ACCELERATING YOUR SECURITY LEARNING IN 2017

NULL/OWASP/G4H BLR MEET

AKASH MAHAJAN

21st Jan 2016

HappyNewYear

You must define your **why** before you can begin with the **what** and the **how**.

MariaReyesMcDavis

WHY LEARNING?

WHY SECURITY LEARNING?
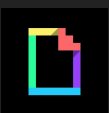
WHY SHOULD YOU ACCELERATE YOUR SECURITY LEARNING?

WHY DO WE LEARN?

- Career Growth
- Recognition amongst peers
- Better salary
- Sheer joy of learning

WHAT DRIVES YOU?

BUGBOUNTY $$$

GIPHY

via GIPHY

PEER PRESSURE

GIPHY

via GIPHY

WHAT DRIVES ME?

The thrill of learning something new and being able to use it to solve a problem.

For eg. yesterday I learnt how to upload images to a website, using a Node package and just use the URL in this presentation

WHAT ARE WE TRYING TO DO

LEARN

- What is it?
- How does that happen?

> *Learning results from what the student does and thinks and only from what the student does and thinks. The teacher can advance learning only by influencing what the student does to learn.*
>
> - *HERBERT A. SIMON, Founder of the field of Cognitive Science*

WE ARE TRYING TO MAKE SURE THAT YOU "THE" STUDENT IS ABLE TO

- do stuff and
- think things

PRINCIPLES OF LEARNING (MY VERSION)

Just so you remember this while learning

YOUR PRIOR KNOWLEDGE CAN HELP OR HINDER LEARNING

HOW YOU ORGANISE KNOWLEDGE INFLUENCES HOW YOU WILL LEARN AND *APPLY*

YOUR MOTIVATION PLAYS A CRUCIAL ROLE

TO DEVELOP MASTERY, YOU MUST

1. acquire various skills,
2. practice integrating them and
3. most importantly know when to apply what you have learned

ALWAYS DO GOAL DIRECTED PRACTICE

TO BECOME SELF DIRECTED LEARNER, YOU MUST

- learn to monitor and
- adjust your approach to learning

HOW DO WE KNOW WHERE WE ARE?

Unless you know where you are starting, there is no way for you to measure where you are going or how much of the way is done

STEP 1 - CREATE YOUR SKILL CHART

WE CAN'T DO THIS IN ISOLATION

- There is no way to figure out how much we need to learn in isolation
- This is best done as a group activity

GROUP ACTIVITY

Lets divide the room in 4 sections

1. Beginners
2. Intermediate
3. Expert
4. Neo

LETS MAKE A LIST OF ALL THE THINGS THAT WE SHOULD KNOW

And we should categorise them

	A	B	C	D	E	F	G	H
1	Beginner (n00b)							
2								
3								
4								
5								
6								
7								
8								
9								
10								
11	Intermediate (Apprentice)							
12								
13								
14								
15								
16								
17								
18								
19								
20								
21	Advanced (Journeyman)							
22								
23								
24								
25								
26								
27								
28								
29								

HOW DO WE GET TO WHERE WE WANT TO GO?

We break down the topic we want to learn in two main parts

1. Skills required
2. Knowledge to be gained (Application of skills to solve a problem)

GROUP ACTIVITY

1. Pick a topic
2. Make a list of skills required for that skill
3. Add this to the practice workbench

SETUP A WORKBENCH ONLINE

	A	B	C	D	E	F	G	H
1				Basic exercises in the cloud				
2	**Cloud Provider**	**Azure**			**AWS**			
3	Exercise	**CLI**	**Cpanel**	**Script/Program**	**CLI**	**Cpanel**	**Script/Program**	**CLI**
4	Start a virtual machine							
5	Stop a virtual machine							
6	Get remote access to the VM							
7	Provision the VM							
8	Configure a network between two vms							
9	Enable security groups/firewall							
10	Use orchestration tool to start VM							
11	User provisioning software to provision vm							
12	Enable monitoring of the VM							
13								
14								

SETUP A ROADMAP

- Project goals and objectives

- A timeline indicating the schedule

- Important milestones and deliverables

- Possible risks

- Dependencies

FOR NOW WE WILL JUST FOCUS ON TIMELINE

- How does one setup a timeline?
- Where should we setup a timeline?

