

# Veratad Technologies LLC

Integration Document  
Age & Identity Verification Solutions

## Veratad Batch Services

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### Versions

Version Number	Description
2.0	Updated to corporate standards
2.1	Use Test Key in all examples
2.2	Track versions and add Flags
2.3	Update Document Width
2.4	Update Document Content



## VERATAD - BATCH SERVICE INTEGRATION DOCUMENT

### Preface

- *italic*: Text presented in italic format indicates an input requirement or output specification which is currently unsupported.
- **bold**: Text presented in bold indicates a mandatory input requirement or constant output specification.
- XML paths: In some cases it is helpful to refer to an area of XML using a path. Any paths in this document will be paths that start at the root node. "{a,b}" syntax is used to specify either of node a or node b.

```
<root>
  <main>
    <part-a>value-a</part-a>
    <part-b>value-b</part-b>
  </main>
</root>
```

For example /root/main/{part-a, part-b}, would indicate that what the text is referring describes will apply equally to /root/main/part-a and /root/main/part-b.

### EXAMPLE DATA

Data used to create the examples is totally fictitious, and is provided to assist in the implementation process. Your initial implementation account will be activated with our Test Data unless otherwise instructed. A Test\_Key\_Age.pdf contains all the identities to use during your implementation. Contact Veratad Support ([support@veratad.com](mailto:support@veratad.com)) to activate a live data feed.



## VERATAD - BATCH SERVICE INTEGRATION DOCUMENT

### Introduction

Veratad Services are delivered through three interfaces:

- Veratad Virtual Terminal
- Custom batching process
- API Web Service

Veratad offers a customizable automated batch process through the IDResponse Platform. This document describes the steps required in establishing an automated Veratad Batch Process.

Delivery of batch files requires the generation of a public which reside on Veratad's Secure Server and private key which reside on the submitting computer or network.

Veratad runs a cron job on the server to scan for batch files to process every 15 minutes.

The batch process requires standardized input in delimited flat text file format. Batch output is returned as a delimited flat text file. A sample is included in your Batch Instruction Package. Or you may contact Technical Support if you need assistance with modifications (support@veratad.com).



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### Establishing a Secure FTP Location

To establish a connection with Veratad's Secure Server, setup a secure FTP client of your choice to allow secure upload of the batch submission and retrieval of the batch results from Veratad Servers. (Veratad has used WINSCP successfully)

### DOWNLOADING AND INSTALLING WINSCP

To download WinSCP go to: <http://winscp.net/eng/download.php> and click on the link for the stable "Installation Package" <http://winscp.net> (We do not recommend the use of beta versions.)

Choose from the selection of downloadable versions compatible with your computer or network.

1. Run the installer and download to install WinSCP.
2. Select a directory in which to install, making note of this location:  
  
WinSCP location: \_\_\_\_\_
3. Leave all components selected at the "Select Components" screen.
4. At the end of the install **do not** "Launch WinSCP now"



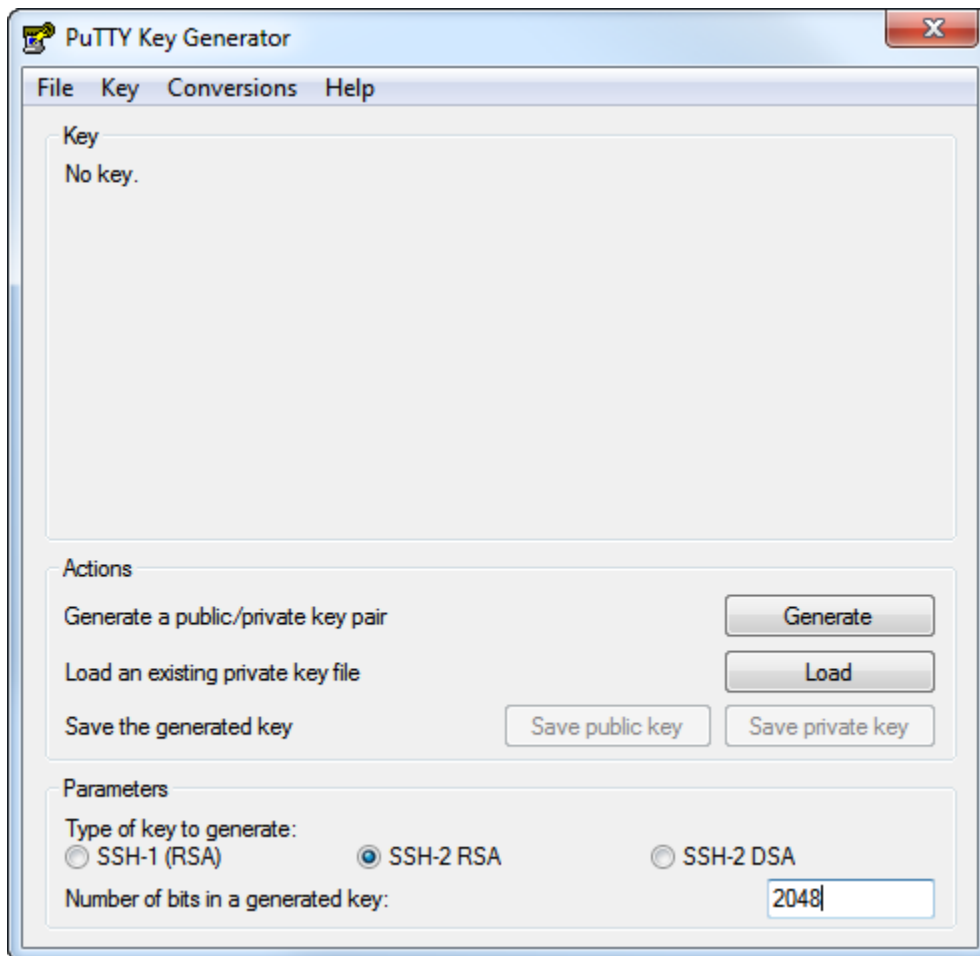
## VERATAD - BATCH SERVICE INTEGRATION DOCUMENT

