SmartLoader V2: User Management Automation

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1. SmartLoader Overview

Introduction

SmartLoader is the suite of tools you can use to integrate your Human Resources System, Student Information System (SIS), or Course or Learning Management System (CMS/LMS) with Rave's communication platform. This guide addresses the format, process, and reporting tools available to automate your user data management through using SmartLoader.

Other guides provide information about managing list, landline, and other types of data.

The SmartLoader Process

The SmartLoader process lets you easily maintain membership information in Rave's system.

SmartLoader accepts complete user membership files, processes them for differences, and applies any changes to the Rave system. SmartLoader can:

Action	Description
Add New Users	New user records in the load file are added to the database.
Delete Users	User records that are removed from the load file are removed from the database. Users in the admin role will not be deleted. The loader delete function applies to all users removed from the load file, even those with fields edited by the user or an admin.
Change User Information	User information that is changed in the load file is updated on the database, unless the information on the database was edited by a user or an admin through a user portal. Once information in the load file matches user- or admin-edited information, SmartLoader can update that information in successive load processes. Please see **Load Control for Editing Fields** (page 2) for more details.

For each load process, SmartLoader creates a log file of detected changes and actions taken. SmartLoader deposits these files in the Log folder of a secure WebDAV directory for your convenience. Clients have used this log file to analyze or audit SmartLoader results and to detect necessary updates for future load files.

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Process Safeguards

If a load job will delete over 15% of users or mobile phones, SmartLoader halts the job before any records are processed and sends a notifying email to the addresses listed in the Rave Alert console for "Copy on SmartLoader Notifications". This allows you to replace the file if you didn't intend to delete those users or confirm the job if you want to delete these users or phones.

Load Control for Editing Fields

User data in Rave Alert can be modified in different ways. Users can edit their data, authorized admins can change it for them, and SmartLoader can update it as part of automated uploads.

To support these different inputs, SmartLoader takes data origin and status into account when determining whether to change it.

Data SmartLoader can change is called "load controlled" data or data that is "in load control". Load controlled data comes from two sets of users – users created by SmartLoader and manually created users whose data later appears in SmartLoader files.

Users created by SmartLoader start out with all fields in their account in load control. This means SmartLoader will maintain and update these users' data as it changes in your system of record. Specific fields in these user accounts can move out of load control if the user edits them.

Users created by SmartLoader will always be deleted if you remove them from the SmartLoader file, even if some fields inside their profile are not in load control.

Manually created users start out with no fields in their account under load control. These users can enter load control when a record appears for them in your loader file with registration data – first name, last name, and email 1 – that matches data in their user account. Each field with matching data enters load control. Fields that don't have matching data stay out of load control.

Once any field in a manually created user account enters load control, you can delete the user by removing their record from the load file. This applies even if only a couple fields in the user's account are in load control.

These Load Control Rules Only Impact Data Updates – NOT User Deletions

Load control behavior impacts whether SmartLoader changes data fields in a user's record.

These rules do not affect whether SmartLoader can delete a user record. This is because SmartLoader can delete any user where any part of their record is under load control – including users created via a load process and manual users who later became load controlled.

If any field in the user's record matches a record for them in the load file, removing that record from the file will delete them from your Rave Alert system.

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Error Processing

SmartLoader checks data integrity during file processing and tells you when information is outside of load control. The system attempts to programmatically correct data problems and loads user records as completely as possible. If the system can't correct errors in a user record, it does not process that record.

SmartLoader records all errors in the SmartLoader results log, discussed further in Chapter 3. For SmartLoader log Error Codes, please see page 20.

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2. User Load File Specification

SmartLoader accepts files of user information in a specific format. The user load file specification is the same for manual and automated processing.

Include all accounts in one CSV file with one record per account. SmartLoader adds, deletes, and changes user accounts based on their presence in this file.

To give SmartLoader access to a load file to process it automatically, place the file in your WebDAV/load folder. If you have access to the SmartLoader tab within the Rave Alert Admin Console, you can also run a load process manually through this interface.

2.1 File Requirements

The characteristics of the input load file are:

Format	Comma Separated Value (CSV) file. Include only one record per user account.
	
	Example records:
	`A0012,Mary,Butler,mbutler@example.com,,1231231234`
	`A3487,John,O'Malley,j.omalley@example.com,,,Employee`
	
	Column Order Does Not Matter
	Record fields can be in any order, so long as you include proper header labels.

Encoding	ISO-8859-1 or Windows/DOS 1252 format. SmartLoader does not support Unix or OSX formats, Unicode or UTF-8 characters, or "Smart quotes".
Preferred File Name	rave-people.csv (case sensitive)

Rules:

These will cause errors and possibly halt a load process if not met in your load file.

- Unique Loader ID, First Name, Last Name, and Registration Email Address are **required** fields
- You must include a header on every row you include. Headers must match the format on page 7.
- The Unique Loader ID value must be **unique** across all users and must stay the same for a given user for as long as they appear in the system.
- The Registration Email Address must be **unique**

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- You must include all internal commas. You may omit commas after the last piece of data in a user record.
- Do not include extra commas in a field, unless you enclose the field in double quotes. For example, instead of Washington, Jr, use “Washington, Jr” or Washington Jr
- Single quotes are allowed in the first name and last name fields, as in: O’Malley

Best Practices:

The load process will complete even if the following rules are not met in your load file, but your data may be negatively impacted.

- Include only one record per account. If a user has multiple phone numbers, email addresses, or other traits, include all of these in a single record.
- Do not put the same phone number in multiple phone fields for a given user. SmartLoader only files the first instance of duplicate numbers within a given record.
- Remove trailing spaces from your fields.
- You may enclose fields in double-quotes as text-identifiers, but this is not required.
- Do not remove the headers with column names from your load file. You can put columns in any order, so these headers are how Rave Alert identifies each data field.
- Leave optional fields blank to engage site defaults. For example, your system has a default setting for “Notify by SMS” and “Notify by Email”.
- Leave Phone Carrier fields blank for Rave Alert to automatically attempt to determine carrier. To override Rave Alert’s carrier selection, input a value from the Table of Carrier Codes on page 23.
- If you don’t know whether a phone number is landline (voice-only) or mobile (text-capable), put it in the Mobile Phone 1 field. Please note that VOIP phones are voice-only.

