment of Security Summit participants (based on the signed Memorandum Of Understanding) is that the appropriate software programming is in place and that the data fields are populated. The expectation for all our software providers is that all data elements listed in our return schemas are programmed and that, if applicable to the return, a value is provided. To assist with educating the filing community, IRS has engaged in an education campaign during this year's Tax Forums and outreach events. These speaking events provided overviews of what we are asking them to provide regarding the new data elements.

We also have issued Fact Sheet FS-2017-10, *Information on Identity Theft for Business, Partnerships and Estate and Trusts*, and News release IR 2017-123, *Don't Take the Bait, Step 3: Security Summit Safeguards Help Protect Individuals; Renew Focus on Curbing Data Breaches and Business Identity Theft*. Both documents can be found on IRS.gov along with other helpful information regarding business identity theft.

## 1 Data Elements Related to IP Address

### 1.1 IP Port Number

Since there will be two IP Port Number fields beginning with the TY2017 1040 Return Header Schema, it is important to make the distinction between "IP Port at Creation" (IPPortNum) and "IP Port at Submission" (FinalIPPortNum). For other fields in the schema, we currently define "submission" as the last step when the software sends the return data to the IRS (e.g. timestamp). In terms of IP & Port, it is slightly different, being the last time that the taxpayer interacts and sends data over the internet to the software company. Therefore, the two fields can be defined in the following ways:

For port number at Creation: *"From the **first** IP Packet header received from the taxpayer by your software, we are asking to collect the '**source port**' (UDP/TCP) of the **source** IP Address."*

For port number at Submission: *“From the **last** IP Packet header received from the taxpayer by your software, we are asking to collect the ‘**source port**’ (UDP/TCP) of the **source IP** Address. This source IP address and source port number should be collected at the last possible point of communication prior to the final packaging of the XML for return finalization and transmission.”*

**Note: For the above requested source IP address and source port number to have value, they must coincide with timestamps collected as part of the return. The IP Port information at creation and submission must be collected at the same time that the Device ID information at creation and submission is collected. This will allow for the timestamp (SystemTs) in DeviceInfoCommonElements to apply to both the IP Port and Device ID.**

The IRS’ utility for these fields is twofold, for both NATted end-user network identification and anomaly detection. It is important to note that the IRS does **not** find value in the destination port number of your firewall, gateway, software’s internal server, or any other NAT device or the port number involved in any other intermediate IP packet transmission. We are only looking for the incoming (source) port associated with the source IP Address of the taxpayer.

## 1.2 Public vs. Private IP Addresses

Only Public IP Addresses will be accepted starting with TY2016 returns; Private IP Addresses (and reserved IP spaces) will **not** be accepted. Private IP Addresses are set aside by the IANA to be reserved for internal network communications. If your software uses a corporate VPN or internal private network to transmit and submit returns, you will be required to capture the **outfacing public IP address** of the user that has connected to your network. Note that in some cases, this may result in shared IP addresses being reported when captured (both creation & submission).

### 1.2.1 List of Reserved IP Addresses

IPv4 Range	Comments
0.0.0.0 - 0.255.255.255	Used for broadcast messages to the current ("this") network as specified by RFC 1700
10.0.0.0 - 10.255.255.255	Used for local communications within a private network as specified by RFC 1918.
100.64.0.0 –100.127.255.255	Used for communications between a Service Provider and its subscribers when using a Carrier-grade NAT, as specified by RFC 6598.
127.0.0.0 - 127.255.255.255	Used for loopback addresses to the local host, as specified by RFC 3330.
169.254.0.0 - 169.254.255.255	Used for auto configuration between two hosts on a single link when no IP address is otherwise specified, such as would have normally been retrieved from a DHCP server, as specified by RFC 3330.
172.16.0.0 - 172.31.255.255	Used for local communications within a private network as specified by RFC 1918
192.0.0.0 - 192.0.0.255	IETF Protocol Assignments
192.0.2.0 - 192.0.2.255	Documentation (TEST-NET-1)
192.31.196.0 - 192.31.196.255	AS112-v4
192.52.193.0 - 192.52.193.255	AMT
192.88.99.0 - 192.88.99.255	Deprecated (6to4 Relay Anycast)

IPv4 Range	Comments
192.168.0.0 - 192.168.255.255	Used for local communications within a private network as specified by RFC 1918.
192.175.48.0 - 192.175.48.255	Direct Delegation AS112 Service
198.18.0.0 - 198.19.255.255	Used for testing of inter-network communications between two separate subnets as specified in RFC 2544.
198.51.100.0 - 198.51.100.255	Documentation (TEST-NET-2)
203.0.113.0 - 203.0.113.255	Documentation (TEST-NET-3)
240.0.0.0 - 255.255.255.255	Reserved

