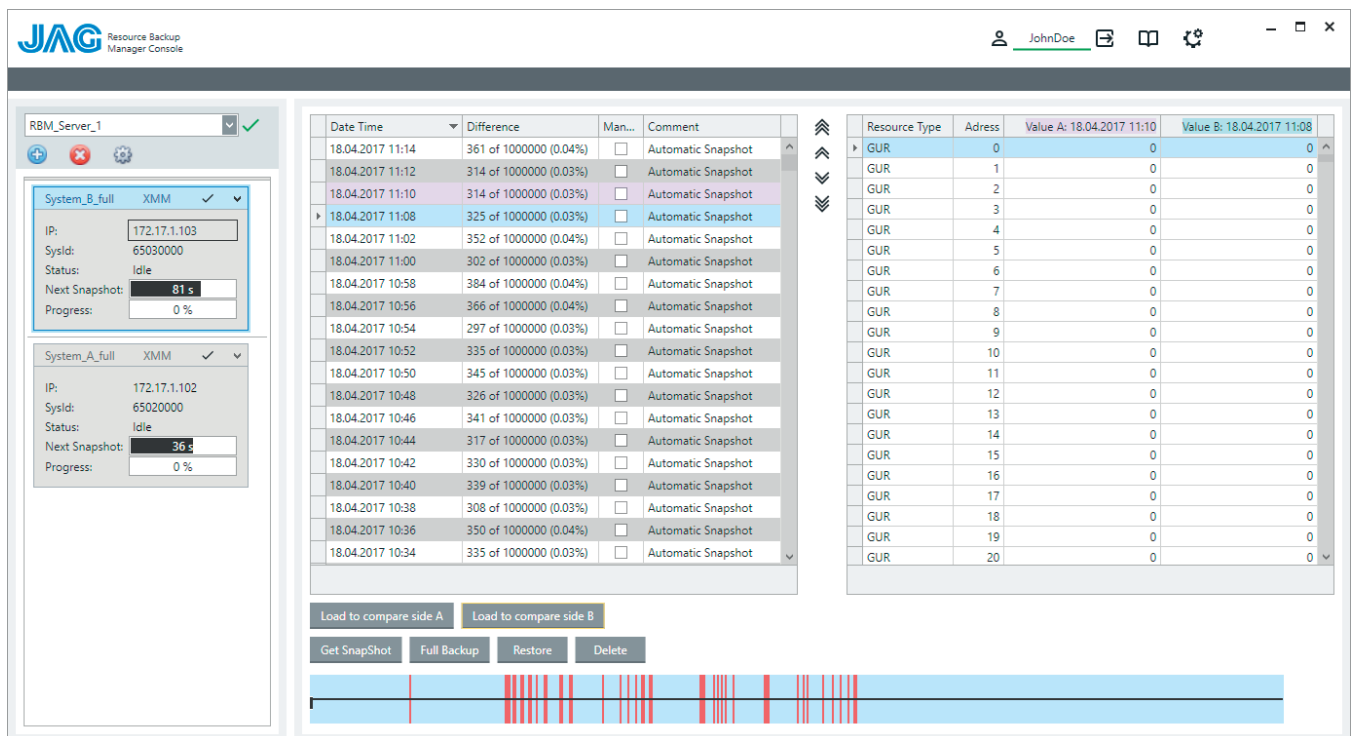


# JAG RBM Resource Backup Manager



The screenshot displays the JAG Resource Backup Manager Console. On the left, there are configuration panels for 'System\_B\_full' and 'System\_A\_full', showing IP addresses, system IDs, and snapshot progress. The main area features a table of snapshots with columns for Date Time, Difference, and Comment. Below this is a table of resources (GUR) with columns for Resource Type, Address, and values for two different snapshots. At the bottom, there are buttons for 'Get Snapshot', 'Full Backup', 'Restore', and 'Delete', along with a progress bar.

