Icinga and Hipchat

Working hand to hand

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# Author

Shubhamkr619@gmail.com

# Audience

System Engineers and operation engineers

* [pops@vuclip.com](mailto:pops@vuclip.com)
* [suyog.shirgaonkar@vuclip.com](mailto:suyog.shirgaonkar@vuclip.com)

# Introduction

Change the default mail notification of Icinga server to hipchat notification using ruby code. This will allow a single place of management of all the notification and alerts across organization. Let that be service,host or business level alerts all can be managed and monitored using hipchat and hubot will give certain advantage over traditional alerting system.

1. Proactive and reactive alerting
2. Managed monitoring
3. Single place of all the alerts
4. Better communication and collaboration
5. Integration with multiple tools in CI cycle
   1. Jenkins
   2. Chef
   3. Bitbucket/Github
   4. Jira
   5. Confluence …. Etc

As per plan once Elastalert is implemented Hipchat will support business and revenue alerts, and hopefully with event based proactive/reactive handling or issues.

# Ruby Script

Need to create a Ruby script in order to make sure that we can send messages from a single server. Idea here is to be able to configure icinga server to send message to custom user groups and Hipchat account.

We are going to use a Ruby gem called hipchat which will support API version 2.0. In order for script to work we need to install 2 gems,

1. Hipchat
2. Trollop

|  |
| --- |
| # apt-get install ruby -y  # gem install hipchat  # gem install trollop |

|  |
| --- |
| #!/usr/bin/env ruby  require 'hipchat'  require 'trollop'  #  # Provides a hipchat notifier with minimal requirements.  # Post the nofication to room  #  # Docs: http://wiki.opscode.com/display/chef/Exception+and+Report+Handlers  #  # Install - add the following to your client.rb:  # gem install hipchat # Configure CLI entries  # gem install trollop # configure commandline option parser  module HipChat  class NotifyRoomCli  def initialize(api\_token, room\_name, msg, options={})  defaults = { hipchat\_options: {api\_version: 'v2',server\_url: 'https://api.hipchat.com'}, msg\_options: {:notify => true}, excluded\_envs: [], msg\_prefix: ''}  options = defaults.merge(options)  @api\_token = api\_token  @room\_name = room\_name  @msg = msg  @hipchat\_options = options[:hipchat\_options]  @msg\_options = options[:msg\_options]  @msg\_prefix = options[:msg\_prefix]  @excluded\_envs = options[:excluded\_envs]  @to\_user=options[:name]  case  when options[:alerttype].match(/warning/i)  @color = 'yellow'  when options[:alerttype].match(/critical/i)  @color = 'red'  when options[:alerttype].match(/info/i)  @color = 'green'  end if options[:alerttype]  end  def report  if @msg  @msg\_options[:color]=(@color || 'yellow')  client = HipChat::Client.new(@api\_token, @hipchat\_options)  client[@room\_name].send(@to\_user, [@msg\_prefix, @msg].join(' '), @msg\_options)  end  end  end  end  begin  opts = Trollop::options do  opt :message, "Use monkey mode" ,:type => :string # flag --monkey, default false  opt :name, "Monkey name", :type => :string # string --name <s>, default nil  opt :apitoken, "HIPCHAT API Token 2.0", :type=> :string  opt :roomname, "Room id from Hipchat", :type=> :string  opt :alerttype, "warning/critical/info", :type => :string  end  [ :message, :apitoken, :roomname].each do |key|  Trollop::die "arguments required --#{key}" unless opts[key]  end  hipchat=HipChat::NotifyRoomCli.new(opts[:apitoken],opts[:roomname],opts[:message],opts)  hipchat.report  rescue Errno::ENOENT => err  abort "hip\_chat\_cli: #{err.message}"  end |

# Script used on server

following is a script which should which we need to configure to use this code with a icinga server

## Service notification

|  |
| --- |
| root@hubot0:/etc/icinga2/scripts# cat hipchat-service-notification.sh  #!/bin/sh  template=`cat <<TEMPLATE  \*\*\*\*\* Icinga \*\*\*\*\*  Notification Type: $NOTIFICATIONTYPE  Service: $SERVICEDESC  Host: $HOSTALIAS  Address: $HOSTADDRESS  State: $SERVICESTATE  Date/Time: $LONGDATETIME  Additional Info: $SERVICEOUTPUT  Comment: [$NOTIFICATIONAUTHORNAME] $NOTIFICATIONCOMMENT  TEMPLATE  `  #/usr/bin/printf "%b" "$template" | mail -s "$NOTIFICATIONTYPE - $HOSTDISPLAYNAME - $SERVICEDISPLAYNAME is $SERVICESTATE" $USEREMAIL  dir="$(readlink -f $(dirname $0))"  ruby $dir/notify --message "$(/usr/bin/printf "%b" "$template")" --name icinga --apitoken "<TOKEN>" --roomname 2614946 --alerttype "$SERVICESTATE" |