Source: <http://www.iana.org/assignments/iana-ipv4-special-registry/iana-ipv4-special-registry.xhtml>

IP v6 Range	Comments
0000:0000:0000:0000:0000:0000:0000	Unspecified address
0000:0000:0000:0000:0000:0000:0000:0001	Used for loopback address to the local host.
0000:0000:0000:0000:0000:FFFF:0000:0000 - 0000:0000:0000:0000:0000:FFFF:FFFF:FFFF	IPv4 mapped addresses
0064:FF9B:0000:0000:0000:0000:0000:0000 - 0064:FF9B:0000:0000:0000:0000:FFFF:FFFF	IPv4/IPv6 translation (RFC 6052)
0100:0000:0000:0000:0000:0000:0000:0000 - 0100:0000:0000:0000:FFFF:FFFF:FFFF:FFFF	Discard-Only Address Block
2001:0000:0000:0000:0000:0000:0000:0000 - 2001:01FF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF	IETF Protocol Assignments
2001:0DB8:0000:0000:0000:0000:0000:0000 - 2001:0DB8:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF	Documentation
2002:0000:0000:0000:0000:0000:0000:0000 - 2002:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF	6to4 Transition Tunneling
2620:004F:8000:0000:0000:0000:0000:0000 - 2620:004F:8000:FFFF:FFFF:FFFF:FFFF:FFFF	Direct Delegation AS112 Service
FC00:0000:0000:0000:0000:0000:0000:0000 - FDFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF	Unique-Local
FE80:0000:0000:0000:0000:0000:0000:0000 - FEBF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF	Single-link Communications (Link-Scoped Unicast)
FF00:0000:0000:0000:0000:0000:0000:0000 - FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF	Multicast Communication

Source: <http://www.iana.org/assignments/iana-ipv6-special-registry/iana-ipv6-special-registry.xml>  
<https://www.iana.org/assignments/ipv6-multicast-addresses/ipv6-multicast-addresses.xhtml>

## 2 Authentication Related Fields

### 2.1 Identity Proofing

- No verification or validation expected, but not prohibited either – Based on different business models
- No grading, judging, assessment, or audit - just let us know what was done

Online products probably have both an IPL (probably a 1) and a TAL {1-4}

In-person only is probably an IPL (1 or 2P are most likely) and a TAL (0)

Note: NIST published Digital Identity Guidelines: Enrollment and Identity Proofing Requirements in June 2017. [<https://pages.nist.gov/800-63-3/sp800-63a.html>]. They are referenced here for information purposes only. The expectation should be that these guidelines will be incorporated for the 2019 Processing Year.

#### 2.1.1 IPL = Identity Proofing Level Definitions

Category	Level	Type	Description
<b>IPL1</b>	Level 1	Basic	Any basic mechanism that prevents confusing one customer for another, but does not include any government-ID (e.g., weaker than Level 2)
<b>IPL2P</b>	Level 2	In Person	Possession of a valid current primary government picture ID that contains Applicant's picture, and either address of record or nationality of record (e.g., driver's license or Passport)
<b>IPL2R</b>	Level 2	Remote	Possession of a valid current government ID (e.g., a driver's license or Passport) number and a financial or utility account number (e.g. checking account, savings account, utility account, loan or credit card, or tax ID) confirmed via records of either the government ID or account number. Note that confirmation of the financial or utility account may require supplemental information from the applicant.
<b>IPL3P</b>	Level 3	In Person	Possession of verified current primary Government Picture ID that contains Applicant's picture and either address of record or nationality of record (e.g., driver's license or passport)
<b>IPL3R</b>	Level 3	Remote	Possession of a valid Government ID (e.g., a driver's license or Passport) number and a financial or utility account number (e.g., checking account, savings account, utility account, loan or credit card) confirmed via records of both numbers. Note that confirmation of the financial or utility account may require supplemental information from the Applicant.
<b>IPL4</b>	Level 4	In Person	In-person appearance and verification of: a) a current primary Government Picture ID that contains Applicant's picture, and either address of record or nationality of record (e.g., driver's license or passport), and; b) either a second, independent Government ID document that contains current corroborating information (e.g., either address of record or nationality of record), OR verification of a financial account number (e.g., checking account, savings account, loan or credit card) confirmed via records.



