

Survey Questionnaire

Start of Block: Introduction

Introduction

Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate or to stop participating any time without penalty. We estimate that this survey will take around 5~7 minutes. Participation in this study is not a requirement of your employment, and your participation or lack thereof will not affect your job. Your supervisor will not know about your participation. This survey gathers feedback from practitioners on which development activities practitioners agree to be related to defective scripts. We want to learn from practitioners about what development activity metrics relate with defective IaC scripts (Ansible/Chef/Puppet).

Confidentiality

The information in the study will be kept confidential to the full extent allowed by law. Data will be stored securely on password-protected computers and hard drives belong to the researcher. No reference will be made in oral or written reports, which could link you to the study. No one can match your identity to the answers you provide.

Participation Prize

Upon completing this survey, you may enter a drawing for one of the two Amazon gift cards. The link will be available once you complete the survey. Randomly selected two participants will be awarded Amazon gift cards. Contact If you have questions at any time about the study or the procedures, you can contact the primary investigator.

What if you have questions about your rights as a research participant?

If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Deb Paxton, Regulatory Compliance Administrator, Box 7514, and NCSU Campus (919/515-4514).

By proceeding forward you are giving your consent to participate in the study.

End of Block: Introduction

Start of Block: Professional experience

Q1 How long have you been using IaC (Ansible/Chef/Puppet) in the software industry?

- ☐ Less than a year (1)
 - ☐ One-two years (2)
 - ☐ Three-five years (3)
 - ☐ Six-ten years (4)
 - ☐ More than ten years (5)
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Q2 What is your job title?

End of Block: Professional experience

Start of Block: Development activities that are related to defective infrastructure as code (IaC) scripts

Q3 A defect is an imperfection that needs repair and replacement. A defect-related commit is a commit which is indicative of an action taken to resolve a defect. A defective infrastructure as code (IaC) script is an IaC script (Ansible/Chef/Puppet script) modified in a defect-related commit. Development activities may relate with defective IaC scripts. We have hypothesized seven activity metrics related to the IaC development process. Each of these activity metrics are listed below. To which extent do you agree that a metric is related with defective IaC scripts?

	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
Making large changes (add/delete/edit) at a time (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Changing scripts in a scattered manner (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Large amount of developers working on the same script (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A script being changed by multiple, but distinct developer groups(4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Script was changed by many developers who made many changes to other scripts (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Many developers who have contributed less than 5% of the editing (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Majority of the lines of a script is not written by the highest contributor (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4 Any general feedback on what other development activities may relate with defective IaC scripts?