### GENERATING A PUBLIC/PRIVATE KEY DOWNLOAD

After downloading a secure FTP Client such as WinSCP, generate a public/private key pair to identify the computer or network connecting to Veratad Secure Server.

The examples below demonstration key generation using WinSCP.

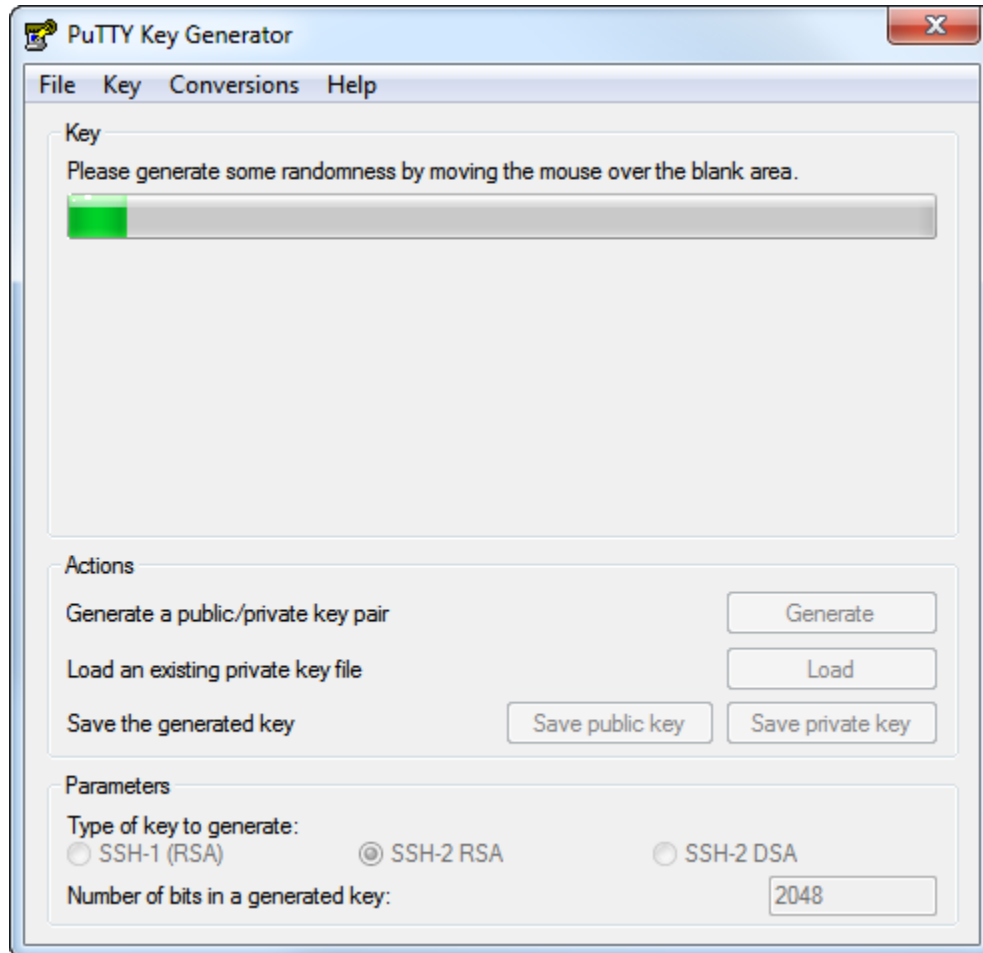
1. Locate the WinSCP Program group in your start menu and under "Key tools" run "PuTTYgen".
2. To ensure a secure connection select the key type set to "SSH-2-RSA" and change the key length to 2048.





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3. Click "Generate". Move your mouse to speed-up the key generation. This may take a few minutes depending on the speed of the computer.  
(The green bar below will move if you keep moving your mouse)







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4. Enter a pass-phrase (don't leave this blank) and confirm password. If installed on a PC, the \*pass-phrase is required each time the pc is started. (The private key is loaded into the Pageant program (part of WinSCP at startup), which sends the authentication to the Veratad's Secure Server. This method keeps your private key secure.

