Properties in Defective Puppet Scripts

Start of Block: Introduction

Q2 **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 6~8 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 focuses on which elements of Puppet source code contribute to defects and effect productivity of programmers who work with Puppet. We want to learn from practitioners about which elements of Puppet can lead to Puppet errors/defect and hurt productivity while writing Puppet code.    
   
 **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 three Amazon gift cards. The link will be available once you complete the survey. Randomly selected three 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, Akond Rahman at aarahman@ncsu.edu.         
   **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 (919/515­4514).     **By proceeding forward you are giving your consent to participate in the study.**

End of Block: Introduction

Start of Block: Professional experience

Q4 How long have you been using 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)

End of Block: Professional experience

Start of Block: Defect metrics for Puppet

Q5 A defect is an imperfection or deficiency in a work product that does not meet its requirements or specifications. Each of the following statements mention a source code element that might cause defects related to Puppet. To which extent would you agree with the statements below? We identified the following metrics by analyzing commit messages and want to know to what extent you agree with them.

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| --- | --- | --- | --- | --- | --- |
|  | Strongly disagree (1) | Disagree (2) | Neutral (3) | Agree (4) | Strongly agree (5) |
| URLs in a Puppet file can cause defect (1) |  |  |  |  |  |
| The 'file' resource used in a Puppet file can cause defect (2) |  |  |  |  |  |
| The 'require' syntax used in a Puppet file can cause defect (3) |  |  |  |  |  |
| The 'ensure' syntax used in a Puppet file can cause defect (4) |  |  |  |  |  |
| The 'include' syntax used in a Puppet file can cause defect (5) |  |  |  |  |  |
| The '=>' symbol used in a Puppet file can cause defect (6) |  |  |  |  |  |
| Hard-coded statements in a Puppet file can cause defect (7) |  |  |  |  |  |
| The 'cmd' syntax used in a Puppet file can cause defect (8) |  |  |  |  |  |
| The 'mode' syntax used in a Puppet file can cause defect (9) |  |  |  |  |  |
| The 'ssh' syntax used in a Puppet file can cause defect (10) |  |  |  |  |  |
| Count of lines in a Puppet file can indicate defect (11) |  |  |  |  |  |
| Comments in a Puppet file can indicate defect (12) |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

End of Block: Defect metrics for Puppet

Start of Block: Gift card

Q6 If you would like to participate in a drawing of three 50 USD Amazon gift cards please click the following link:  
 [https://goo.gl/forms/zR0cNLIvBvpxqwIf1](https://goo.gl/forms/zR0cNLIvBvpxqwIf1%22%20target=%22_blank)

End of Block: Gift card