## 2.2 Token/Authentication Level

TAL1, TAL2, TAL3, TAL4 = For the token / authenticator level, it would just be per Table 7 of 800-63-2 – whatever combinations are there that they used, they can report that level {1-4}

### 2.2.1 Assurance Levels for Multi-Token Authentication

	Memorized Secret Token	Pre-registered Knowledge Token	Look-up Secret Token	Out of Band Token	SF OTP Device	SF Cryptographic Device	MF Software Cryptographic Token	MF OTP Device	MF Cryptographic Device
<b>Memorized Secret Token</b>	Level 2	Level 2	Level 3	Level 3	Level 3	Level 3	Level 3	Level 4	Level 4
<b>Pre-registered Knowledge Token</b>	X	Level 2	Level 3	Level 3	Level 3	Level 3	Level 3	Level 4	Level 4
<b>Look-up Secret Token</b>	X	X	Level 2	Level 2	Level 2	Level 2	Level 3	Level 4	Level 4
<b>Out of Band Token</b>	X	X	X	Level 2	Level 2	Level 2	Level 3	Level 4	Level 4
<b>SF OTP Device</b>	X	X	X	X	Level 2	Level 2	Level 3	Level 4	Level 4
<b>SF Cryptographic Device</b>	X	X	X	X	X	Level 2	Level 3	Level 4	Level 4
<b>MF Software Cryptographic Token</b>	X	X	X	X	X	X	Level 3	Level 4	Level 4
<b>MF OTP Device</b>	X	X	X	X	X	X	X	Level 4	Level 4
<b>MF Cryptographic Device</b>	X	X	X	X	X	X	X	X	Level 4

## 2.3 Authentication Review Code Field

The Trusted Customer requirements are now defined by the IRS Security Summit to more closely adhere to NIST 800-63, for all online applications. Tax software providers must adhere to these new Trusted Customer Requirements beginning in processing year 2019.

Trusted customer is meant to serve as a baseline authentication standard as we progress along the NIST implementation timeline. In light of this consideration, any solution that meets or exceeds AAL2 will be exempt from the requirements below (i.e.: password requirements etc.).

## NIST 800-63B STANDARD PROGRAMMING FOR PROCESSING YEAR 2019

The Objectives for incorporating NIST 800-63B Standards are to strengthen the current authentication procedures to provide a more secure login for customers. It will be critical to track and pass **the Authentication Review Code Indicator 5**, on the MeF and State Schemas to identify all customers who opted into the additional authentication factor and provide industry feedback based on an analysis of these fields.

Year one requires industry to implement the following:

- **User Login:**
  - Leverage the existing authentication infrastructure and **add at least one optional unrestricted authentication factor** (e.g., PIN, secret grid, printed secret grid) for client opt-in.
- **Account Recovery:**
  - Continue using email as a second factor for recovery or an **unrestricted authentication factor** the client opted into (e.g., shared secret, information from return, etc.)

See Appendices of Trusted Customer documents in Section 3.1 for **NIST 800-63B AAL2 – Examples of Unrestricted Authentication Factors**

The full NIST 800-63-B Standard: <https://csrc.nist.gov/publications/detail/sp/800-63b/final>

For Online DIY, if the primary and/or secondary SSN is being used in a new account in the current year that was used by a different account in the **previous year, and you have the capability**, include the Authentication Review Code (AuthenticationReviewCd) value of 6 - SSN DUP, with the filing of the return that the primary and/or secondary SSN is used in another account. The remaining fields will be assigned for back-testing

### 2.4 Authentication Review Text Field

These fields will be used to describe the corresponding Authentication Review Code indicator for back testing.

## 3 Trusted Customer

### 3.1 Trusted Customer Overview

The industry, state and IRS partners recognize that even though fraudulent filings will still occur, we all must be proactive and take steps to reduce or prevent the fraud. Minimum requirements are established by a cooperative effort of industry partners, states and the IRS to present a consistent standard for front-end customer identity authentication using recognized national standards from the National Institute of Standards and Technology (NIST) and the IRS Office of Safeguards. These standards also meet the requirements of the Security Summit Strategic Threat Assessment & Response (STAR) working group.

The IRS and States working with Industry partners have established a minimum set of standards and methodology that Industry will use to help deter potential identity theft tax refund fraud activity, which going forward will be based on increasingly stringent and effective national standards and protocols. To preserve innovation and creativity, Industry partners may choose to, and are encouraged to, exceed the minimum standards established and conduct their own independent and unique analysis, based on patterns or trends they observe and identify. These minimum requirements will be reviewed and strengthened by July of each year.

Copies of these standards can be found in the attached files ("Trusted Customer - 2019 DIY\_FINAL\_6.27.18.pdf" and "Trusted Customer - 2019 Tax Pro\_FINAL\_7.9.18.pdf")



Trusted Customer -  
2019 DIY\_FINAL\_6.27



Trusted Customer -  
2019 Tax Pro\_FINAL\_

## 4 Device ID

### 4.1 Device ID Individual Browser Component Samples

Please refer to **Appendices A through C** for the code that should be used by all software developers when creating the Device ID.

