



World Wide Remedy Users Group

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Software Tool House Inc

Data Imports using Meta-Update®

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Outline

2

- Different Ways to Automate Imports
- How Meta-Update® Automates Imports
- Meta-Update® Benefits
- Sample Import (Background, Live Demo)
- A Look at Meta-Update® Scripting
- More Information

Objectives/Results

3

- Objectives
 - Compare different ways for automating imports for time to delivery, efforts and costs
 - Learn how Meta-Update® slashes costs and yields significant reductions in time to market
- Results
 - A complex CSV import to the CMDB will be demonstrated
- Skills developed
 - Understanding Import Automation Strategies
 - An introduction to Meta-Update® scripting

Ways of Automating Imports

4

ARS Import Export

Manual exports to CSVs, Excel to change values, manual imports.

Automated with staging forms and import workflow: a time-consuming, expensive Workflow Project.

Template-based Products

Must use supplied templates.

Can't use your own or handle different sources. Manual validation and firing.

Automated with staging forms and import workflow.

Panacea Migrator DSO AIE

Automated with complex Merge workflow.

May require changes to application.

Workflow Project can approach API costs.

API Perl Java c

Sure way to automate.

Expensive and slow to develop.

Usually needs outside, non-Remedy staff.

SQL

Dangerous to the integrity of the ARS system data.

Expensive and slow to develop.

Usually needs outside, non-Remedy staff.

Meta-Update Import Automating

5

Scripting Tool

Meta-Update reads a simple ASCII script file, and performs your functions through the API. Replete with look-ups, value transforms, file facilities, messaging and error handling.

No Server Changes No Workflow

No server changes at all.
No staging forms and complex Merge workflow.
No changes to OOTB applications.

No API Needed

No API programmers.
No time-consuming, expensive, frustrating development projects.
Your ARS staff easily implement any automation.

Any Sources

Handle CSVs of any type – even with line feeds.
Handle your own developed templates.
Apply automatic value transforms.
Use CSVs as Look Ups.

Efforts Costs Time

ROI is typically its first use.
Reduce efforts and time to delivery by an order of magnitude.

Meta-Update Import Automating

6

- Meta-Update is an ARS API Data Scripting Tool.

With Meta-Update, one develops proven, repeatable scripts that can be used over and over again.

Meta-Update is a new way to harness the power of the ARS API: ***with no programming at all!***

Meta-Update Import Automating

7

- ARS: **\$ Field \$**
- Meta-Update: **\$ Tag, Field \$**

Meta-Update extends the concept of a reference by specifying a record with a field. This allows multiple records' field values to be referenced.

Meta-Update Import Automating

8

- ARS: **\$ Field \$**
- Meta-Update: **\$ Tag, Field \$**

A **Tag** is a reference to an ARS record, file record, SQL row, a named variable set, a diary entry, program arguments, the environment.

Meta-Update Import Automating

9

- ARS: **\$ Field \$**
- Meta-Update: **\$ Tag, Field \$**

A **Field** is an ARS field's database name or id, a field defined in a file or SQL query, a program argument, an environment variable, assigned string variable name, regular expression extract, server or client process.