The screenshot shows the PuTTY Key Generator window. It has a menu bar (File, Key, Conversions, Help) and a 'Key' section. The 'Key' section contains a text area for the public key, a 'Key fingerprint' field, a 'Key comment' field, and 'Key passphrase' and 'Confirm passphrase' fields. Below these are 'Actions' buttons: 'Generate a public/private key pair' (with a 'Generate' button), 'Load an existing private key file' (with a 'Load' button), and 'Save the generated key' (with 'Save public key' and 'Save private key' buttons). The 'Parameters' section at the bottom has radio buttons for 'Type of key to generate' (SSH-1 (RSA), SSH-2 RSA, SSH-2 DSA) and a text field for 'Number of bits in a generated key' (set to 2048).

Annotations with arrows point to the following fields:

- Public key for pasting into OpenSSH authorized\_keys file:
- Key fingerprint:
- Key comment:
- Key passphrase:
- Confirm passphrase:
- Save private key

Text boxes on the right provide instructions for each annotation:

- Highlight and copy this key to an email you send to us
- Enter your email address here
- Enter an easily remembered phrase here
- Save private key to your desktop or a directory you will remember.



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5. Click "Save private key". Make note of the location and the name of the private key. Don't specify an extension at this time - the program automatically save the file with a .PPK extension.

Private Key Location: \_\_\_\_\_

Private Key Filename: \_\_\_\_\_

Note: **For security reasons, never send the private key to anyone for any reason.** This key identifies your computer or network to anyone who holds its public key.

Sample filled in screen:

The screenshot shows the PuTTY Key Generator window. The 'Key' tab is selected, displaying a generated SSH key pair. The public key is shown in a text area, and the key fingerprint is displayed below it. The key comment is set to 'email@address.com'. The key passphrase and confirm passphrase fields are filled with dots. The 'Actions' section contains buttons for 'Generate', 'Load', 'Save public key', and 'Save private key'. The 'Parameters' section shows the 'Type of key to generate' set to 'SSH-2 RSA' and the 'Number of bits in a generated key' set to '2048'.

PuTTY Key Generator

File Key Conversions Help

Key

Public key for pasting into OpenSSH authorized\_keys file:

```
ssh-rsa AAAAB3NzaC1yc2EAAAABJQAAAQEAgrKjJo4cJ7Ay8jmVBoxakEb2mVz3U
+I0Lo2gtPcyUOnsFLsr29SxkdelVWpmwnXqOuQJJZN8yV5Dp3rd5h3nrVSBM9HXGFo
Epxmv+2hMBmEVoWfSp6nORtStTSoUYIQacab
+MGCuhb8/XjcO3qG0e6z5Q29TvJx8eaquWoJuIV1CD/
+39Wqhfto4XOCJMzmylgtHcijWVdElueNDDJRsj5amaKdxHykeVhG86h81OppLGafNk
```

Key fingerprint: ssh-rsa 2048 65:e3:3c:7f:38:f2:b3:f0:9e:ca:0b:ce:90:8a:a1:7c

Key comment: email@address.com

Key passphrase: ••••••••

Confirm passphrase: ••••••••

Actions

Generate a public/private key pair Generate

Load an existing private key file Load

Save the generated key Save public key Save private key

Parameters

Type of key to generate:

