

Vocera Platform Dataset Guide

Version 6.3.0

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Getting Started

This section provides an overview of Datasets, Attributes, Conditions, and Rules. Further, it describes how to use them in the Vocera Platform Web Console and within Adapters.

About the Vocera Platform

The Vocera Platform optimizes patient safety by helping clinicians make real-time decisions and communicate instantly in critical situations; it is the intelligent ecosystem that connects all the people and information needed to deliver patient care.

With the intelligence of the Vocera Platform, clinicians can quickly determine what to prioritize next and close the loop faster with secure messaging, phone calls, and alert and alarm notifications—all in one place. You can locate people quickly, collaborate productively, and reduce the noise, using the device that fits your workflow—the Vocera Vina smartphone app, the V-Series Smartbadge, or the B-Series Badge. The Vocera Platform enables the flow of meaningful, actionable information between people and systems and allows it to be received when, where, and how it's needed, keeping the patient at the center of care.

In addition, the Vocera Platform now offers simplified deployment, maintenance, and administration, as well as a smaller footprint requiring fewer servers.

About the Vocera Platform Dataset Guide

The Vocera Platform Dataset Guide describes how to create, edit, remove, and how to work with Datasets within the Vocera Platform.

This document describes tasks required to manage the Datasets using the Web Console. This document is intended for a technical audience, specifically the system administrators. You can also access this Guide from the context-sensitive Help available in the Web Console.

The organization of this guide generally matches the layout of the Vocera Platform Web Console.

Related Documentation

This section includes a list of recommended reference documents that support the Vocera Dataset Guide.

- Vocera Platform Describes the installation, configuration, and usage guidelines for the Vocera Platform.
- XMPP Adapter Configuration Guide Describes the usage guidelines for the XMPP adapter.

Vocera Datasets

Datasets allow Vocera Platform to store and refer to a large amount of contextual data, such as data about users, groups, devices, templates, and more to generate alerts and notifications.

The Vocera datasets are defined by their purposes, such as NurseCalls, Deliveries, or Conversations, and are built to house specific pieces of data in their attributes. The relational nature of these datasets allows Vocera Platform to store and reference contextual data about each alert. For example, when an alert is triggered and processed, data is added to many attributes on a number of different datasets to provide the proper processing and context for the alert.

Datasets may link to other datasets and allow linked attribute access across two or more datasets. For example, an alert is linked to a patient, room, and bed to display this information on the user's device when the alert is triggered. Each of these respective attributes is stored in separate datasets. Attributes, Conditions, and Rules configured on a dataset are used to manage this information.

Vocera Platform stores parsed data to later retrieve that data and assemble it into meaningful information. The mechanism to store and retrieve information builds intelligence into the system that allows for a highly flexible, intelligent assembly of data. For example, some adapters can subscribe to a dataset, and receive a message when a Condition is met and a Rule is triggered.

Parsed data is stored as attributes on objects that are identified through core object IDs. Objects are organized into datasets that separate objects into usable groups that the system can act upon. Vocera Platform assigns a unique ID to each object when the object is created, and the object ID is used for all additional operations on the object, including retrieving and updating.

Datasets are organized in a hierarchy; a parent dataset is at the top of a hierarchy with child datasets branching below it. A key attribute configured for a dataset determines whether objects are included or not. If an object matches the dataset keys, it is a member of the dataset, and since keys are inherited by child datasets, the object also may be a member of child datasets. If an attribute or link is created in the child of an abstract dataset, any attribute or link of the same name created in another child of the same abstract parent must also have the same type, key, and required settings.

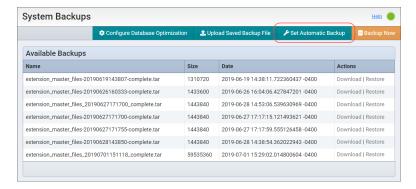
Each dataset may also have one or more conditions that further filter objects. For more information on Conditions, see <u>Dataset Conditions</u> on page 59

Understanding the Automatic Backups

Automatic backups allow you to automatically backup specified Vocera system information to a specified external location on a desired schedule. When performing a backup (either automated or on demand) all datasets that were previously built will be backed up.

You must perform manual backups until an automatic backup is configured for the system. Automatic backups can be configured in **System Backups** in the Vocera Platform Web Console.

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Automatic backups of the Vocera Platform can be configured to transfer backup files daily to an external location, such as a central information storage system, at a specified time. The Automatic Backups functionality allows you to configure the following transfer methods for backup files; SMB, FTP, SFTP, and transfer to a secondary Vocera appliance. When an external location is configured for backups, the backup files are automatically transferred to the specified IP address or server location for storage.

Once the automatic backup is configured, you can perform a test transfer to ensure that the configuration is accurate. Using a backup file from the current list of available backups, this test will verify that the backup files are transferred successfully.

As shown in the **Setup an automatic backup** page, you can specify local machine or system backup options, in addition to managing the automatic backup storage options. The Vocera system configurations include the option to enable local machine, Kerberos keytab file, and Voice database backups. In addition you can configure a database optimization schedule and enable data purging.

Setup an automatic	backup					Help	
			♣ Upload Publi	с Кеу	🚣 Download Public Key	✓ Appl	ly
			Autom	natic B	ackup		
Appliance type:	Primary			id the pu /home/u	blic key and copy it to the i	emote	
Local Machine Options	Timary		transact Seconda	ıry Appli	nction correctly. For the "Tr ance" option, download the	public key,	
Enable local daily backup:					econd appliance, and uploo key form.	ad the key	
Number of backups to retain:	10		Eleme				
Daily backup / cleanup t			applianc the prim	e is typi	appliance type. The secor cally used for storing backt ance	ips from	
Hour:	1 am		_	,			
Minute:							
	0	· ·					
Data Purging Enable data purging:			-				
Backup Configuration							
Enable Kerberos keytab backup:			_				
Enable Voice database backup	o: €						
SMB Backup							
Enable SMB transfer:							
Domainname:							
Username:							
Password:							
Server name or IP address:							
Server share name:							
File to test SMB transfer:		•					
Test Now FTP Backup							
Enable FTP transfer:			_				
Destination host:							
Destination subdirectory:							
Username:							
Password:							
File to test FTP transfer:		•					
Test Now							
SFTP Backup							
Enable SFTP transfer:							
Destination host:							
Destination subdirectory:							
Username:							
File to test SFTP transfer:							
Test Now	_						
Transfer to Secondary A			-				
Enable transfer:							
Secondary appliance:							
File to test SCP transfer:		•					
Test Now							

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Understanding Regular Expressions (Regex)

Methods of specifying regular expresssion (Regex) mappings are useful to help you find designated characters in a segment of an incoming HL7 message.

Introduction

Vocera uses regular expressions (Regex) when parsing incoming messages for storage in a designated dataset in the Data Manager.

Incoming message data is processed in order to store information from a nurse call system and may later be used by the Workflow Engine to display a message on the end user's device. For example, the NaviCare adapter uses Regex mappings configured in the Message Type settings to capture alert data sent by the NaviCare nurse call system.

This document will discuss Literal Expressions, Statements of Equality, and Global Variables. A quick reference provides some commonly used operators for easy access at the end of this page.

General Guideline for Regular Expressions

When building a Regex for a facility, be sure to keep the expression as simple as possible while still meeting the needs of the facility. Performance issues, including delays in Alerts, can occur when overly complex Regex strings are written.

The system enforces a maximum processing time limit of five seconds to ensure that CPU loads are not significantly increased by overcomplicated Regex strings. A string that exceeds the threshold will generate an audit event and will not match any results.



Warning: Avoid building extremely complex Regex functions, as performance issues may result.

For example, preprocessing rules might contain inefficient Regex with nested ungreedy matchers such as (.*?) that result in excess load on the system.

Below is an example of inefficient Regex for a preprocessor rule:

```
(OBR(\|.*?){7}.?)(\d){4}(\d){2}(\d){2}(\d){2}(\d){2}
```

This example could be expressed more efficiently as the following:

```
"OBR(\|.*){7}.*?(\d){4}(\d){2}(\d){2}(\d){2}(\d){2}(\d){2}"
```

Literal Expressions

Regex describes a search pattern, similar to the way *.txt is used to find text files in a file management system. An adapter that uses Message Types to parse incoming message data will define Regex fields to describe the data pattern to match, and a corresponding mapping which describes the attribute expressions to store the data. Each segment in the Regex field corresponds to one line in the Regex Mapping field.

The adapter expects to find data in the defined pattern for processing; if no match is made, the message is not processed. A number of Message Types, with Regex mappings, have to be created to address each and every format or combination of data that the implementation will need to handle.

In this example, the Regex (d++(d+)+(1|2))s+(.+) maps to the following attribute expressions:

• bed.pillow number

- bed.room.room number
- bed.bed number
- alert type



This Regex mapping results in stored data, which may be used to display on the user device. The Regex (d + (d+) + (1|2))) may result in a user's device displaying "100:103:1 Code Blue" due to the stored data captured by the following segments.

- "100" is stored by the first segment and mapping, and is the pillow number.
- "103" is stored by the second segment and mapping, and is the room number.
- "1" is stored by the third segment and mapping, and is the bed number. Bed numbers depend on how many beds are in the room.
- "Code Blue" is stored by the fourth segment and mapping, and is the alert type triggered. Alerts are preconfigured to cover conditions ranging from "Code Blue" to "Patient needs water" in a clinical setting.

Explanation for Literal Expressions

Regex provides a method of pattern matching where the system expects to find the designated characters in a particular position in the incoming message data. Regex is written in a formal language that can be interpreted by a regular expression processor, which is a program that either serves as a parser generator or examines text and identifies parts that match the provided specification.

Regular expressions have a syntax in which a few characters are special constructs, called metacharacters, and the rest are ordinary. An ordinary character matches that same character and nothing else. The metacharacters are reserved for special search terms and to use one of them as a literal in a Regex, it must be escaped with a backslash () character.

There are 11 special or metacharacters: the opening square bracket [, the backslash \setminus , the caret $^{\wedge}$, the dollar sign $^{\circ}$, the period or dot ., the vertical bar or pipe symbol |, the question mark $^{\circ}$, the asterisk or star $^{\circ}$, the plus sign $^{\circ}$, the opening round bracket (and the closing round bracket). Any two regular expressions can be concatenated.

The Regex example (d+)+(d+)+(1|2) is described by its concatenated segments:

- The (\d+\ segment matches the bed.pillow_number mapping, which stores digits in the message data that pertain to the pillow number of the patient.
- The $(\d+)\+$ segment matches the bed.room.room_number mapping, which stores digits in the message data that pertain to the room number of the patient.
- The (1|2)) segment matches the bed.bed_number mapping, which stores digits 1 or 2 in the message data to associate the alert to bed one or two in that room.
- The \s+ tells Vocera to expect any number of spaces after the group, but there must be at least one space.
- The (.+) segment matches the alert_type mapping. This segment catches any other information that is not recognized by the rest of the string.

Statements of Equality

Statements of equality are an alternative way to specify Regex mappings. In a statement of equality mapping, the left-hand side of the equality statement is the attribute path, while the right-hand side is the value of the attribute path. The right-hand side should use numbered captured groups (e.g., \$1) to reference elements matched, but may also include literal strings. When any item contains an equals sign, then every item is expected to be a statement of equality. If the item is not formatted as a statement of equality (i.e., no equals sign or more than one attribute path or value), then an error message will be written to the audit log indicating that the processing failed for this message type.

In this example, the Regex $((w+):(w+))\s+(.+)$ maps to the following attribute expressions:

- bed.room.facility.name
- bed.pillow number
- bed.room.room number
- bed.bed_number
- alert_type



This Regex mapping represents how the information is sent to Vocera by NaviCare. Using the mapping of ((w+):(w+))(s+(.+)) the information comes to Vocera as General301:1 Code Blue.

A diagram of the expression is: $((w+):(w+))\s+(.+)$

Pillow Number is equal to bed.pillow number=\$1

Room Number is equal to bed.room.room number=\$2

Bed Number is equal to bed.bed number=\$3

Alert Type is equal to alert type=\$4

- "General" is the name of the facility. In the example above General has been hardcoded into the mapping. The string from NaviCare must include General or the message will not be parsed correctly by Vocera.
- The first section of the mapping is the group ((\w+):(\w+)) and represents the Pillow Number. The Pillow Number is derived by taking the Room Number and the Bed Number and seperating them with a colon ":". Using the example above, the Pillow number is 301:1
- Contained within the group of $((\w+):(\w+))$, the first segment is $(\w+)$ which is the Room Number. The example above tells Vocera that the room number is 301.
- The colon ":" is used to separate the Room Number from the Bed Number.
- The second part of the group is located after the colon ":" and is (\w+) which is the Bed Number. The example above tells Vocera that the bed number is 1. Bed numbers depend on how many beds are in the room.
- The \s+ tells Vocera to expect any number of spaces after the group, but there must be at least one space.
- The final segment of the mapping is (.+). This tells Vocera to expect any number of charcters, but there must be at least one character. This is the alert type that is triggered. In our example, the alert type is Code Blue. Alerts are preconfigured to cover the clinical conditions needed by the facility.

Explanation for Statements of Equality

Regex provides a method of pattern matching where the system expects to find the designated characters in a particular position in the incoming message data. Regex is written in a formal language that can be interpreted by a regular expression processor, which is a program that either serves as a parser generator or examines text and identifies parts that match the provided specification.

Regular expressions have a syntax in which a few characters are special constructs, called metacharacters, and the rest are ordinary. An ordinary character matches that same character and nothing else. The metacharacters are reserved for special search terms and to use one of them as a literal in a Regex, it must be escaped with a backslash () character.

There are 11 special or metacharacters: the opening square bracket [, the backslash \setminus , the caret $^{\wedge}$, the dollar sign $^{\circ}$, the period or dot ., the vertical bar or pipe symbol |, the question mark $^{\circ}$, the asterisk or star $^{\circ}$, the plus sign $^{\circ}$, the opening round bracket (and the closing round bracket). Any two regular expressions can be concatenated.

The Regex example ((w+):(w+)) is described by its concatenated segments:

- The ((\w+):(\w+)) segment matches the bed.pillow_number=\$1 mapping, which stores the Room Number:Bed Number.
- The (\w+) segment matches the bed.room.room_number=\$2 mapping, which stores digits in the message data that pertain to the room number of the patient.
- The (\w+) segment matches the bed.bed_number=\$3 mapping, which stores digits in the message data to associate the alert to bed number one or two in that room.
- The (.+) segment matches the alert_type=\$4 mapping. This segment stores the alert type information. In our example, the alert type is Code Blue. Alerts are preconfigured to cover the clinical conditions needed by the facility.

Global Variables

A Global Variable represents a capture group that has a fixed set of modifiers. These variables define ways to transform and format data that is stored in the Vocera appliance.

Vocera has created two global variables; now which evaluates to the current time of the systems time zone, and today which evaluates to the current date. To utilize these variables, select a modifier from the list below.

To format these variables, the modifer must be to the right side of the global variable. For example, selecting the global variable of now will add the current time of the system time zone. To format that time as HH:mm, use the modifier of as_mil_time. The full global variable is: #{now.as_mil_time}.

The modifiers below are also defined and may be used to format or augment the base value of the date/time group, now by adding ".modifier", for example #{now.as_mil_time}.

Modifier	Definition
as_date	The date portion of a date/time returned in the format MM/DD/YYYY.
as_iso	A time formatted using ISO8601. The format is YYYY-MM-DD'T'hh:mm:ss.sssTZD
as_iso_date	The date portion of a date/time using ISO8601. The format is YYYY-MM-DD.
as_mil_time	The time portion of a date/time in the form 'HH:mm' (where HH is 0-23).
as_mil_time_sec	The time portion of a date/time in the form 'HH:mm:ss' (where HH is 0-23).