Phone Number Promotion Options

Load Jobs after Dec 7th, 2015

No phone numbers are promoted even if higher fields are empty. If the load file includes mobile phone 2 but not mobile phone 1, the mobile phone 2 stays in the mobile phone 2 field.

Load Jobs before Dec 7th, 2015

Values in the mobile phone 2 field are promoted to the mobile phone 1 field if mobile phone 1 is empty. Similarly, mobile phone 3, landline phone 2, and landline phone 3 are promoted if the higher field is empty.

If you would like to switch from number promotion to honoring number placement, contact Rave Technical Support.

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2.2 User Load File Record Layout

Order Doesn't Matter, but Labels Do!

Record columns can be in any order, so long as you include proper headers contained in the Header Field. The field headers are not case sensitive.

Column Header	Description	Max Char Length	Format	Required for File	Content Requirements
	Content Notes				
Required Fields					
Unique Loader ID	Rave uses this ID to match user records during updates.	255	String	Required	**This field must be unique within the site and must stay the same value in each load file while a user exists in the Rave Alert database.**
	• You can see a user's Unique Loader ID in the Enrollment Report on WebDAV. • Examples: email address, phone number, employee ID, student ID. • Include each user's Unique Loader ID once only in a load file. Do not create multiple records for a single user. • Leading zeroes are allowed, but we recommend prefixing them with an alphabetic character to avoid spreadsheet software stripping them out. This is an alphanumeric field and "123" is not the same value as "000123". • If you need to change an existing unique ID, contact Rave Technical Support.				
First Name	User's first name	50	String	Required	
Last Name	User's last name	50	String	Required	
	• Names may include apostrophes, such as: O'Malley • Remove extra commas. Jane,Doe,Jr, is not allowed. Jane,Doe Jr, is acceptable. Jane,"Doe, Jr" is acceptable.				
Registration Email Address	User's primary email	255	String	Required	**This field must be unique within the site.**
	• We recommend that you use the email address associated with your organization's email domain (e.g., "@school.edu"). • If using LDAP authentication, this email address must match the LDAP attribute containing email address. • One user's registration email address may be used as an alternate email address for another user.				

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Column Header	Description	Max Char Length	Format	Required for File	Content Requirements
	Content Notes				
Optional Basic Fields					
Mobile Phone 1	Primary mobile phone number	USA: 10 integer digits International: + followed by number		Optional	Duplicates are allowed, **but if the number is not unique, Rave Alert will not capture the user's alert responses.**
	• Do not include spaces, hyphens, parentheses, dots, or other punctuation. • USA mobile phones can be sent text and voice alerts. USA format: 10 digits. Example: 5081231234 • International messages to mobile phones are delivered on a best effort basis. International format: + then country code and full phone number, integers only. Example: +440173671000 • Do not provide the same phone number more than once for a given user. • If the user provides only one phone number, unless you know it is a voice-only phone, put it in the Mobile Phone 1 (col.6) field.				
Site Username	User's authentication system login value	255	String. (Not case sensitive).	Conditional	Required for CAS, not used for other authentication systems. When using CAS for authentication, this field must contain the user's CAS ID.
Optional Additional Email Addresses					
Email Address 2	User's optional email	255	String	Optional	Used for broadcast alerts only. Not required. Must be valid email address.
Email Address 3	User's optional email	255	String	Optional	Used for broadcast alerts only. Not required. Must be valid email address.
	• One user's alternate email address may be the same as another user's registration or alternate email address. • **Do not** provide the same email address more than once for a user.				
Additional Mobile Phone Information					
Mobile Phone 2	Additional mobile phone number	See Mobile Phone 1 (col.6)	Optional	See Comments for Mobile Phone 1 (col.6).	Mobile Phone 2

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Column Header	Description	Max Char Length	Format	Required for File	Content Requirements
	Content Notes				
Mobile Phone 3	Additional mobile phone number	See Mobile Phone 1 (col.6)	Optional	See Comments for Mobile Phone 1 (col.6).	Mobile Phone 3
Optional Mobile Phone Voice Preference					
Mobile 1 Voice	Deliver Voice Alert to mobile 1 preference flag	1	Integer	Conditional	0 = No, 1 = Yes, null = use site default. Conditional if Mobile Phone 1 is populated, prohibited otherwise.
Mobile 2 Voice	Deliver Voice Alert to mobile 2 preference flag	1	Integer	Conditional	0 = No, 1 = Yes, null = use site default. Conditional if Mobile Phone 1 is populated, prohibited otherwise.
Mobile 3 Voice	Deliver Voice Alert to mobile 3 preference flag	1	Integer	Conditional	0 = No, 1 = Yes, null = use site default. Conditional if Mobile Phone 1 is populated, prohibited otherwise.
Optional Additional Mobile Information					
Mobile Carrier 1	Wireless carrier associated with mobile phone 1	255	String	Optional	Contact Rave support for details of use
Mobile Carrier 2	Wireless carrier associated with mobile phone 2	255	String	Conditional	Contact Rave support for details of use
Mobile Carrier 3	Wireless carrier associated with mobile phone 2	255	String	Optional	Contact Rave support for details of use
Optional Landline Phones					
Landline Phone 1	Voice-only (non-SMS) phone number	10	Integer	Optional	
	• Do not include spaces, hyphens, parentheses, dots, or other punctuation. • USA mobile phones can be sent text and voice alerts. USA format: 10 digits. Example: 5085675678 • International calls are delivered on a best effort basis. • Do not provide the same phone number more than once for a given user. • If the user provides only one phone number, unless you know it is a voice-only phone, put it in the Mobile Phone 1 (col.6) field.				