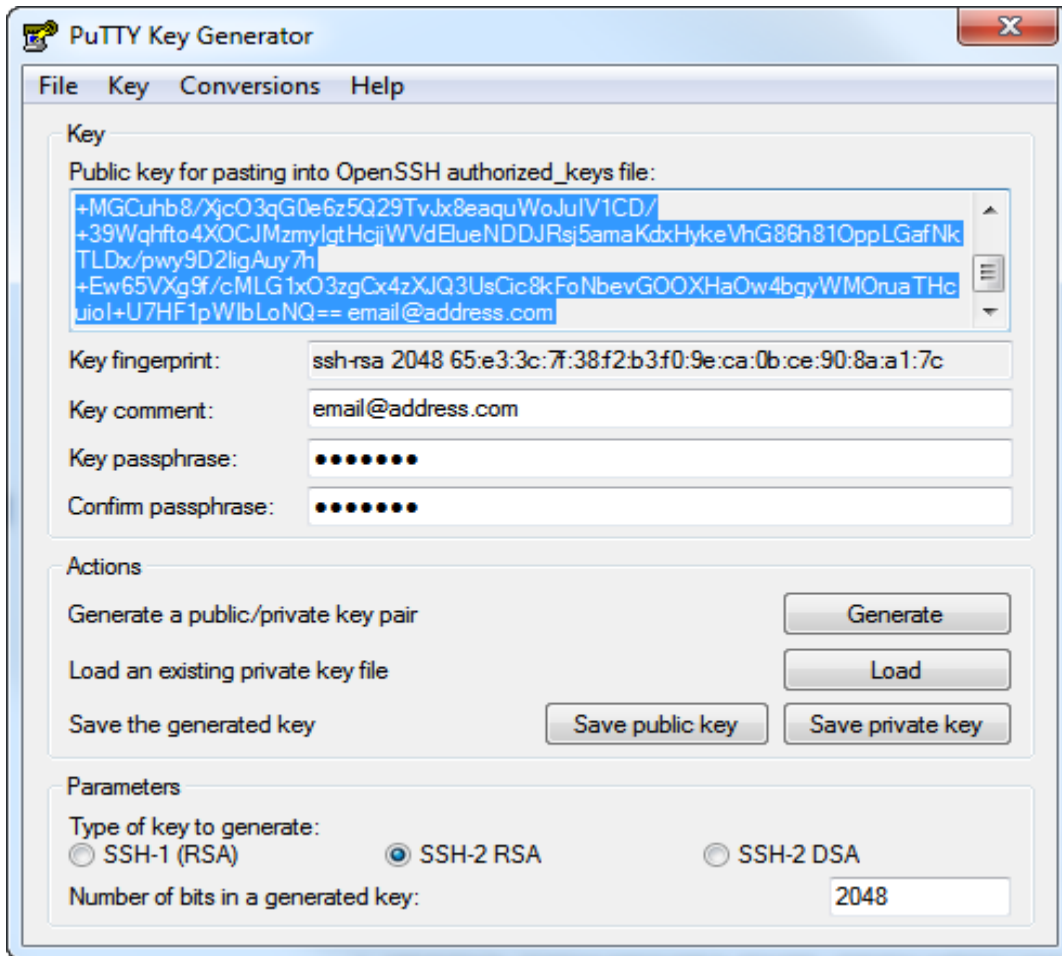
☐ SSH-1 (RSA) ☒ SSH-2 RSA ☐ SSH-2 DSA

Number of bits in a generated key: 2048



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6. Highlight the text in the public key box as shown, and copy it to clip-board.



7. Paste the public key into an email and send it to [support@veratad.com](mailto:support@veratad.com)

8. Exit.

9. \*Your company may opt to add the private key file (as shown in step 5) to your Startup menu. This will automatically keep the private key loaded on the computer or network. The private key password will be required when starting your computer or network.

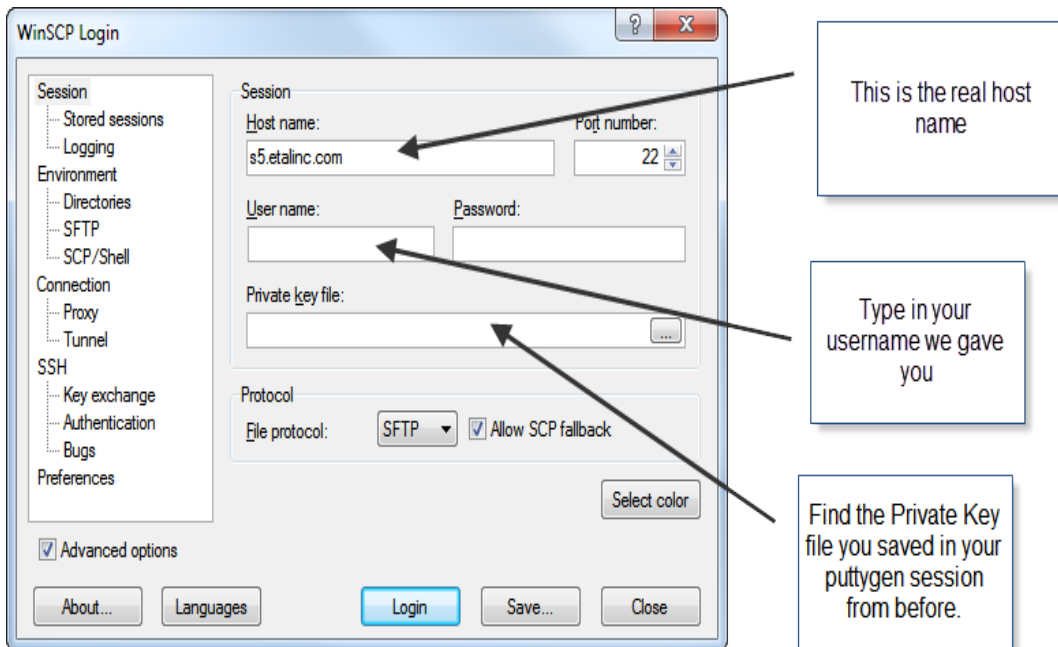


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### Setting Up a WinSCP Saved Session

To set up a WinSCP saved session:

1. Run WinSCP from the start menu.
2. For host name, enter s5.etalinc.com.
3. For "User name" enter the username we assign you.
4. Leave the "Password" and "Private Key file" fields blank.
5. For "Protocol" change the option to "SFTP".
6. Click the "Save..." button, and save Username and related settings as "IDresponse".

