© 2015 IJSRSET | Volume 1 | Issue 5 | Print ISSN : 2395-1990 | Online ISSN : 2394-4099
Themed Section: Engineering and Technology

Policy Based Management in Autonomic Network Management

T. Charan Singh, B. Shyam Prasad, K. D. Nitesh Kumar
Department of Computer Science & Engineering, Sri Indu College of Engineering & Technology, Affiliated to JNTU-Hyderabad, Andhra Pradesh, India

ABSTRACT

Policy-based management could be a terribly effective methodology to guard sensitive info. However, the over claim of privileges is widespread in rising applications, together with mobile applications and social network services, as a result of the applications' users concerned in policy administration have very little information of policy-based management. The over claim will be leveraged by malicious applications, then result in serious privacy leakages and loss. To resolve this issue, this paper proposes a completely unique policy administration mechanism, mentioned as cooperative policy administration CPA, to change the policy administration. In CPA, a policy administrator will talk to different similar policies to line up their own policies to guard privacy and different sensitive info. This paper formally defines controller and proposes its social control framework. What is more, to get similar policies additional effectively, that is that the key step of controller, a text mining-based similarity live methodology is conferred. We tend to valuate controller with the info of mechanical man applications and demonstrate that the text mining-based similarity live methodology is more practical in getting similar policies than the previous category-based methodology.

Keywords: Collaborative Policy Administration, Policy-Based Management, Mobile Applications, Android, Social Network Services

I. INTRODUCTION

The technique of policy-based management is wide wont to manage complicated and large-scale network systems. The normal framework of policy-based management consists of 4 core elements, policy call purpose (PDP), policy social control purpose (PEP), policy administration purpose (PAP), and policy repository (PR). A well-trained policy administrator or cluster can specify, verify policies in PAP, and deploy the policies in PR. once a system runs; PDP can retrieve applicable policies from PR and build selections. spirit takes massive of the choice, like satisfying the request wherever a topic desires to open a file (authorization action), or launching a feller to record system context (obligation action).The over claim of privileges, wherever a not well-trained administrator assigns a lot of privileges than those that ar ordinarily needed by a topic, is AN more and more major problem, particularly once the strategy of policy-based management is applied to rising application situations, like mobile applications and social network services . for example, throughout the method of mechanical man application development, 3 roles ar sometimes concerned within the policy administration: Application Developers declare that permissions the applying can request; Application Marketers verify whether or not the applying is legitimate by AN automatic tool; Application Users decide whether or not to approve the permission requests. These 3 roles ar sometimes performed by those that aren't well trained in policy-based management. That is, the developers sometimes declare a lot of permissions than necessary as a result of they're inclined to create the event of applications easier, or perhaps interpret technical documents the marketers sometimes tend to permit a lot of applications no matter the malicious permission requests; and therefore the application users might not recognize what the requested permissions

mean, so approving all requests as a result of they're desperate to use the applying. a similar issue exists in social network services, wherever a user is asked to grant access to non-public knowledge to third-party applications . This challenge to policy administration is more and more serious attributable to the explosion of those applications. Among all smartphones shipped throughout the second quarter. Mechanical man OS smartphones had the most important world market share (68.1 percent). Moreover, social network services became one in all the foremost common internet applications within the world the policy administration continues to be major problem within the policy-based management of those rising applications. As a result, we should always strengthen the policy administration mechanism in these application situations. This paper proposes cooperative policy administration (CPA). The essential plan of CPA is that applications with similar functionalities shall have similar policies which will be such and deployed. Thus, to specify or verify policies, CPA can examine policies already such by different similar applications and perform cooperative recommendation. The degree of similarity is going to be calculated by predefined algorithms that may be a category-based formula, a text mining-based formula, and so on.

II. SYSTEM ARCHITECTURE

We tend to propose a completely unique method—collaborative policy administration, to assist not well-trained users, even novices to specify and verify policies in fig one. We tend to outline the formal model of CPA. During this model, 2 main functions in policy administration square {measure} outlined supported similarity measure ways, which can choose similar policies as a refinement basis to help directors to style or verify their target policies. We tend to propose a text mining-based similarity live technique to assist policy directors to get similar policies. Per the analysis, the projected technique is more practical than the category-based mostly similarity live technique that is a lot of wide utilized in different literatures. We tend to gift an social control framework and implement a paradigm of CPA. The framework supports 2 styles of user interfaces and provides functions of cooperative policy style and cooperative policy verification.