<b>User Agent at Submission (UserAgentTxt)</b>  Mozilla/5.0 (iPad: CPU OS 9_3_1 like Mac OS X) AppleWebKit/601.1.46 (KHTML, like Gecko) Version/9.0 Mobile/13E238 Safari/801.1  Mozilla/5.0 (iPhone: CPU iPhone OS 9_3_2 like Mac OS X) AppleWebKit/601.1.46 (KHTML, like Gecko) Version/9.0 Mobile/13F69 Safari/601.1  Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_5) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/50.0.2661.102 Safari/537.36  Mozilla/5.0 (Windows NT 10.1; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/50.0.2661.102 Safari/537.36
<b>BrowserLanguage (BrowserLanguageTxt)</b> en-us es-es
<b>Platform at Submission (PlatformTxt)</b> iPad iPhone MacIntel Win32
<b>Time Zone Offset at Submission (TimeZoneOffsetNum)</b> 240
<b>System Time at Submission (SystemTs)</b> Wed May 25 2016 08:59:38 GMT-0400 (EDT) Wed May 25 2016 08:00:19 GMT-400 (Eastern Daylight Time)

## 5 Return Header Element Modifications and Clarifications

### 5.1 Federal Original Submission ID

The Federal Original Submission ID [FederalOriginalSubmissionId] is a way of tracking resubmitted returns back to the originally filed return. The Federal Original Submission ID must always contain a valid Submission ID when present in the return. Failure to use a valid Submission ID in the Federal Original Submission ID, such as using the same letter or number repeated 20 times, may result in processing delays for the submission. The table below explains the correct use of the Federal Original Submission ID.

Return Usage	Submission ID	Federal Original Submission ID
Original Submission	0000012017060111111a	0000012017060111111a Or Do Not Include Element
First Re-Submission	0000012017060222222b	0000012017060111111a
Second Re-Submission	0000012017060333333c	0000012017060111111a

### 5.2 Refund Anticipation Loan Code

The definitions for RAC and RAL in the TY2016 1040 family return schemas do not accurately reflect all of the products being utilized in the market and do not account for early access products. Beginning with TY2017, the element “RefundAnticipationLoanCd” is being changed to “RefundProductCd”. The RefundProductCd element will use the following enumerations:

- NO FINANCIAL PRODUCT
- PRE-REFUND ADVANCE PRODUCT - TAXPAYER CHARGED AN ADVANCE FEE (RAL)
- POST-REFUND FINANCIAL PRODUCT (REFUND TRANSFER)
- PRE-REFUND ADVANCE PRODUCT - TAXPAYER NOT CHARGED AN ADVANCE FEE
- OTHER/NEW PRODUCT

The optional element RefundProductCodeTxt was also added to the TY2017 1040 family return schemas immediately after the RefundProductCd element. If the “OTHER/NEW PRODUCT” enumeration for the RefundProductCd is selected, the RefundProductCodeTxt may be used to supply additional information related to the product being utilized.

## 6 Ultimate Bank Account

### 6.1 Basic Definitions

For the purposes of this document, the following terms will have the meanings described below:

**“CIP”** means a written Customer Identification Program implemented by a bank under 31 CFR Part 1020, which must be commensurate with the size and type of its business and include risk-based procedures for verifying the true identity of each customer to the extent reasonable and practicable. As described under 31 CFR §1020.220, CIP can be performed either through documentary means (e.g., reviewing government issued IDs) or non-documentary means (e.g., comparing personally identifiable information against a public database), or a combination of both. In addition, there are similar CIP requirements for money services businesses under 31 CFR §1022.210.

**“Early Access Products” or “EAP”** means a pre refund product that provides the taxpayer with early access to tax refund proceeds, which can be in the form of a loan or a fee free, nonrecourse advance of funds. The advance is repaid by direct deposit of the refund into a new taxpayer bank account set up for this purpose. An EAP typically allows the taxpayer to pay for tax preparation services and associated fees at the time that the tax refund is received instead of the time that the tax return is prepared and filed.

**“Prepaid Card”** refers to a reloadable prepaid card obtained through the tax return provider at the time of tax preparation or filing. This is considered a separate and distinct disbursement option and reflected in the table below. Prepaid cards obtained by a taxpayer outside of the tax preparation process (e.g., prepaid cards purchased at retail stores) are treated as Bank Accounts (code # 2) for purposes of the Refund Disbursement Codes.

**“Refund Product”** refers to a Refund Transfer or an Early Access Product that is obtained through the tax return provider at the time of tax preparation or filing. The Routing Transit Number/Deposit Account Number (**“RTN/DAN”**) associated with these products is tax software controlled and cannot be overridden by the tax preparer.