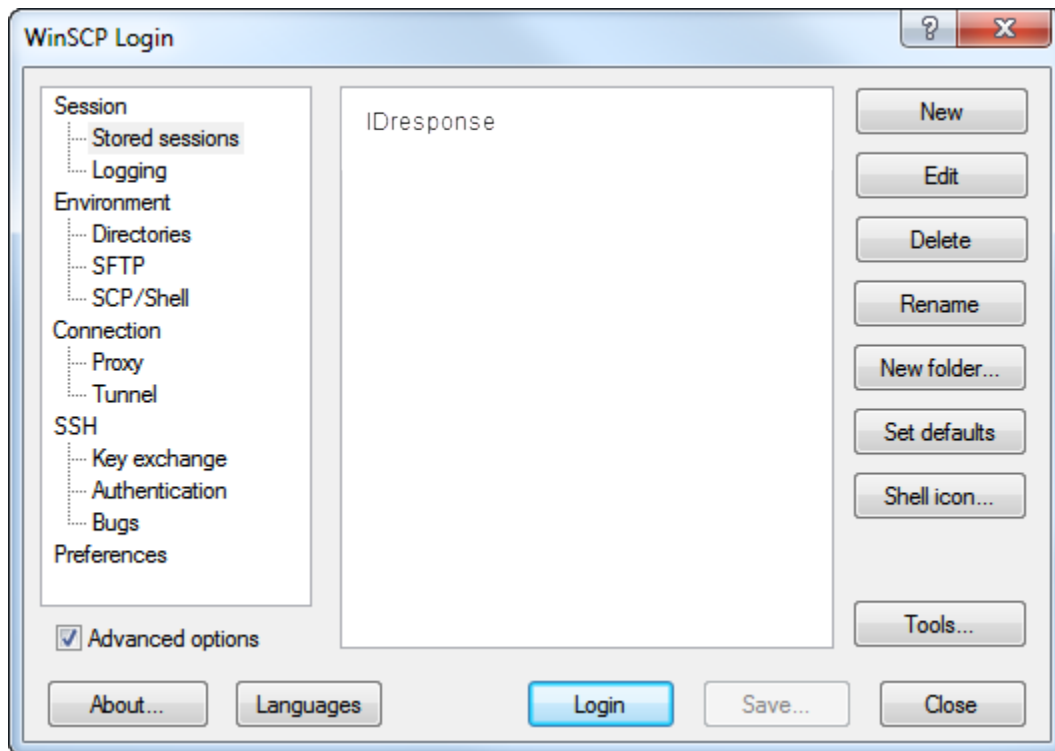




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### LOGGING IN

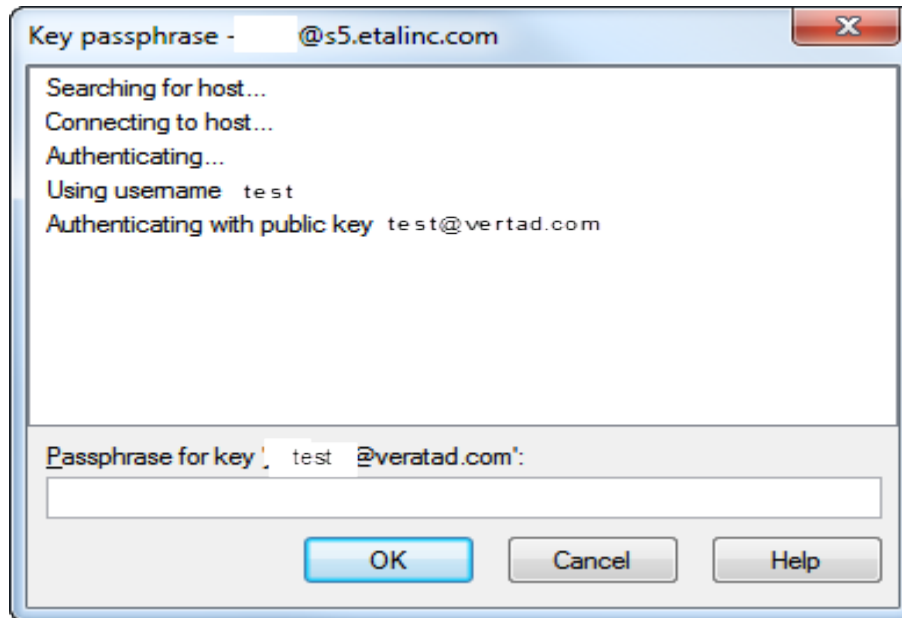
Contact Veratad to request a SFTP account creation prior to log in. Once your account has been created, the "IDresponse" account will be ready to process batches





