

EASE

Easiest Alert System Ever

Alex Wallace 2016-9-21

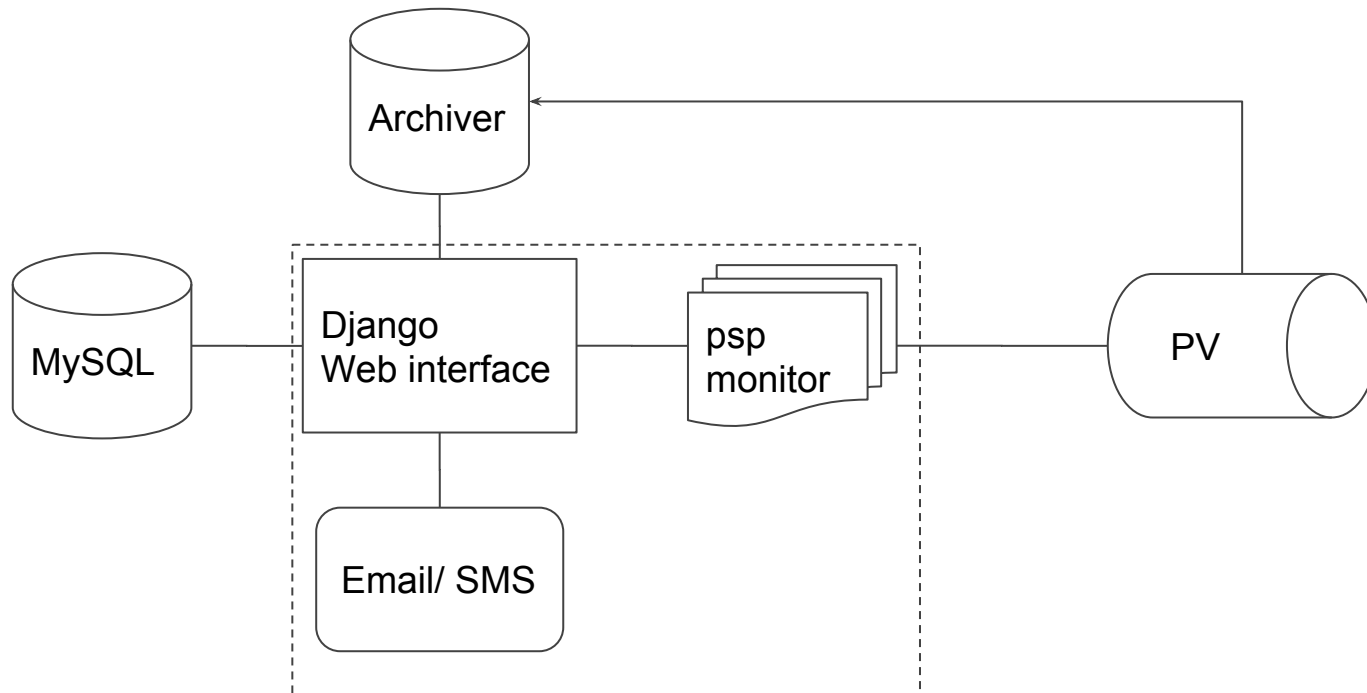
awallace@slac.stanford.edu

- EPICS already includes an alarm system
 - We all know the high, hihi, low, lolo fields
- But what if someone wants to be alerted to a state change defined by a different boundary?
- Need a tool for quickly establishing alerts

- Lower the barrier to entry, so we can crowdsource the alert system
- Leverage the knowledge and experience of area managers, technicians, and scientists
- Include a layer for generic user roles
 - Hutch Area Manager Account
- Intelligently decide when to send alerts
 - Save the user inbox

- Django webapp spawning python PV monitors
- PV monitors use a callback to check alert boundaries
- If alert boundaries are crossed an email is sent to the user

Architecture



Screenshots

EASE Admin Page

Welcome, Alex. [View site](#) / [Change password](#) / [Log out](#)

[Home](#) > [Alarms](#) > [Alarms](#)