**“Refund Transfer”** means a post refund product, which provides the taxpayer a new bank account to utilize for direct deposit of the refund instead of waiting for a paper check. The Refund Transfer typically allows the taxpayer to pay for tax preparation services and associated fees at the time that the tax refund is received instead of the time that the tax return is prepared and filed.

**“Ultimate Bank Account (UBA)”** means the RTN/DAN from which the taxpayer will ultimately gain access to its tax refund. The UBA must always be the last movement of funds known to the e-file provider at the time the return is prepared. The UBA Modernized e-File (MeF) schema elements are mandatory for EVERY return where the RefundDisbursementCd is equal to 1 or 2.

## 6.2 Ultimate Bank Account TY2016 MeF 1040 Return Header Schema Data Elements

	Field	Description	Options
1	Refund Product Election indicator (RefundProductElectionInd)	Whether taxpayer elected a Refund Product or not	Yes – Elected a Refund Product No – Did not elect a Refund Product
2	Refund Disbursement Code (RefundDisbursementCd)	Taxpayer chosen settlement vehicle	0 – Balance Due/Zero Balance 1 – Reloadable Prepaid Card 2 – Bank Account 3 – Paper Check 4 – Non-reloadable Merchant Gift Card
3	Ultimate Bank Account (UBA) – RTN (AdditionalFilerInformation/AtSubmissionFilingGrp/RoutingTransitNum)	Routing/transit number of the final known destination of the refund	
4	Ultimate Bank Account (UBA) – DAN (AdditionalFilerInformation/AtSubmissionFilingGrp/DepositorAccountNum)	Deposit account number of the final known destination of the refund	
5	Refund Product Customer Identification Program (CIP) Indicator (AdditionalFilerInformation/AtSubmissionFilingGrp/RefundProductCIPCd)	Within a Refund Product, signifies documentary or non-documentary CIP with or without a Prepaid Card election	0 – Not Applicable 1 – Documentary CIP for Refund Product 2 – Non-documentary CIP for Refund Product 3 – Documentary CIP for the Refund Product; Non-documentary CIP for the Prepaid Card 4 – Non-documentary CIP for the Refund Product; Non-documentary CIP for the Prepaid Card 5 – Documentary CIP for the Refund Product; Documentary CIP for the Prepaid Card

### 6.3 Scenario A: Taxpayer Selected a Refund Product

Note: there are instances where the RTN/DAN field for UBA will be 'NULL'

Taxpayer elects a Refund Product and chooses how to receive access to the tax refund from their Refund Product. Options include:

	Description	Refund Product Election indicator	Refund Disbursement Code	Tax Return Bank Account (from tax return)	Ultimate Bank Account	Refund Product CIP Indicator	Notes
A	Direct deposit to a <b>new</b> Prepaid Card	Yes	1	Refund Product RTN/DAN	Proxy Card # <b>OR</b> Bank Holding Acct RTN/DAN	3, 4 or 5	If the refund vehicle is a financial product such as a new reloadable Prepaid Card where the UBA may be unknown at the time the return is prepared, the Refund Disbursement Code will be "1" and the UBA will be the proxy card number or the holding account of the bank issuing the product.
B	Direct deposit into an <b>existing</b> bank account	Yes	2	Refund Product RTN/DAN	Taxpayer Bank Acct RTN/DAN	1 or 2	The subsequent deposit RTN/DAN provided by the taxpayer may be any traditional bank account including checking, savings, or a prepaid card account. Without asking the taxpayer what type it is, there is no systemic way to determine the existing bank account type.
C	A check from the ERO	Yes	3	Refund Product RTN/DAN	<Null>	1 or 2	
D	Converted to a non-financial product (e.g., merchant gift card)	Yes	4	Refund Product RTN/DAN or <Null>	<Null>	1 or 2	



### 6.3.1 Customer Identification Program for Refund Product

- CIP is mandatory to receive a Refund Product. The Refund Product provider (bank) will not receive a deposit of the tax refund in the event a taxpayer fails CIP. If there is a Refund Product, assume CIP was passed.
- CIP is mandatory to activate a “reloadable” prepaid card. Only “reloadable” prepaid cards can receive tax refund deposits. If there is a prepaid card receiving a tax refund deposit, you should assume CIP was passed.

IRS Form 8888, Allocation of Refund (Including Savings Bond Purchases), version 2015, states that the account must be in the taxpayer’s name. If IRS Form 8888 is present in the federal tax return, then Refund Products are NOT allowed, and a Refund Product election is systemically blocked. Guidelines for State split refunds are defined by each State.