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Modifier	Definition
as_time	The time portion of a date/time in the form 'hh:mm AM/PM'
as_time_sec	The time portion of a date/time in the form 'hh:mm:ss AM/PM'.
as_weekday	Returns the name of the week part of a date.
with_increment	Returns the succeeding day of the value being modified; may be used multiple times.
with_decrement	Returns the preceding day of the value being modified; may be used multiple times.

Only a subset of the above modifiers may be used to format or augment the base value of the date group, {today} by adding ".modifier", for example #{today.as_date}.

Modifier	Definition
as_date	The date portion of a date/time returned in the format MM/DD/YYYY.
as_iso_date	The date portion of a date/time using ISO8601. The format is YYYY-MM-DD.
as_weekday	Returns the name of the week part of a date.
with_increment	Returns the succeeding day of the value being modified; may be used multiple times.
with_decrement	Returns the preceding day of the value being modified; may be used multiple times.

Example for Global Variables

The global variables and modifiers that are defined above are used to store a date, time, or date and time stamp on any alert. The following example shows how to use the literal expression, the statement of equality, and the global variables.

The Regex example ((w+):(w+))+(.+) maps to the following attributes:

- bed.room.facility.name
- bed.pillow number
- bed.room.room number
- bed.bed number
- alert type
- clinical.alarm time
- clinical id



This Regex mapping represents how the information is sent to Vocera by the vendor. Using the mapping of ((w+):(w+)) (\dot Blue.

• "General" is the name of the facility. In the example above General has been hardcoded into the mapping. The string from the vendor must include General or the message will not be parsed correctly by Vocera.

- The first section of the mapping is the group ((\w+):(\w+)) and represents the Pillow Number. The Pillow Number is derived by taking the Room Number and the Bed Number and separating them with a colon. Using the example above, the Pillow number is 301:1.
- Contained within the group of ((w+):(w+)), the first section is (w+) which is the Room Number. The example above tells Vocera that the room number is 301.
- The ":" is used to separate the Room Number from the Bed Number.
- The second part of the group is located after the ":" and is (\w+) which is the Bed Number. The example above tells Vocera that the bed number is 1. Bed numbers depend on how many beds are in the room.
- The \s+ tells Vocera to expect any number of spaces after the group, but there must be at least one space.
- The next piece to the mapping is (.+). This tells Vocera to expect any number of charcters, but there must be at least one character. This is the alert type that is triggered. In our example the alert type is Code Blue. Alerts are preconfigured to cover conditions ranging from "Code Blue" to "Patient needs water" in a clinical setting.
- The \s+ tells Vocera to expect any number of spaces after the alert, but there must be at least one space.
- The clincial.alarm_time will store the time the alert was received by Vocera, according to the time zone set in the appliance.
- The clinical id will store the type of device from which the alert was received, (MR), the name of the facility, (General), all of the alert information, (\$1\$2\$3\$4), and transform the time to a date/time formatted using ISO8601, (#{now.as iso}).

Regular Expression Quick Reference

Use the following list of Regular Expression operators to help create useful mappings in an Vocera implementation.

Regular Expressions Anchors

^	Start of string, or start of line in multi-line pattern
\A	Start of string
\$	End of string, or end of line in multi-line pattern
\Z	End of string
d/	Word boundary
\B	Not word boundary
\<	Start of word
\>	End of word

Regular Expressions Character Classes

\c	Control character
\s	White space
\S	Not white space
\d	Digit
\D	Not digit

\w	Word
\W	Not word
\x	Hexadecimal digit
\0	Octal digit

Regular Expressions POSIX

[:upper:]	Upper case letters
[:lower:]	Lower case letters
[:alpha:]	All letters
[:alnum:]	Digits and letters
[:digit:]	Digits
[:xdigit:]	Hexadecimal digits
[:punct:]	Punctuation
[:blank:]	Space and tab
[:space:]	Blank characters
[:cntrl:]	Control characters
[:graph:]	Printed characters
[:print:]	Printed characters and spaces
[:word:]	Digits, letters and underscore

Regular Expressions Assertions

?=	Lookahead assertion
?!	Negative lookahead
?<=	Lookbehind assertion
?!= or ? </th <td>Negative lookbehind</td>	Negative lookbehind
?>	Once-only Subexpression
?()	Condition [if then]
?()	Condition [if then else]
?#	Comment

Regular Expressions Quantifiers

*	0 or more
+	l or more

?	0 or 1
{3}	Exactly 3
{3,}	3 or more
{3,5}	3, 4 or 5

Add a ? to a quantifier to make it ungreedy.

Regular Expressions Escape Sequences

\	Escape following character
\O	Begin literal sequence
\E	End literal sequence

[&]quot;Escaping" is a way of treating characters which have a special meaning in regular expressions literally, rather than as special characters.

Regular Expression Common Metacharacters

^]	
\$	{	*
(\	+
)		?
<	>	

The escape character is usually the backslash - $\$.

Regular Expressions Special Characters

\n	New line
\r	Carriage return
\t	Tab
\v	Vertical tab
\f	Form feed
\xxx	Octal character xxx
\xhh	Hex character hh

Regular Expressions Groups and Ranges

	Any character except new line (\n)
(a b)	a or b
()	Group

(?:)	Passive (non-capturing) group
[abc]	Range (a or b or c)
[^abc]	Not a or b or c
[a-q]	Letter from a to q
[A-Q]	Upper case letter from A to Q
[0-7]	Digit from 0 to 7
\n	nth group/subpattern

Ranges are inclusive.

Regular Expressions Pattern Modifiers

g	Global match
i	Case-insensitive
m	Multiple lines
S	Treat string as single line
X	Allow comments and white space in pattern
е	Evaluate replacement
U	Ungreedy pattern

Regular Expressions String Replacement

\$n	nth non-passive group
\$2	"xyz-" in /^ (abc(xyz))\$/
\$1	"xyz-" in /^(?:abc)(xyz)\$/
\$`	Before matched string
\$'	After matched string
\$+	Last matched string
\$&	Entire matched string

Some Regex implementations use \ instead of \$.

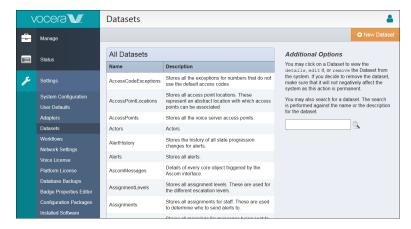
Ruby Reference

Use the Ruby Regular Expression Editor for troubleshooting: http://rubular.com/

Viewing Dataset Properties

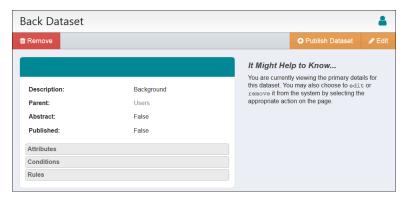
Access the Datasets page to view dataset properties and configurable elements.

Log into the Vocera Platform Web Console with the appropriate credentials, and select **Settings > Datasets** to display a list of configured datasets in the system.



In the **All Dataset** page, you can also search for an existing dataset, or create a new dataset. Enter characters in the **Search** field to filter the list by the datasets matching the name or description that contain the entered characters. Click the **New Dataset** button in the Action bar to configure a new dataset in the system.

Select a dataset name in the list on the **All Datasets** page. As shown below, the **Dataset** page displays the configuration details for the chosen dataset.



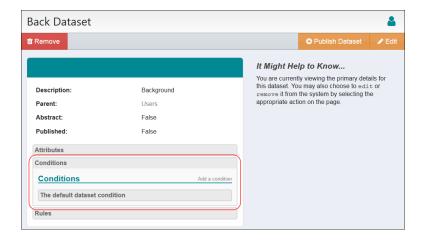
The **Dataset** page provides the ability to edit the dataset details, as well as the ability to publish the dataset, if it is not yet published. When in edit mode, a data purge condition can be set for the dataset. If the dataset is not a system dataset, and the user login is assigned the permissions needed to modify datasets, a Remove button also displays.

This **Dataset** page displays the chosen dataset's properties, which include the dataset description, abstract status, names of parent datasets or child datasets if applicable, and its published status.



Note: An unpublished dataset cannot have data added to it or be used in workflows or adapters. In a published dataset, keys may not be changed once data has been written to the dataset. Attributes that are referenced may not be removed unless the references are first removed.

The dataset's configurable elements are accessed via the expandable Attributes, Conditions, and Rules tabs listed below the dataset properties.



Using the Data Purge Condition

Datasets may be purged of records during automatic backups. Purging of data is not enabled by default. An implementation engineer may enable data purging when configuring automatic backups.

Datasets with dynamic operational data are the only datasets that may be configured for purging. For additional information, see Configuring a Data Purge Condition. This includes details such as alerts, conversations, and messages. Additionally, the history of items such as deliveries, responses, and presence along with other day to day activities can be included in these datasets.

Datasets with static configuration data should NOT be purged. Examples of static datasets are Users, Devices, and Locations.

If purging is enabled, the records that are over 90 days old will be deleted from the system. Implementation engineers can change the filters defined for each of these conditions. They can additionally define purge conditions on other datasets as appropriate. See Working With Condition Filters for additional information.

The following list shows all the datasets that are configured for purging, once an Implementation Engineer enables data purging:



Note: Unless noted, the purge condition contains an additional condition for "created_at"; which is 90 days in the past.

Dynamic Operational Datasets	Special Purge Condition
AlertHistory	The purge condition only has a check available for alert being null.
Assignments	
Chats	The purge condition has an additional check to see if the conversation is null.
ClinicalDetails	
Clinicals	
Conversations	The purge condition has an additional check to see if the messages are null.
ConversationHistory	The purge condition has an additional check to see if the conversation.messages are null.
DM	
Deliveries	
DeliveryHistory	
From	
Groups	The purge condition has an additional check to see if the group starts with Adhoc.
LabTests	
MassAlerts	
MT	
Media	
MediaMetadata	The purge condition has an additional check to ensure that the linked media record was created 90 days in the past.
Messages	
Notes	
NurseCallMessages	
NurseCalls	
Orders	
PresenceHistory	
PresenceUpdate	
RegistrationHistory	
ReportResults	
Reports	
Responses	
Results	

Configuring a Data Purge Condition

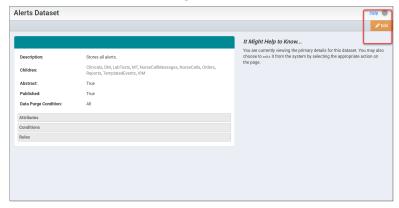
Description of the settings that enable data to be purged from the Vocera Platform.

Select an option from the dropdown box. To keep an existing value, do not edit that field.

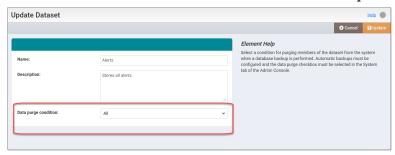
- 1. Access the Vocera Platform Web Console and navigate to **Settings.**
- 2. Select **Datasets** from the menu.
- 3. Select the Dataset you would like to work with by clicking it. Alternatively you can use the Search box to type in the exact dataset you would like to work with.



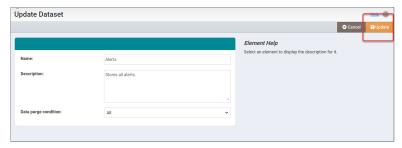
4. Select Edit in the upper right corner to modify the dataset.



- 5. Select the arrow in the **Data purge condition** field to display a list of available conditions.
- 6. Select a condition for purging data from the dataset (and subsquently purging from the system) when a database backup is performed. In the following example, all members of the Alerts dataset that match the selected **All** condition will be deleted from the system after a backup.



7. Select **Update** in the Action bar to implement the change in the system.



8. Optionally, select **Datasets** to work with another dataset, or select a different option from the action bar.

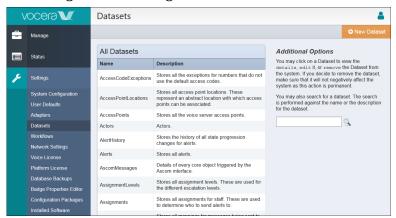


Dataset Configuration

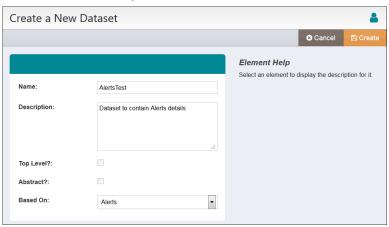
These dataset settings are to be configured when creating a new dataset, or editing an existing dataset in the Vocera system.

Access the Settings tab in the Vocera Platform Web Console as described in Viewing Dataset Properties on page 17 to configure a new or existing dataset.

1. Select the dataset you wish to edit in the All Datasets list, or select the New Dataset button, to display the configuration settings.



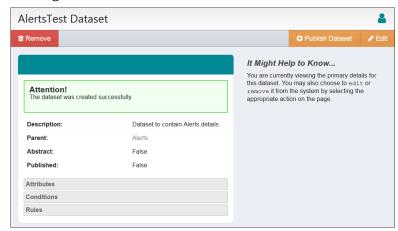
2. Complete the configuration fields for the dataset you wish to create or revise.



Note: Selecting the **Top Level** checkbox enables the **Abstract** checkbox for selection, but disables the **Based On** drop-down menu.

Configuration Field	Description
Name	Enter the name for this dataset. The name must begin with a capital letter, contain no spaces, and it should be descriptive of the dataset's function.
Description	Enter the description for this dataset. The description should briefly explain the dataset's function.
Top Level	Select this checkbox if the dataset being created has no parent dataset. Top Level means that the dataset being created will not inherit any items from another dataset.
Abstract	Select the Abstract checkbox if the dataset being created cannot have information stored directly within the dataset. In order to select this checkbox, you must first select the Top Level checkbox.
Based On	Use the Based On drop-down menu if the dataset you are creating is based on a previously defined dataset. Select the existing dataset from the drop-down menu that you would like to base the new dataset on. In order to select an item from this menu, you must not select the Top Level checkbox.

- 3. When complete, select the appropriate button to complete the configuration.
 - **Create**: Create the new dataset in the system.
 - **Update**: Revise the existing dataset.
 - Cancel: Return to the dataset list without making a change.
- 4. The new or updated dataset will now appear in alphabetical order in the datasets list, with a success message.

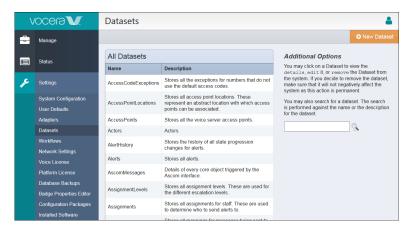


Creating a New Dataset

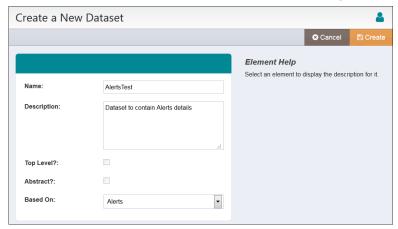
You can create a dataset on the Vocera system.

Access the Settings tab in the Vocera Platform Web Console as described in Viewing Dataset Properties on page 17 to create a new dataset.

1. Select **New Dataset** in the Datasets List page.



2. Complete the fields as described in Dataset Configuration on page 23 to configure a new dataset.



- 3. Choose **Create** to complete the configuration.
 - **Create**: Save the new dataset in the system.
 - **Cancel**: Return to the dataset list without making a change.
- 4. The new dataset displays the completed details page, and a success message. The new dataset name will now appear in alphabetical order in the datasets list.

