

aras community event

2010 International Conference

Replication Workshop

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Hosted by:

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Welcome



Workshop Goals

- ❖ Understand Aras configuration options for Distribution and Replication
- ❖ Planning Guide for Replication Models

Agenda



1. Build working definitions for:
 - Distribution / Distributed
 - Replication / Replicated
2. Aras Innovator Vault Server Tutorial
3. V9.2 Replication Functions
 - Feature list
 - How to install and configure
4. Sample Scenarios

Replication / Distribution



❖ Distribution

- Separating data by class, program, or other method and then storing that data on one of several separate servers
- Separating web services processes across Servers
- Increases performance especially in large networked environments or very high concurrent user count

❖ Replication

- Storing the same data elements on more than one server
- Increases performance and also supports some level of disaster recovery

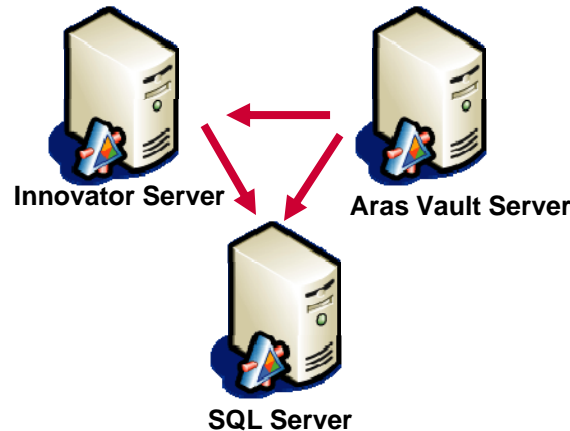
Example Aras Configurations



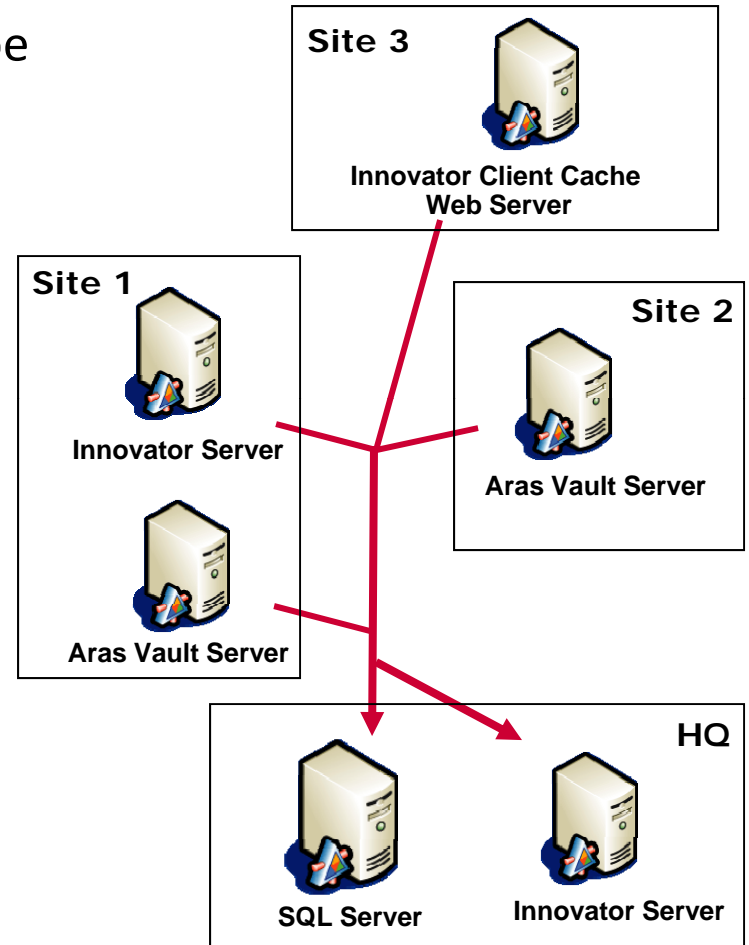
- ❑ Single Server for Initial Deployment / Small Scope
~ 200 users
- ❑ Multiple Servers for scalability
~ 500 users
- ❑ Distributed Servers for performance over the corporate WAN and large scale deployments.



- Single Server:**
- Innovator Server
 - Vault Server
 - SQL Server



- Distributed Process Servers:**
- Innovator Server
 - Vault Server
 - SQL Server



