

Automatic Population and Updating of a Semantic Wiki-based Configuration Management Database

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IT landscapes which are becoming more and more complex as well as the need for faster and more flexible service delivery and the need for providing constantly available services, constitute an increasing challenge for the *IT service management* (ITSM) discipline. The work presented in this paper illustrates a particular aspect of our broader approach to collaborative, semantics-enabled ITSM support. It allows for the automatic population and updating of configuration management data stored in a Semantic Wiki by using standard-based mechanisms available for current mainstream operating systems. In addition to this automatically gathered information, Wiki articles representing computers are editable by members of the IT department as well as technologically knowledgeable users. This enables administrators, for example, to document the history of a computer (e.g., problems, support calls) next to the automatically gathered and updated information described in detail in this paper. The approach presented in this paper uses the *Windows Management Instrumentation* (WMI) feature of the Microsoft Windows operating systems for populating and keeping up-to-date a Semantic Wiki-based CMDB. The use of a Semantic Wiki as the platform for retaining configuration data leads to a number of benefits, including collaborative aspects (from which agile environments with technologically knowledgeable users benefit most) as well as powerful processing mechanisms based on the formal meaning associated to links between configuration items and information stored in Wiki articles. By transforming information gathered via WMI, the component presented in this paper creates relations and attributes in the Semantic Wiki which represent the configuration management data. The use of the SMW query mechanism allows to generate tables with information gathered from multiple Wiki articles. The use of inferencing enables querying for information which is only implicitly stated in the Wiki. In order to enable queries which exceed the capabilities of the mechanism built into SMW, a connector to the Jena Triple Store available for SMW+ is used, which enables the use of queries in the SPARQL query language. Furthermore, external applications can access semantic data stored in the Wiki via the Triple Store interface.