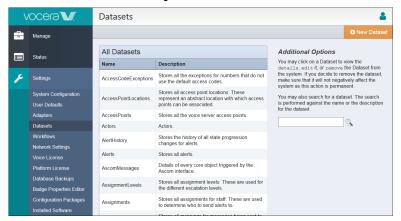


Editing a Dataset

You can edit a dataset on the Vocera system.

Access the Settings tab in the Vocera Platform Web Console as described in Viewing Dataset Properties on page 17 to revise an existing dataset.

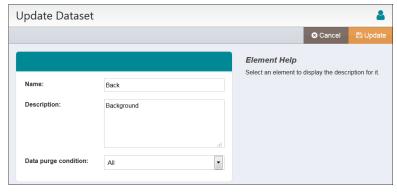
1. Select the dataset that you wish to edit in the Datasets List page.



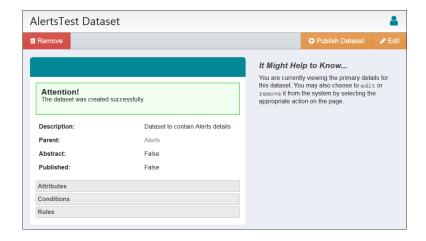
2. Select the **Edit** button in the Action bar to revise the dataset.



3. Complete the fields as described in Dataset Configuration on page 23 to revise the settings for this dataset.



- 4. Choose **Update** to complete the configuration.
 - **Update**: Save the revised dataset in the system.
 - Cancel: Return to the dataset list without making a change.
- 5. The updated dataset displays the completed details page, and a success message.



Removing a Dataset

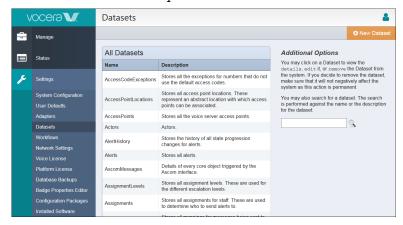
You can permanently remove a dataset from the system.

Access the Settings tab in the Vocera Platform Web Console as described in Viewing Dataset Properties on page 17 to remove an existing dataset.



Warning: Remove cannot be undone. Removing a dataset may prevent features from functioning.

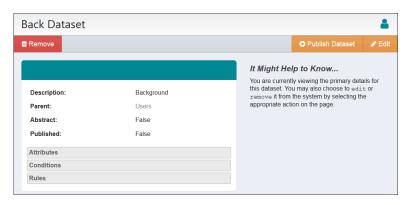
1. Select the dataset that you wish to work with in the Datasets List page.



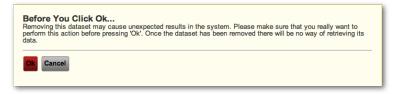
2. Select **Remove** in the dataset page to delete the dataset.



Warning: Remove cannot be undone. Removing a dataset may prevent features from functioning.



3. Select **Ok** in the confirmation message, after you have finished reading the message.



- **Ok**: Choose this option to delete the dataset from the system.
- Cancel: Choose this option to close the message window without deleting the dataset.
- 4. A success message confirms that the dataset has been removed from the system. Searching for the dataset will return a **No datasets found** message.



Publishing a Dataset

You can publish the dataset to make it active and available for use in the system.

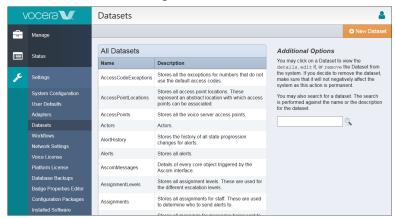
Access the Settings tab in the Vocera Platform Web Console as described in Viewing Dataset Properties on page 17 to publish a dataset.

Once a dataset has been published, it is recommended that no changes be made to the dataset or any of its elements (rules, conditions, filters, etc.)



Note: An unpublished dataset cannot have data added to it or be used in workflows or adapters. In a published dataset, keys may not be changed once data has been written to the dataset. Attributes that are referenced may not be removed unless the references are first removed.

1. Select the dataset that you wish to work with in the Datasets List page.



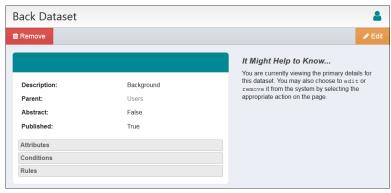
2. Select the **Publish Dataset** button in the Action bar.



3. Select \mathbf{Ok} in the confirmation message, after you have finished reading the message.



- **Ok**: Choose this option to publish the dataset in the system.
- **Cancel**: Choose this option to close the message window without publishing the dataset.
- 4. The Published status now displays True, and the dataset is active in the Vocera system.



Dataset Attributes

An attribute is a single data point on a dataset that contains a specific type of value (such as an alert type or a device's MAC address). The Vocera datasets store and reference a large amount of contextual data about each alert. When an alert is triggered and processed, data is added to many attributes on a number of different datasets in order to provide the proper processing and context for the alert.

An attribute is a single data point on a dataset that contains a specific type of value (such as an alert type or a device's MAC address). The Vocera datasets store and reference a large amount of contextual data about each alert. When an alert is triggered and processed, data is added to many attributes on a number of different datasets in order to provide the proper processing and context for the alert.

See Datasets for overview information about datasets and elements, including attributes. See Viewing Dataset Properties on page 17 for detailed information about accessing the Vocera Platform Web Console and navigating to the dataset elements, such as the Attributes.

A role with the Advanced Support security item applied will allow an associated user to have access to advanced functionality in the Vocera Platform Web Console, such as working with datasets. See the Advanced Support documentation for information about enabling this functionality in order to perform the configuration described in this page



Warning: Enabling Advanced Support allows users access to sensitive components and its use must be carefully evaluated for each login.

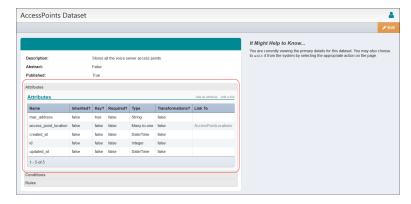
Accessing Dataset Attributes

Navigate in the Console to view regular attribute and link attribute information in Vocera datasets.

In the Vocera Platform Web Console, select **Settings > Datasets** to access the datasets installed on the Vocera system. Select a dataset you wish to view from the All Datasets list.

The All Datasets page displays the configured Vocera datasets in alphabetical order with descriptions for each dataset. The **Edit** button in the Action bar allows you to revise the dataset definition (not the attribute definitions). See the <u>Vocera Datasets</u> on page 6 page for details about working with datasets.

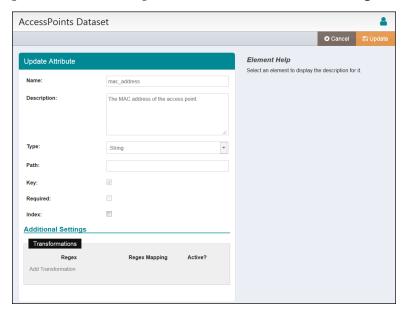
Expand the **Attributes** accordian in the dataset page.



The Attributes panel displays an alphabetical list of attributes configured on the selected dataset. A grid displays the characteristics of each attribute; Inherited, Key, Required, Type, Transformation. If an attribute has a link to another dataset, you can navigate directly to that dataset by the link provided in the right column.

Select **Add an attribute** or **Add a link** in the Attributes panel's menu to add an attribute to the selected dataset.

To access configuration options for an attribute, click to select the attribute in the Attributes panel and the Update Attribute dialog will display. An attribute is selectable if the dataset has been published. Once published, then only the Index and Additional Settings can be revised for a dataset's attributes.

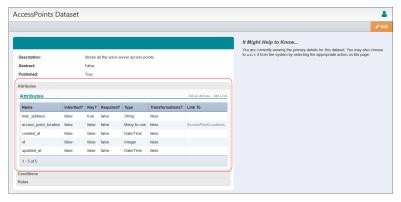


Configuring an Attribute

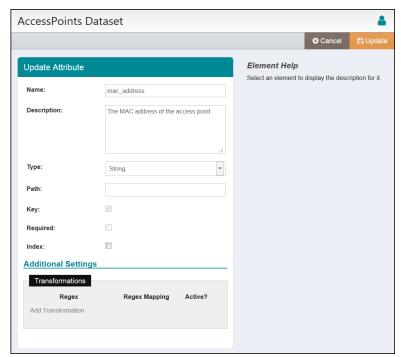
Configure these dataset settings when creating a new attribute, or editing an existing attribute, in the Vocera system.

Access the Settings tab in the Vocera Platform Web Console as described in Accessing Dataset Attributes on page 30, to configure a new or existing attribute.

1. Navigate to the dataset where you wish to work with attributes, and expand the **Attributes** accordian.



- 2. Display the attribute's configuration fields.
 - Update Attribute: Click on an attribute name to display the Update Attribute window.
 - Create a New Attribute: Click the "Add an attribute" link to display the Create a New Attribute window.



3. Complete the fields listed in the table below. An asterisk * indicates that the field must be provided.

Name	Description
Name *	Enter a unique name for this attribute; duplicate attribute names are not allowed in a dataset. The name must begin with a lowercase letter and contain no spaces. The name should be descriptive of the attribute's function. Note: Some attributes are not visible in a dataset configuration, however, if you attempt to create a new attribute with one of the special attribute names, it will fail.
	By design, some attributes are hidden on a few datasets, such as the Users, Roles, and Interfaces datasets. These special attributes possess a type that is not string, integer, date, datetime, binary, or decimal. Although the names of the special attributes do not display in the dataset configuration, if you attempt to create a new attribute using one of the special attribute names, a message will inform you that the name is already specified for the dataset.
Description *	Enter the description for this attribute. The description should briefly explain the attribute's function.

Name Description Type * **Note:** If an attribute or link is created in the child of an abstract dataset, any attribute or link of the same name created in another child of the same abstract parent must also have the same type, key, and required settings. Select an attribute Type from the drop-down menu. The type assigned to an attribute will restrict that Attribute from accepting any data that is not in the specified format. You can select one of the following items from the drop-down menu. Binary Boolean Date Date/Time Decimal Integer String Alias Path Enter a path to be evaluated for an alias (virtual) attribute type defined on the dataset. Alias attributes are used to reference an attribute on a dataset through a different name. Aliases can be used to create a new path to access the same required data after the data model changes, which ensures workflows and adapters are able to function properly. The path for an alias can be an attribute on the same dataset (simple), or be an attribute on a different dataset (foreign) which uses a more complex attribute path to the aliased attribute. When the path is through a link attribute, the attributes are separated by the '.' character (e.g., unit.name to access the name of the unit linked to the current dataset). The path of an alias must point to a valid attribute, and an alias attribute cannot be indexed or be a key attribute. The definition of a path can have a complex attribute path through multiple attributes. The Vocera Platform Web Console will follow the path of the alias attribute to ensure that it does not contain a circular path. Foreign attributes cannot use any *-to-many links. Key **Note:** If an attribute or link is created in the child of an abstract dataset, any attribute or link of the same name created in another child of the same abstract parent must also have the same type, key, and required settings. Assigning the key value to an attribute allows the record associated with the attribute to be updated. If an attribute is not assigned a key value, the record cannot be updated; a new record will be created with the updated data that pertains to the attribute. Select the Key checkbox if you want to designate this attribute as a key value. Leave the Key checkbox de-selected if you do not want to designate this attribute as a key value. Required **Note:** If an attribute or link is created in the child of an abstract dataset, any attribute or link of the same name created in another child of the same abstract parent must also have the same type, key, and required settings. Select the Required checkbox if the information related to this attribute is required, as opposed to optional. When creating a user in the Vocera Platform Web Console, for example, the 'login' attribute is marked as Required in the Users dataset, and therefore, to add a user to the system, you must configure a login for the user; an error message will be displayed if it is not provided. Conversely, the 'email' attribute in the Users dataset is not marked as Required, and

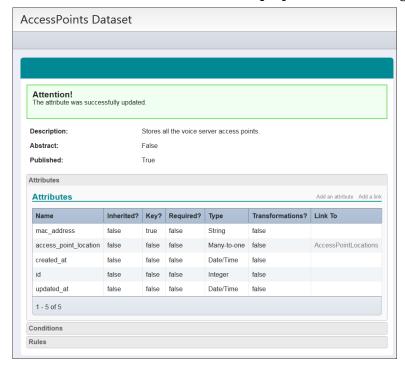
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the configuration.

therefore, a user can be added to the system with or without an email address in

Name	Description
Index	Select this checkbox to create a custom index on the new attribute. This option is not available for attributes that are the only key attributes for a dataset, as they are indexed by design. However, creating a custom index on an attribute that is part of a composite key for a dataset is available. Warning: Creating indexes can improve performance but can also adversely affect performance. Solutions packages will have the proper attributes already indexed. Adding indexes should be tested in a secondary environment to ensure no workflows are adversely affected. Consulting with support is recommended.
Additional Settings	Define an attribute transformation to implement a search pattern on incoming HL7 messages.

- 4. When the configuration is complete, select the appropriate button.
 - **Add**: Create the new attribute in the system.
 - **Update**: Revise the existing attribute.
 - **Cancel**: Return to the dataset page without making a change to the attribute.
- 5. The new or revised attribute will display a success message to confirm your changes.

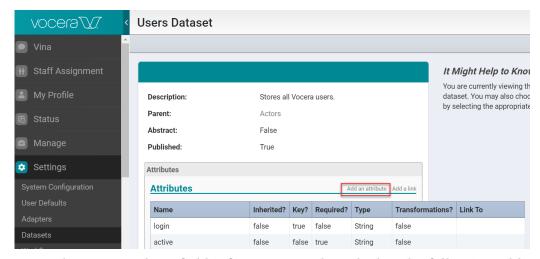


Adding an Attribute

You can create a new attribute for a Dataset.

To configure a new attribute, follow these steps:

- Select **Datasets** in the **Settings** section of the navigation bar.
 A list of all available Datasets are displayed.
- 2. In the search field, enter the name of the Dataset for which you want to add an attribute. The search results display the Dataset at the top of the list.
- 3. Click on the selected Dataset to display this Dataset's page.
- 4. Expand the **Attributes** on the Dataset's page and click on **Add Attributes** link. For example, the following screenshot displays the Attributes section on the Users Dataset page.

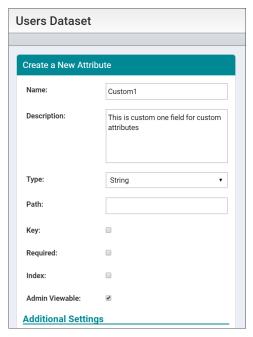


5. Enter the new attribute field information as described in the following table:

Name	Description
Name *	Enter a unique name for this attribute; duplicate attribute names are not allowed in a dataset. The name must begin with a lowercase letter and contain no spaces. The name should indicate or describe the attribute's function. Note: Some special attributes are hidden on a few datasets, such as the Users, Roles, and Interfaces datasets. These special attributes are not classified as string, integer, date, datetime, binary, or decimal type of attributes. The names of these special attributes do not display in Dataset Attributes list but, if you attempt to create a new attribute using one of the special attribute names, system will display a message to inform you that an attribute with this name is already specified for the dataset.
Description *	Enter the description for this attribute. The description should briefly explain the attribute's function.
Type *	Select an attribute Type from the drop-down menu. The type assigned to an attribute will restrict that Attribute from accepting any data that is not in the specified format. You can select one of the following items from the drop-down menu. • Binary • Boolean • Date • Date/Time • Decimal • Integer • String • Alias
	Note: If an attribute or link is created in the child of an abstract dataset, any attribute or link of the same name created in another child of the same abstract parent must also have the same type, key, and required settings.

