White Paper

Software Tool House Inc.

Archiving BMC Remedy ITSM Data

Challenges, Requirements, Solutions

Update: 2015-Nov-17

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Preface

Audience

This document is intended for Remedy ARS Administrators and developers who are familiar with both running and writing Meta-Update scripts.

This document describes the changes made in this release from the previous listed release.

Limitation of Liability

This program is provided "as-is". We are in no way liable for any losses arising from your use of this program, the sample scripts, or the documentation. It is your responsibility to evaluate this program. It is your responsibility to backup and protect your data. It is your responsibility to evaluate your use of this program for any particular purpose.

This manual does not represent a commitment to maintain any syntax or operation, nor is it warranted to be complete or accurate.

Copyrights

Updates

This program and this manual may change from time to time. The latest version is available at our web site: www.softwaretoolhouse.com.

Comments

Your comments are welcome! Please see: www.softwaretoolhouse.com/support and click **Comments**, or email us at support@softwaretoolhouse.com. We look forward to hearing from you!

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Executive Summary

BMC ITSM has been in use in many enterprises for some years and large enterprises with high ticket volumes have accumulated millions of records in their Incident, Change, Problem modules of ITSM.

This has caused significant, human noticeable, slowdowns in the performance of the ITSM modules due to increases in the underlying database search and retrieval times.

ITSM Archiving poses significant challenges requiring a large investment and a long duration development project.

Challenges include the Incident, Change, and other root requests data table complexity and checking a request's associations before archiving a request.

Software Tool House's Meta-Archive is an in-use, swift, solution to all ITSM Archiving challenges.

Meta-Archive uses the BMC API and requires no ITSM customization project and no server changes at all. It is easy to set your rules and add your customized forms – as simple as a spreadsheet.

With Meta-Archive, BMC Remedy your staff can implement ITSM Archiving in a matter of hours – completely eliminating costs of an expensive ITSM project and eliminating the need to customize ITSM at all. Software Tool House provides support needed to get your archive plans going.

Meta-Archive even offers restore.

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Introduction

This white paper discusses archiving data in the BMC Remedy ITSM Suite.

It identifies the need for archiving data, the challenges and requirements for any solution and describes how Meta-Archive delivers these requirements.

It is meant as a more in-depth look at ITSM archiving and Meta-Archive. It can be read by anyone. Familiarity with the BMC ITSM Suite, while helpful, is not needed.

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Need for Archive

BMC ITSM has been in use in many enterprises for some years now.

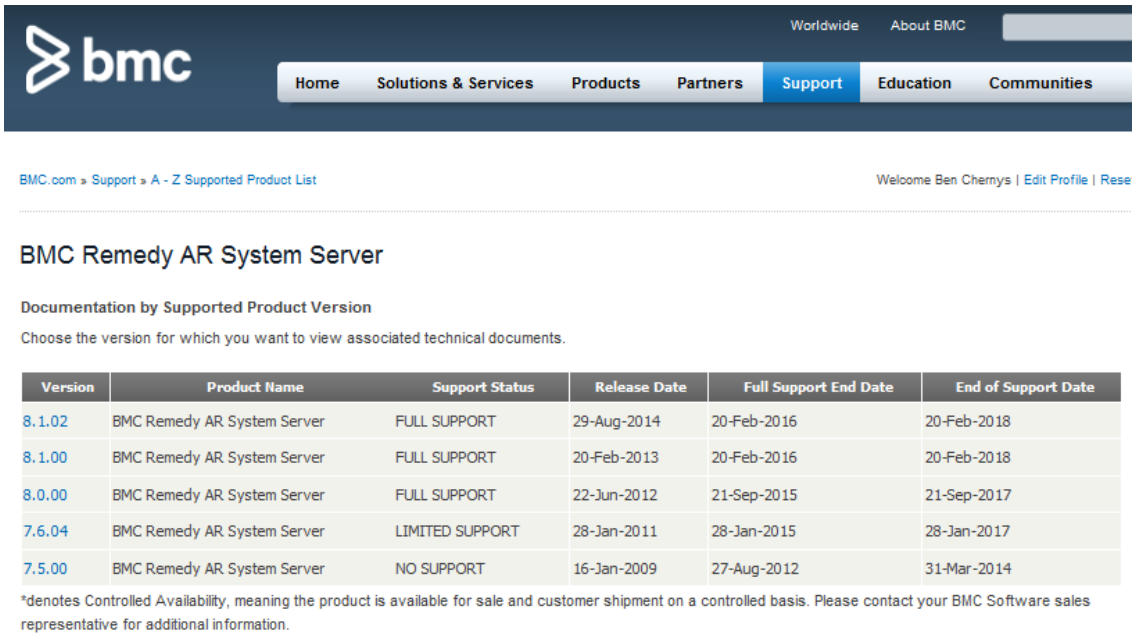

Figure 1 BMC Remedy Release Dates

Many large enterprises with high ticket volumes have accumulated millions of records in their Incident, Change, Problem modules of ITSM.