Meta-Update Import Automating

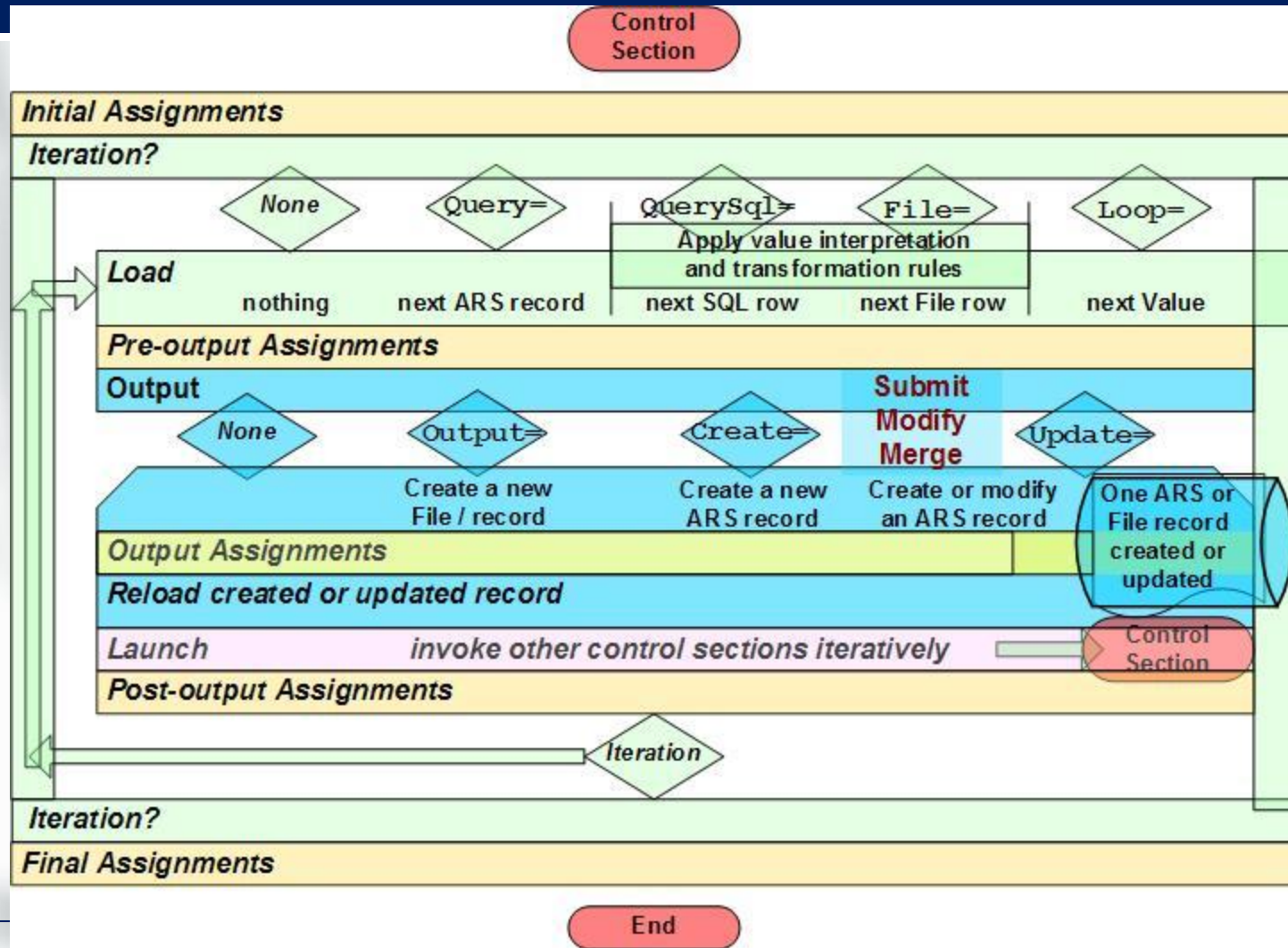
10

- ARS: **\$ Field \$**
- Meta-Update: **\$ Tag, Field \$**

With a few simple words, query results and files are iterated, records are looked up, references are made and used, and with all these **Tags** in memory at the same time, updates are made and files are output.

Meta-Update Import Automating

11



Demo: On-boarding CSV Import

12

➤ CSV CI Import

Each row of the CSV contains different equipment needing to go in different classes. A Type column in the CSV is used to determine the class and CTI from another CSV.

A UsedBy and OwnedBy column contains a semi-colon separated list of ARS User Logins and need to generate appropriate associations.

A Parent column makes a Component Relationship if non-null. The data of the CSV can be assumed to be sorted such that a parent row precedes dependent rows. The Parent's class is defined by the Parent row.

