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Comparative Study on Incident Management

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ABSTRACT
Organizations using Information Technology (IT) is always facing certain situations, where an error occurs or something doesn't work the way it was supposed to be. Here the Incident Management (IM) is coming across the way to play an important role to restore IT services as normal as acceptable and as agreed in Service Level Agreement (SLA) within minimum time and least disturbance of business. The focus of this study is to explain incident management process of Information Technology Infrastructure Library (ITIL) in the view of different vendors, which support ITIL. This study will explore similarities and differences in incident management processes, between BMC and Computer Associates (CA) and produce comparative study on incident management.

Keywords
ITIL, Incident Management, BMC, CA.

1. INTRODUCTION
According to ITIL, the term "incident" is defined as "Any event, not part of the standard operation of a service, that causes, or may cause, an interruption to, or a reduction in, the quality and/or level of service provided" [1]. The term "Incident Management" can be defined as "Maximum availability of the systems within minimum interruption to business". The Service Desk plays a vital role in incident management, acting as first point of contact and support, assign incidents to technical experts and incident management is linked with problem management for root cause analysis of an incident [2][3][4]. This paper highlights the comparative study on incident management process based on different vendor's tool. Each vendor has different approach to implement the incident management process based on ITIL incident management process. The paper focus on the similarities and differences between the vendors which can also be helpful for the standardization of the ITIL processes of the incident management [5]. The next section will discuss why incident management is important for an organization; later the study will focus on similarities and differences between BMC and CA; and finally we will conclude this study.

2. WHY INCIDENT MANAGEMENT?
To meet challenging business objectives, the best level of IT services are required. The main objective of the incident management process is to ensure incident's recording, classification, diagnosis, escalation and resolution. Incident management is the front face of IT organization to its users and first point of contact in trouble time. Incident management kept old incidents record for reporting and further improvement [2][4]. The timely resolution of incidents results, less impact on business and more confidence of users [1].

3. PROMINENT TOOLS
Organizations using ITIL are using several different tools to implement it. Among them HP OpenView, IBM Tivoli, BMC Software, Computer Associates are the prominent tools to implement ITIL processes. Following are two most prominent tools:

3.1 BMC SOFTWARE:
Maximum availability of IT services is essential to run business smartly, and for this BMC Software is the best choice. BMC Software started its journey in 1980 and now most demanding IT organizations rely on BMC Software for quality software products. Classical brands from BMC Software are Atrium, BMC Remedy, PATROL, Marimba, Control-M, Control-SA, BMC ProActiveNet and Magic [5][6].

3.2 COMPUTER ASSOCIATES (CA):
CA is a leading enterprise management software company for simplifying complex business issues. Cloud computing management strategy by CA was announced in 2010 in World user conference. In 2010 the company acquired eight companies to support its cloud strategy. These companies are 3Tera, Nimsoft, NetQoS, Oblicore, Cassatt, 4Base Technology, Arcot Systems, and Hyperformix [5][7].

4. SIMILARITIES & DIFFERENCES
BMC Software and Computer Associates (CA) Inc. have their own processes to implement the incident management, but those processes are based on ITIL processes for the incident management. Each vendor tries to design process of incident management in a way that it will align with the business needs and with ITIL processes. Each vendor is including its technical area, management area, history of products and processes to form an incident management process [5].

BMC – Incident Request Registration: Service Desk is centre point of contact for users. Users can use different channels (i.e. email, phone call, Direct) to register an incident request. In case of old registered incident, Service desk agent will investigate and update user to reopen incident. For new request agent will register new incident and tries to resolve, if not possible then incident assignment procedure starts [8].

CA – Raise an Incident: The first process activity is to raise an incident. Incidents can create through different channels such as web, email, and direct call. The source of an incident is also based on an event, which causes service failures. Event detection before impact on IT services is very important. The purpose of Event detection is IT service continuity [2].

Similarities: Both are based on same concept.

Differences: The only difference is the name; for BMC the name is "Incident Request Registration" and for CA the name is "Raise an incident".

BMC – Incident Request Assignment: After registering new incident, agent confirms that service management application have capability to assign incident automatically to an appropriate group. Assigned group manager reviews the incident and sends back to Service desk, in case information is not completed. This gives an idea to agent for better understanding of customer information and correct assigned group. In case of correct group assignment, manager assigns incident to specialist otherwise incident request required Change Management process [8].

CA – Record an Incident: In most of the cases, incidents are recorded by service desk. Users should possibly report incidents in quick fashion, providing complete information to front line analyst. Most effective way is capability of system itself for auto record incidents. Recording of an incident is important even if users have resolution of an incident. The service desk calls can be minimize by using effective Knowledge Management, and web interface to log an incident [2]. **Categorization** of an incident is sub part of record function in Incident Management. Categorization has two aspects; classification and affected configuration item. Service desk agent should categorize an incident rightly, otherwise complication can occur [2].

Similarities: No similarities.

Differences: There is no separate process to record an incident in BMC to handle Incident Management Process. Categorization is the sub part of record function in CA Incident Management Process but not in BMC.

BMC – Incident Request Tracking: After Service level Agreement (SLA) has escalated an incident, and resolution threshold has been passed, the manager escalated incident to service provider of affected service. In case of first specialist failures to resolve an incident, it reassigns to another skillful specialist for resolution. If manager does not want to reassign the incident, he/she informs assigned specialist for quick resolution to avoid SLA violations [8].