## Host notification

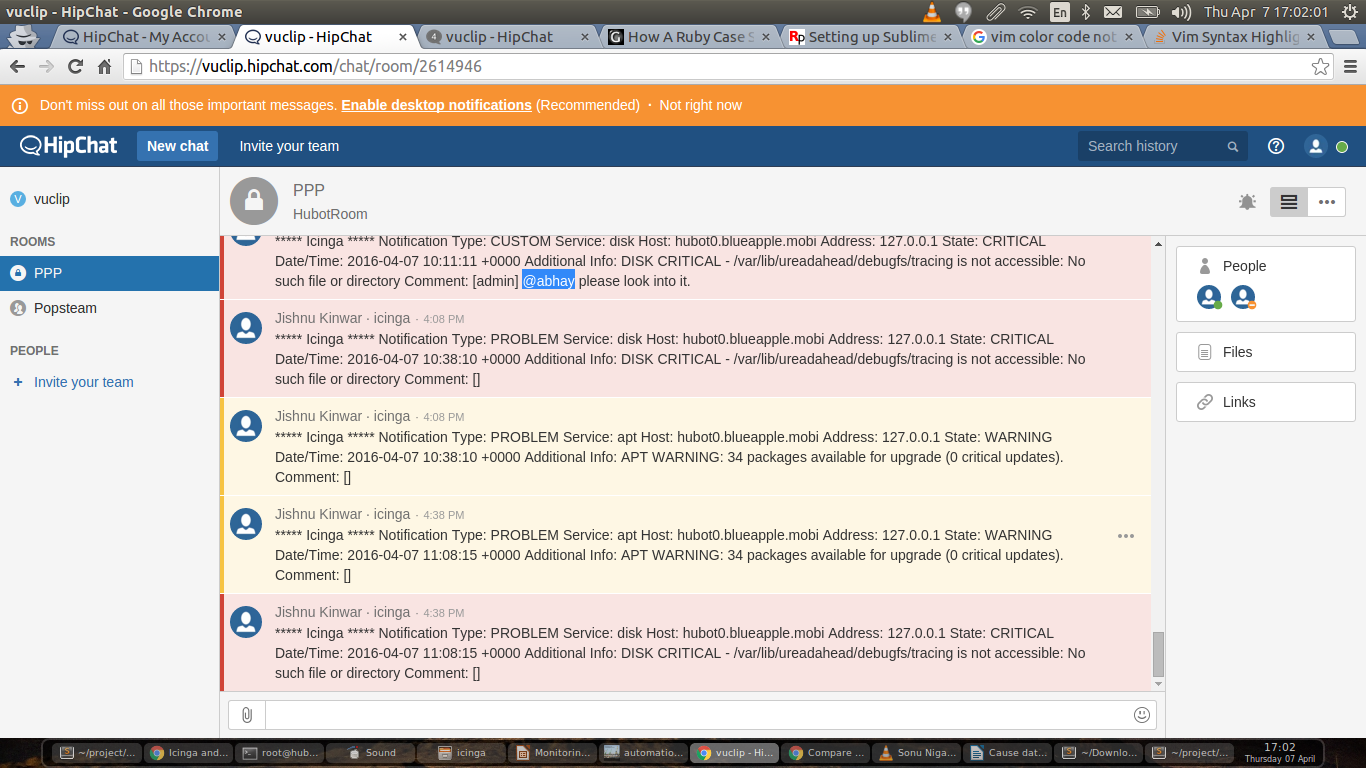
|  |
| --- |
| root@hubot0:/etc/icinga2/scripts# cat mail-host-notification-hipchat.sh  #!/bin/sh  dir="$(readlink -f $(dirname $0))"  template=`cat <<EOF  HOST DOWN $HOSTALIAS; Address: $HOSTADDRESS; State: $HOSTSTATE ; Date/Time: $LONGDATETIME  Additional Info: $HOSTOUTPUT  Comment: [$NOTIFICATIONAUTHORNAME] $NOTIFICATIONCOMMENT  EOF  `  ruby $dir/notify --message "$(/usr/bin/printf "%b" "$template")" --name icinga --apitoken "<TOKEN>" --roomname 2614946 --alerttype "warning"  root@hubot0:/etc/icinga2/scripts# |

# Change in command.conf for Icinga server

This will change the Icinga server to support the hipchat adapter ,

|  |
| --- |
| root@hubot0:/etc/icinga2/scripts# cat ../conf.d/commands.conf  /\* Command objects \*/  object NotificationCommand "mail-host-notification" {  import "plugin-notification-command"  command = [ SysconfDir + "/icinga2/scripts/mail-host-notification-hipchat.sh" ]  env = {  NOTIFICATIONTYPE = "$notification.type$"  HOSTALIAS = "$host.display\_name$"  HOSTADDRESS = "$address$"  HOSTSTATE = "$host.state$"  LONGDATETIME = "$icinga.long\_date\_time$"  HOSTOUTPUT = "$host.output$"  NOTIFICATIONAUTHORNAME = "$notification.author$"  NOTIFICATIONCOMMENT = "$notification.comment$"  HOSTDISPLAYNAME = "$host.display\_name$"  USEREMAIL = "$user.email$"  }  }  object NotificationCommand "mail-service-notification" {  import "plugin-notification-command"  command = [ SysconfDir + "/icinga2/scripts/hipchat-service-notification.sh" ]  env = {  NOTIFICATIONTYPE = "$notification.type$"  SERVICEDESC = "$service.name$"  HOSTALIAS = "$host.display\_name$"  HOSTADDRESS = "$address$"  SERVICESTATE = "$service.state$"  LONGDATETIME = "$icinga.long\_date\_time$"  SERVICEOUTPUT = "$service.output$"  NOTIFICATIONAUTHORNAME = "$notification.author$"  NOTIFICATIONCOMMENT = "$notification.comment$"  HOSTDISPLAYNAME = "$host.display\_name$"  SERVICEDISPLAYNAME = "$service.display\_name$"  USEREMAIL = "$user.email$"  }  } |

# Example notification



# Roadmap

1. Add hipchat user for Icinga server
2. Configure to talk to groups using token from user settings in hipchat
3. Change notification files and update token+room\_ids

All these steps are required to make sure hubot can take actions on events. For now hubot can not take actions if the user Hubot and notifying user is matched. It is required to prevent race conditions.