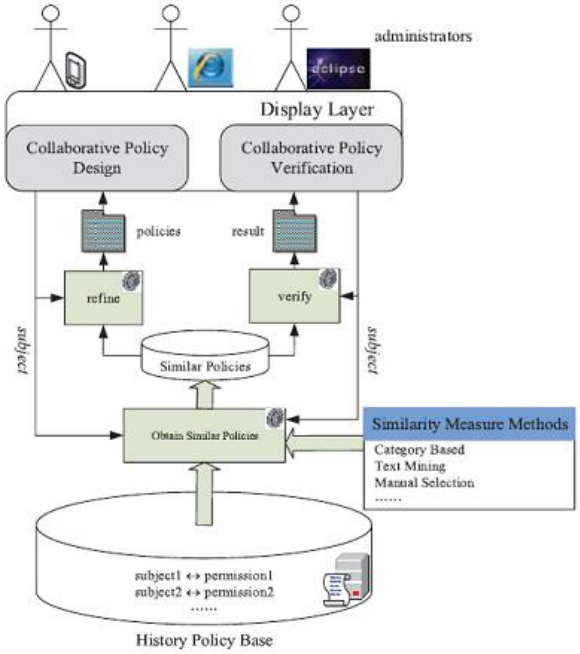

Figure 1: System Architecture

III. EXISTING SYSTEM

The traditional framework of policy-based management consists of 4 core parts policy call purpose (PDP), policy social control purpose (PEP), policy administration purpose (PAP), and policy repository (PR). A well-trained policy administrator or cluster can specify, verify policies in PAP, and deploy the policies in PR. once a system runs; PDP can retrieve applicable policies from PR and create selections. Liveliness takes charge of the choice, like satisfying the request wherever a topic needs to open a file (authorization action), or launching a lumberjack to record system context (obligation action). The over claim of privileges, wherever a not well-trained administrator assigns additional privileges than those that ar unremarkably needed by a topic, is associate degree progressively major problem, particularly once the strategy of policy-based management is applied to rising application eventualities, like mobile applications and social network services.

IV. PROPOSED SYSTEM

This paper proposes cooperative policy administration (CPA). The essential plan of comptroller is that applications with similar functionalities shall have similar policies that may be such that and deployed. Thus, to specify or verify policies, comptroller can

examine policies already such that by alternative similar applications and perform cooperative recommendation. The degree of similarity are calculated by predefined algorithms, that may well be a category-based rule, a text mining-based rule, novel technique, social control framework and implement an example of comptroller. The framework supports 2 varieties of user interfaces and provides functions of cooperative policy style and cooperative policy verification.

V. METHODOLOGY

The CPA: social control framework as is shown in Fig. 1, a policy administrator will leverage the framework to administer policies via a phone, applications programme, or development tool. In Fig. 1, the direction of arrows is that the direction of key information flows. The history policy base and similarity live strategies ar 2 key parts within the social control framework. To enforce comptroller, the administrator ought to prepare a comfortable range of policies initially. What is more, cooperative policy style and cooperative policy verification ar the 2 key functions provided by the framework, consistent with the definitions delineate in Section three. These 2 functions rely on the history policy base and similarity live strategies. Once getting the similar policies, the 2 functions decision a refinement rule and a verification rule severally. Finally, cooperative policy style and cooperative policy verification can show the results to the administrator on varied user interfaces, for instance, a phone, applications programme, or development tool.

5.1 Cooperative Policy Style

Here, Admins refers to any or all concerned policy directors, including, e.g., developers, marketers, and finish users within the robot framework. Policy administrator Admins will get a refined policy set PSref consistent with a refinement perform. We have a tendency to style the policy victimisation the system like a brand new user will register and logins and transfer any file. The user will style the policy in it. That's the policy is also like transfer possibility on the market or not, shopper details read choices specified choices.