## VERATAD - BATCH SERVICE INTEGRATION DOCUMENT

### Sample session

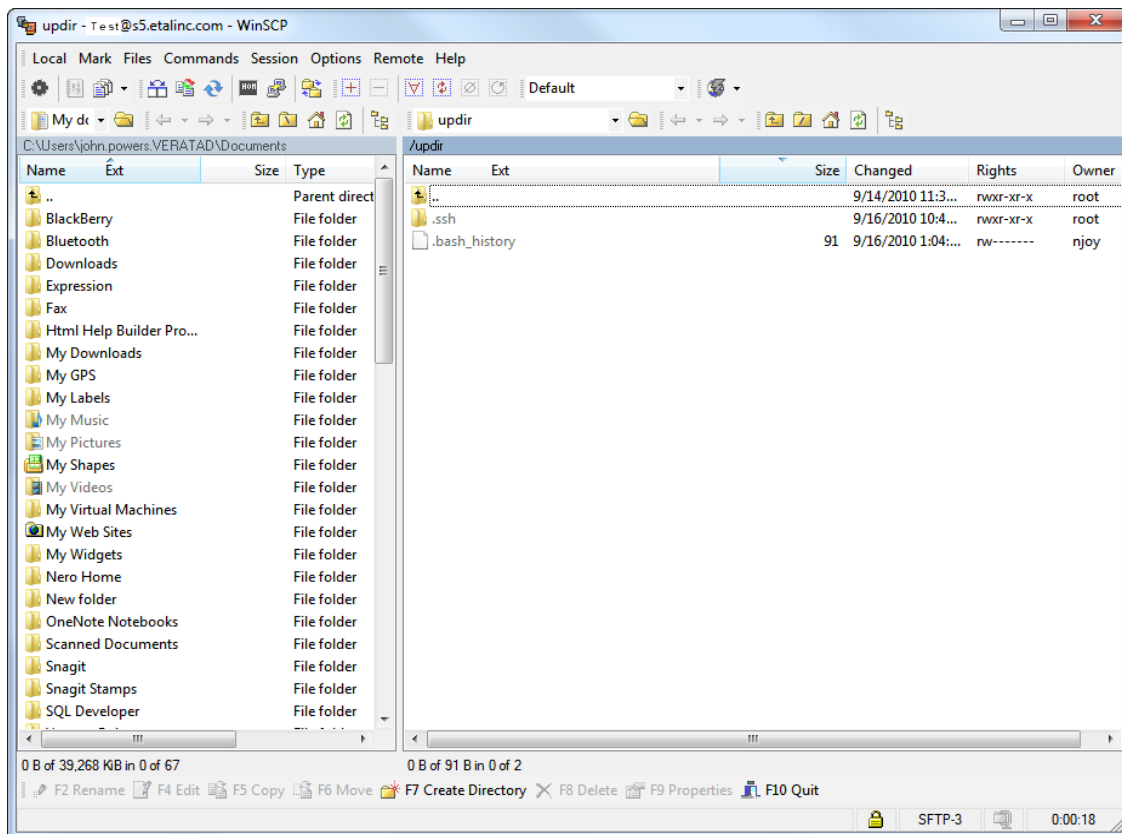




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The account will automatically be placed into the updir directory and is ready for batch Uploads and batch download results.

**Please understand that all files need to be deleted when no longer needed.**



If you have any questions contact tech support @ [support@veratad.com](mailto:support@veratad.com) or 201-510-6000 ext 124



## VERATAD - BATCH SERVICE INTEGRATION DOCUMENT

### INPUT File Format

#### INPUT FILE FORMAT

To establish automated batch processing you must first establish a standardized input file format. Standard batches are submitted as a delimited flat file and may contain some or all of the following data elements:

firstname,lastname,street,city,state,zip,Order #,Date of Birth,DOB Type,SSN,IDR Calc Question #,IDR Calc
--

Illustration 1: INPUT File Format





## VERATAD - BATCH SERVICE INTEGRATION DOCUMENT

Using Sample Data from Test Key File:

**Stephen, Miller, 26 N Franklin St, Shamokin, PA, 17872,,19870618,,584745233,,**  
*--There is no Order Number, IDR Calc Question or IDR Calc for this example*

The following provides format recommendations of submitted data to ensure the highest return rates:

**firstname** - Prefixes such as Mr., Dr, Mrs., First Name and Middle Name may go into this tag.

**lastname** - only the last name should be submitted in this tag and may contain a Suffixes such as Jr. and Sr.

**street** - House number such as 1234, pre-direction such as N, S, E, W, NW, street names such as Main St, post direction (such as N, S, E, W, NW, Unit Name such as Apt, Flr, or Suite and unit numbers may all be submitted in this tag.

For example: 1234 W Main St Apt #3

**city** - The full city may be submitted into this tag. The Veratad process may associate Vanity City Names with an actual Full City Name. A Vanity City Name is an un-official name for an area within a city.

**state** - The two position abbreviation of a state should be submitted in this tag.

**zip** - The five digit zip code should be submitted in this tag.

### Optional Input Entry

**order #** - Discretionary field which can be used for tracking purposes. (No processing is dependent on this field.)

**DOB** - The date of birth must be formatted consistently as described in the DOB Type field and should not contain hyphens or slashes.