SETUP A CALENDAR (GOOGLE?)

HOW WILL I REMEMBER EVERYTHING?

- Use markdown for documentation
- Use raneto / mkdocs for personal website

SETUP RANETO

1. Download Raneto (http://raneto.com/)
2. Unzip it
3. Run the command `npm install` (node needs to be installed)
4. Now `npm start` to start it on http://localhost:3000

CONFIGURE RANETO TO USE AS A KNOWLEDGE BASE

1. Change directory to `cd example/content`
2. Add a new directory `mkdir my-new-security-project`
3. Create a new markdown document
4. Add content
5. Browse to http://localhost:3000

(ALTERANTIVE) SETUP AND CONFIGURE MKDOCS

1. install mkdocs `pip install mkdocs`
2. configure mkdocs `mkdocs new my-project` KnowledgeBase Location `my-project\docs`

3. Serving the content

```
cd my-project
mkdocs serve
```

4. Browse at http://localhost:8000

Change in markdown file results in automatic rebuild of the knowledgebase and refresh of the page.

More details and Advance setup information here

TIP

Add the entire directory of Raneto under version control and set a remote repository to a private bitbucket / gitlab repository

WHAT ABOUT MY RESEARCH?

Use Google Keep

Search

Notes

Reminders

Labels   EDIT

Cloud Apprentice

Cloud Journeyman

Cloud n00b

Cloud-Sec Apprentice

Cloud-Sec Journeyman

Cloud-Sec n00b

+   Create new label

Archive

Trash

Take a note…

AWS PCI Reference Architecture

http://docs.aws.amazon.com/quickstart/latest/accelerator-pci/welcome.html

Cloud Journeyman

Cloud-Sec Journeyman

Setting up AWS VPC

http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_Scenario2.html

Cloud Apprentice   Cloud-Sec Apprentice

AWS

☐ https://aws.amazon.com/training/intro_series/

☐ https://run.qwiklab.com/catalog?locale=en

Cloud n00b   Cloud-Sec n00b

Azure

☐ https://docs.microsoft.com/en-us/azure/security/azure-security-getting-started

☐ https://docs.microsoft.com/en-us/azure/security/azure-security-pen-testing

Cloud n00b   Cloud-Sec n00b

Cloud Apprentice

Cloud Journeyman

Cloud n00b

Cloud-Sec Apprentice

Cloud-Sec Journeyman

Cloud-Sec n00b

HOW WILL I COLLABORATE WITH OTHERS?

- Use version control and issues and wikis
- Use Raneto in a repository together with collaborators

HOW SHOULD I SEEK HELP?

- Ask
  - Keeping in mind How to ask questions in the smart way
- Mailing lists
  - null
  - Cysinfo
  - OWASP

HOW CAN I MAKE FULL USE OF THE COMMUNITY?

- Ask for sessions
- Keep reminding the chapter leaders
  - If the leaders aren't responding, volunteer to become one
- Do all workbench activities in groups
  - You will cover more ground faster