5.2 Cooperative Policy Verification

A policy administrator Admins will get a verification result. Vary Result for a target policy set PS target, that contains all polices allotted to a target subject SUBJS, consistent with a verification perform. A policy administrator will leverage the framework to administer policies via a phone, applications programme, or development tool. The direction of arrows is that the direction of key information flows. The history policy base and similarity live strategies are 2 key parts within the social control framework. To enforce comptroller, the administrator ought to prepare a comfortable range of policies initially. What is more, cooperative policy style and cooperative policy verification ar the 2 key functions provided by the framework. These 2 functions rely on the history policy base and similarity live strategies. Once getting the similar policies, the 2 functions decision a refinement rule and a verification rule severally. Finally, cooperative policy style and cooperative policy verification can show the results to the administrator on varied user interfaces, e.g., a phone, applications programme, or development tool.

VI. CONCLUSION

In this paper, we have a tendency to think of a brand new variety of potential attackers in cooperative information business a coalition of information suppliers, known as m-adversary. To forestall privacy speech act by any m-adversary we have a tendency to show that guaranteeing m-privacy is enough. We have a tendency to bestowed heuristic algorithms exploiting equivalence cluster monotonicity of privacy constraints and adaptive ordering techniques for with efficiency checking m-privacy. We have a tendency to introduce conjointly a provider-aware anonymization rule with adaptive m-privacy checking ways to confirm high utility and m-privacy of anonymized information. Our experiments confirmed that our approach achieves higher or comparable utility than existing algorithms whereas making certain m-privacy with efficiency. There are several remaining analysis queries. Process a correct privacy fitness score for various privacy constraints is one amongst them. It conjointly remains an issue to deal with and model he information |the info the information suppliers once data ar distributed in a very vertical or ad-hoc fashion. it might be conjointly attention-grabbing to

verify if our strategies are often tailored to different kinds of information like set-valued data.

VII. REFERENCES

[1] A. K. Bandara, N. Damianou, E.C. Lupu, M. Sloman, and N. Dulay, "Policy Based Management," Handbook of Network and System Administration, Elsevier, Nov. 2007.

[2] D. Verma, "Simplifying Network Administration Using Policy- Based Management," IEEE Network, vol. 16, no. 2, pp. 20-26, Mar./ Apr. 2002.

[3] W. Han and C. Lei, "A Survey on Policy Languages in Network and Security Management," Computer Networks, vol. 56, no. 1, pp. 477-489, 2012.

[4] R. Yavatkar, D. Pendarakis, and R. Guerin, "A Framework for Policy-Based Admission Control," RFC 2753, no. 2753, 2000.

[5] B. Moore, E. Ellesson, J. Strassner, and A. Westerinen, "Policy Core Information Model—Version 1 Specification," IETF, RFC 3060, http://www.ietf.org/rfc/rfc3060, Feb. 2001.

[6] W. Enck, M. Ongtang, and P. McDaniel, "Understanding Android Security," IEEE Security & Privacy, vol. 7, no. 1, pp. 50-57, Jan./ Feb. 2009.

[7] B. Sarma, N. Li, C. Gates, R. Potharaju, C. Nita-Rotaru, and I. Molloy, "Android Permissions: A Perspective Combining Risks and Benefits," Proc. 17th ACM Symp. Access Control Models and Technologies, pp. 13-22, 2012.

[8] M. Nauman, S. Khan, and X. Zhang, "Apex: Extending Android Permission Model and Enforcement with User-Defined Runtime Constraints," Proc. Fifth ACM Symp. Information, Computer and Comm. Security, pp. 328-332, 2010.

[9] D. Barrera, H. Kayacik, P. van Oorschot, and A. Somayaji, "A Methodology for Empirical Analysis of Permission-Based Security Models and Its Application to Android," Proc. 17th ACM Conf. Computer and Comm. Security, pp. 73-84, 2010.

[10] G. Cheek and M. Shehab, "Policy-by-Example for Online Social Networks," Proc. 17th ACM Symp. Access Control Models and Technologies, pp. 23-32, 2012.