Preparer	Ultimate Bank Account Type	CIP Performed for UBA	Refund Product CIP Indicator	Description
ERO	Bank Account	N/A	1	Documentary CIP for Refund Product
Do-It-Yourself (DIY) Online	Bank Account	N/A	2	Non-documentary CIP for Refund Product
ERO	New Prepaid Card	No	3	Documentary CIP for the Refund Product, Non-documentary CIP for the Prepaid Card
DIY Online	New Prepaid Card	N/A	4	Non-documentary CIP for the Refund Product, Non-documentary CIP for the Prepaid Card
ERO	New Prepaid Card	Yes	5	Documentary CIP for the Refund Product, Documentary CIP for the Prepaid Card

### 6.4 Scenario B: Taxpayer did NOT select a Refund Product

**Note:** there are instances where the RTN/DAN field for UBA will be ‘NULL’

**Balance Due:** If the tax return is a balance due or a zero balance, then there will be no UBA.

**Default (Paper Check or State Issued Debit Card or Prepaid Card):** For taxpayers who elect to default to a state’s or the IRS’s primary refund disbursement method, predominantly a check mailed to the taxpayer’s home, but could also be a state issued debit card or prepaid card, there will be no UBA.

**Note:** Some states issue debit cards or prepaid cards rather than checks.

**Direct Deposit:** Taxpayers may also elect direct deposit of their refund into an existing taxpayer provided bank account. In these cases, refunds are issued directly from the Treasury or the state into a taxpayer’s bank account and the UBA will be the taxpayer provided bank account. For this purpose, a

taxpayer provided bank account could be a checking account, savings account or a reloadable prepaid card acquired from channels outside of the tax preparer (e.g., sold off a j-hook<sup>1</sup> rack at a grocery store).

**Note:** For federal returns, a taxpayer may elect a “split refund” using IRS Form 8888, Allocation of Refund, Version 2015, including savings bond purchases. When elected, the Treasury will direct deposit tax refunds into and up to (3) taxpayer provided bank accounts. In this case, the UBA will be the taxpayer provided bank account(s).

**Merchant Gift Cards:** Some tax preparation providers may offer taxpayers the option to have their refund loaded onto a merchant gift card from the bank account the taxpayer provided for direct deposit.

	Description	Refund Product Election Indicator	Refund Disbursement Code	Tax Return Bank Account	Ultimate Bank Account	Refund Transfer CIP Indicator
A	Balance Due	No	0	<Null>	<Null>	0
B	Default (Paper Check or State Issued Debit Card)	No	3	<Null>	<Null>	0
C	Direct deposit	No	2	Taxpayer Bank Acct RTN/DAN (Same>>)	Taxpayer Bank Acct RTN / DAN (<<Same)	0
D	Merchant Gift Card	No	4	Taxpayer Bank Acct RTN/DAN	<Null>	0

#### 6.4.1 Customer Identification Program When a Refund Product is NOT Selected

For taxpayers who did not elect a Refund Product, the CIP is always “0”. However, the USA PATRIOT Act requires financial services providers to perform CIP to open a bank account or a reloadable prepaid card. If the refund is directed to an RTN/DAN which is provided by the taxpayer at the time of tax preparation or filing, you can assume that the CIP has been previously performed by the financial services provider of the RTN/DAN where the refund is deposited.

**Note:** CIP is not required at the time of tax return filing when no Refund Product or new Prepaid Card election is made by the taxpayer. The U.S. Treasury and the states do not have a USA PATRIOT Act requirement to verify the identity of taxpayers. Therefore, guided by their individual governing regulations, it is assumed the IRS and the states have taken steps to validate taxpayer identity when directly issuing checks or state debit cards or prepaid cards.

<sup>1</sup> J-hook – Refers to a situation where a taxpayer purchases a reloadable prepaid card in a retail store off a display rack, and passes CIP before any additional loads, including tax refunds, are permitted.

## 7 Enumerated MeF Elements and Group Definitions

### 7.1 MeF Elements with Enumerations and Definitions

MeF Field Name	Values / Description
RefundDisbursementCd	0 - Balance Due / Zero Balance Due 1 - Reloadable Prepaid Card 2 - Bank Account 3 - Paper Check 4 - Non-reloadable Merchant Gift Card
TrustedCustomerCd	0 - New taxpayer 1 - Returning taxpayer online 2 - Returning taxpayer to the same tax preparer 3 - Returning taxpayer to the same pro-software
OOBSecurityVerificationCd	00 = Can't send email 01 = Bounced email 02 = Sent email one way 03 = Full Out of Band - Email 04 = Can't send Text 05 = Bounced Text 06 = Delivered Text – one-way 07 = Full Out of Band - Text 08 = Random 3rd Party Security Questions 09 = Security Questions established by Industry 10 = Security Questions established by Customer 11 = Other Pass 12 = Other Fail (used for Email or Text)
LastSubmissionRqrOOBCd	0-Match 1-No Match  (Does the IP Address at final submission match prior login IP)
AuthenticationSummaryCd	IPL Series: IPL0, IPL1, IPL2P, IPL2R, IPL3P, IPL3R, IPL4 TAL Series: TAL0, TAL1, TAL2, TAL3, TAL4
PaymentDeclinedReasonCd	0 – DECLINED 1 - APPROVED 2 - UNABLE TO VERIFY (Credit Card Payment Denied >2 for software purchases)
ProfileUserNameChangeInd (Checkbox)	Y/N
ProfilePasswordChangeInd (Checkbox)	Y/N
ProfileEmailAddressChangeInd (Checkbox)	Y/N
ProfileCellPhoneNumChangeInd (Checkbox)	Y/N