This, in turn, has caused significant, human noticeable, slowdowns in the performance of the ITSM modules due to increases in the underlying database search and retrieval times.

This may lead to frustrations to customers, lower performance and morale of support staff and negative views of the responsible IT department.

Most of these millions of tickets are closed and old enough to not be needed in the high-use tables used by the ITSM Suite. They still must be kept however for reasons including completeness, history, and compliance.

BMC Remedy has the concept of Archive tables, so removing this data from the high-use, active, ITSM tables, and placing it into the archive tables would reduce the data in the active tables.

This would reduce the time the underlying database needed to perform searches and retrieve data, thereby speeding up the performance of the ITSM applications and any reports, or interfaces.

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Challenges

BMC Archive Forms

BMC Remedy has had an “Archive Attributes” facility since release 6.0. However it is directly tied to one and only one table.

OOTB Archiving can be set to these options:

Copy to Archive and Delete from Source	An Archive Form is named. The developer tool is used to set the Archive Form name. If the form exists, it is validated to have the “Characteristics of archive forms” If it does not exist, the Remedy server will create an Archive Form based on the source table. The entries you choose from the main form are copied to the archive form and deleted from the main form.
Copy to Archive	As above but entries are not deleted from the main form.
Delete from Source	The entries you choose from the main form are deleted; no archive form is involved.
None	This option deletes the archive settings for the source form. The source form is not archived and the archive form is not deleted.

A single query to identify the records desired is also available as is a Schedule for running the archive operation.

The following is from the BMC Remedy 8.1 on-line documentation:

> To specify a limited amount of data on the form to archive, enter a qualification.
>
> For example, to archive statistics older than 30 days in the Application Statistics form, enter:
>
> **'Time Stamp' < ($TIMESTAMP$ - 2592000)**

Multiple, more complex queries are needed to handle different customers and different classes of tickets with different ages. Separate processes are also needed to manage these different queries.

A Root Request is a Tree of Records

OOTB archive forms are directly related to one and only one form. In fact, an ITSM Root Request comprises many records in many forms.

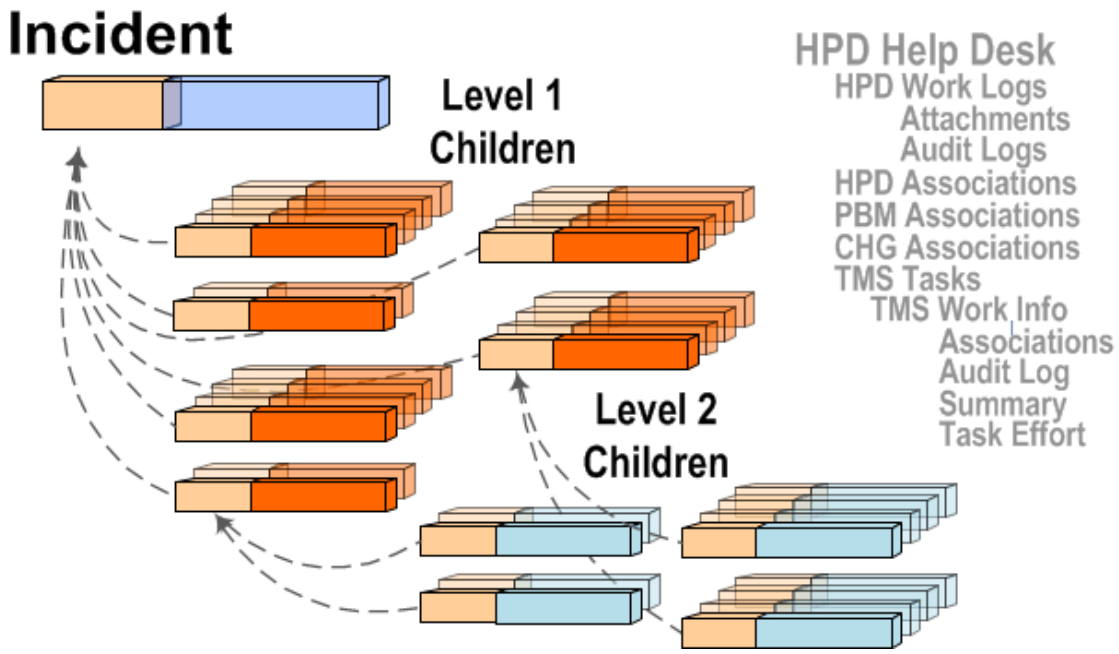

Figure 2 Forms for a single ITSM Incident

An Incident, for example, has records added in many forms as that Incident gets worked. Assignment Logs, Work Info records, Attachments, Audit logs get added to their respective forms.