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Column Header	Description	Max Char Length	Format	Required for File	Content Requirements
	Content Notes				
Landline 1 Extension	Extension for Landline 1	50	String	Conditional	Optional if Landline Phone 1 populated, prohibited otherwise. Valid values: 0 - 9, “#” (pound) , * (asterisk) or “p”
Landline Phone 2	Voice-only (non-SMS) phone number	10	Integer	Optional	
Landline 2 Extension	Extension for Landline 2	50	String	Conditional	Optional if Landline Phone 2 populated, prohibited otherwise. Valid values: 0 - 9, “#” (pound) , * (asterisk) or “p”
Landline Phone 3	Voice-only (non-SMS) phone number	10	Integer	Optional	
Landline 3 Extension	Extension for Landline 3	50	String	Conditional	Optional if Landline Phone 3 populated, prohibited otherwise. Valid values: 0 - 9, “#” (pound) , * (asterisk) or “p”
Optional Language Preference, Text, and Email Opt-in/Out					
Language Preference	Language Preference	2	String	Optional	See table of values on page 27. Allow values for languages not active in domain. Null = use site default
Notify By SMS	Preference	1	Integer	Optional	Send text alerts to the user. 0 = No, 1 = Yes, null = use site default
Notify By Email	Preference	1	Integer	Optional	Send email alerts to the user. 0 = No, 1 = Yes, null = use site default

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Column Header	Description	Max Char Length	Format	Required for File	Content Requirements
	Content Notes				
Optional Custom Attributes					
	Rave Alerts supports 20 string attributes, 5 integer attributes, 5 true/false attributes, and 5 date-time attributes. You can manage attributes by adding them through the loader or through the Rave Alert console. Use the format below to add attribute values through the loader. Rave Alert will automatically add any new value to the available values for an attribute. To manage via the Rave Alert console, go to the System tab → Site Properties → Attributes tab.				
	Each user can only have 1 value for each attribute.				
String Attribute 1	A custom text-based category	255	String	Optional	For use with alert Query Lists, which are dynamic lists based on selection criteria using attribute fields.
	Attributes can have multiple text-based values. Assign each user one value per attribute.				
String Attribute 2	A custom text-based category	255	String	Optional	For use with alert Query Lists
String Attribute 3	A custom text-based category	255	String	Optional	For use with alert Query Lists
String Attribute 4	A custom text-based category	255	String	Optional	For use with alert Query Lists
String Attribute 5	A custom text-based category	255	String	Optional	For use with alert Query Lists
String Attribute 6	A custom text-based category	255	String	Optional	For use with alert Query Lists
String Attribute 7	A custom text-based category	255	String	Optional	For use with alert Query Lists
String Attribute 8	A custom text-based category	255	String	Optional	For use with alert Query Lists

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Column Header	Description	Max Char Length	Format	Required for File	Content Requirements
	Content Notes				
String Attribute 9	A custom text-based category	255	String	Optional	For use with alert Query Lists
String Attribute 10	A custom text-based category	255	String	Optional	For use with alert Query Lists
String Attribute 11	A custom text-based category	255	String	Optional	For use with alert Query Lists
String Attribute 12	A custom text-based category	255	String	Optional	For use with alert Query Lists
String Attribute 13	A custom text-based category	255	String	Optional	For use with alert Query Lists
String Attribute 14	A custom text-based category	255	String	Optional	For use with alert Query Lists
String Attribute 15	A custom text-based category	255	String	Optional	For use with alert Query Lists
String Attribute 16	A custom text-based category	255	String	Optional	For use with alert Query Lists
String Attribute 17	A custom text-based category	255	String	Optional	For use with alert Query Lists
String Attribute 18	A custom text-based category	255	String	Optional	For use with alert Query Lists
String Attribute 19	A custom text-based category	255	String	Optional	For use with alert Query Lists
String Attribute 20	A custom text-based category	255	String	Optional	For use with alert Query Lists

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Column Header	Description	Max Char Length	Format	Required for File	Content Requirements
	Content Notes				
Integer Attribute 1	A custom number-based category	18	Integer	Optional	For use with query-based Alert distribution lists. Integer values from 0 to 999999999999999999
	Attributes can have multiple values. Assign each user one value per attribute.				
Integer Attribute 2	A custom number-based category	18	Integer	Optional	For use with query-based Alert distribution lists. Integer values from 0 to 999999999999999999
Integer Attribute 3	A custom number-based category	18	Integer	Optional	For use with query-based Alert distribution lists. Integer values from 0 to 999999999999999999
Integer Attribute 4	A custom number-based category	18	Integer	Optional	For use with query-based Alert distribution lists. Integer values from 0 to 999999999999999999
Integer Attribute 5	A custom number-based category	18	Integer	Optional	For use with query-based Alert distribution lists. Integer values from 0 to 999999999999999999
True/False Attribute 1	A custom category with true/false or yes/no states	N/A	Boolean	Optional	For use with alert Query Lists, which are dynamic lists based on selection criteria using attribute fields. Required values: ON | OFF
	The only allowed values are "**ON**" and "**OFF**" Do **NOT** use "True" or "False" as values. The loader does not support them.				
True/False Attribute 2	A custom category with true/false or yes/no states	N/A	Boolean	Optional	For use with alert Query Lists Required values: ON | OFF