Date Time	Difference	Man...	Comment
18.04.2017 11:14	361 of 1000000 (0.04%)	<input type="checkbox"/>	Automatic Snapshot
18.04.2017 11:12	314 of 1000000 (0.03%)	<input type="checkbox"/>	Automatic Snapshot
18.04.2017 11:10	314 of 1000000 (0.03%)	<input type="checkbox"/>	Automatic Snapshot
18.04.2017 11:08	325 of 1000000 (0.03%)	<input type="checkbox"/>	Automatic Snapshot
18.04.2017 11:02	352 of 1000000 (0.04%)	<input type="checkbox"/>	Automatic Snapshot
18.04.2017 11:00	302 of 1000000 (0.03%)	<input type="checkbox"/>	Automatic Snapshot
18.04.2017 10:58	384 of 1000000 (0.04%)	<input type="checkbox"/>	Automatic Snapshot
18.04.2017 10:56	366 of 1000000 (0.04%)	<input type="checkbox"/>	Automatic Snapshot
18.04.2017 10:54	297 of 1000000 (0.03%)	<input type="checkbox"/>	Automatic Snapshot
18.04.2017 10:52	335 of 1000000 (0.03%)	<input type="checkbox"/>	Automatic Snapshot
18.04.2017 10:50	345 of 1000000 (0.03%)	<input type="checkbox"/>	Automatic Snapshot
18.04.2017 10:48	326 of 1000000 (0.03%)	<input type="checkbox"/>	Automatic Snapshot
18.04.2017 10:46	341 of 1000000 (0.03%)	<input type="checkbox"/>	Automatic Snapshot
18.04.2017 10:44	317 of 1000000 (0.03%)	<input type="checkbox"/>	Automatic Snapshot
18.04.2017 10:42	330 of 1000000 (0.03%)	<input type="checkbox"/>	Automatic Snapshot
18.04.2017 10:40	339 of 1000000 (0.03%)	<input type="checkbox"/>	Automatic Snapshot
18.04.2017 10:38	308 of 1000000 (0.03%)	<input type="checkbox"/>	Automatic Snapshot
18.04.2017 10:36	350 of 1000000 (0.04%)	<input type="checkbox"/>	Automatic Snapshot
18.04.2017 10:34	335 of 1000000 (0.03%)	<input type="checkbox"/>	Automatic Snapshot

Resource Type	Address	Value A: 18.04.2017 11:10	Value B: 18.04.2017 11:08
GUR	0	0	0
GUR	1	0	0
GUR	2	0	0
GUR	3	0	0
GUR	4	0	0
GUR	5	0	0
GUR	6	0	0
GUR	7	0	0
GUR	8	0	0
GUR	9	0	0
GUR	10	0	0
GUR	11	0	0
GUR	12	0	0
GUR	13	0	0
GUR	14	0	0
GUR	15	0	0
GUR	16	0	0
GUR	17	0	0
GUR	18	0	0
GUR	19	0	0
GUR	20	0	0

## Summary

The JAG PdiCS\* Master Modules play an important role in the JAG PdiCS System, as they take care of the recipe interpretation and execution and they control the whole process.

As a consequence, the software resources of the Master Modules (registers, strings, timers and flags) contain valuable data regarding the current state of the process and the recipe execution.

The JAG Resource Backup Manager allows creation and restoration of backups of the software resources of one or several Master Modules.