- Distributed Servers:**
- Innovator Server(s)
 - Vault Server(s)
 - SQL Server

Replication



❖ Meta Data

Less common

- Use SQL Server replication functions

OR

- Multiple Aras Innovator Instances

❖ Files

- Multiple Vault servers

- Why Replicate

- Partition network load
- Fail over / redundancy

Aras Vault Server Tutorial



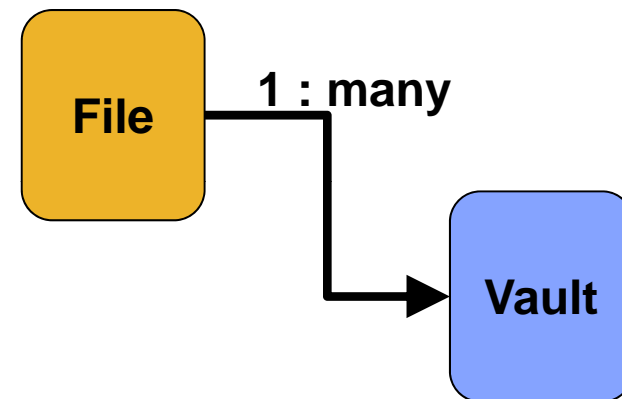
- ❖ File ID is version specific
 - Each check-in creates a new ID
 - No risk of stale files being used by mistake
- ❖ Files are stored in the operating system
 - Folder is named by the File ID
 - Allows multiple files in one Vault with the same name
 - No hashing of file name or contents
- ❖ All file Meta-data is stored in Database
 - Filename, Size, CheckSum, fileType, Permissions, etc.

Aras Vault Server Tutorial



❖ Components of the Aras Vaulting System meta data

- File ItemType
- Vault ItemType
- Located RelationshipType
- User's Default Vault



❖ Multiple Vault Servers

- Distribution
- Replication

❖ Remember Aras Innovator uses a Logical Vault approach, supported by 1 or more Physical Vaults

Aras Replication



- ❖ Distributed vaulting supported since Version 5 (in 2003)
 - ❖ Ability to do Replication also, however, need custom code
 - ❖ Prepackaged Replication capability is currently in QA, scheduled for 9.2 SP1
 - ❖ Prepackaged Replication capability will be Subscriber Only
-
- Fits Aras open source model. No restriction on what users can develop themselves, but subscribers get the completed, packaged and supported solution.
 - Straightforward to develop your own Replication processes

Aras Replication Models



❖ OnDemand

- User asks to view file that is not in his local Vault
- Administrator or Product Manager requests a File transfer between Vaults

❖ OnEvent

- Lifecycle promotion to In-Review or Released triggers the Replication

❖ OnChange

- File check-in triggers a Replication of the updated File

Aras Replication Models



❖ When should the File transfer take place

- Immediately
- Scheduled batch process

❖ Business Rules

- By File Type
- By Vault
- By User (or group)
- and using Method logic for custom rules

Aras Replication Approach



❖ Multiple Vault Servers

- Each Vault Server represented by an Item in Aras Innovator
- New API functions added to the VaultServer.aspx

[alternative, from my home grown solution, place a new program MyReplication.aspx in the vault server folder]

❖ Queue Table ItemType

- Records the need for a File transfer transaction
- Allows monitoring of queue, re-try on failure, & reporting

❖ Business Logic

- Methods for Queue processing, adding Files to Queue, etc.

9.2 SP1 Installation Steps



- ❖ Install a 2nd (3rd, 4th,...) Vault Server
- ❖ Assign default Vaults to each User
- ❖ Install Innovator Scheduler for batch File transfers
- ❖ Add Rules to each Vault
 - Files of Type X from this Vault should move to which Vault, When, and under What circumstances
- ❖ Add events on Lifecycles
 - Files attached to Documents that are released should be replicated to a Vault at a remote manufacturing site

Admin documentation will be released with the SP

9.2 SP1 – Configuring a Rule



The screenshot shows the 'Vault - Default - Windows Internet Explorer' window. The main content area displays the configuration for a 'Vault' with the following fields:

- Name: Default
- Vault Uri: \${HTTP_PREFIX_SERVER}\${HTTP_HOST_SERVER}\${HTTP_PORT_SERVER}\${HTTP_PAT...

Below the configuration is a 'Replication Rule' section with a toolbar and a table of rules.

Name	Initiator Type	Replication Mode	Filter [...]	Replication Type	Is Active	Label
World	onChange	Scheduled		Copy	<input checked="" type="checkbox"/>	On changed txt fil...

The status bar at the bottom indicates 'Ready' and '0 Items found.' The Aras Innovator logo is visible in the bottom right corner of the application window.

9.2 SP1 – Configuring a Rule



Replication Rule - onChange On changed txt files - Windows Internet Explorer

File Edit Views Search Actions Reports Tools Help

Initiator Type: onChange
Filter Method:
Replication Mode: Scheduled
Replication Type: Copy
Is Active:
Replication Time: 0330
Timeout: 0100
Label: On changed txt files

File Types Target Vaults

Actions Pick Related Hide Search Criteria

Name	Description	Ext.
------	-------------	------

Ready 0 Items found. aras INNOVATOR

Scenarios



Examples

- ❖ Replicate all Files to all Vaults
- ❖ Replicate all Files added to one of the remote Vaults to a single master Vault to simplify backups
- ❖ Replicate CATIA CAD files from Vault A to Vault B when they are Released
- ❖ Replicate Files associated with a Product Line from the US Vault to the Chinese Partner Vault