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Column Header	Description	Max Char Length	Format	Required for File	Content Requirements
	Content Notes				
True/False Attribute 3	A custom category with true/false or yes/no states	N/A	Boolean	Optional	For use with alert Query Lists Required values: ON | OFF
True/False Attribute 4	A custom category with true/false or yes/no states	N/A	Boolean	Optional	For use with alert Query Lists Required values: ON | OFF
True/False Attribute 5	A custom category with true/false or yes/no states	N/A	Boolean	Optional	For use with alert Query Lists Required values: ON | OFF
Date Attribute 1	A custom category with date-time values	N/A	YYYY-MM-DD or YYYY-MM-DDTHH:MM:SS	Optional	For use with alert Query Lists, which are dynamic lists based on selection criteria using attribute fields. YYYY-MM-DD or YYYY-MM-DDTHH:MM:SS format
	You can choose either format option.				
Date Attribute 2	A custom category with date-time values	N/A	YYYY-MM-DD or YYYY-MM-DDTHH:MM:SS	Optional	For use with alert Query Lists, YYYY-MM-DD or YYYY-MM-DDTHH:MM:SS format
Date Attribute 3	A custom category with date-time values	N/A	YYYY-MM-DD or YYYY-MM-DDTHH:MM:SS	Optional	For use with alert Query Lists, YYYY-MM-DD or YYYY-MM-DDTHH:MM:SS format
Date Attribute 4	A custom category with date-time values	N/A	YYYY-MM-DD or YYYY-MM-DDTHH:MM:SS	Optional	For use with alert Query Lists, YYYY-MM-DD or YYYY-MM-DDTHH:MM:SS format
Date Attribute 5	A custom category with date-time values	N/A	YYYY-MM-DD or YYYY-MM-DDTHH:MM:SS	Optional	For use with alert Query Lists, YYYY-MM-DD or YYYY-MM-DDTHH:MM:SS format

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3. Load Process Results Log

3.1 Results Log Overview

For each load process, SmartLoader outputs a log file that includes summary results and line-by-line detail of record changes. The log provides a complete report of all loading activity for a given load process and supports automated processing of SmartLoader output files.

SmartLoader outputs this log into the Log folder of your secure WebDAV directory, where it can be retrieved manually or via scripted automaton.

Log Naming Conventions

SmartLoader results logs names use this format:

system_ + **CurrentTimeInMilliseconds** + **.csv**

Example file name: system_1218216559797.csv

3.2 Log File Conventions

SmartLoader logs are CSV files with several conventions to make it easier to view them in spreadsheet applications such as Microsoft Excel, Apple Numbers, or OpenOffice Calc, and manipulated via scripting languages and standard text parsing tools.

1. **Record Type Codes**

   Each report row has a "Record Type" code identifying the row as a header, user data row, group data row, subscription data row, or cross-list data row. Please see the following table on page 13 for a full list of Record Type codes and their specifications. You can use these codes to automate file processing.

2. **Summary Results**

   The top ten rows in each log show summary results for the load process, with a row of column labels above five data rows. Here is an image of the summary section, with rows centered for visual clarity.

	A	B	C	D	E	F	G	H
1	00	Domain Name	Processing Start					
2	01	Rave Demo Univ	20080126_140402					
3	02	Total Users Processed	Total Users Skipped	Users Added	Users Changed	Users Deleted	Users Warnings	Users Errors
4	03	30	12	10	8	3	2	
5	04	Total Groups Processed	Total Groups Skipped	Groups Added	Groups Changed	Groups Deleted	Groups Warnings	Groups Errors
6	05	5	2	2	1	1	1	1
7	06	Total Subscriptions Processed	Total Subscriptions Skipped	Subs Added	Subs Changed	Subs Deleted	Subs Warnings	Subs Errors
8	07	3	1	1	1	0	0	0
9	08	Total Xlinks Processed	Total Xlinks Skipped	Xlinks Added	Xlinks Changed	Xlinks Deleted	Xlinks Warnings	Xlinks Errors
10	09	2	1	1	1	1	1	1
11	10	1234	Matthew	Serra	[illegible]	2	201251657	Sprint

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These rows contain the total users processed, skipped, added, changed, deleted, and other categories. Each summary row has a unique Record Type code, as discussed above.

3. Common System Changes

To enhance readability and automated processing, SmartLoader logs common system changes in the following ways:

- **Record Add** operations produce a numbered row (Row 12 for new users)
- **Record Delete** operations produce a numbered row (Row 13 for deleted users)
- **Record Update** operations produce the complete original record data above the complete changed record data.

  This allows administrators to inspect changes by eye, extract the old and new records as a pair, or diff reported changes via scripted automation. You can easily filter original records out of the log file using their Record Type Code.

  For user changes, the original record has a Record Code Type of 11, and the changed record has a Record Type Code of 10.

4. Info Code and Info Text

These fields offer record-specific information on warnings and errors, described below. The Info Code field contains numeric warning or error codes. The Info Text field contains a description of the error or warning. For successfully processed records, the Info Code reads 0 (zero) and the Info Text reads “Success”.

5. Warnings and Errors

Warnings appear in the Info Code and Info Text fields when records were processed but flagged for data validation issues. Errors appear in the Info Code and Info Text fields when records could not be processed due to validation errors, data insistency, missing data, or other problems. Please see the full list of Warning and Error codes on pages 14 through 17.

- **Warnings** produce an 8000-based number warning code with a full record entry
- **Errors** produce a “no-op” row that includes record details, a 1000-based number error code, and error messages. User Record Errors are Record Type code 14 in the log file.

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3.3 Record Type Codes

Log Record Type Codes		
Record Type	**Code**	**Record Contents**
Header Rows		
Totals Header Row Labels	00	Row labels for following row. Overall count of processed records.
Totals Header Row	01	Client Name, Processing Start Time, Total records processed, Total skipped (no changes), Total Warnings, Total Errors
Users Header Row Labels	02	Row labels for following row. Tallies for processed user records.
Users Header Row	03	Total users processed, users skipped, users added, users changed, users deleted, user warnings, user errors.
Groups Header Row Labels	04	Row labels for following row. Tallies for processed group records.
Groups Header Row	05	Total groups processed, groups skipped, groups added, groups changed, groups deleted, group warnings, group errors.
Subscriptions Header Row Labels	06	Row labels for following row. Tallies for processed subscription records.
Subscriptions Header Row	07	Total subscriptions processed, subs skipped, subs added, subs changed, subs deleted, sub warnings, sub errors.
Cross-Links Header Row Labels	08	Row labels for following row. Tallies for processed cross-link records.
Cross-Links Header Rows	09	Total cross-links processed, xlinks skipped, xlinks added, xlinks changed, xlinks deleted, xlink warnings, xlink errors.
User Rows		
Updated user record	10	Updated users (preceded by original user record with Record Type 11)
“Original” user record	11	User record prior to current change; precedes row 10 for an updated record. Not present for adds, deletes, or errors.
Added user record	12	Shows record detail of added record.
Deleted user record	13	Shows record detail of deleted record.
Error in user record	14	Shows record detail with error code and text.
Footer Rows		
Footer Row	99	Shows domain name, date/time of report finish.