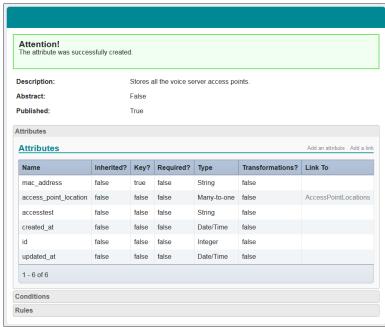
Name	Description
Path	Enter a path to be evaluated as an alias (virtual) attribute type. Alias attributes are used to reference an attribute on a dataset through a different name. Aliases can be used to create a new path to access the same required data after the data model changes, which ensures workflows and adapters are able to function properly. The path for an alias can be an attribute on the same dataset (simple), or be an attribute on a different dataset (foreign) which uses a more complex attribute path to the aliased attribute. When the path is through a link attribute, the attributes are separated by the "." character (e.g., unit.name to access the name of the unit linked to the current dataset). The path of an alias must point to a valid attribute, and an alias attribute cannot be indexed or be a key attribute. The definition of a path can have a complex attribute path through multiple attributes. The Vocera Platform Web Console follows the path of the alias attribute to ensure that it does not contain a circular path. Foreign attributes cannot use any *-to-many links.
Key	Select the Key checkbox if you want to designate this attribute as a key value. Leave the Key checkbox de-selected if you do not want to designate this attribute as a key value. Assigning a key value to an attribute allows the record associated with the attribute to get updated. If an attribute is not assigned a key value, the record is not updated; a new record is created with the updated data that pertains to the attribute. Important: If an attribute or link is created in the child of an abstract dataset, any attribute or link of the same name created in another child of the same abstract parent must also have the same type, key, and required settings.
Required	Select the Required checkbox if the information related to this attribute is required, as opposed to optional. For example, when creating a user in the Web Console, the "login" attribute is marked as Required in the Users Dataset, and therefore, to add a user to the system, you must configure a login for the user. The system displays an error message if it is not provided. Conversely, the "email" attribute in the Users Dataset is not marked as Required, and therefore, you can add a user the system with or without an email address in the configuration. Important: If an attribute or link is created in the child of an Abstract Dataset, any attribute or link of the same name created in another child of the same abstract parent must also have the same type, key, and required settings.
Index	Select this checkbox to create a custom index on the new attribute. This option is not available for attributes that are the only key attributes for a dataset, as they are indexed by design. However, creating a custom index on an attribute that is part of a composite key for a dataset is available. Warning: Creating indexes can improve performance but can also adversely affect performance. Vocera provided solutions packages have the proper attributes already indexed. Adding indexes should be tested in a secondary environment to ensure no workflows are adversely affected. Vocera recommends that you consult with Customer Support before
Admin Viewable	Select this checkbox to display the attribute in the Vocera Platform Web Console user interface. System administrators can configure the custom attributes for Users, Groups, and Devices in the system. For more information on creating custom options for Users, Groups, and Device, refer to the following: Creating Custom Options for Users Creating Custom Options for Groups Creating Custom Options for Devices
Additional Settings	Add attribute transformations as part of the Additional Settings. Transformation is a regular expression (Regex) string that describes a unique search pattern. Transformation to implement a search pattern on incoming HL7 message. An HL7 message is a hierarchical structure associated with a trigger event. The HL7 standard define trigger a trigger even as an event in the real world of health care that creates the need for data to flow among system.

The following screenshot displays the attriubute, "Custom1" created for Users in the system.



- 6. Select one of the following:
 - Add to save the new attribute you created for the Dataset.

If Add is selected and all field information is correct, a success message displays at the top of the dataset form. The Dataset page displays the new attribute in the Attributes list.



Cancel — to return to the selected Dataset's page without saving your changes.

Editing an Attribute

You can edit and modify the information for an existing attribute in a Dataset.

To modify an attribute, follow these steps:

- Select **Datasets** in the **Settings** section of the navigation bar.
 A list of all available Datasets are displayed.
- 2. In the search field, enter the name of the Dataset for which you want to remove an attribute.

The search results display the Dataset at the top of the list.

- 3. Click on the selected Dataset to display this Dataset's page.
- 4. Expand the **Attributes** section on the Dataset's page to view all the available attributes.
- 5. Locate and click on the Attribute that you wish to edit.
 - The selected Attribute's page displays.
- 6. Add all changes and modifications to the Attribute's page. For information on the Attribute fields, see the Adding An Attribute.
- 7. Select one of the following options:
 - **Update** to save your changes and modifications to the Attribute's fields. A success message display to confirm that your changes were updated successfully.



- **Cancel** to return to the Dataset's page without making any change.
- **Remove** to delete the Attribute from the system.

Removing an Attribute

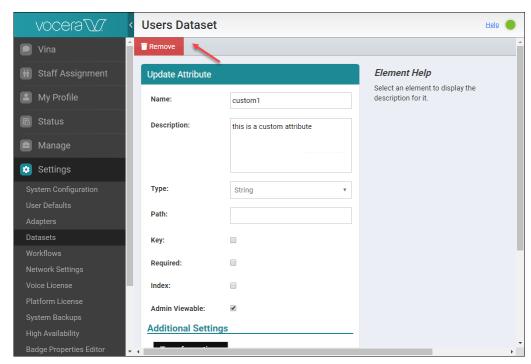
You can remove an attribute that you created for a dataset.

To remove an existing attribute, follow these steps.

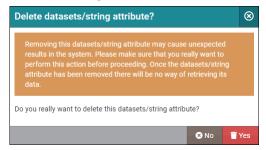
- Select **Datasets** in the **Settings** section of the navigation bar.
 A list of all available Datasets are displayed.
- 2. In the search field, enter the name of the Dataset for which you want to remove an attribute. The search results display the Dataset at the top of the list.
- 3. Click on the selected Dataset to display this Dataset's page.
- 4. Expand the **Attributes** section on the Dataset's page to view all the available attributes.
- 5. Locate and click on the Attribute that you wish to remove. The selected Attribute's page displays.
- 6. Select **Remove** in the Action bar to delete the attribute.



Warning: Remove cannot be undone. Removing an attribute may prevent features from functioning, and data may be permanently discarded.



The system displays a confirmation message and prompts you cautionsly proceed with your actions. The following screenshot displays a



- 7. Carefully read the confirmation message and choose one of the following options:
 - Yes to proceed with the delete action and remove the attribute.from the system.
 If you selected Yes, the attribute is deleted and the system displays a success message confirming the deletion of the attribute.



• **No** — to return to the Attribute's page without delete the attribute.

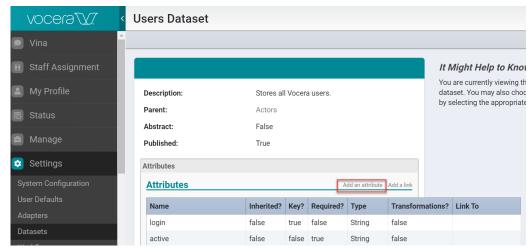
Creating Custom Options for Users

Create a custom options section for Users in the system.

To create custom tabs, follow these steps:

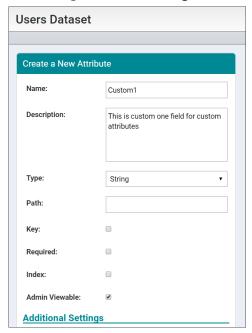
- Navigate to **Datasets** in **Settings** section of the navigation bar.
 A list of all available Datasets is displayed.
- 2. Enter **Users** in the search field to locate the Users Dataset. The search results display the Users Dataset at the top of the list.

- 3. Click **Users Dataset** to display the User Dataset page. .
- 4. Expand the Attributes section and click on Add Attributes link.

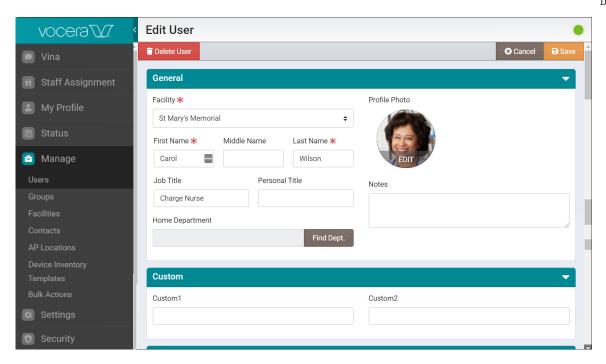


5. Enter the Custom attribute information.

For example, the following screenshot displays the attribute, "Custom1" created for Users in the system.



- 6. Select one of the following:
 - Add Save the new attribute you created for Users Dataset.
 - **Cancel** Return to the User Datasets page without saving your changes.
- 7. Repeat steps 3-6 to create additional Custom fields (if desired). All custom fields must have unique names, duplicate custom fields names are not supported.
- 8. (Optional) If you selected **Add** to save the custom attribute created for Users. You can navigate to **Manage**> **Users** and select a user to verify if the Custom section is available on the User's page. The following screenshot displays the Custom field with Custom1 and Custom2 options for the user Carol Wilson.



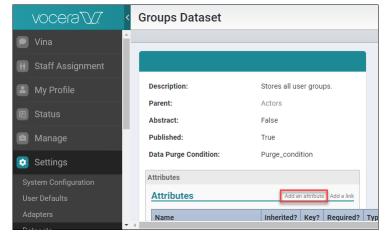
Creating Custom Options for Groups

Create a custom options section for groups in the system.

To create custom tabs, follow these steps:

- Navigate to **Datasets** in the **Settings** section of the navigation bar.
 A list of all available Datasets is displayed.
- 2. Enter **Groups** in the search field to locate the Groups Dataset.

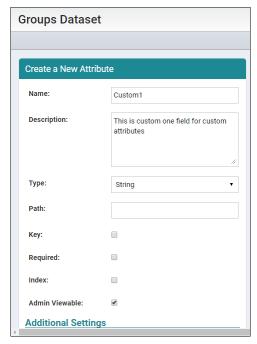
 The search results display the Groups Dataset at the top of the list.
- 3. Click **Groups Dataset** to display the Groups Dataset page.
- 4. Expand the **Attributes** section and click on **Add Attributes** link.



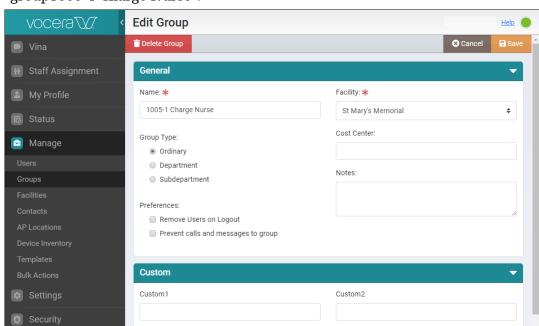
5. Enter the Custom attribute information, refer to the field information described in Adding an Attribute on page 34.

For example, the following screenshot displays the attribute, "Custom1" created for Groups in the system.

41



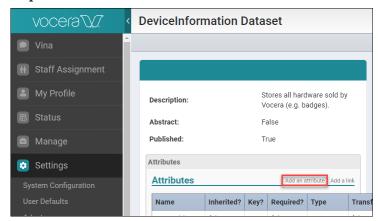
- 6. Select one of the following:
 - Add Save the new attribute you created for Groups Dataset.
 - **Cancel** Return to the Groups Datasets page without saving your changes.
- 7. Repeat steps 3-6 to create additional Custom fields (if desired). All custom fields must have unique names, duplicate custom fields names are not supported.
- 8. (Optional) If you selected **Add** to save the custom attribute created for Groups. You can navigate to **Manage**> **Groups** and select a group to verify if the Custom section is available on the Group's page. The following screenshot displays the Custom field with Custom1 and Custom2 options for "group1005-1 Charge Nurse".



Creating Custom Options for Devices

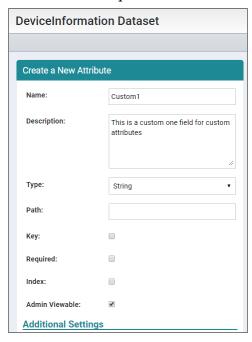
Create a custom options section for devices in your system.

- 1. Navigate to **Datasets** in the **Settings** section of the navigation bar. A list of all available Datasets is displayed.
- 2. Enter **DeviceInformation** in the search field to locate the DeviceInformation Dataset. The search results display all dataset related to devices available in the system.
- 3. Click **DeviceInformation Dataset** to display the DeviceInformation Dataset page.
- 4. Expand the Attributes section and click on Add Attributes link.



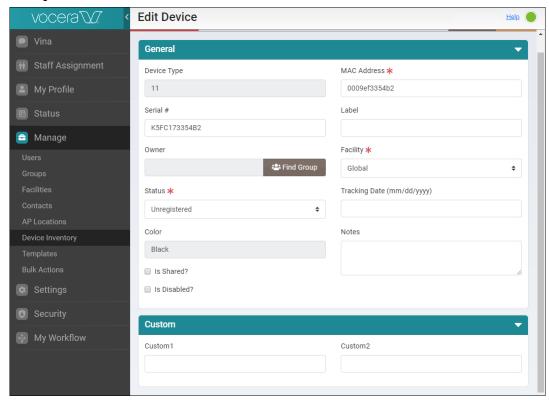
5. Enter the Custom attribute information.

For example, the following screenshot displays the attribute, "Custom1" created for devices in the Device Inventory.



- 6. Select one of the following:
 - Add Save the new attribute you created for DeviceInventory Dataset.
 - **Cancel** Return to the DeviceInventory Dataset page without saving your changes.
- 7. Repeat steps 3-6 to create additional Custom fields (if desired). All custom fields must have unique names, duplicate custom fields names are not supported.
- 8. (Optional) If you selected **Add** to save the custom attribute created for Devices. You can navigate to **Device Inventory** in the **Manage** section and select a device to verify if the Custom section is available on the Device's page.

The following screenshot displays the Custom field with Custom1 and Custom2 options for a device in the system.



Attribute Transformations

An attribute transformation is a regular expression (Regex) string that describes a unique search pattern.

Regex provides a method to find designated characters in a segment of an incoming HL7 message. Regex serves as a parser generator, where it examines text and identifies parts that match the provided specification. For more information on regular expressions, visit the <u>Understanding Regular Expressions</u> (Regex) on page 9 page.

Attribute transformations can only be defined in top-level datasets for inherited attributes. This limitation means that for a child of an abstract dataset, all attribute transformations must be applied to the abstract dataset itself instead of the concrete instance of the child.



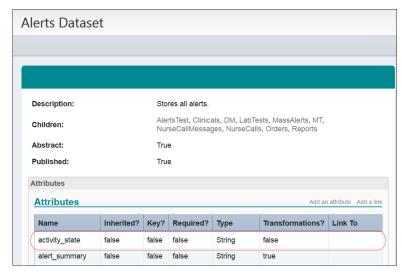
Note: Only string attributes can be transformed.

Creating a New Attribute Transformation

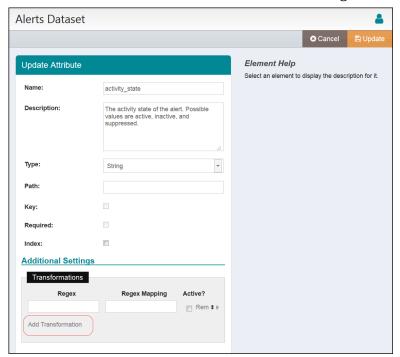
You can add a regex transformation to an attribute on a dataset.