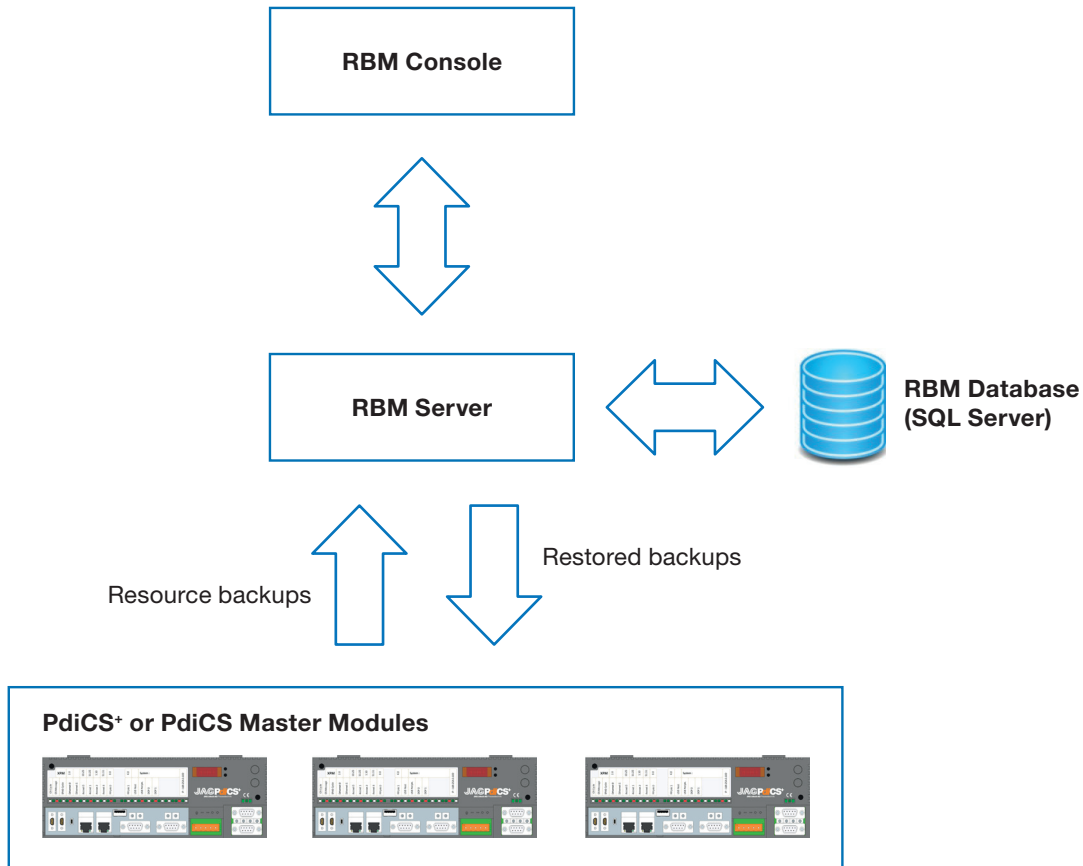
Typical applications include

- speeding up and simplifying the recovery process in the event of a module failure by creating automated backups at fixed intervals
- streamlining the test and commissioning process by creating manual backups when the plant is in a specific state

## Features and benefits of the JAG RBM

- RBM Console (desktop application)
  - Connect to RBM Servers
  - Define the connections to the Master Modules and the resources to be backed up
  - Create manual backups
  - Compare backups to decide which one should be restored
  - Restore backups
- RBM Server (windows service)
  - Create automated backups at fixed intervals
  - Event driven creation of backups (triggered by the user or by the Master Module)
  - Backup retention management
- RBM Database
  - MS SQL database that holds the backups and the configuration of the RBM Server

## System overview



### Creating consistent snapshots by using JAG PdiCS+ XMM-EM Master Modules

The JAG Resource Backup Manager can be used with any JAG PdiCS+ or JAG PdiCS Master Module, but creating snapshots requires the use of JAG PdiCS+ XMM-EM modules.

Thus, by creating a mirror copy of the resources in the working memory of the XMM-EM module, it is possible to create backups where all resources date from exactly the same moment in time.

Use of the Resource Backup Manager with XMM-EM modules is recommended for plants that process valuable products, as it allows minimization of the risk of product loss.

### System requirements

Component	Requirements
Client PCs for the RBM Console	One or several PCs with Windows 7/8/10. Live connection to the RBM Server with which the user is currently working and the corresponding SQL Server.
Server for the RBM Service	Windows 7/8/10 machine. Live connection to the Master Modules and the SQL Server.
SQL Server	MS SQL Server 2014 or later

### Licensing

Licensing of the Resource Backup Manager consists of two kinds of licenses:

- A basic license per RBM server that allows manual resource backups of an unlimited number of Master Modules
- An additional license per Master Module with automated backups

The number of RBM Consoles is not taken into account for licensing purpose.

License	Order number
RBM basic license (per RBM Server)	M022.130.010.300
RBM Master Module license (per Master Module with automated backups)	M022.130.010.310