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3.4 Warning Codes

Warnings appear in the log file when records were processed but flagged for data validation issues. Warning Codes appear in the Info Code field in record rows.

Log Warning Codes – 8000 series	
Code	**Description**
8000	Phone number for <x> has an invalid length.
8001	Phone number for <x> has spaces.
8002	Phone number for <x> has non-digits.
8003	Phone number for <x> already exists in the file. It will be blanked out in this record.
8004	Mobile Phone 1 must exist for Mobile Phone 2 to be added for SIS ID <x>.
8005	Mobile Phone 2 must exist for Mobile Phone 3 to be added for SIS ID <x>.
8006	Landline 1 must exist for Landline 2 to be added for SIS ID <x>.
8007	Landline 2 must exist for Landline 3 to be added for SIS ID <x>.
8008	User <x> Email <x> has no phone number. Fill the phone number in for this user.
8009	Phone carrier not found for user with email address <x>. Please call for support.
8010	User <x> already found in Rave, adding to load control (User pre-exists in Rave but has not been in load file before, and all credentials match)
8011	Same phone number specified multiple times for a user
8012	Same e-mail address specified multiple times for a user
8013	Client email must exist for Preferred Email 1 to be added for SIS ID <x>.
8014	Preferred Email 1 must exist for Preferred Email 2 to be added for SIS ID <x>.
8015	User language preference not selected for your organization. Preference set to default value, English.
8050	List in prior load file no longer in Rave system (List Deleted via UI)
8051	People in prior load file no longer in Rave system (Membership Deleted either via person, SmartLoader, or UI)
8052	Preferred language not active in site domain.

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3.5 Error Codes

Errors appear in the log file when records could not be processed due to validation errors, data insistency, missing data, or other problems. Error codes appear in the Info Code field in record rows.

Log Error Codes – 1000 series	
Code	**Description**
1000	Not enough columns (5+) in csv record
1001	Student id is empty
1002	Student with id <x> already exists in the file
1003	Last name field is empty
1004	Email address field is empty
1005	Email address not valid
1006	Email address <x> already exists in the file
1008	Preferred email 1 not valid
1009	Preferred email 2 not valid
1010	Unknown error
1011	Database error loading user
1012	Service should be empty
1013	Service value needs to be 0 or 1
1014	The delete attempt threw an exception. User deletion failed.
1014	First name field is empty
1015	Failed to load user
1016	User <x> has no email address. Fill the email address in for this user
1018	Exception updating user
1019	Exception deleting rave user ID <x> and email <x>
1020	The user add attempt threw an exception. User add failed.

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Log Error Codes – 1000 series	
Code	**Description**
1021	Failed to complete Rave user updates
1022	Rave user with id <x> has no data and can't be updated. Confirm that a user with rave id of <x> exists in the rave db.
1023	Failed to update user <GivenName> <FamilyName>. Check the logs.
1025	Exception occurred finding user in Rave database
1030	Too many columns in record (may indicate a stray comma within a field)
1031	User already found in Rave system with mismatched credentials, updates skipped (User pre-exists in Rave but has not been in load file before, credentials in load file do not match Rave)
1032	E-Mail address collision: e-mail address update in use by a different user in the same domain (likely a duplicate account)
1033	E-Mail address collision: user's registration e-mail address is in use in a different domain
1034	Update not applied because Rave system information does not match prior load value (user updated their info)
1035	User language preference value not valid
1036	Voice preference supplied for a non-existent mobile contact (x)
1037	Landline Extension specified with a no landline
1038	Invalid landline extension format

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4. Rave Alert User Enrollment Report

4.1 Enrollment Report Overview

Rave Alert produces a nightly comma-delimited (.CSV) Enrollment Report. This report provides detailed reporting of every user your domain on the Rave system. The Enrollment Report is outputted to the root of your secure WebDAV directory every night. The system maintains 12 days of Enrollment Reports, after which old reports are purged.

Enrollment Report Naming Conventions

Enrollment report names use this format:

enrollment_ report_ + **YearMonthDate_** + **domainname** + **.csv**

Example file name: enrollment_report_20090729_yourdomain.csv

4.2 Enrollment Report CSV File Layout

The Enrollment Report format displays data as found in the system.

Do Not Use an Enrollment Report as a SmartLoader Load File!
It Will Not Work and Could Delete Parts of Your Database

You cannot use an Enrollment report as a User Load File. The record layouts are different and cannot be interchanged.

Please see the User Load File Record Layout on page 8 for loading users into Rave Alert.

Enrollment Report CSV File Layout		
Column Order	Description	Notes
1 A	Unique Loader ID	Rave uses this ID to identify user records across the system.
2 B	First Name	User's first name
3 C	Last Name	User's last name

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Enrollment Report CSV File Layout		
Column Order	Description	Notes
4 D	Site Username	Name the user enters when logging in to Rave Alert.
5 E	Registration Email Address	Primary email address associated with the user's account. Each account needs a unique registration email address. If using LDAP authentication, this email address will match the email in the LDAP server.
6 F	Email Address 2	Optional additional email for receiving broadcast alerts. Can be added by the organization or by the user.
7 G	Email Address 3	Optional additional email for receiving broadcast alerts. Can be added by the organization or by the user.
8 H	Mobile Phone 1	Required for the user to receive text alerts. **This number must be unique within your organization for each account.**
9 I	Mobile 1 Specified Carrier	User provided carrier information for Mobile Phone 1, if available.
10 J	Mobile 1 Carrier Lookup	System-generated carrier information for Mobile Phone 1 from an automated carrier lookup.
11 K	Mobile 1 Carrier Lookup Error Date	If this row contains a date, an error occurred looking up the carrier for Mobile 1 on that date. This row will be blank if no error occurred.
12 L	Mobile 1 Carrier Lookup Error	If this row contains a value, an error occurred looking up the carrier for Mobile 1. Use the error code value to look up the error in our loading guide. This row will be blank if no error occurred.
13 M	Mobile 1 SMS Stop Flag	Indicates if the user issued a "STOP" command for the Mobile Phone 1, opting out of SMS delivery on that device. 1 = STOP Enabled (SMS not delivered to this phone) 0 = STOP Disabled
14 N	Mobile 1 Voice Delivery	Indicates if a user has specified a preference for receiving voice calls on this mobile number. 0 = None, 1 = Yes, Null = domain default applied.