Navigate to the attribute in the dataset where you wish to add a regex transformation. See Accessing Dataset Attributes on page 30.

1. Select the attribute name. In this example, the activity_state attribute displays "false" in the Transformations column, indicating it has no associated transformations.



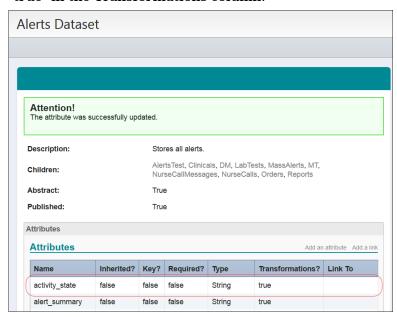
2. Select **Add Transformation** in Additional Settings in the Update Attribute page.



3. Provide the following information as needed.

Name	Description	
Regex *	Enter the regular expression to be transformed in this Regex field. This field is case insensitive; a letter is not distinguished by using upper and lower case.	
Regex Mapping *	Enter how the regular expression should be mapped by Vocera in the Regex Mapping field.	
Active	Select the Active checkbox to enable the transformation on the system. Note: Failing to check the Active check box will cause the transformation to be ignored.	
Remove	Select Remove to delete this transformation from the configuration.	
Re-order	Select an up/down arrow icon and drag the transformation to re-order the processing sequence of the active transformations in the system.	

- 4. Choose **Update** to complete this step.
 - **Update**: Save the transformation on the system.
 - **Cancel**: Return to the attribute list without making a change to the configuration.
- 5. A success message displays at the top of the dataset form. The activity_state attribute now displays "true" in the Transformations column.

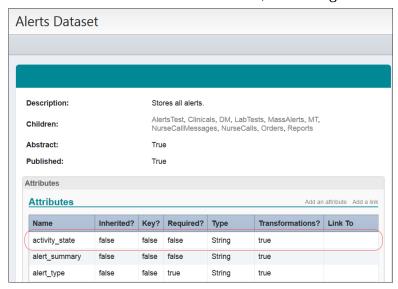


Removing an Attribute Transformation

You can easily remove a transformation from an attribute configuration.

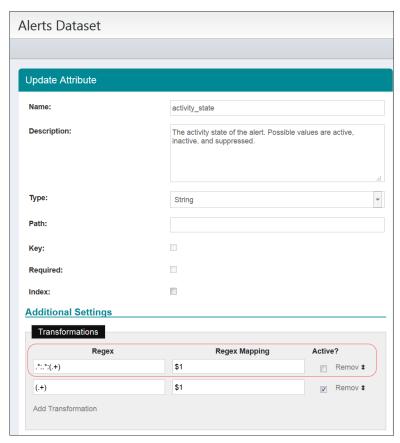
Navigate to the attribute in the dataset where you wish to work with transformations. See Accessing Dataset Attributes on page 30.

1. Select the attribute name in the Dataset page. In this example, the activity_state attribute displays "true" in the Transformations column, indicating it has transformations configured.

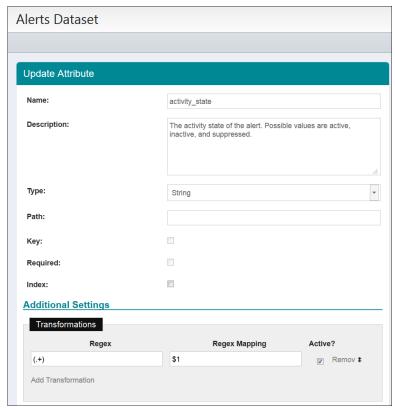


2. Select **Remove** to the right of a transformation to delete it from the attribute.

Note: Removing a transformation moves the following transformation up in processing priority.



3. The transformation is immediately removed from the configuration settings, and any remaining transformations are re-prioritized automatically.

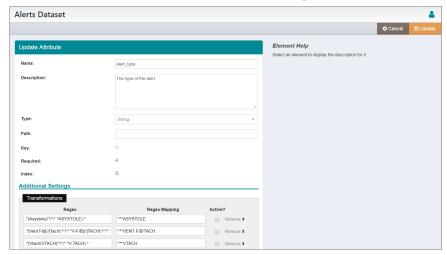


Reordering the Process Priority of Transformations

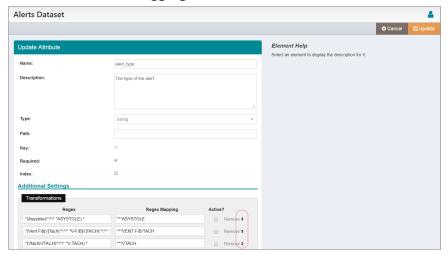
You can drag and drop an attribute's transformations in order to change the prioritization with which they are processed.

An attribute transformation is a regular expression (Regex) string that describes a unique search pattern. Transformations are processed sequentially, according to the order they are listed in the attribute configuration. You can change the order in which search patterns are applied by reordering the attribute's transformations.

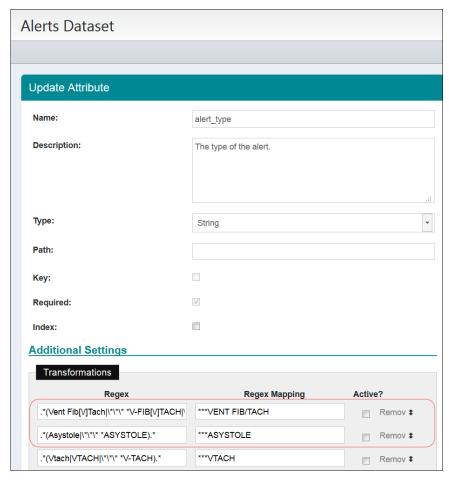
- 1. Access the Settings tab in the Vocera Platform Web Console as described in Accessing Dataset Attributes on page 30, to configure an existing attribute.
- 2. Select an attribute on the Datasets page to display the **Additional Settings** configuration fields. Transformations are displayed in this configuration section.



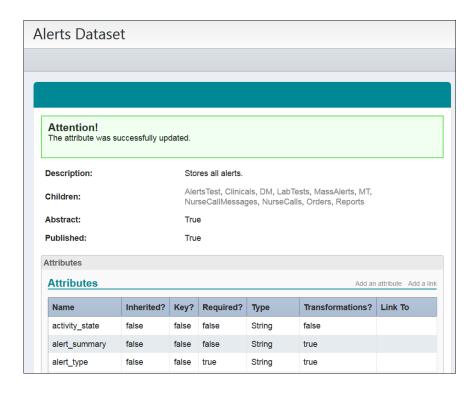
3. To change the processing priority of the attribute transformations, click and hold the **arrow icon** in a transformation's row, then drag it up or down to place it in a new position in the list of transformations. Dragging a transformation will move the entire row.



4. In this example, move the ASYSTOLE alert below the VENT FIB/TACH alert.



- 5. Choose **Update** to complete this step.
 - **Update**: Save the transformation on the system.
 - **Cancel**: Return to the attribute list without making a change to the configuration.
- 6. A success message displays at the top of the dataset form. Select the attribute to confirm the processing order of the transformations is now correct.

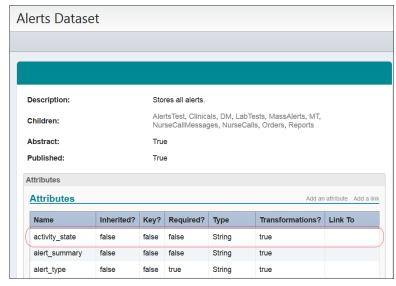


Verifying a Transformation's Active Status

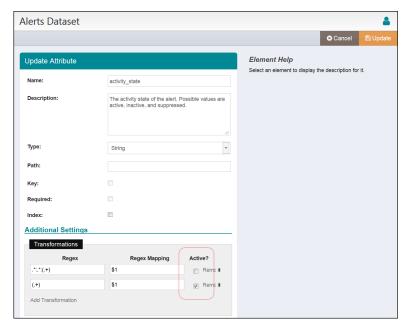
Verify that you have checked the Active box to enable the search pattern prioritization configured for the attribute's transformations.

Navigate to the attribute in the dataset where you wish to work with transformations. See Accessing Dataset Attributes on page 30.

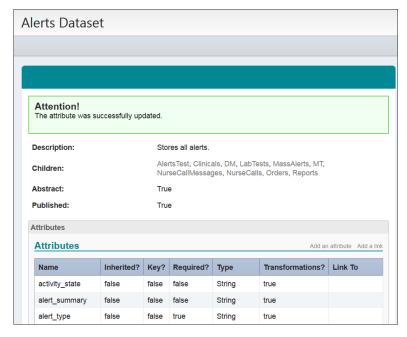
1. Select the attribute name in the Dataset page. In this example, the activity_state attribute displays "true" in the Transformations column, indicating it has transformations configured.



2. Select the Active checkbox for each transformation that you wish to enable on the system.



- 3. Choose **Update** to complete this step.
 - **Update**: Save the transformation on the system.
 - **Cancel**: Return to the attribute list without making a change to the configuration.
- 4. A success message displays at the top of the dataset form. Select the attribute to confirm that the correct transformations are now active.



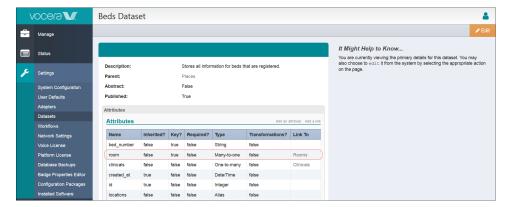
Link Attributes

A link attribute joins two datasets and creates a relationship between them.

A linked attribute must be created directly on the chosen dataset; an existing attribute cannot be modified to be a linked attribute. Once an attribute is created and saved, only the Index checkbox and the Additional Settings sections can be modified.

In the Vocera Platform Web Console, navigate to **Settings > Datasets** to view a list of configured datasets. Click the dataset name with which you wish to work, in order to display the details for the dataset.

A link attribute in a starting dataset, such as Beds shown below, displays a navigable link to the associated dataset in the "Link To" column of the Attributes table. A regular attribute does not have a linked dataset, such as the bed number attribute shown in the Beds dataset.



Click the link name in the "Link To" column to navigate directly to the related dataset. In this example, the Rooms dataset displays.

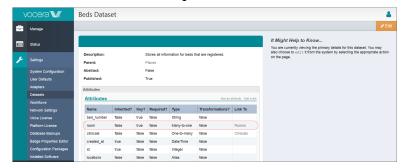


Configuring a Link Attribute

Configure these dataset settings when creating a new link attribute, or editing an existing link attribute, in the Vocera system.

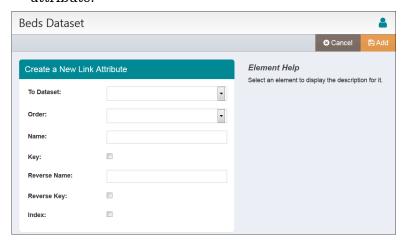
Access the Settings tab in the Vocera Platform Web Console to configure a new or existing link attribute. See Accessing Dataset Attributes on page 30.

1. Select the dataset where you wish to work with a link attribute, and expand the Attributes tab.



- 2. Display the link attribute's configuration fields.
 - **Update Link Attribute**: Click a link attribute name to display the Update Link Attribute dialog.

• **Create a New Link Attribute**: Select "Create a link" in the Attribute page to create a new linked attribute.

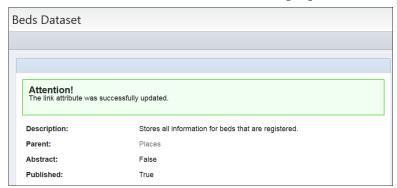


3. Complete the fields listed in the table below. An asterisk * indicates that the field must be provided.

Name	Description
To Dataset *	Select the dataset to which you are creating a link. For example, if you are working in a Beds dataset, you can link to the Assignments dataset to create a relationship between the two datasets. The options that appear in the drop-down menu will vary based upon your Vocera configuration. Once the link attribute is created, a navigable link displays in the starting dataset's Attributes table to access the linked 'To Dataset'.
Order *	 Select the degree of association between the two datasets that the link should provide. For example, if you are working in Beds (starting dataset), you can create a link to Assignments (destination dataset) with one of the following associations. One-to-one: Each member of the starting dataset can be linked to at most one member of the destination dataset, and each member of the destination dataset can be linked to at most one member of the starting dataset. One-to-many: Each member of the starting dataset can be linked to many members of the destination dataset, but each member of the destination dataset can be linked to at most one member of the starting dataset. Many-to-many: Each member of the starting dataset can be linked to many members of the destination dataset, and each member of the destination dataset can be linked to many members of the starting dataset. Many-to-one: Each member of the starting dataset can be linked to at most one member of the destination dataset, but each member of the destination dataset can be linked to many members of the starting dataset.
Name *	Enter the name of this link for the starting dataset. The name must begin with a lowercase letter, contain no spaces, and it should be descriptive of the link's function.
Key *	Note: If an attribute or link is created in the child of an abstract dataset, any attribute or link of the same name created in another child of the same abstract parent must also have the same type, Key, and required settings. Assigning the key value to an attribute allows the record associated with the attribute to be updated. If an attribute is not assigned a key value, the record cannot be updated; a new record will be created with the updated data that pertains to the attribute.
Reverse Name *	Enter the name of this link for the destination dataset. The name must start with a lowercase letter, contain no spaces, and it should be descriptive of the link's function.

Name	Description		
Reverse Key	Select the Reverse Key checkbox if this link is part of the key for the destination dataset.		
	Note: If an attribute or link is created in the child of an abstract dataset, any attribute or link of the same name created in another child of the same abstract parent must also have the same type, key, and required settings.		
	Assigning the key value to an attribute allows the record associated with the attribute to be updated. If an attribute is not assigned the key value, it cannot be updated and a new record will be created for each piece of information that pertains to this attribute.		
Index	Select the Index checkbox to create a custom index on the new attribute. This option is not available for key attributes, as they are indexed by design.		
	Warning: Creating indexes can improve performance but can also adversely affect performance. Solutions packages will have the proper attributes already indexed. Adding indexes should be tested in a secondary environment to ensure no workflows are adversely affected. Consulting with support is recommended.		

- 4. When the configuration is complete, select the appropriate option to complete the new or existing link attribute.
 - **Add**: Create the new link attribute in the system.
 - **Update**: Update the existing link attribute. Only the Index and Additional Actions configuration fields can be modified.
 - **Cancel**: Return to the dataset page without making a change.
- 5. The new or revised link attribute will display a success message to confirm your changes.

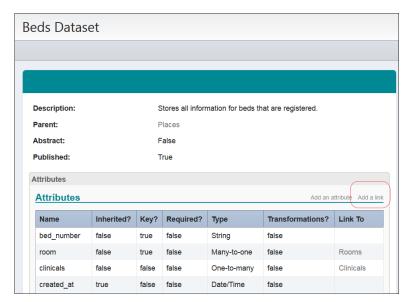


Adding a Link Attribute

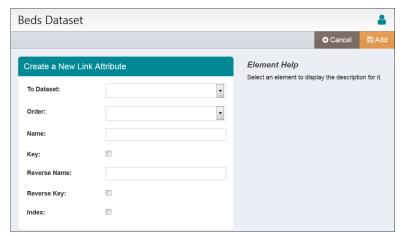
You can create a new link attribute on a dataset.

Access the Settings tab in the Vocera Platform Web Console to create a new link attribute. See Accessing Dataset Attributes on page 30.