Demo: On-boarding CSV Import

13

➤ CSV CI Import: The input Asset file

Lists of Login IDs need to build CI Associations.

Needs 2nd CSV to get Class, CTI.

	A	B	C	D	E	F	I	J	K	L
1	CI-ID	hostname	Parent	UsedBy	OwnedBy	Type	Architecture	Memory	Num-CPU	Capacity
2	STH-Svr-010			bchernys		Server	Sparc	12	4	
3	STH-Lpt-010	nanook		bchernys	bchernys	Laptop	Intel	4	2	
4	STH-Lpt-020	seekoo		bchernys	bchernys	Laptop	Intel	16	4	
5	DSK-020	L:	nanook	bchernys		Disk				750 Gb
6	DSK-030	N:	nanook	bchernys		Disk				1 Tb
7	DSV-010	goat		bchernys;gabd	bchernys	Disk				
8	DSV-020	yam		bchernys;gabd	bchernys	Disk				
9	STH-Lpt-010	sth-m3		gabdule;bcher	gabdule	Laptop	Intel	2	1	
10	DSK-010		sth-m3	gabdule		Disk				1.5 Tb
11	SCR-010		seekoo	bchernys	bchernys	Monitor				

Class dependent attributes.

BMC_Disk "Size" attribute is a decimal. Needs normalization.

Demo: On-boarding CSV Import

14

➤ CSV CI Import: The Type Look-Up CSV

A	B	C	D	E	F
Type	Tier 1	Tier 2	Tier 3	Name Space	Class
Server	Hardware	Processing Unit	Server	BMC	BMC_ComputerSystem
Mainframe	Hardware	Processing Unit	Other Type of Processing Unit	BMC	BMC_Mainframe
Laptop	Hardware	Processing Unit	Laptop	BMC	BMC_ComputerSystem
Disk	Hardware	Disk Device	Disk Drive	BMC	BMC_DiskDrive

Demo: With Meta-Update

15

- No staging forms or workflow changes to design, document, implement, test, inventory!
- A single, simple Meta-Update ASCII Script file that can be built in a few hours.
- A single, simple command that can be run manually when needed or automated with ***cron*** or ***at***, or through run process filter.

Comparison of Automation Efforts

16

Methods Tasks	ARS Import Export, staging forms, workflow	Template- based Products	Panacea, Migrator, DSO	AIE	ARS Perl	Java API	c API	SQL	Meta-Update
Prepare table	4	#N/A	#N/A	4	0	0	0	#N/A	0
Develop mapping	0			1	0	0	0		0
Develop workflow	25			25	0	0	0		0
Develop Script	0			0	15	15	20		1
Dev Corrections	10			10	5	5	5		1
Documentation	5			5	5	5	5		1
QA	5			5	5	5	5		5
Total man-days	49			50	30	30	35		8
Costs permanent employee	\$30,625			\$31,250	\$18,750	\$18,750	\$21,875		\$5,000
Time to market in calendar months	2.5			2.5	1.5	1.5	1.8		0.4