MeF Field Name	Values / Description
DeviceTypeCd	0 - DESKTOP 1 - Browser-based
AuthenticationReviewCd	0 - IMF AUTH 1 - BMF AUTH 2 - TRUSTED CUST 3 - LEADS 4 - SCHEME 5 - AUTHENTICATION – taxpayer was offered and opted to use the unrestricted authentication factor 6 - SSN DUP (see section 2.3) 7 – OTHER
AuthenticationReviewTxt	Open and available for testing.
FilingLicenseTypeCd	"I" = Individual (DIY) "P" = Professional "O" = Individual Online Filer  (Professional or Individual License)
TotActiveTimePrepSubmissionTs	Unit: Minutes up to 6 digits  (Only capturing the amount of time active within the application till submission)

MeF Field Name	Values / Description
VendorControlNum	<p>alpha – numeric</p> <p>The Vendor Control Number is a precursor to EFIN validation. The vision is to allow software developers to validate an EFIN prior to the sale of their software and then assign them a unique 16-digit Vendor Control Number. The Vendor Control Number will be populated in the VendorControlNum element in the 1040/1040NR return header for validation by IRS prior to acceptance of the return by IRS.</p> <p>For this initial phase, IRS is assigning a two-character prefix to each software developer to avoid potential duplication. If you have not been assigned a two-character prefix, please request one through the MeF Mailbox (<a href="mailto:MeFmailbox@irs.gov">MeFmailbox@irs.gov</a>). The software developer should then use the assigned prefix as the first two characters of a unique 16-character Vendor Control Number. This Vendor Control Number must accompany all submissions from the EFIN using the software package they purchased. The software developer should also maintain a list of Vendor Control Numbers that they have assigned along with the EFIN and Software ID. This information will be sent to IRS at a later date so that a retrospective analysis may be conducted.</p> <p>Although the schema allows for a Vendor Control Number less than 16 characters, IRS strongly recommends that it be 16 characters in length. IRS also highly discourages embedding easily identifiable information in the Vendor Control Number such as an EFIN or Software ID. Although the VendorControlNum element is optional in the 1040/1040NR return headers, it is required to be present through use of a business rule. Failure to include the VendorControlNum element will result in the return being rejected.</p>

## 7.2 Group Definitions

Group with xPath	Definition
AdditionalFilerInformation/ AtSubmissionCreationGrp	Filer Information collected at the time of creation
AdditionalFilerInformation/ AtSubmissionFilingGrp	Filer Information collected at the time of submission
AdditionalFilerInformation/ TrustedCustomerGrp	Customer Authentication information

<b>Group with xPath</b>	<b>Definition</b>
FilingSecurityInformation/ AtSubmissionCreationGrp	Security Related information collected at the time of creation
FilingSecurityInformation/ AtSubmissionFilingGrp	Security Related information collected at the time of creation

## 8 List of MeF Business Rules for Security Summit Elements

### 8.1 MeF Business Rules for Device ID and IP Address

Rule Number	Information	Rule Text	Rule Bypass
IND-189	Device ID	'DeviceId' in 'AtSubmissionCreationGrp' in 'FilingSecurityInformation' in the Return Header must have a value.	
IND-190	Device ID	'DeviceId' in 'AtSubmissionFilingGrp' in 'FilingSecurityInformation' in the Return Header must have a value.	
IND-191	Device ID	'DeviceTypeCd' in 'AtSubmissionCreationGrp' in 'FilingSecurityInformation' in the Return Header must have a value.	
IND-195	IP Address	'IPAddress' in 'AtSubmissionCreationGrp' in 'FilingSecurityInformation' in the Return Header must have a valid value.	
IND-196	IP Address	'IPAddress' in 'AtSubmissionFilingGrp' in 'FilingSecurityInformation' in the Return Header must have a valid value.	
IND-203	Device ID	'DeviceTypeCd' in 'AtSubmissionFilingGrp' in 'FilingSecurityInformation' in the Return Header must have a value.	