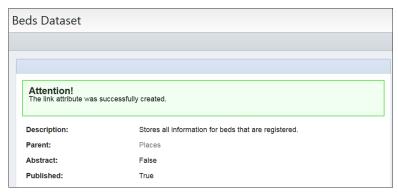
1. After selecting an existing dataset with which to work, expand the **Attributes** tab and select **Add a Link** on the right side of the screen.



2. Complete the fields as described in Configuring a Link Attribute on page 52 to configure a new link attribute for this dataset.



- 3. Choose **Add** to complete the configuration.
 - Add: Create the new link attribute on the dataset.
 - **Cancel**: Return to the dataset list without making a change.
- 4. A success message displays at the top of the dataset form. The new link attribute is listed alphabetically in the Attributes tab.



Editing a Link Attribute

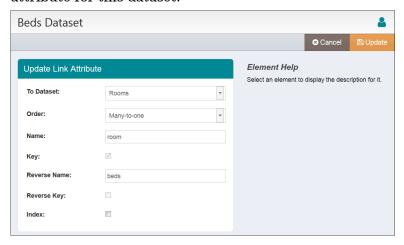
You can create an existing link attribute on a dataset.

Access the Settings tab in the Vocera Platform Web Console to edit an existing link attribute. See Accessing Dataset Attributes on page 30.

1. After selecting an existing dataset with which to work, expand the **Attributes** tab and then select a link attribute in the Attributes list.



2. Complete the fields as described in Configuring a Link Attribute on page 52 to revise the link attribute for this dataset.



- 3. Choose **Update** to complete the configuration.
 - **Update**: Revise the link attribute's configuration on the dataset.
 - Cancel: Return to the dataset list without making a change.
- 4. A success message displays at the top of the dataset form. The revised link attribute is listed alphabetically in the Attributes tab.

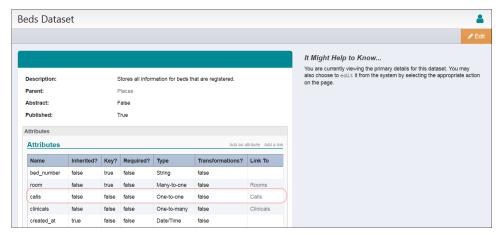


Removing a Link Attribute

You can permanently delete a link attribute from the system.

Access the Settings tab in the Vocera Platform Web Console to remove an existing link attribute. See Accessing Dataset Attributes on page 30.

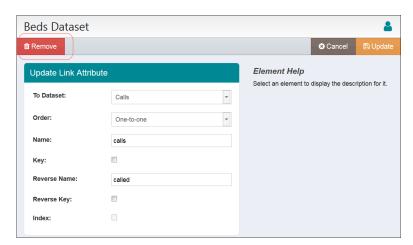
1. After selecting an existing dataset with which to work, expand the **Attributes** tab and then select a link attribute in the Attributes list.



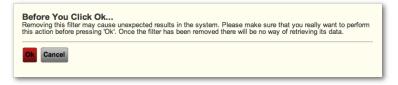
2. Select **Remove** in the Action bar to delete the link attribute from the dataset.



Warning: Remove cannot be undone. Removing a link may prevent features from functioning.



3. Select **Ok** on the confirmation message.



- **Ok**: Choose this option to delete the link attribute from the system.
- Cancel: Choose this option to close the message window without deleting the link attribute.
- 4. A success message displays at the top of the dataset form.

Attention! The link attribute was successfully removed. Description: Stores all information for beds that are registered. Parent: Places Abstract: False Published: True

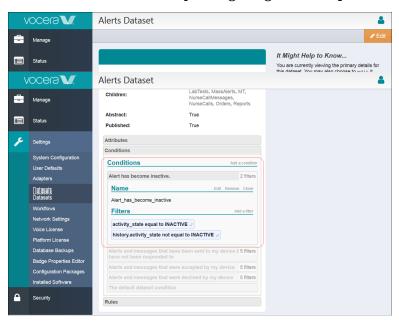
Dataset Conditions

Conditions provide access to a subset of a dataset when only particular events or records within a dataset are needed for review.

Conditions share the keys of their dataset, but each condition has a unique combination of filters, see conditions section for more information. Filters are set by selecting an attribute, defining a value, and selecting a comparator. Attribute paths expand the filter's functionality, and templates can be used in special cases to evaluate before the filter is applied. Through the combination of filters, it is possible to make detailed distinctions between conditions.

By utilizing cascading filters, any constraints on a linked dataset will be considered when returning the results of both datasets. Through these configured links, Vocera retrieves data that has been received from disparate sources and assembles it into meaningful information.

The condition is defined by configuring filters to provide the needed subset of events or records.



Cascading filters allow a condition's filters to specify constraints on a linked dataset that are applied when evaluating an expression. Prior to developing cascading filters in Vocera, the condition's filters were not taken into consideration when they were applied to an expression that referenced a linked dataset. For example, consider a dataset named **Patients** with a one-to-many link to a dataset named **Appointments**. The Patients dataset contains a condition named **WithAppointmentsToday**, and this condition contains a filter named **appointments.start_time.as_date** = #{today}. By applying the condition **WithAppointmentsToday**, the patients who have an appointment scheduled for today are returned in the results.

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Prior to implementing cascading filters, applying the filter appointments.start_time.as_date = #{today} on a member of the condition WithAppointmentsToday would produce a list of the start times of all of that patient's appointments, not just the patient's appointments for today. Now, with cascading filters, the filter of appointments.start_time.as_date = #{today} is also applied to the linked Appointments dataset, and only appointments for today are displayed.

Cascading filters allow an intuitive approach to returning data. When the expression appointments.status = 'Cancelled' is evaluated on a member of the condition named WithAppointmentsToday, the data is filtered across linked datasets by design. For example, the appointments.status = 'Cancelled' expression automatically combines with the appointments.start_time.as_date = #{today} filter linking to the Appointments dataset, and thus, only today's appointments with a status of 'Cancelled' are returned.

See the Vocera Datasets on page 6 page for overview information about datasets and elements, including conditions and filters. The Datasets page also provides details for accessing the Vocera Platform Web Console and navigating to the Conditions, Attributes, or Rules.

A Vocera role with the Advanced Support security item applied will allow an associated user to have access to advanced functionality in the Vocera Platform Web Console, such as working with datasets. See the Advanced Support documentation for information about enabling this functionality in order to perform configuration on a dataset.

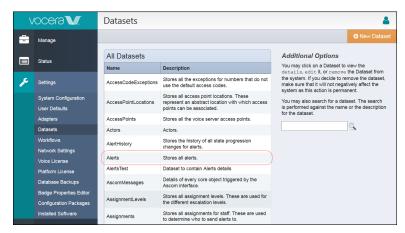


Warning: Enabling Advanced Support allows users access to sensitive components and its use must be carefully evaluated for each login.

Accessing Dataset Conditions

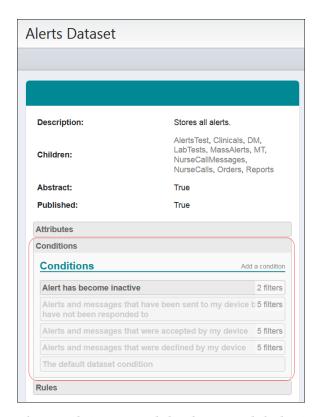
Navigate in the console to view conditions and their filters in Vocera datasets.

In the Vocera Platform Web Console, select **Settings > Datasets** to access the datasets installed on the Vocera system. Select a dataset you wish to view from the All Datasets list.



The All Datasets page displays the configured Vocera datasets in alphabetical order with descriptions for each dataset. The **Edit** button in the Action bar allows you to revise the dataset definition (not the condition definitions). See the <u>Vocera Datasets</u> on page 6 page for details about working with datasets.

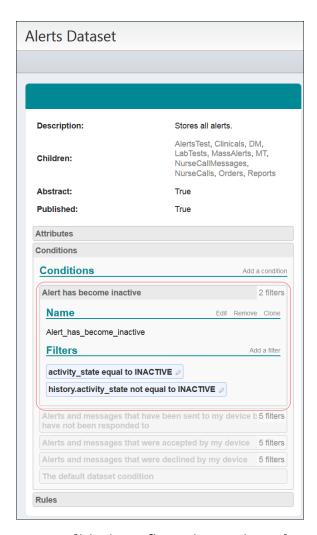
Expand the **Conditions** accordian in the dataset page to view conditions and filters.



The Conditions panel displays an alphabetical list of conditions configured on the selected dataset. Each condition has a name and description; the Conditions panel list is sorted by the description (not the condition name.) The condition identifier is descriptive of its function, and each condition also displays the number of filters configured on it.

In this panel you can select **Add a Condition** to create a new condition. You can click a condition to expand (and click again to close) the accordian if you wish to work with its configuration settings.

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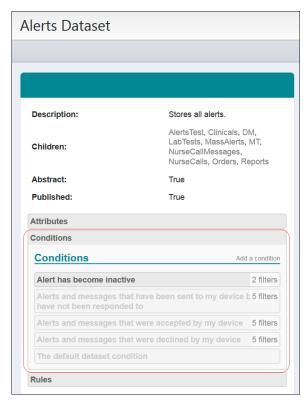
In a condition's configuration settings, the action bar allows you to edit, remove, or clone the condition. In the filters settings, select **Add a Filter** to create a new filter on the chosen condition, or click an existing filter to revise its configuration settings or remove it from the system.

Configuring a Condition

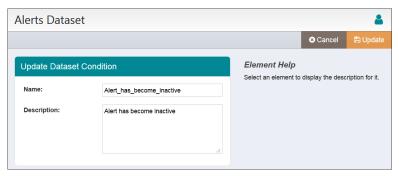
Configure these dataset settings when creating a new condition, or editing an existing condition, in the Vocera system.

Access the Settings tab in the Vocera Platform Web Console as described in Accessing Dataset Conditions on page 60 to configure a new or existing condition.

1. Navigate to the dataset where you wish to work with conditions, and expand the **Conditions** accordian.



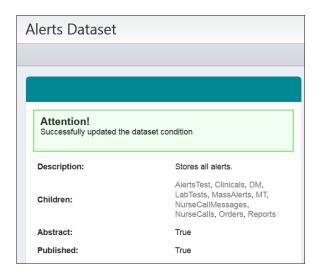
- 2. Display the condition's configuration fields. The configuration fields are the same in both new and existing condition forms.
 - Create a New Condition: Click Add a Condition in the Conditions accordian menu to display the Create a New Dataset Condition window.
 - **Update a Condition**: Click **Edit** in the condition's menu bar to display the Update Dataset Condition window.



3. Complete the fields listed in the table below. An asterisk * indicates that the field must be provided.

Name	Description
Name *	Enter a unique name for this condition. The name must begin with a capital letter, contain no spaces, and should be descriptive of the condition's function.
Description *	Enter the description for this attribute. The description should briefly explain the attribute's function.

- 4. When the configuration is complete, select the appropriate option for the new or revised condition.
 - **Create**: Create the new condition in the system.
 - **Update**: Revise the existing condition.
 - **Cancel**: Return to the dataset page without making a change to the condition.
- 5. The new or revised condition will display a success message to confirm your changes.

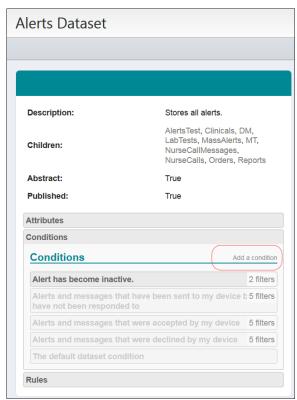


Adding a Dataset Condition

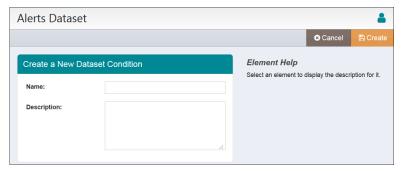
You can create a new condition on a Vocera dataset.

Access the Settings tab in the Vocera Platform Web Console as described in Accessing Dataset Conditions on page 60 to configure a new condition.

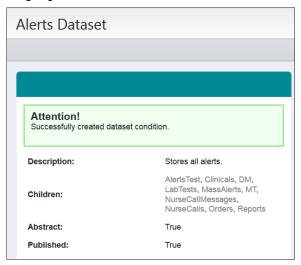
- 1. Navigate to the dataset where you wish to work with conditions, and expand the **Conditions** accordian.
- 2. Select **Add a condition** in the menu.



3. Complete the fields as described in Configuring a Condition on page 62 to define the new condition.



- 4. When the configuration is complete, select the appropriate option.
 - **Create**: Create the new condition in the system.
 - **Cancel**: Return to the dataset page without making a change.
- 5. The screen refreshes and a success message displays at the top of the dataset form. The new condition displays in the Conditions accordian, once expanded, sorted by description.

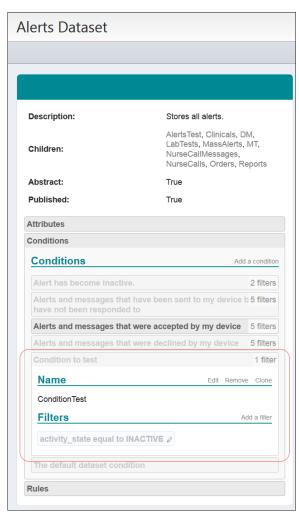


Editing a Dataset Condition

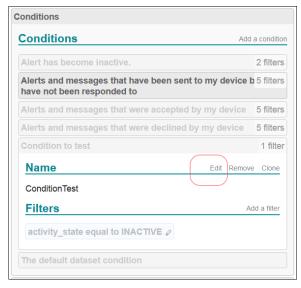
You can edit a condition on a dataset.

Access the Settings tab in the Vocera Platform Web Console as described in Accessing Dataset Conditions on page 60 to configure an existing condition.

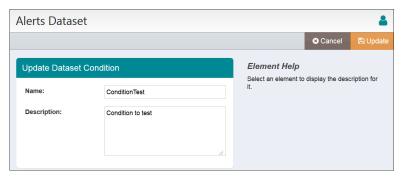
1. Navigate to the condition that you wish to revise, and expand the accordion to display the configuration settings.



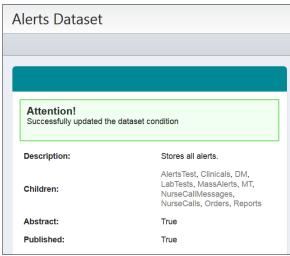
2. Select **Edit** in the menu bar to revise the condition. The menu displays Edit, Remove, and Clone options.



3. Complete the fields as described in Configuring a Condition on page 62 to revise the details for this condition.



- 4. When the configuration is complete, select the appropriate option.
 - **Update**: Save the revised condition in the system.
 - **Cancel**: Return to the dataset page without making a change.
- 5. A success message displays at the top of the dataset form. The condition's accordian is expanded to display the updated configuration.

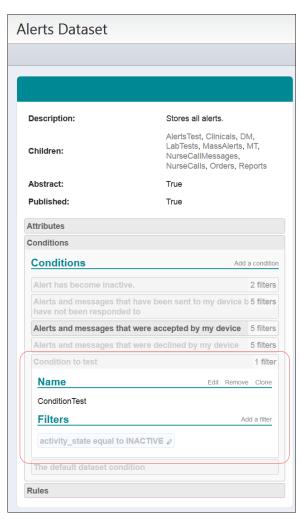


Cloning a Dataset Condition

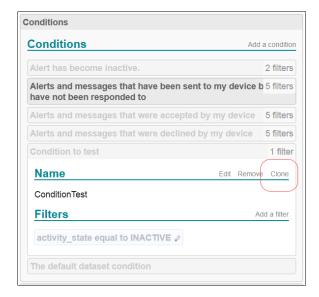
You can create a clone (copy) of a dataset condition.