Assumptions

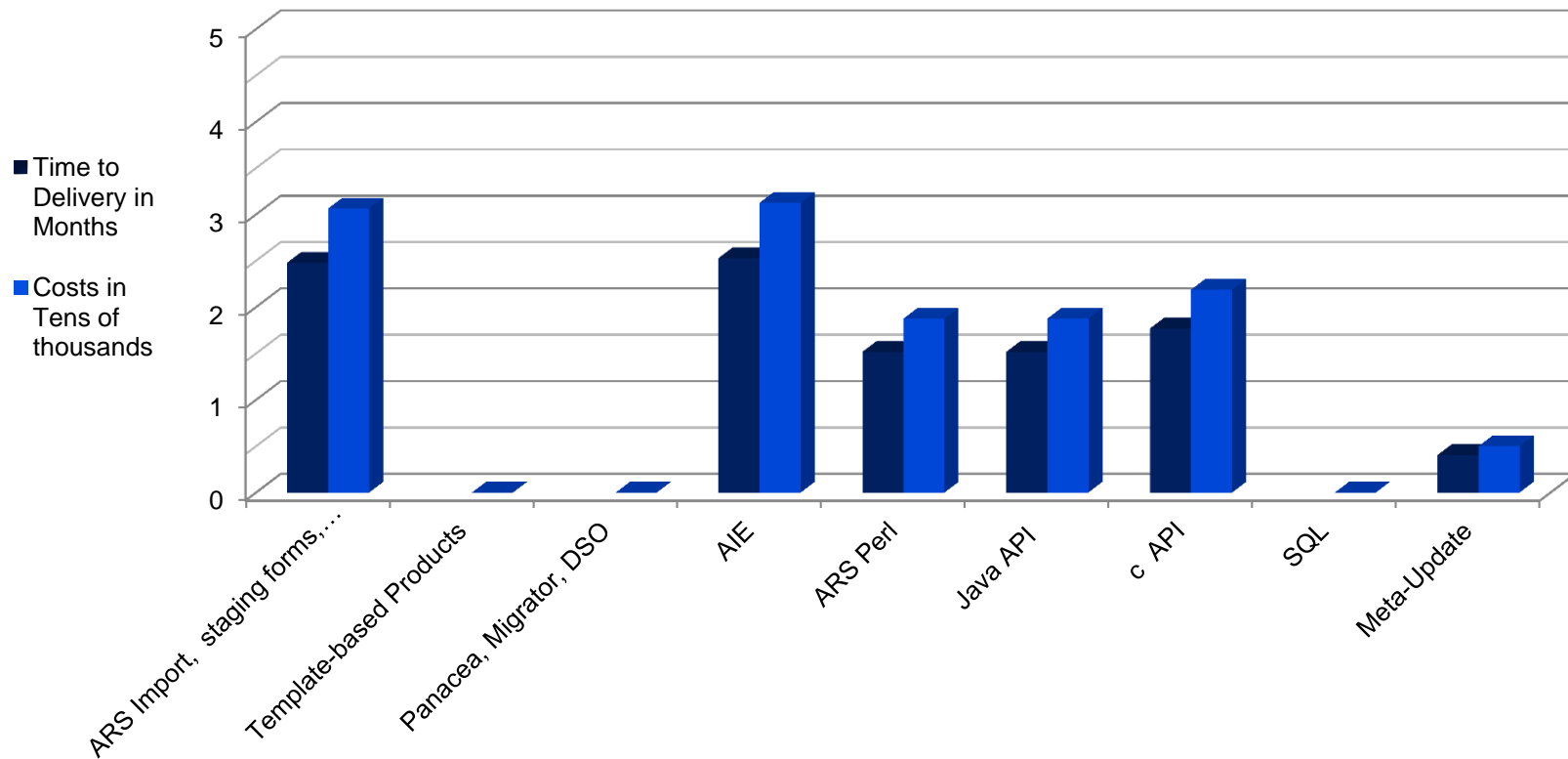
Fully burdened annual employee costs	\$150,000
Paid holidays	20
Work days in year	260

- Adequate skills in required areas assumed.
- Management overhead can fluctuate wildly and is not considered.
- Columns marked #N/A exceed staging forms and do not provide CSV handling required.

Comparison of Automation Costs

17

CSV Automation Methods Costs Comparisons



Demo: CSV

18

- We'll now move to the Demo part of the presentation.
- We'll start with an empty CMDB - zero CIs.
- We'll run the script in debug mode with an editor open to walk through a bit of it.
- We'll let it run to completion and examine the results with the User tool.

Next Steps

19

- ❑ Check out the Web Site www.softwaretoolhouse.com
- ❑ Download this script. See Learning, Script Library
- ❑ Request a Trial License with a Live Install WebEx Training session
- ❑ Contact us at: sales@softwaretoolhouse.com



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Thank You

20

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