An Incident can also include Tasks, for which records are added in similar child forms as the Task gets worked.

Continuing with the example of an Incident and its tasks, we can see that there are two levels of child records and forms.

The first level can be queried from data in the Incident. This includes main Task form. The second level of child forms can only be queried with data from a single record in the first level. So a query for TMS:Work Info would need data from the task which was queried by data in the Incident.

Root Form	Level	Source Form	Upper Form
HPD:Help Desk	1	CFG:Broadcast	HPD:Help Desk
HPD:Help Desk	1	CFG:Reminders	HPD:Help Desk
HPD:Help Desk	1	HPD:Associations	HPD:Help Desk
HPD:Help Desk	1	HPD:Attachments	HPD:Help Desk
HPD:Help Desk	1	HPD:Help Desk Assignment Log	HPD:Help Desk
HPD:Help Desk	1	FIN:Association	HPD:Help Desk
HPD:Help Desk	2	FIN:Costs	FIN:Association
HPD:Help Desk	1	HPD:Help Desk Audit Log	HPD:Help Desk
HPD:Help Desk	1	HPD:Impacted Areas	HPD:Help Desk
HPD:Help Desk	1	SLM:Measurement	HPD:Help Desk
HPD:Help Desk	2	SLM:AuditLog	SLM:Measurement
HPD:Help Desk	2	SLM:RuleActionNotifier	SLM:Measurement
HPD:Help Desk	1	SLM:MilestoneLogging	HPD:Help Desk
HPD:Help Desk	1	TMS:Association	HPD:Help Desk
HPD:Help Desk	1	TMS:Flow	HPD:Help Desk
HPD:Help Desk	1	TMS:Task	HPD:Help Desk
HPD:Help Desk	2	TMS:AuditLog	TMS:Task
HPD:Help Desk	2	TMS:AuditLogSystem	TMS:Task

Figure 3 An ITSM Incident's associations

The image above is extracted from a table that defines an Incident's tree of forms. Level 2 Source forms, can only be queried from data in a single level 1 Source form. Each Level 1 form is queried from data in the Incident being archived.

To find the records in FIN:Costs belonging to a single Incident, we will need the data in a single FIN:Association.

Ticket Associations

A further complication arises due to associations between root requests.

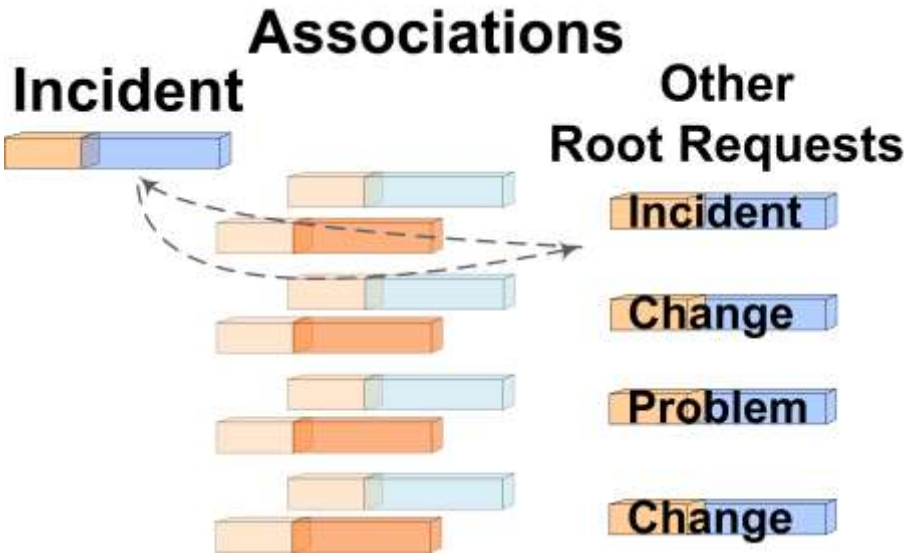

Figure 4 An ITSM Incident's associations

An incident that is ready to be archived may be associated with a Change that is not ready to be archived. In this case, the Change needs that Incident and so the Incident cannot be archived.

Any archiving solution would have to evaluate all root request associations before archiving a root request.

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Further Requirements

In many shops, ITSM has been tailored with the addition of workflow and forms. Any archiving solution would have to include customized forms.