Cloning a condition provides the ability to make an exact copy of an existing, configured condition. After a clone, or copy, of the condition is created, small changes can quickly be made without having to create all aspects of the condition.

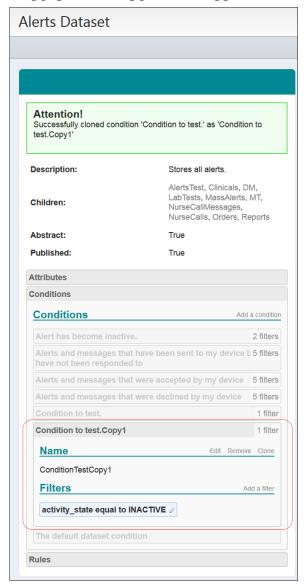
- 1. Access the Settings tab in the Vocera Platform Web Console as described in Accessing Dataset Conditions on page 60 to work with the condition.
- 2. Navigate to the condition that you wish to clone, and expand the accordian to display the configuration settings.



- 3. Select **Clone** in the menu bar. The menu displays Edit, Remove, and Clone options.
 - **Note:** The Clone action occurs without presenting a confirmation dialog.



4. The Dataset page refreshes and displays a success message at the top of the form. The cloned condition displays in the list, with the same description and name as the original condition, but with the word "Copy" plus the copy number appended to the end.



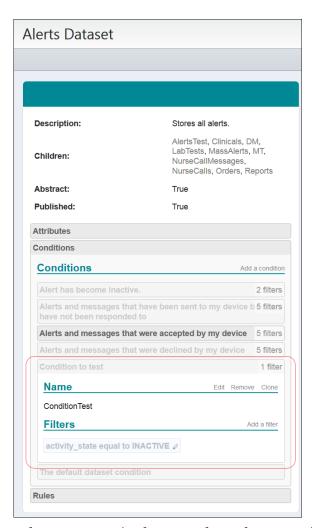
The new condition is ready for revision.

Removing a Dataset Condtion

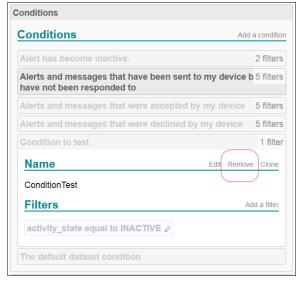
You can permanently remove (delete) a dataset condition from the system.

Verify that the condition you are working with should be removed from the dataset. Removing a condition may prevent features from functioning, and data may be permanently discarded.

- 1. Access the Settings tab in the Vocera Platform Web Console as described in Accessing Dataset Conditions on page 60 to work with the condition.
- 2. Navigate to the condition that you wish to remove, and expand the accordian to display the configuration settings.



3. Select **Remove** in the menu bar. The menu displays Edit, Remove, and Clone options.



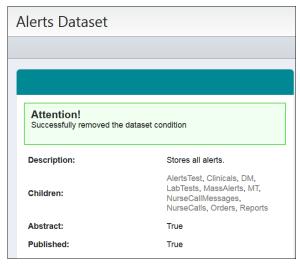
4. Select the appropriate action in the confirmation message dialog.



Warning: Remove cannot be undone. Removing a condition may prevent features from functioning, and data may be permanently discarded.



- **Ok**: Select Ok to remove the condition from the system.
- **Cancel**: Select Cancel to close the message without making a change to the condition.
- 5. A success message displays at the top of the Dataset page.



Filters on Conditions

Filters provide a way to view specific information that is contained within a dataset.

A filter provides a way to view specific information that is contained within a dataset. Filters consist of three components: an attribute path, a comparator, and a value.

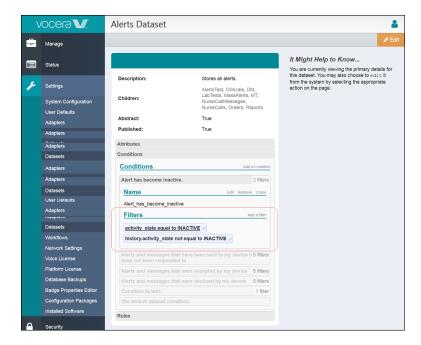
This section describes how to add, edit, and remove filters on a condition in a dataset. In the Vocera Platform Web Console, navigate to the details page of the dataset with which you wish to work.

Accessing a Filter on a Condition

Navigate in the console to view the filters on a condition in a Vocera dataset.

In the Vocera Platform Web Console, select **Settings > Datasets** to access the datasets installed on the Vocera system. Navigate to the dataset and expand the condition that you wish to work with, to display the filters configured on that condition.

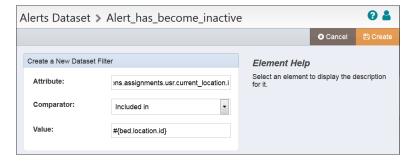
71



Understanding Filter Templates

A filter's Value configuration field may use a template, as well as a static value or null value.

The Value field of a filter usually contains a static value (a string or number) against which the values located by the attribute path are compared using the specified comparator (or it will be empty in the case of unary comparators such as null). However, in special cases the value may contain a template which will be evaluated before the filter is applied.



If a condition is to be used as the trigger condition for a rule, the condition's filters may optionally have templates which specify expressions relative to the triggering object of the rule. Such expressions will be evaluated before the trigger condition for the rule is tested.

For example:

Attribute path: bed.locations.assignments.usr.current_location.id

Comparator: Included in
Value: #{bed.location.id}

Templates contained in a value can refer to one of the following system values:

Value	Evaluates to	Notes
now	The current time at which the filter is applied	
today	The current date at which the filter is applied	

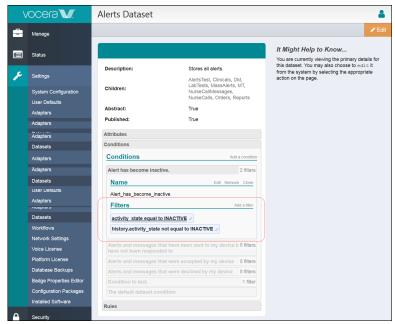
Value	Evaluates to	Notes
current_user	The member of the Dataset <mark>Users</mark> which represents the logged in user	Only applies to views used in Workflow pages
line_appearance	The member of the Dataset Lines assigned to the logged in user	Only applies to views used in Workflow pages

Configuring a Filter on a Condition

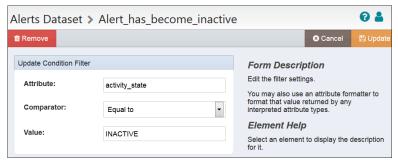
Filters are configured on a condition by using attribute, comparator, and value definitions to select specific information from a dataset.

Attributes, comparators, and values are defined to allow a condition to filter information for a business use. See Filters on Conditions on page 71 for more information.

1. Navigate to Datasets in Vocera Platform Web Console and display the filters configured on a condition that requires revision.



2. Expand a selected filter to display its configuration fields. Otherwise, select **Add a filter** to configure a new filter on the condition. The configuration fields are the same in both new and existing filters.



3. Complete the fields listed in the table below. An asterisk * indicates that the field must be provided.

Name	Description
Attribute *	Enter the name of the attribute that will be used as a filter for this dataset. The system validates that the attribute path is a valid path relative to the parent dataset.

Name	Description
Comparator *	Select the comparator from the drop-down menu that you wish to apply to the attribute. A comparator provides the ability to filter information by specific parameters. Provided comparators are as follows: contains, ends with, equal to, greater than, greater than or equal to, included in, less than, less than or equal to, like, not equal to, not included in, not like, not null, null, starts with.
Value *	Enter a value that the attribute will be compared against in this field. See Understanding Filter Templates on page 72 for additional information about using a template in this field.

- 4. When the configuration is complete, select the appropriate option for the new or revised filter.
 - **Create**: Create the new filter on the selected condition in the system.
 - Update: Revise the existing filter.
 - Cancel: Return to the dataset page without making a change to the filter.
- 5. The new or revised filter will display a success message to confirm your changes.

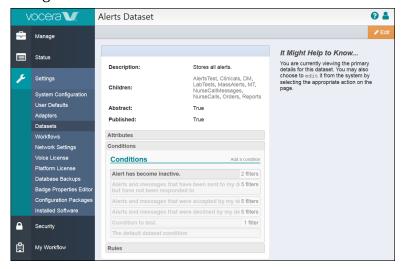


Adding a Filter

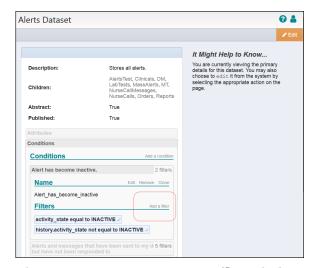
You can add a filter to an existing condition.

The condition must exist on the dataset in order to create a filter on the condition.

1. Navigate to Datasets in Vocera Platform Web Console and select the condition that requires revision.

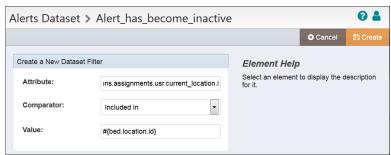


2. Select **Add a filter** in the Filters menu.



The Create a New Dataset Filter dialog appears.

3. Complete the dialog as described in Configuring a Filter on a Condition on page 73 to add the new filter to the system.



4. The screen refreshes and a success message displays at the top of the dataset form.

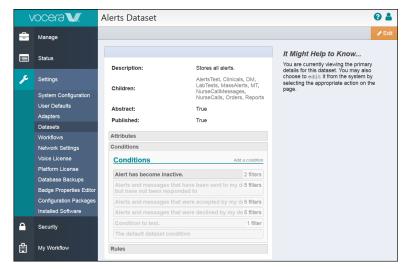


Editing a Filter

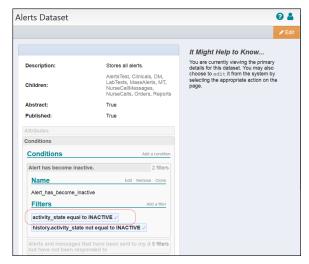
You can revise an existing filter on a condition.

To edit an existing filter, perform the following steps.

1. Navigate to Datasets in Vocera Platform Web Console and select the condition that requires revision.

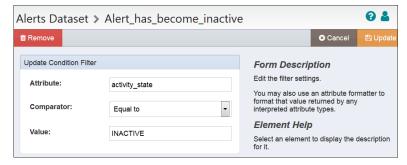


2. Select the filter to edit.

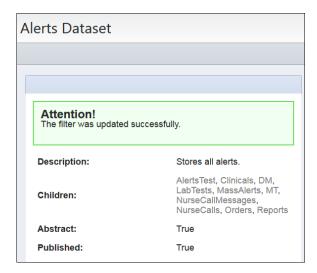


The **Update Condition Filter** dialog appears.

3. Revise the filter as needed. Complete the dialog as described in Configuring a Filter on a Condition on page 73 to edit the filter.



4. The screen refreshes and a success message displays at the top of the dataset form.



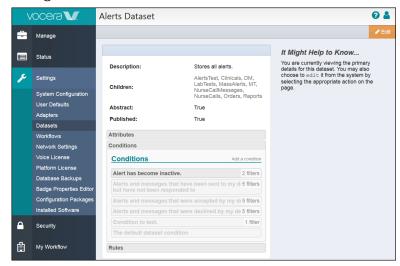
Removing a Filter

You can permanently remove (delete) a filter from a condition in the system.

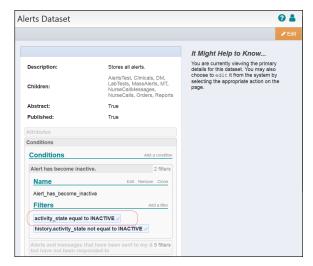


Warning: Remove cannot be undone. Removing a filter may prevent features from functioning, and data may be permanently discarded.

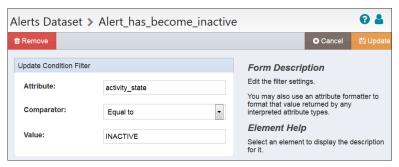
1. Navigate to Datasets in Vocera Platform Web Console and select the condition that requires revision.



2. Select the filter to remove.



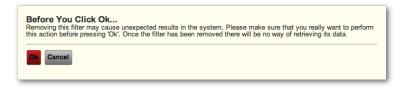
3. Select **Remove** in the filter's menu bar.



4. Select \mathbf{Ok} on the confirmation message, after you have finished reading the message.



Warning: Remove cannot be undone. Removing a filter may prevent features from functioning, and data may be permanently discarded.



- **Ok**: Close the message and delete the filter.
- **Cancel**: Close the message without deleting the filter from the system.
- 5. A success message displays at the top of the dataset form. Inspect the filters to verify that the removed filter no longer displays in the Filters list.

Alerts Dataset

Children:

Attention! The filter was removed successfully

Description: Stores all alerts.

AlertsTest, Clinicals, DM, LabTests, MassAlerts, MT, NurseCallMessages, NurseCalls, Orders, Reports

Abstract: True

Published: True

Dataset Rules

Information within the Data Manager (the Vocera data storage container) is created or updated and separate messages can be sent if a rule has been configured based on the activity that occurred. There are several rule types that may be created within Vocera and many options that may be customized for a more personalized experience.

When information within the Data Manager (the Vocera data storage container) is created or updated, separate messages can be sent if a rule has been configured based on the activity that occurred. There are several that may be created within Vocera and many options that may be customized for a more personalized experience.

See the Datasets page for overview information about datasets and elements, including rules. The Datasets page also provides details for accessing the Admin Console and navigating to the elements, such as the Rules tab described in this page.

A role with the Advanced Support security item applied will allow an associated user to have access to advanced functionality in the Vocera Platform Web Console, such as working with datasets. See the Advanced Support documentation for information about enabling this functionality in order to perform the configuration described in this page



Warning: Enabling Advanced Support allows users access to sensitive components and its use must be carefully evaluated for each login.



Accessing Dataset Rules

Navigate in the Console to view rules in Vocera datasets.

In Vocera Platform Web Console, select **Settings > Datasets** to access the datasets configured on the Vocera system. Select the dataset you wish to work with in the All Datasets page and navigate to the dataset's details page.

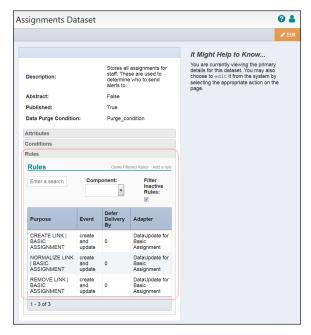
Expand the Rules tab to view a list of existing rules, and to access the tools to add, edit, clone, and remove rules. In this example, select the Rules tab for the Assignments dataset.

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The Rules section displays. In this section, the Rules list displays active rules by name, with event, deferred delivery, and adapter information. Click a rule name to edit the rule.

This section also provides access to tools for limiting the rules list display by search criteria that you specify. In addition, you can access the links for Cloning Filtered Rules on page 91 and Adding a Rule on page 86 on this page.



Searching and Viewing Dataset Rules

Rules display in alphabetical order, based on the purpose of the rule, but you can filter the list by a search term, or a component name, or filter out all inactive rules.