### 8.2 MeF Business Rules for Ultimate Bank Account

Rule Number	Information	Rule Text	Rule Bypass
IND-192	Ultimate Bank Account	'RefundDisbursementCd' in 'AtSubmissionFilingGrp' in 'AdditionalFilerInformation' in the Return Header must have a value.	
IND-193	Ultimate Bank Account	'RoutingTransitNum' in 'AtSubmissionFilingGrp' in 'AdditionalFilerInformation' in the Return Header must have a value.	Bypass rule will apply if Refund Disbursement Code is 0, 3 or 4
IND-194	Ultimate Bank Account	'DepositorAccountNum' in 'AtSubmissionFilingGrp' in 'AdditionalFilerInformation' in the Return Header must have a value.	Bypass rule will apply if Refund Disbursement Code is 0, 3 or 4
IND-198	Ultimate Bank Account	'RefundProductElectionInd' in 'AtSubmissionFilingGrp' in 'AdditionalFilerInformation' must have a choice of "Yes" or "No" indicated.	

<b>Rule Number</b>	<b>Information</b>	<b>Rule Text</b>	<b>Rule Bypass</b>
IND-199	Ultimate Bank Account	'RoutingTransitNum' in 'AtSubmissionCreationGrp' in 'AdditionalFilerInformation' in the Return Header must have a value.	Bypass rule will apply if Refund Disbursement Code is 0, 3 or 4
IND-200	Ultimate Bank Account	'DepositorAccountNum' in 'AtSubmissionCreationGrp' in 'AdditionalFilerInformation' in the Return Header must have a value.	Bypass rule will apply if Refund Disbursement Code is 0, 3 or 4
IND-201	Ultimate Bank Account	'BankAccountDataCapturedTs' in 'AtSubmissionCreationGrp' in 'AdditionalFilerInformation' in the Return Header must have a value.	Bypass rule will apply if Refund Disbursement Code is 0, 3 or 4

### 8.3 MeF Business Rules for other MeF Return Header Fields

<b>Rule Number</b>	<b>Information</b>	<b>Rule Text</b>	<b>Rule Bypass</b>
IND-197	Total Active Prep Time	'TotActiveTimePrepSubmissionTs' in 'FilingSecurityInformation' in the Return Header must have a value.	
IND-202	Vendor Control Number	'VendorControlNum' in 'FilingSecurityInformation' in the Return Header must have a value.	

## 9 Known Issues

<b>Item Number</b>	<b>Date Opened</b>	<b>Issue</b>	<b>Resolution</b>	<b>Status</b>



## Appendix A: Client Based Device ID: Windows Operating System

This is the latest code release for the IRS Device ID desktop software implementation for Windows. New code releases are typically distributed by early September. The attached Windows VBS script can be used to generate the Device ID for desktop software on a Windows operating system. The attached file is named “Windows DeviceID Generator.zip.abc”. To use this script, save the file and rename it removing the .abc file extension and replacing it with the .vbs file extension instead. Once renamed, double-click on the file to generate the Windows Desktop Software Device ID on any Windows machine. The Device ID generated by this script should be compared with the Device ID generated by your own software to make sure both sets of code produce exactly the same Device ID.



Windows DeviceID  
Generator.zip.abc

## Appendix B: Client Based Device ID: Mac OSX

This is the latest code release for the IRS Device ID desktop software implementation for Mac OSX. New code releases are typically distributed by early September. The attached .zip file can be used to generate the Device ID for desktop software using Mac OSX. The attached file is named “MacOSX DeviceID Generator.zip.abc”. To use this generator, save the file and rename it removing the .abc file extension leaving the filename “MacOSX DeviceID Generator.zip”. Once renamed, extract the entire contents of the .zip file into a folder on the user’s Mac OSX computer. Follow the instructions in the “readme.txt” file contained within the .zip file to use the scripts properly. The Device ID generated by this script should be compared with the Device ID generated by your own software to make sure both sets of code produce exactly the same Device ID.



**MacOSX DeviceID  
Generator.zip.abc**

## Appendix C: Browser-Based Device ID JavaScript

This is the latest code release for the IRS Device ID browser-based implementation. New code releases are typically distributed by early September. The attached .zip file can be used to generate the Device ID for browsers. The attached file is named "TY2018 DeviceID - 083118 revision.zip.abc". To use this generator, save the file and rename it removing the .abc file extension leaving the filename "TY2018 DeviceID - 083118 revision.zip". Once renamed, extract the entire contents of the .zip file into a folder on the user's computer. Double click on the "index.html" file contained within the .zip file to use the scripts properly. The Device ID generated by this script should be compared with the Device ID generated by your own software to make sure both sets of code produce exactly the same Device ID.



**TY2018 DeviceID -  
083118 revision.zip**