ITSM is often used in multi-tenancy mode and customers may have different Service Level Agreements and different rules for archiving. A simple example would be archiving data after 3 years for one customer and after four for another.

Additionally, some classes of tickets may need different archiving rules. Perhaps VIP tickets should never be archived, or network tickets archived earlier than others.

There are also choices to be made over where the Archived data is to be stored.

Remedy Archive forms, by default, are built in the same database as the other ITSM forms. Archiving to these will help with performance but not database size. In addition, Remedy Archive forms do not offer the presentation that their parent forms do.

Archiving to another ITSM server is another option. In this case, the production ITSM database is reduced and the GUI features are available in in the Archive server.

Yet another option is extracting data to the file system, either as CSV file or HTML files with attachments also extracted. In the case of HTML the data presentation is natural and easy with links to attachments and dependent records. It is also searchable. This mechanism eliminates the costs of a second server and also reduces database size.

Finally, some mechanism for automating the archiving processes is needed.

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ITSM Archiving Solutions

ITSM Archiving Options OOTB

As with any BMC Remedy automations, the following options for an ITSM Archiving solution present themselves:

Option	Comments
Workflow	Incredibly difficult and long development project to handle a tree as a single unit due to the BMC Remedy paradigm of independent tables and workflow. Association check at least as difficult. Inefficient. ITSM dependencies as well as customized tables subject to change. Lack of scaling possibilities. Difficult to add customer and ticket class settings. Changes to the tree – such as an additional customized form – would be difficult and expensive to set. All in all, a multi-person, multi-year, BMC Remedy development project with a significant chance of failure.
API	For requirements as difficult as this, the API makes sense. However, most enterprises do not have the programming skills needed and do not want to develop software. A project of this complexity would be exorbitantly costly, time consuming, and subject to failure.
SQL	SQL is not recommended by BMC as the BMC Remedy layer is bypassed. Similar in project costs and complexity with the API..
AI	Atrium Integrator is capable of implementing an archiving solution but would still require an exorbitantly expensive project. Difficulties would include handling customers and ticket classes differently. Adding customized forms would be difficult.

The standard options all are an expensive and long-duration development projects – something outside the line of business for most enterprises and subject to fail.

Software Tool House's Meta-Archive delivers all of the ITSM Archiving requirements and is in production use now.

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Meta-Archive Delivers ITSM Archiving

Meta-Archive is built on Meta-Update – a data automation tool for BMC Remedy. The API is used exclusively.

The tree of records making up a root request is given by a simple spreadsheet. Adding your own customized forms is simply a matter of adding a line to the spreadsheet.

Different classes of tickets or different customers can have different ages on any root request. Granular control over associations checking is offered. Unused parts of ITSM can be easily disabled.

All in a simple spreadsheet.

Scaling up is made possible through Run Automation. Run automation is used to break up jobs into chunks and will fire and control these jobs simultaneous chunks. It can be extended across different servers and workstations.

All with no server changes or ITSM customisations needed.

Meta-Archive supports writing archive data to Archive forms, another ITSM server, or extracting attachments to the file system and generating CSV or HTML files.

Meta-Archive even offers restore!

Conclusions

Requirements Summary

- ITSM Data comprises a tree or records in many forms for each module or root request. The whole tree must be written to the archive forms before any deletions can take place. OOTB archiving handles each table independently and offers only a single query.
- Different archiving rules will be needed for different customers and different classes of tickets.
- All associations of a root request need to be checked before it can be archived.
- It should be easy to add customized forms to the root request tree that will be archived or even to the associations checks.
- A mechanism for automating and scheduling the archive process is needed that will allow for a Remedy shop's customers to be handled differently.

Conclusion

Without tremendous effort, customizations and costs, up-front and on-going, archiving trees of data cannot be done with the standard OOTB tools such as workflow.

Due to the complexity of archiving ITSM data, a standalone process using the Remedy API and loading the tree definitions for root requests from configurations is recommended.

Meta-Archive writes the whole tree as a unit before deleting the records of that tree in reverse order. Any archive failures aborts the delete process.

Meta-Archive allows customer specific ages to be set, or ages to be set based on any query. So, for example, high impact tickets can be retained longer.

Meta-Archive allows granular associations checking. If a ticket cannot be archived because of an association, it is reported in an output CSV. These files can be emailed to appropriate people.

Meta-Archive allows easy addition of customized forms and setting forms to be checked for associations. All in a simple spreadsheet.

Meta-Archive supports writing archive data to Archive forms, another ITSM server, or extracting attachments to the file system and generating CSV or HTML files.

Meta-Archive includes Run Automation that can manage and control Archive jobs for different customers or classes of tickets.