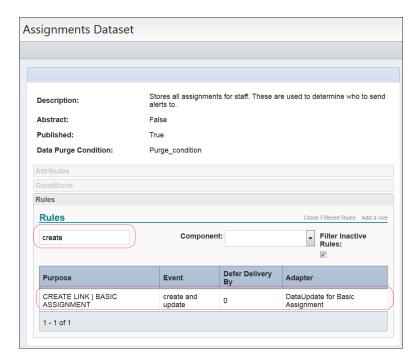
You can restrict the view to display rules filtered by a search term or a component, or filter out all inactive rules. Combine these search tools to further define the list of rules displayed.

Navigate to the dataset where you wish to work with rules, and expand the Rules accordian as described in Accessing Dataset Rules on page 80.

Search for Rules

Enter a search term in the **Search** field to display rules containing the term. For example, enter 'create' to restrict the displayed list to rules that specify Create in the purpose.

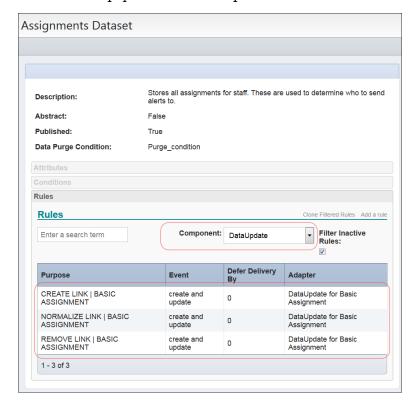
The Rules page shown below displays one active rule "CREATE LINK | BASIC ASSIGNMENT" with Create in the purpose. Remove the search criteria from the Search field to display the unrestricted list of rules.



Filter Rules by Component

Select the adapter of interest in the **Component** drop down menu. The adapters provided in this field are specific to the dataset. In this example, select 'DataUpdate' to display the three DataUpdate for Basic Assignment rules shown below.

Select the empty field in the drop down menu to remove the component filtering behavior.

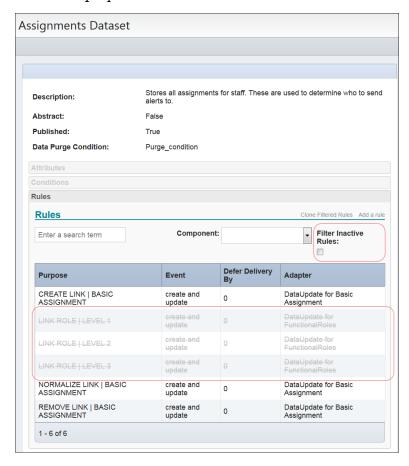


Filter Inactive Rules

By default, the Filter Inactive Rules checkbox is selected and only the active rules display.

De-select the **Filter Inactive Rules** checkbox to display the unfiltered list of rules. All rules display in alphabetical order based on the purpose of the rule.

Inactive rules display in grey text and strikethrough. For example, the inactive rule "LINK ROLE | LEVEL 1" now displays in the list shown below.



Configuring a Rule

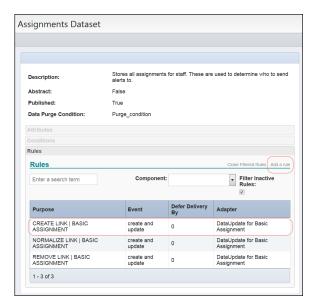
Configure these dataset settings when creating a new rule, or editing an existing rule, in the Vocera system.

When creating or editing a rule, these fields allow you to define the rule and add trigger events or data update parameters for associated adapters.

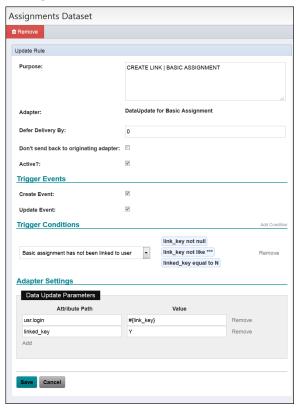
1. Navigate to the dataset where you wish to work with rules, and expand the Rules accordian.



- 2. Select one of the following two options, depending on whether you are updating an existing rule or adding a new rule on the dataset.
 - Create a New Rule: Click Add a rule in the Rules accordian menu to display the Create a New Rule window.
 - Update a Rule: Click a rule in the Rules list to display the Update Rule window.



3. Display the **Create a New Rule**, or the **Update Rule**, dialog windows. They both contain the same configuration fields.



4. Complete the fields listed in the table below. An asterisk * indicates that the field must be provided.

Name	Description
Purpose *	Enter the purpose for this rule. This should be descriptive and unique to the parent dataset. The recommended form is to use all capitals, and separate key portions of the purpose with the pipe symbol. For example, "CREATE LINK BASIC ASSIGNMENT", or "CREATE XMPP ROOM DESAT MT XMPP ALL UNITS".

adapter to which the rule will apply from the drop-down menu. Only which support rules are displayed in this drop-down list. Depending quirements associated with the adapter selected for this field, various al configuration fields will display in Adapter Settings in this form. For when DataUpdate for Basic Assignment is selected in the Adapter Data Update Parameters configuration fields automatically display in oter Settings section at the bottom of the form. The amount of time in seconds by which message delivery to a recipient edelayed by this rule. By default, this value is zero and messages are limmediately.
e delayed by this rule. By default, this value is zero and messages are l immediately.
is option to prevent the platform from sending updates to the selected when that adapter caused the message to be triggered. Selecting this option prevent updates from this rule triggering other rules for the selected When checked, each time a message is delivered to the adapter that causes e created or updated in the system, then that data modification will not his rule again. Select this checkbox if it is appropriate to your needs.
e Active checkbox to allow the platform to utilize this rule template.
e Create Event checkbox to trigger a message when an object within the co which this rule belongs, is created. All of the filters in the dataset's conditions must evaluate to true, to trigger the associated rule.
e Update Event checkbox to trigger a message when an object within the co which this rule belongs, is updated. All of the filters in the dataset's conditions must evaluate to true, to trigger the associated rule.
e arrow in a Trigger Conditions configuration field to display a dropenu containing all configured conditions associated with the rule's dataset. In a provide the ability to view dataset objects with a combination of filters. In the dataset's Trigger Conditions must evaluate to true, to trigger ciated rule. See Dataset Conditions on page 59 for additional information.
d Condition to provide additional triggering condition configurations to
move to delete a trigger condition from the rule.
pter Settings that display in the rule's configuration are determined by tion made in the Adapter field in this form. The details for each adapter's rule settings are provided in general information about adapter rules. cample, the Adapter Settings section automatically displays the defined angs that must be configured for the selected Data Update for Basic tent adapter.

- 5. When the configuration is complete, select the appropriate option for the new or revised rule.
 - **Save**: Revise the new or existing rule in the system.
 - **Reset**: Clear the configuration fields to start again in Create a New Rule. (Update Rule fields cannot be cleared for a reset.)
 - **Cancel**: Return to the dataset page without making a change to the rules.
- 6. The new or revised rule will display a success message to confirm your changes.

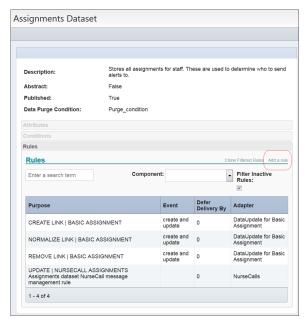


Adding a Rule

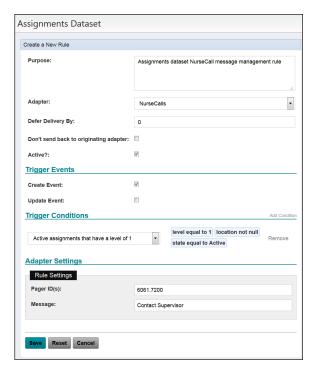
You can create a new rule on a dataset.

Use the following information to add a new rule to a dataset in the Vocera Platform Web Console.

- 1. Navigate to the dataset where you wish to work with rules, and expand the Rules accordian as described in Accessing Dataset Rules on page 80.
- 2. Select Add a rule in the Rules menu.



3. Complete the fields as described in Configuring a Rule on page 83 to define the new rule.



- 4. When the configuration is complete, select the appropriate option.
 - **Save**: Revise the new or existing rule in the system.
 - **Reset**: Clear the configuration fields to start again in Create a New Rule. (Update Rule fields cannot be cleared for a reset.)
 - **Cancel**: Return to the dataset page without making a change to the rules.
- 5. The screen refreshes and a success message displays at the top of the dataset form. The new rule displays in the Rules accordian, once expanded, sorted by description.

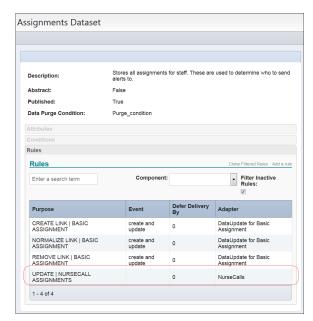


Editing a Rule

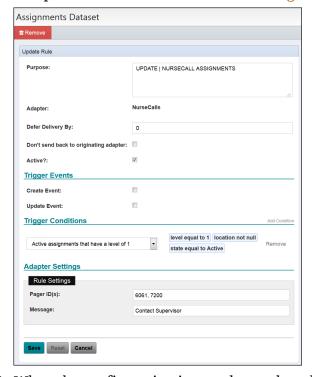
You can revise a rule on a dataset.

Use the following information to edit an existing condition.

- 1. Navigate to the dataset where you wish to work with rules, and expand the Rules accordian as described in Accessing Dataset Rules on page 80.
- 2. Select the name of the rule you wish to edit.



3. Complete the fields as described in Configuring a Rule on page 83 to revise the rule.



- 4. When the configuration is complete, select the appropriate option.
 - **Save**: Revise the new or existing rule in the system.
 - **Reset**: Clear the configuration fields to start again in Create a New Rule. (Update Rule fields cannot be cleared for a reset.)
 - Cancel: Return to the dataset page without making a change to the rules.
- 5. The screen refreshes and a success message displays at the top of the dataset form. The updated rule displays in the Rules accordian, once expanded, sorted by description.

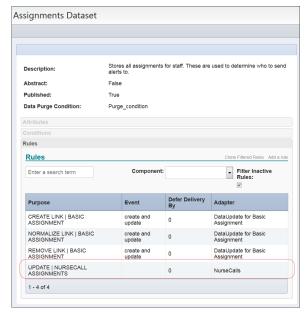


Cloning a Rule

Cloning a rule provides the ability to make an exact copy of an existing, configured rule.

After a clone, or copy, of the rule is created, small changes can quickly be made in the clone without having to create all aspects of the rule.

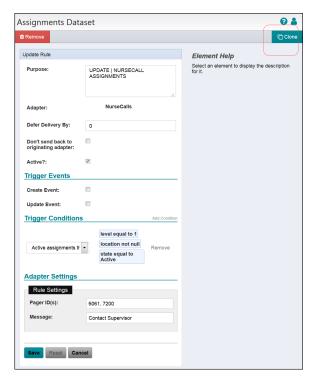
- 1. Navigate to the dataset where you wish to work with rules, and expand the Rules accordian as described in Accessing Dataset Rules on page 80.
- 2. Select the name of the rule you wish to clone.



3. Click Clone in the Rule's menu.



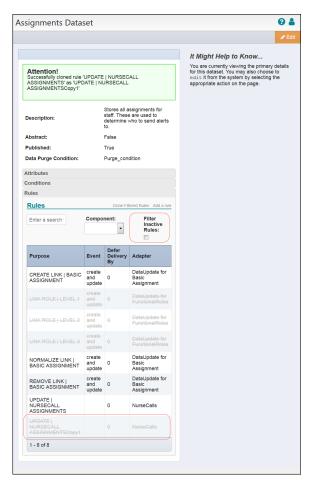
Note: The Clone action occurs without presenting a confirmation dialog.



The Dataset page refreshes and displays a success message at the top of the form.

4. Uncheck the **Filter Inactive Rules** box to access the new rule. By default, the cloned rule is not active and will not be used by the system. It displays in the alphabetical list, in strikethrough and grey text.

The cloned rule displays in the Rules list, with the same description and name as the original rule, but with the word "Copy" plus the copy number appended to the end.



The cloned rule is ready for revision as described in Editing a Rule on page 87.

Cloning Filtered Rules

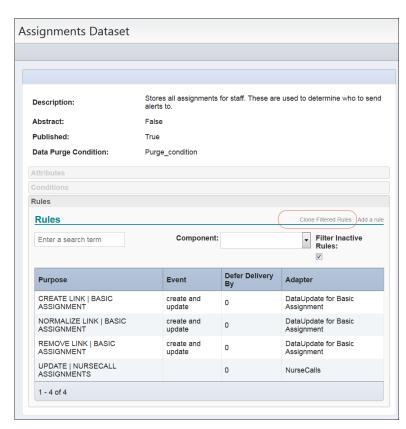
You can select a set of rules, and then make a copy of each rule in the group with one button push.

Identify the rules you want to copy, then use the search field to filter for these needed rules and display them in the Rules list.

- 1. Navigate to the dataset where you wish to work with rules, and expand the Rules accordian as described in Accessing Dataset Rules on page 80.
- 2. Select **Clone Filtered Rules** in the menu bar, when you have specified the rules you wish to clone using the filtering tools.



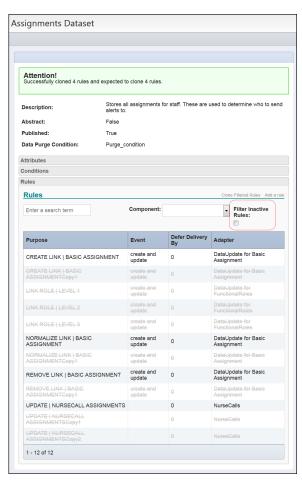
Note: The Clone action occurs without presenting a confirmation dialog.



The Dataset page refreshes and displays a success message at the top of the form.

3. Uncheck the **Filter Inactive Rules** box to access the new rules. By default, the cloned rules are not active and will not be used by the system. They display in the alphabetical list, in strikethrough and grey text.

The cloned rules display in the Rules list, with the same description and name as the original rule, but with the word "Copy" plus the copy number appended to the end.



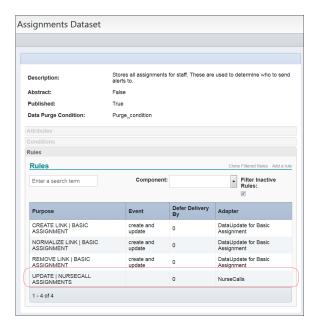
The cloned rules are ready for revision as described in Editing a Rule on page 87.

Removing a Rule

You can remove rules from the system.

After selecting an existing dataset with which to work, expand the **Rules** tab in the Dataset Details page.

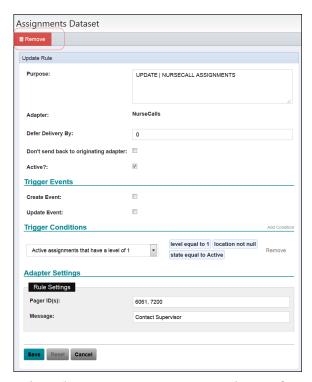
- 1. Navigate to the dataset where you wish to work with rules, and expand the Rules accordian as described in Accessing Dataset Rules on page 80.
- 2. Select the name of the rule you wish to remove.



3. Select **Remove** in the Update Rule page.



Warning: Remove cannot be undone. Removing a rule may prevent features from functioning, and data may be permanently discarded.



4. Select the appropriate action in the confirmation message dialog.



Warning: Remove cannot be undone. Removing a condition may prevent features from functioning, and data may be permanently discarded.



- **Ok**: Select Ok to remove the rule from the system. **Cancel**: Select Cancel to close the message without making a change to the rules.
- 5. A success message displays at the top of the dataset form. The rule no longer appears in the list when