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Enrollment Report CSV File Layout		
Column Order	Description	Notes
15 O	Mobile 1 Confirmation Status	Confirmation status of the primary mobile number within Rave Confirmed, Pending, or Blank
16 P	Mobile Phone 2	Optional second mobile number for the user to receive alerts
17 Q	Mobile 2 Specified Carrier	User provided carrier information for Mobile Phone 2, if available.
18 R	Mobile 2 Carrier Lookup	System-generated carrier information for Mobile Phone 2 from an automated carrier lookup.
19 S	Mobile 2 Carrier Lookup Error Date	If this row contains a date, an error occurred looking up the carrier for Mobile Phone 2 on that date. This row will be blank if no error occurred.
20 T	Mobile 2 Carrier Lookup Error	If this row contains a value, an error occurred looking up the carrier for Mobile Phone 2. Use the error code value to look up the error in our loading guide. This row will be blank if no error occurred.
21 U	Mobile 2 SMS Stop Flag	Indicates if the user issued a “STOP” command for the Mobile Phone 2, opting out of SMS delivery on that device. 1 = STOP Enabled (SMS not delivered to this phone) 0 = STOP Disabled
22 V	Mobile 2 Voice Delivery	Indicates if a user has specified a preference for receiving voice calls on this mobile number. 0 = None, 1 = Yes, Null = domain default applied.
23 W	Mobile Phone 3	Optional third mobile number for the user to receive alerts
24 X	Mobile 3 Specified Carrier	User provided carrier information for Mobile Phone 3, if available.
25 Y	Mobile 2 Carrier Lookup	System-generated carrier information for Mobile Phone 3 from an automated carrier lookup.

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Enrollment Report CSV File Layout		
Column Order	Description	Notes
26 Z	Mobile 3 Carrier Lookup Error Date	If this row contains a date, an error occurred looking up the carrier for Mobile Phone 3 on that date. This row will be blank if no error occurred.
27 AA	Mobile 3 Carrier Lookup Error	If this row contains a value, an error occurred looking up the carrier for Mobile Phone 3. Use the error code value to look up the error in our loading guide. This row will be blank if no error occurred.
28 AB	Mobile 3 SMS Stop Flag	Indicates if the user issued a "STOP" command for the Mobile Phone 3, opting out of SMS delivery on that device. 1 = STOP Enabled (SMS not delivered to this phone) 0 = STOP Disabled
29 AC	Mobile 2 Voice Delivery	Indicates if a user has specified a preference for receiving voice calls on this mobile number. 0 = None, 1 = Yes, Null = domain default applied.
30 AD	Landline Phone 1	Optional landline phone number for receiving voice calls.
31 AE	Landline Phone 1 Extension	Extension for Landline Phone 1 Valid values: 0 - 9, "#" (pound) , * (asterisk) or "p"
32 AF	Landline Phone 2	Optional landline phone number for receiving voice calls.
33 AG	Landline Phone 2 Extension	Extension for Landline Phone 2 Valid values: 0 - 9, "#" (pound) , * (asterisk) or "p"
34 AH	Landline Phone 3	Optional landline phone number for receiving voice calls.
35 AI	Landline Phone 3 Extension	Extension for Landline Phone 3 Valid values: 0 - 9, "#" (pound) , * (asterisk) or "p"
36 AJ	Rave Handle	Name for the user inside the system – appears on audit trails and other reports.

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Enrollment Report CSV File Layout		
Column Order	Description	Notes
37 AK	Registration Date	Date record initially entered Rave system.
38 AL	String Attribute 1	Custom attribute with text values.
39 AM	String Attribute 2	Custom attribute with text values.
40 AN	String Attribute 3	Custom attribute with text values.
41 AO	String Attribute 4	Custom attribute with text values.
42 AP	String Attribute 5	Custom attribute with text values.
43 AQ	String Attribute 6	Custom attribute with text values.
44 AR	String Attribute 7	Custom attribute with text values.
45 AS	String Attribute 8	Custom attribute with text values.
46 AT	String Attribute 9	Custom attribute with text values.
47 AU	String Attribute 10	Custom attribute with text values.
48 AV	String Attribute 11	Custom attribute with text values.
49 AW	String Attribute 12	Custom attribute with text values.

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Enrollment Report CSV File Layout		
Column Order	Description	Notes
50 AX	String Attribute 13	Custom attribute with text values.
51 AY	String Attribute 14	Custom attribute with text values.
52 AZ	String Attribute 15	Custom attribute with text values.
53 BA	String Attribute 16	Custom attribute with text values.
54 BB	String Attribute 17	Custom attribute with text values.
55 BC	String Attribute 18	Custom attribute with text values.
56 BD	String Attribute 19	Custom attribute with text values.
57 BE	String Attribute 20	Custom attribute with text values.
58 BF	Integer Attribute 1	Custom attribute with number values
59 BG	Integer Attribute 2	Custom attribute with number values
60 BH	Integer Attribute 3	Custom attribute with number values
61 BI	Integer Attribute 4	Custom attribute with number values
62 BJ	Integer Attribute 5	Custom attribute with number values