CA – Prioritization: Prioritization is very important in Incident Management. Service Level Agreements (SLAs) and service desk solutions can be helpful to determine priority of an incident. If an incident has high impact on business then priority would be high. If resolution of high priority incident is not provided immediately, then the incident manager should create a problem [2].

Similarities: No similarities.

Differences: There is no separate process for prioritization in BMC Incident Management Process. Prioritization is the separate process in CA. Incident Request Tracking process doesn't exist in CA.

BMC – Incident Request Resolution by Specialist: The specialist reviews and finds the way to resolve an incident. If incident request requires change management to resolve the issue, then specialist escalates to service provider. The requester should be informing at the time of incident resolution. In case specialist believes that solution can useful for agents, specialists, and requesters then he/she proposes it for general use. At last, if workaround was used to resolve the incident and specialist thinks that incident can reoccur, he/she informs problem to manager of the affected service to stop future occurrences [8].

CA Check Junction: It is about Incident Management outputs derived from detection and reporting of incidents and providing a way to proactive and optimize problem management. The accurate incident recording will minimize incident repetition. Alternatively check junction provides capability to incident management for taking inputs from problem management to stream line whole process [2]. **Investigate & Diagnose** – Service Desk Analyst investigates and analyses all related information of an incident. If resolution is not provided by analyst then route incident to subject matter experts (SMEs). Integrated Management technologies can play a vital role to identify and route incidents to suitable SMEs. In this process, involvement of multilevel SMEs group and vendor may require [2].

Similarities: In CA case, an incident is routed to SMEs if resolution is not provided by the Service Desk Analyst. In BMC case, group manager reviews the incident and sends back to Service desk, in case information is not completed otherwise manager assigns an incident to specialist. The basic concept is same.

Differences: The Check Junction, and Investigate & diagnose process does not exist in BMC Incident Management Process separately.

BMC – Incident Escalation Handling: After escalation of an incident to service provider, it should be discusses with specialist in detail to find best solution. If found the effective way for affected service recovery, it escalates incident to on-duty manager for service recovery. If change management is not required for incident resolution, then service provider confirms most suitable specialist for resolving incident within incident management process. If change management is required, service provider consults in detail with specialist regarding risk and impact of change on users. They both find out the best way of change implementation with least risk [8].

CA – Escalate: Escalation of incidents as per agreed service levels and assigned more support resources if necessary is critical here. Escalation can have two paths; horizontal or vertical. For incident escalation to different SME groups, horizontal escalation is required. Proactive approach and process automation is important for routing incidents to correct SMEs groups. Vertical escalation is required when an incident requires gaining higher level of priority. Technology plays a vital role to automate escalation process to identify correct error source [2].

Similarities: Both worked in same way.

Differences: No differences.

BMC – Incident Request Closure: When a service desk agent is capable of resolving an incident, he/she resolves an incident and provides resolution detail, which will helpful to resolve incident in future. The agent closes an incident if customer is in contact with him/her and able to verify solution. As agent resolves an incident, customer receives incident resolution notification. The customer checks the solution, if solution is correct then there is no need for any other action, and if an issue exists, customer can reopens incident for better solution [8].

CA – The Act Junction: At the act junction, investigation and diagnosis has find incident nature and correct actions for resolution. By using workarounds, service failures restoration

can be done very quickly, and incidents are required to escalate to problem management for identifying cause of problem [2]. Workaround - The workaround requires to be documented in problem record and creation of known error record. During root cause analysis, it is possible that an organization can find resolution to a problem, but management may deem costly permanently fixed. In such cases, workaround is the permanently fixing the problem and record denotes this status [2].

Similarities: No similarities.

Differences: The workaround concept is used as part of Incident Request Resolution by Specialist in BMC but Workaround process is separately used in CA Incident Management process.

BMC – Solution Approval: As Manager notifies for a new proposed solution, he/she reviews in detail. If Manager satisfies that solution can help to resolve incidents in future and helpful for customers, specialists and agents, he/she makes the availability of solution for general use [8].

CA Resolve and Recover: At this stage, an incident resolution with solutions or workarounds obtained from previous activities. In some cases, a Request for Change (RFC) will be submitted, so automated transfer of incident details to Change Management is vital. An incident is routed back to Service Desk when SMEs resolve service failure. Confirmation to incident is required for rectification of an error and then incident can close [2].

Similarities: In BMC, resolution is provided in Incident Request Resolution by Specialist and in CA, resolution is provided in Resolve and recovers process but main concept is same.

Differences: Solution Approval process does not exist in CA Incident management but it is the separate process in BMC Incident management process.

CA – Restore Service: The main objective of incident management process is service restoration. It is ensuring that all related information of an incident is correctly captured and also recording of resolution details are kept. The Customer satisfaction surveys are helpful for effective delivery of high-quality services and customer satisfaction [2].

Similarities: No similarities, as no process in BMC.

Differences: Completely different as no process in BMC to compare with.

5. DISCUSSION AND CONCLUSION

In this paper we had compared incident Management processes of BMC and CA, which demonstrate that there are few similarities among them, which may help for standardization of ITIL process and obviously there are few differences, which are liable to resist standardization of ITIL processes. The versions of ITIL process can be set if ITIL incidents management standards exist, the versioning concept is always a useful for the enhancements of the processes at all the time. One should consider the possibility of open standards as a new initiative [5][9].

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