MANAGING YOUR TIME AND PRIORITIES

Label all tasks with the following four

1. Important and not Urgent
2. Urgent and not Important
3. Important and Urgent
4. Not Important and Not Urgent

FOCUS ON

Important and not urgent

ALWAYS TRY TO DELEGATE

Not Important and Not Urgent

SET REMINDERS FOR

Urgent and not Important
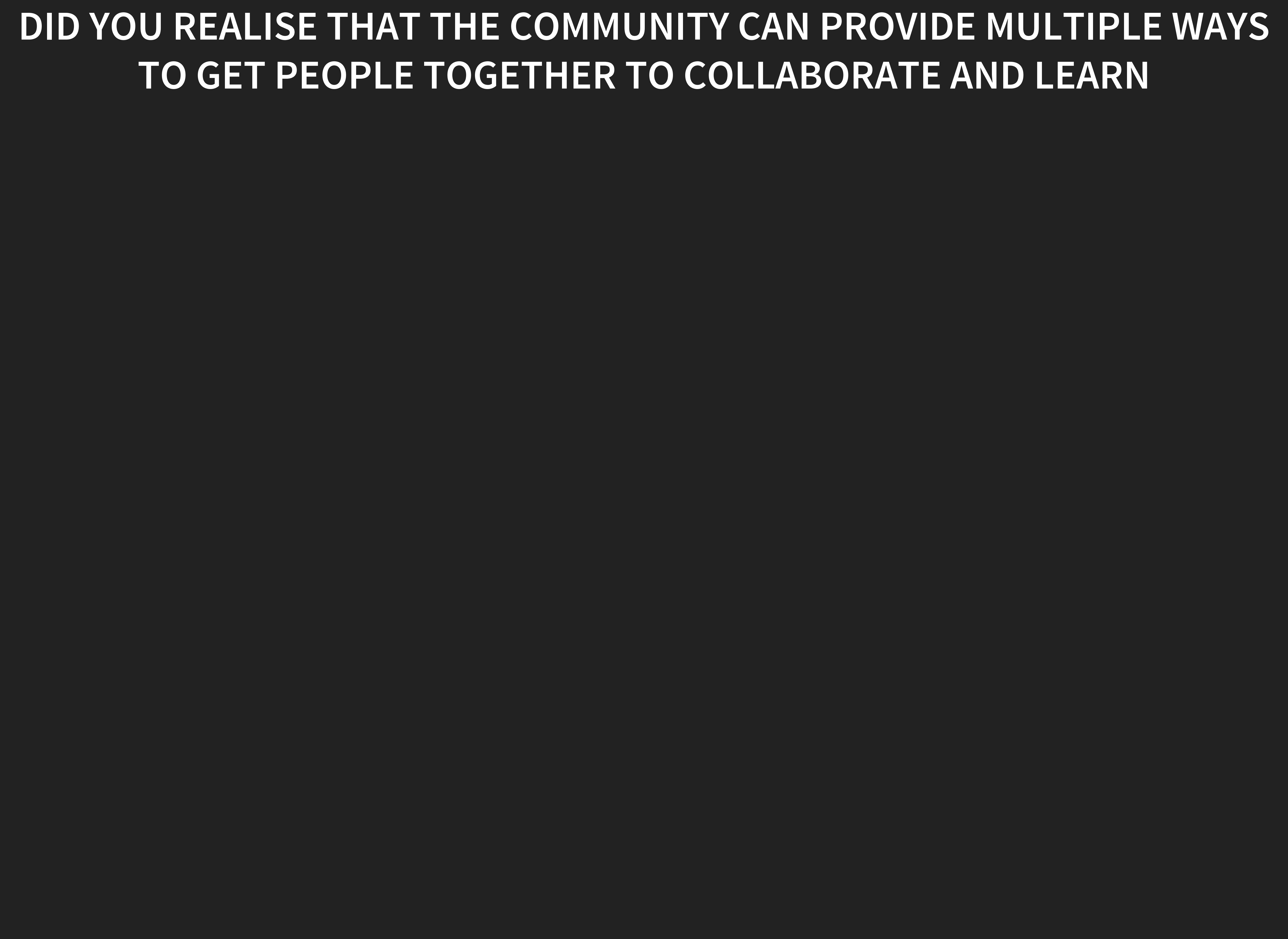
5 QUESTIONS TO ASK ALWAYS

- Why?
- What?
- How?
- When?
- Where?

YES AND NO QUESTIONS

ARE YOU LEAVING THE TALK WITH A GENERIC ROADMAP BASED ON WHERE YOU ARE IN THE JOURNEY

DO YOU HAVE A NEW LANGUAGE TO UNDERSTAND AND MEASURE?

DID YOU FIND THAT THERE ARE OTHERS IN THE SAME PLACE AS YOU AND YOU ARE ALL IN THIS TOGETHER?

DID YOU REALISE THAT THE COMMUNITY CAN PROVIDE MULTIPLE WAYS TO GET PEOPLE TOGETHER TO COLLABORATE AND LEARN

ARE YOU LEAVING THE TALK WITH SOME CLARITY ON WHERE YOU ARE HEADED?

REFERENCES

Planning projects

QUESTIONS?

- aka@null.co.in
- @makash on Twitter