Select alarm to change

[Add alarm](#) +

Search

Action: ----- Go 0 of 3 selected

<input type="checkbox"/>	Alarm	Status	Severity	Alarm Value
<input type="checkbox"/>	Some other alarm	NOM	NORM	280.58
<input type="checkbox"/>	Danny's alarm	NOM	NORM	258.99
<input type="checkbox"/>	Alex's alarm	HIHI	MAJOR	287.77

3 alarms

EASE Admin Page

Welcome, Alex. [View site](#) / [Change password](#) / [Log out](#)

[Home](#) > [Alarms](#) > [Alarms](#) > [Add alarm](#)

Add alarm

Alarm:

Pv:

Alarm type:

Lolo:

Low:

High:

Hihi:

[Guidance Information \(Show\)](#)

[Filter Options \(Show\)](#)

[Save and add another](#)

[Save and continue editing](#)

[Save](#)

EASE Admin Page

Welcome, Alex. [View site](#) / [Change password](#) / [Log out](#)

Site administration

Alarms	
Accounts	Add Change
Alarm lists	Add Change
Alarms	Add Change
Pvs	Add Change
Authentication and Authorization	
Groups	Add Change
Users	Add Change

Recent Actions	
My Actions	
	mortond User
	Alarmist Group
	mortond User
	mortond User
	(awallace)'s Alarm List Alarm list
	Some other alarm Alarm
	TST:SDS:PAREG:02:PressSP Pv
	TST:SDS:PAREG:02:PressSP Pv
	mortond User
	Danny's alarm Alarm

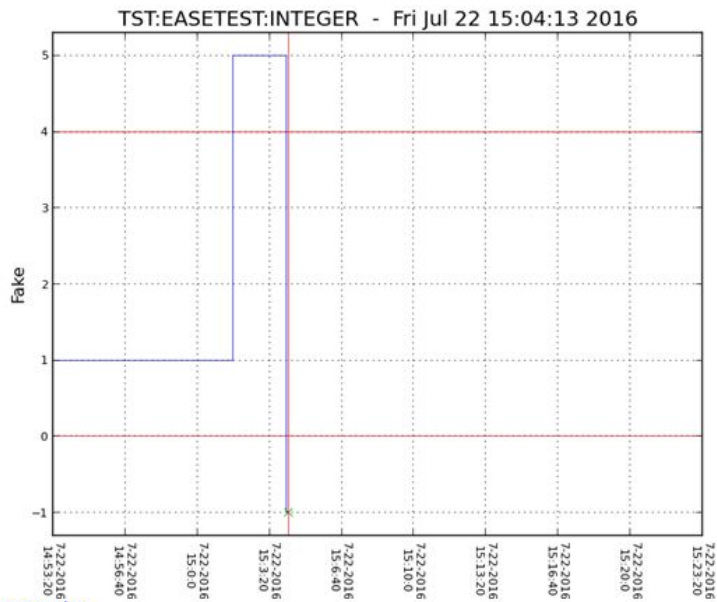
Email Alert

From: EASE@slac.stanford.edu
To: Wallace, Alex
Cc:
Subject: EASE PV Alert for: TST:EASETEST:INTEGER

Sent: Fri 7/22/2016 3:04 PM

Message ATT00001.txt (365 B)

Alarm: EASE test for Demo
Changed to: LOW
Filter status: Oscillaiton filter off
Plot:



[Current PV Plot](#)

Alerts and Lists

- Alerts are organized in lists
 - Users can subscribe to lists
 - Lists and alerts form an alert tree structure
-
- EASE can be used to quickly bring new employees up-to-speed on a system.

- Usable EASE instance running on our network for our software engineers to break
- Email circuit breaker is implemented
- Default Django admin screens for user interface

- Multi PV alert, masking
- Create a separate worker for monitor threads
- More intelligent alert frequency, digest system
- SMS/ Slack
- Acknowledgement, and automated script execution
- Parser for automated alert creation
- Alert tree summary

Acknowledgements

- Jacob Rudolph
 - Built the first schema and connected Django to psp
- Nolan Brown
 - Developed the email circuit breaker
 - Incremented the schema
- Daniel Damiani, Zachary Lentz, Teddy Rhendal, Daniel Flath

Thanks!

Put your mind at EASE.