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Enrollment Report CSV File Layout		
Column Order	Description	Notes
63 BK	True/False Attribute 1	Custom attribute with on/off values.
64 BL	True/False Attribute 2	Custom attribute with on/off values.
65 BM	True/False Attribute 3	Custom attribute with on/off values.
66 BN	True/False Attribute 4	Custom attribute with on/off values.
67 BO	True/False Attribute 5	Custom attribute with on/off values.
68 BP	Date Attribute 1	Custom attribute with YYYY-MM-DD or YYYY-MM-DD HH:MM:SS date format values
69 BQ	Date Attribute 2	Custom attribute with YYYY-MM-DD or YYYY-MM-DD HH:MM:SS date format values
70 BR	Date Attribute 3	Custom attribute with YYYY-MM-DD or YYYY-MM-DD HH:MM:SS date format values
71 BS	Date Attribute 4	Custom attribute with YYYY-MM-DD or YYYY-MM-DD HH:MM:SS date format values
72 BT	Date Attribute 5	Custom attribute with YYYY-MM-DD or YYYY-MM-DD HH:MM:SS date format values
73 BU	Notify by SMS	Indicates a user's current preference for SMS messaging 1 = Deliver, 0 = Do Not Deliver
74 BV	Notify by Email	Indicates a user's current preference for email messaging 1 = Deliver, 0 = Do Not Deliver

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Enrollment Report CSV File Layout		
Column Order	Description	Notes
75 BW	Terms Date	Date/Time when a user accepted the Rave Alert Terms of Use as noted in row 77. When the user has not accepted Rave Alert's terms of use, this field is empty. Format: yyyy-mm-dd hh:mm:ss [24-hour format / Eastern Time Zone]
76 BX	Last Login	Date/Time the user last logged into the Rave Alert system. If the user has not yet logged into the Rave web portal, this field is empty. Combined with the "Rave Alert Terms of Use Acceptance," this field can help estimate which users logged into the Rave web portal but chose not to accept the Rave Alert Terms of Use. Format: yyyy-mm-dd hh:mm:ss [24-hour format / Eastern Time Zone]
77 BY	Terms Status	Indicates whether the user has accepted or declined Rave's Alert Terms of Use. 'Accepted' = the user explicitly accepted the Rave Alert Terms of Use 'Declined'* = the user explicitly rejected the Rave Alert Terms of Use NULL (not populated) = the terms were neither Accepted nor Declined **Note**: "Declined" is available for users created via SmartLoader or the Rave Alert Management console. This value is only applicable to clients who activate the Rave Alert Terms of Use Opt-Out feature.
78 BZ	Language Preference	Code for the language the user prefers to receive alerts in.
79 CA	Suspended	Is the user currently suspended and not receiving alerts? 0 = No, 1 = Yes
80 CB	RBAC Role	User's access role within Rave Alert.
81 CC	Guardian Registration	Indicates whether the user has registered the Rave Guardian app on one of their mobile phone numbers.

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3.3 Mobile Carrier Error Codes

Rave Alert performs regular freshness checks of your mobile numbers' carrier information. The Enrollment Report reports phone numbers that failed these checks.

The most common carrier error codes are:

Mobile Carrier Error Codes	
Code	**Description**
03573	The registry service does not recognize this number as a valid mobile phone number. Reasons could include: • The number is invalid • The number is for a landline phone but was entered as a mobile number • The number is associated with a small regional carrier without relationships with carrier lookup facilities. Rave recommends you verify phone number receiving this error with the user. If the user is loaded through SmartLoader, you can include a carrier identification code (Appendix A) in their record.
20700	The registry service reports the phone is on a carrier but unable to receive messages. Reasons could include: • The number is deactivated and not in service • The number has recently been ported to another carrier, and the registry service has yet to receive the new carrier information • The carrier has installed SMPP blockers for various reasons, including billing issues and disputes Rave Alert will attempt to message these numbers through our aggregators. If those attempts are rejected, Rave Alert attempts delivery via SMTP protocol through the last known carrier. A user who recently ported a number can manually adjust their mobile number's listed carrier from the My Account section of the Rave Alert User Console.
11103	The phone number is truncated or has insufficient characters to be a valid mobile number. Rave Alert cannot deliver messages to this contact until the number is corrected in Rave Alert or the bulk load file.

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Appendix A – Mobile Carrier Codes

Sorted by Carrier Name

Codes for the Phone Carrier fields of bulk load files.

Carrier Codes by Carrier Name	
Rave Carrier ID	**Carrier Name**
51	ACS Wireless
1	Advantage Cellular
36	Airfire/Airadigm
76	AirVoice Wireless
53	Aliant Telecom
2	Alltel
70	American Messaging
4	Appalachian Wireless
15	AT&T
56	AT&T Legacy
6	Bell Mobility
7	Bluegrass Cellular
8	Boost Mobile
9	Carolina West Wireless
10	Cellcom
45	Cellular 29 Plus
41	Cellular One AZ
11	Cellular One Dobson
82	Cellular One East Central IL
52	Cellular One East Texas
50	Cellular Properties
13	Centennial Wireless
77	Chat Mobility

Carrier Codes by Carrier Name	
Rave Carrier ID	**Carrier Name**
14	Cincinnati Bell
100	Choice Wireless (AKA NTUA Wireless)
87	Clear Talk Wireless
88	Contact Communications
32	Contact Wireless
62	Corr Wireless
92	Cricket/AIO
99	Critical Alert
12	CSPIRE/Cellular South
71	DTS Cellular
18	Edge Wireless
83	Element Mobile
86	EPIC
21	First Cellular of Southern Illinois
93	GCI Mobile
44	Golden State Cellular
94	Google Voice
19	Helio
72	Illinois Valley Cellular
25	Immix
84	Inland Cellular
3	International Number