**DOB Type** - The template format of the contents of the DOB field. For example: YYYYMMDD

**SSN** - The Full Social Security Number OR the Last 4 Numbers may be submitted in this field.

**IDR Calc question** - SSN component calculation type submitted.

**IDR Calc** - The IDR Calc answer submitted.

In the event customized input is required, Veratad will work with our clients to prepare the final batch configuration.



## VERATAD - BATCH SERVICE INTEGRATION DOCUMENT

### OUTPUT FILE FORMAT

The following illustrations contain the Veratad Standard Batch Output Format:

firstname,lastname,street,city,state,zip,Transaction id, status_code,status_text,transaction_id,time_stamp,age_code,age_text, age_deceased_code,age_deceased_text
---

Illustration 2: Standard OUTPUT File Format



## VERATAD - BATCH SERVICE INTEGRATION DOCUMENT

### EXPANDED OUTPUT OPTIONS

The following illustration contains the Veratad Expanded Batch Output format and is available as part of the batch output upon request:

```
firstname,lastname,street,city,state,zip,Transaction id,  
status_code,status_text,transaction_id,time_stamp,age_code,  
age_text,age_deceased_code,age_deceased_text,phone_code,  
phone_text,phone_date,ssn_ssn-9_code,ssn_ssn-9_text,  
ssn_ssn-4_code,ssn_ssn-4_text,ssn_idr-calc_code,  
ssn_idr-calc_text,bill_code,bill_text,bill_percentage,  
bill_date,bill_details,bill_closest_firstname,  
bill_closest_midname,bill_closest_lastname,bill_closest_streetnumber,  
bill_closest_streetpredirection,bill_closest_streetname,  
bill_closest_streetpostdirection,bill_closest_streetsuffix,  
bill_closest_unitdesignation,bill_closest_unitnumber,  
bill_closest_city,bill_closest_state,bill_closest_zip,  
bill_closest_phone,bill_match_firstname_code,  
bill_match_firstname_text,bill_match_firstname_percentage,  
bill_match_firstname_details,bill_match_midname_code,  
bill_match_midname_text,bill_match_midname_percentage,  
bill_match_midname_details,bill_match_lastname_code,  
bill_match_lastname_text,bill_match_lastname_percentage,  
bill_match_lastname_details,bill_match_firstname-alt_code,  
bill_match_firstname-alt_text,bill_match_firstname-alt_percentage,  
bill_match_firstname-alt_details,  
bill_match_midname-alt_code,bill_match_midname-alt_text,  
bill_match_midname-alt_percentage,bill_match_midname-alt_details,  
bill_match_lastname-alt_code,  
  
bill_match_lastname-alt_text,bill_match_lastname-alt_percentage,  
  
bill_match_lastname-alt_details,bill_match_streetnumber_code,  
  
bill_match_streetnumber_text,bill_match_streetnumber_percentage,  
  
bill_match_streetnumber_details,bill_match_streetpredirection_code,  
  
bill_match_streetpredirection_text,  
  
bill_match_streetpredirection_percentage,  
  
bill_match_streetpredirection_details,  
  
bill_match_streetname_code,bill_match_streetname_text,
```



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```
bill_match_streetname_percentage,  
  
