



HIGH AVAILABILITY for IBM i

HA4i - High Availability Solution

Features

- Easy installation and configuration
- Uses Remote Journal technology
- Fully automated replication processes
- Automatic Profile & Password replication
- Complete auditing functionality
- Fully automated role-swap
- Optional many to one, one to many
- Reduced system foot print

System Requirements

- IBM i OS Version 6 release 1 and up
- Suitable network connection between the source and target systems
- Journaling for both object and database replication, if you do not have journaling enabled, you will need sufficient resources to support the journaling processes



HA4i

is a premier High Availability

solution of the IBM i and its predecessors (AS/400, iSeries, Systemi, i5, etc). Developed from our experience with other High Availability solutions and customer requests, HA4i delivers a flexible and simplistic approach to implementing a High Availability offering.

New features and enhancements have taken the product beyond its original concepts. The product was completely rewritten to take advantage of ILE concepts which has resulted in a better and leaner product which uses less resources to carry out the task.

HA4i is a full function High Availability Solution that provides the ability to securely replicate your important system data and objects between systems. HA4i is running in many high profile and very demanding IBM i environments with extremely high customer satisfaction levels. It is constantly evolving with

new enhancements and improvement being delivered regularly.

The latest version, **HA4i Multi-Node** brings the concept of one to many or many to one. Scenarios such as providing a HA instance for fast switching, plus a DR instance for infrastructure failure protection can be implemented.

Cost

HA4i is attractively priced offering superior functionality at a lower cost.

It has been developed with "ease-of-use" at its core, this reduces the cost of ownership and provides an easily manageable environment most IBM i shops.

Installation and fix management is carried out using the same commands used to manage the OS. Licensing is IBM CPU tier based.



75 First Street, Suite 206, Orangeville, Ontario, Canada, L9W 5B6

+1 (519)-940-1192

WWW.SHIELDADVANCED.COM



Database File replication

Shield developed its own apply process which uses remote journal technology as the intersystem transport. It applies the entries to a remote database using our proprietary process and can handle any journal entry found in a User Journal. This has brought a number of new benefits, none more important than being able to enhance the apply process based on customer requirements.

Object Replication

Object replication is triggered using the QAUDJRN. As soon as entries are placed into the journal receiver, they are read and if necessary a replication request is placed in the replication queue. This ensures the replication process only replicates the latest copy of an objects and removes duplication of effort. The number of objects supported by the replication process continues to grow, as customers require additional support we are able to introduce it very quickly.

IFS Replication

The IFS can be replicated using the object replication processes (based on the QAUDJRN), or using the user journal process (Journal entries are applied on the target using the

apply process). The object replication process will automatically filter out any requests for those objects which are also being replicated using any user journal configured to HA4i.

DLO Replication

Added by a recent update it uses the QAUDJRN to signal changes that are sent to the remote system.

Auditing

Auditing is important for any High Availability Solution. Even if the apply process does everything it should, there can be times when audits provide additional functionality. The audits available through HA4i have seen many improvements as a result of customer feedback. This has resulted in automated repair capabilities and better object audits.

Monitoring

HA4i has a number of tools which significantly ease the burden of managing the product. An automated process can be configured to run at a set frequency that will check that the processes which should be running are, plus ensure the remote journal links are kept active. It can be configured to notify any number of users if problems are found (even if they are corrected) using a number of notification methods.

HA4i comes with an Email capability which can be configured to send

notifications out to pre-determined users via your own internal SMTP server. The PHP interface also has colour coded notifications that provide the user with instant visual notification that problems exist.

Web-based Interface

HA4i can be controlled entirely using the standard UIM interface, but the advantages of the web based interface, developed using PHP and the Easycom™ toolkit, provide the user with a lot more information due to the additional space available to a web browser. The interface is secured using the IBM i sign on and cannot be used without the user entering their credentials.

Implementation

HA4i is packaged as an IBM LPP, this means the install and management uses the same IBM commands you use for installing and maintaining the IBM OS. To install, you simply download the base product as a save file from the website, and use the RSTLICPGM command to install and configure the product. The updates we provide are packaged as IBM PTFs, they will be posted to our website to allow download for those users who are under a current maintenance agreement for the product. Installation takes minutes and uses the IBM LOD/APYPTF commands.



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Configuration

The installation process gathers the required common configuration data and simple to understand menus offer the ability to configure the application specific data prior to starting the replication process. Once you have configured each side of the replication process you can start the programs and HA4i will maintain a duplicate copy of the configured data and objects on the remote system.

Management

HA4i attempts to recover from most replication errors without notification to the user, however, if an error is found which it cannot rectify, it will pass that notification to the user in a number of ways.

For those users who do not obtain the PHP interface there are a number of screens which are provided to indicate how the replication process is performing. Any errors which are found that cannot be rectified will have notifications sent to these management screens plus a message queue.

The PHP interface simplifies this even further by providing a unified view over each system with colour coded

indicators for the errors. Commands and menu options provide the user with full control over the replication processes and recovery of failed requests which make the product very simple to manage on an ongoing basis.

Services Available

Installation and configuration

HA4i is able to be installed by most IBM i administrators, however, if you need assistance we provide highly trained consultants who will be able to install and configure HA4i.

Bespoke development

If you need additional programming support to develop additional tools not provided by HA4i, or need assistance developing the exit programs used by HA4i in role swaps, Shield has the expertise to help.

Project management

Providing a fully recoverable High Availability / Disaster Recovery environment can be challenging, we can offer expert project management to ensure your project is delivered on time and within budget.

Remote management

We know how to manage a High Availability environment and have a

deep understanding of the technology used within our replication products. Let us use our knowledge and skill to manage your environment and allow your staff to undertake other important tasks.

Hosting

If you need to have your High Availability / Disaster Recovery hosted outside of your company we can offer the service via one of our partners.



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