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Carrier Codes by Carrier Name	
Rave Carrier ID	**Carrier Name**
57	Iowa Wireless Services
85	IPN Paging
89	Leaco
17	Leap Legacy
80	Long Lines
90	Lyca Mobile
46	Lyrix Wireless
20	Metro PCS
66	MetroCall Pagers
22	Microcell Connexions
16	Midwest Wireless
60	Mobi PCS
91	Mobile Nation
98	Mosaic
49	MTPCS/Cellular One
68	MTS Allstream
61	Net10
59	Nex-Tech
23	Nextel
65	Northwest Missouri Cellular
24	NTELOS
81	Panhandle Telephone Cooperative, Inc
95	Pine Cellular
54	Pioneer Wireless
26	Plateau Telecomm
58	Pocket Communications

Carrier Codes by Carrier Name	
Rave Carrier ID	**Carrier Name**
28	Qwest Wireless (TEXT NOT SUPPORTED)
79	Rave Wireless
97	Republic Wireless
63	Revol
29	Rogers Wireless
43	Rural Cellular (Unicel)
55	SilverStar
74	Skytel
30	Southern Linc
31	Sprint
5	Straight Talk
33	SUNCOM WIRELESS
78	Syringa Wireless
34	T-Mobile
35	Telus
96	Thumb Cellular
48	TracFone
37	U.S. Cellular
42	Union Wireless
75	United Wireless
64	USA Mobility
38	Verizon Wireless
47	VIAERO Wireless
39	Virgin Mobile Canada
40	VIRGIN MOBILE USA
27	West Central Wireless
67	Westlink Communications

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Sorted by Carrier Code

Codes for the Phone Carrier fields of bulk load files.

Carrier Codes by Carrier Number	
Rave Carrier ID	**Carrier Name**
1	Advantage Cellular
2	Alltel
3	International
4	Appalachian Wireless
5	Straight Talk
6	Bell Mobility
7	Bluegrass Cellular
8	Boost Mobile
9	Carolina West Wireless
10	Cellcom
11	Cellular One Dobson
12	CSPIRE/Cellular South
13	Centennial Wireless
14	Cincinnati Bell
15	AT&T
16	Midwest Wireless
17	Leap Legacy
18	Edge Wireless
19	Helio
20	Metro PCS
21	First Cellular of Southern Illinois
22	Microcell Connexions
23	Nextel
24	NTELOS

Carrier Codes by Carrier Number	
Rave Carrier ID	**Carrier Name**
25	Immix
26	Plateau Telecomm
27	West Central Wireless
28	Qwest Wireless (TEXT NOT SUPPORTED)
29	Rogers Wireless
30	Southern Linc
31	Sprint
32	Contact Wireless
33	SUNCOM WIRELESS
34	T-Mobile
35	Telus
36	Airfire/Airadigm
37	U.S. Cellular
38	Verizon Wireless
39	Virgin Mobile Canada
40	VIRGIN MOBILE USA
41	Cellular One AZ
42	Union Wireless
43	Rural Cellular (Unicel)
44	Golden State Cellular
45	Cellular 29 Plus
46	Lyrix Wireless
47	VIAERO Wireless
48	TracFone

Carrier Codes by Carrier Number	
Rave Carrier ID	**Carrier Name**
49	MTPCS/Cellular One
50	Cellular Properties
51	ACS Wireless
52	Cellular One East Texas
53	Aliant Telecom
54	Pioneer Wireless
55	SilverStar
56	AT&T Legacy
57	Iowa Wireless Services
58	Pocket Communications
59	Nex-Tech
60	Mobi PCS
61	Net10
62	Corr Wireless
63	Revol
64	USA Mobility
65	Northwest Missouri Cellular
66	MetroCall Pagers
67	Westlink Communications
68	MTS Allstream
69	Alltel/AWCC
70	American Messaging
71	DTS Cellular
72	Illinois Valley Cellular
74	Skytel
75	United Wireless

Carrier Codes by Carrier Number	
Rave Carrier ID	**Carrier Name**
76	AirVoice Wireless
77	Chat Mobility
78	Syringa Wireless
79	Rave Wireless
80	Long Lines
81	Panhandle Telephone Cooperative, Inc
82	Cellular One East Central Illinois
83	Element Mobile
84	Inland Cellular
85	IPN Paging
86	EPIC
87	Clear Talk Wireless
88	Contact Communications
89	Leaco
90	Lyca Mobile
91	Mobile Nation
92	Cricket/AIO
93	GCI Mobile
94	Google Voice
95	Pine Cellular
96	Thumb Cellular
97	Republic Wireless
98	Mosaic
99	Critical Alert
100	Choice Wireless (aka NTUA Wireless)

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Appendix B – Language Codes

Use these codes for the Language Preference field of bulk load files. Use these codes for the Language Preference field (column 30) of bulk load files.

Table of Language Codes	
Language Name	**Code**
English (default)	Null value
Afrikaans	af
Arabic	ar
Arabic Levantine	apc
Bengali	bn
Bosnian Latin	bs_Latn
Bulgarian	bg
Catalan	ca
Chinese Simplified	zh-CHS
Chinese Traditional	zh-CHT
Croatian	hr
Czech	cs
Danish	da
Dutch	nl
Estonian	et
Fijian	fj
Filipino	fil
Finnish	fi
French	fr
German	de
Greek	el
Haitian	ht
Hebrew	he

Table of Language Codes	
Language Name	**Code**
Hindi	hi
Hmong Daw	mww
Hungarian	hu
Icelandic	is
Indonesian	id
Italian	it
Japanese	ja
Korean	ko
Latvian	lv
Lithuanian	lt
Malagasy	mg
Malay	ms
Maltese	mt
Norwegian	no
Persian	fa
Polish	pl
Portuguese	pt
Quetero Otomi	otq
Romanian	ro
Russian	ru
Samoan	sm
Serbian Cyrillic	sr_Cyrl
Serbian Latin	sr_Latn

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Slovak	sk
Slovenian	sl
Spanish	es
Swahili	sw
Swedish	sv
Tahitian	ty
Tamil	ta
Telugu	te
Thai	th
Tonga	to
Turkish	tr
Ukrainian	uk
Urdu	ur
Vietnamese	vi
Welsh	cy
Yucatec Maya	yua