bill_match_streetname_details,bill_match_streetpostdirection_code,  
  
bill_match_streetpostdirection_text,  
  
bill_match_streetpostdirection_percentage,  
  
bill_match_streetpostdirection_details,bill_match_streetsuffix_code,  
  
bill_match_streetsuffix_text,bill_match_streetsuffix_percentage,  
  
bill_match_streetsuffix_details,bill_match_unitdesignation_code,  
  
bill_match_unitdesignation_text,  
  
bill_match_unitdesignation_percentage,  
  
bill_match_unitdesignation_details,bill_match_unitnumber_code,  
  
bill_match_unitnumber_text,bill_match_unitnumber_percentage,  
  
bill_match_unitnumber_details,bill_match_city_code,  
  
bill_match_city_text,bill_match_city_percentage,  
  
bill_match_city_details,bill_match_state_code,  
  
bill_match_state_text,bill_match_state_percentage,  
  
bill_match_state_details,bill_match_zip_code,bill_match_zip_text,  
  
bill_match_zip_percentage,bill_match_zip_details,  
  
newest_firstname,newest_midname,newest_lastname,  
  
newest_streetnumber,newest_streetpredirection,newest_streetname,  
  
newest_streetpostdirection,newest_streetsuffix,  
  
newest_unitdesignation,newest_unitnumber,newest_city,  
  
newest_state,newest_zip,newest_phone,newest_date  
flag_code flag_text
```

Illustration 3: Expanded OUTPUT File Format



## VERATAD - BATCH SERVICE INTEGRATION DOCUMENT

### QUICK REFERENCE: READING CODES

#### STATUS CODES

Examine the Status Codes to determine the success or failure by analyzing the Status Code(s) returned. Status Text accompany that the Status Code and provide additional descriptive information.

<i>Status Code</i>	<i>Status Text</i>	<i>Appended Text</i>
0	Transaction was successful	
1	Person not found with information entered	
2	No relevant information found	
3	User ID and/or password not provided in query	
4		
4	Incorrectly formed XML request	No query string provided
4	Incorrectly formed XML request	Query did not include a function value
4	Incorrectly formed XML request	Unable to begin parsing
4	Incorrectly formed XML request	Query did not include a function value
4	Incorrectly formed XML request permission to function denied	Unknown function
5	Userid and/or password is incorrect	
5	Userid and/or password is incorrect	user not found
5	Userid and/or password is incorrect	user not active
5	Userid and/or password is incorrect	company not found
5	Userid and/or password is incorrect	company not active
5	Userid and/or password is incorrect	incorrect password
5	Userid and/or password is incorrect	invalid client address
6	Your IDResponse account is out of funds	Please add funds

Table 1 Veratad Status Codes and corresponding text

If a query is successful, then the next step in interpreting the results. Examine Veratad encoded responses such as the Age and Deceased Codes (shown below). An Age and Deceased Code will be delivered with all queries resulting in a Status Code "0".



## VERATAD - BATCH SERVICE INTEGRATION DOCUMENT

### ERROR CODES

Error Codes numbered 1000-9999 indicate a system problem, and therefore the corresponding message tag will be “system status”. Information in the table provides more detail, however these codes are encountered, please contact us for support ([support@veratad.com](mailto:support@veratad.com)).

<b>Error Code</b> 1000-9999	<b>System Status</b>
2000-2003	system is experiencing difficulties with data communication
3000-3999	unexpected system conditions or possible program status
7000-7999	system is failing to retrieve data correctly

Table 2: Veratad Error Codes and corresponding text



## VERATAD - BATCH SERVICE INTEGRATION DOCUMENT

### AGE CODES, DECEASED CODES AND SSN/ IDRCALC CODES

**Age Codes** indicate the result of the specific function within the transaction.

For example:

age\_code = "1" ...  
age\_text = "positive"

<b>Code</b>	<b>Text</b>
1	Positive
2	Negative
3	information unavailable
4	not sufficiently associated with identity
5	information is ambiguous

Table 3: Veratad Age Codes and corresponding text

**<1> <positive>** - Indicates the field in the query sufficiently matches the data found. Qualifications for a "positive" result vary by field.

**<2> <negative>** - Indicates the field in the query did not sufficiently match the data found.

**<3> <information unavailable>** - Indicates information required for the specific function was not returned. (In the context of an age result, this would indicate that a record was returned however the record did not contain date of birth information so age could not be verified.)

**<4> <not sufficiently associated>** - Indicates a positive result. However the information returned did not meet Veratad's criteria to sufficiently associate the returned data with the request.

**<5> <ambiguous>** - Indicates multiple results with unresolved selection criteria. Additional information is provided in the result, as well as resolution criteria in the form of a question. This question can be used to isolate the appropriate information.

**flag** –supplemental data is returned providing additional information regarding the address and phone submitted in the original query.



## VERATAD - BATCH SERVICE INTEGRATION DOCUMENT

**Deceased Codes** indicate the result of the specific function within the transaction.

For example:

deceased\_code = "1"...

deceased\_text = "positive"

<b>Code</b>	<b>Text</b>
1	Positive
2	Negative
5	Ambiguous

Table 4: Veratad Deceased Codes and corresponding text

**<1> <positive>** - Indicates the field in the query sufficiently matches the data found.

Qualifications for a "positive" result vary by field.

**<2> <negative>** - Indicates the field in the query did not sufficiently match the data found.

**<5> <ambiguous>** - Indicates multiple results with unresolved selection criteria. Additional information is provided in the result, as well as resolution criteria in the form of a question. This question can be used to isolate the appropriate information.

**SSN/IDRCalc Codes** indicate the result of the specific function within the transaction.

For example:

SSN/dcalc\_code = "1"...

SSN/dcalc\_text = "positive"

<b>Code</b>	<b>Text</b>
1	Positive
2	Negative
3	information unavailable

Table 5: Veratad SSN/IDRCalc Codes and corresponding text

**<1> <positive>** - Indicates the field in the query sufficiently matches the data found.

Qualifications for a "positive" result vary by field.

**<2> <negative>** - Indicates the field in the query did not sufficiently match the data found.

**<3> <information unavailable>** - Indicates information required for the specific function was not returned. (In the context of an age result, this would indicate that a record was returned however the record did not contain date of birth information so age could not be verified.)





## VERATAD - BATCH SERVICE INTEGRATION DOCUMENT

### FLAG INDICATORS

The following table lists the types of supplemental information:

<id>	<message>
FA01	Address invalid
AA01	Prison address
AA02	Temporary address
AA03	Mail delivery address
AA04	Military address
AA05	Business address
AA06	Address unit number missing
AP01	Phone listed to a prison
AP02	Phone listed to a temporary address
AP03	Phone listed to a mail delivery location

Table 6: Supplemental address and phone information and corresponding text

Note: A flag indicator is not returned in every result.