



RiverSMART- RiverWare Study Manager and Research Tools - Overview and Demonstration

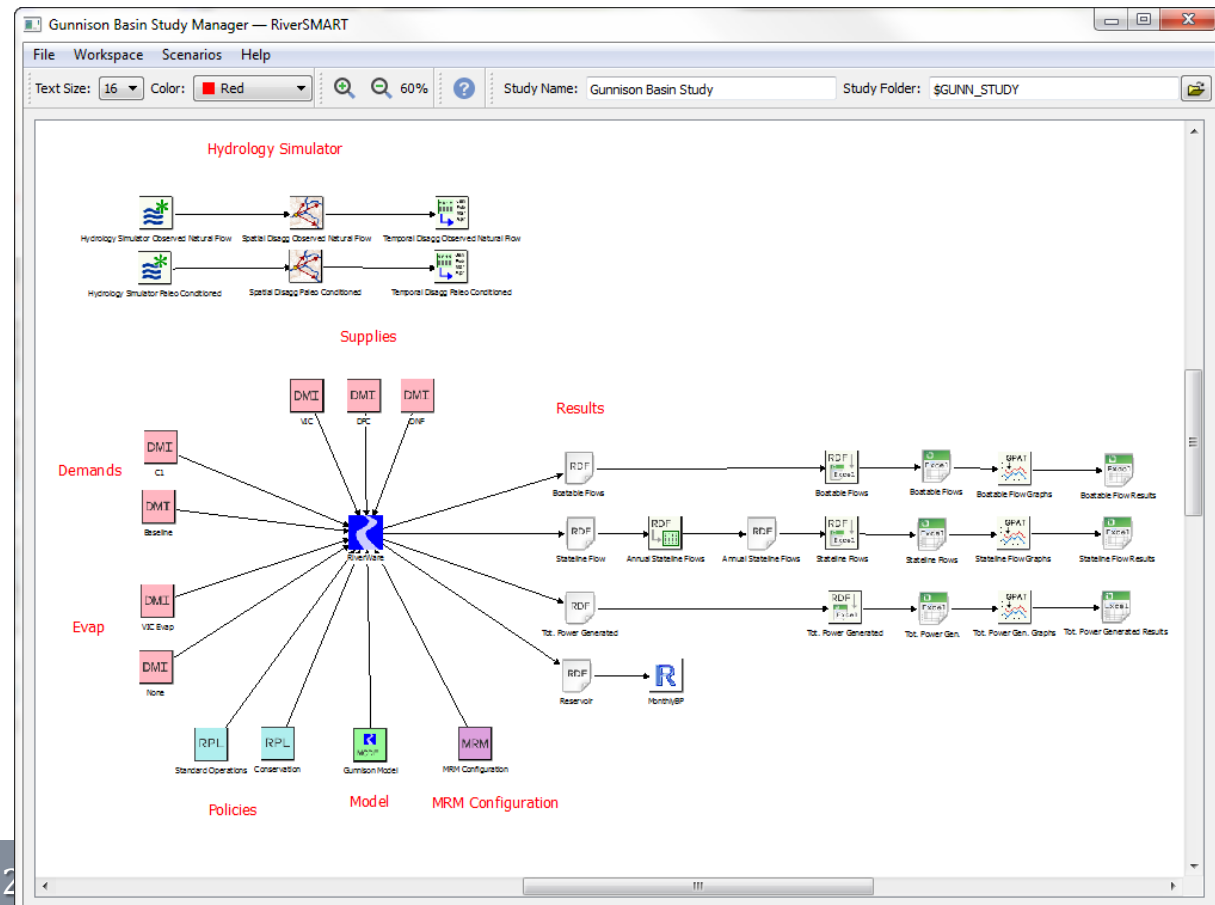
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RiverWare Study Manager and Research Tools (RiverSMART)

Facilitates large studies with many combinations of inputs by organizing and executing scenarios

- Develop Scenarios that consist of combinations of alternative
 - Ensembles of Hydrologies
 - Demands
 - Operating Policies
 - Infrastructure
- Provide Graphical Representation
- Manage Execution
- Organize Outputs
- Archive the study



RiverSMART Architecture

- Framework for communication of independent process or programs called plugins
- An instance of a Plugin is called an **Event**

Current RiverSMART Plugins

 RiverWare

 RiverWare Model

 RiverWare Policy

 RiverWare MRM

 RiverWare DMI

Hydrology

 Hydrology Simulator

 Spatial Disaggregation

 Temporal Disaggregation

Post Processing

 RDF to Excel

 RDF Annualizer

 GPAT Graphs

 R Plugin

Demonstration

Generating Scenarios

- RiverSMART organizes your study into combinations of alternatives called **Scenarios**
- Possible Scenarios are created by combinations of:
 - Input DMI Categories
 - Policies
 - Models
 - MRM Configurations
- Deactivate scenarios not of interest
- Create Naming Conventions

Item	Sample	Count
DMI Category: Inflows	Paleo, Observed, Conditioned	3
DMI Category: Demands	No Growth, Medium Growth, Large Growth	3
Model		1
Policies	Current Ops, Flexible Ops	2
MRM Configuration		1
	Scenarios:	18

Running Scenarios

- **Select Scenarios to Simulate**
 - Choose scenarios from a list
 - See which ones have been previously run
- **Simulate Scenarios**
 - See Distributed Run Status dialog
 - Combine outputs into RDF files

Post Processing

- Scenario Processing – Events that act on each scenario
- Scenario **Set** Processing – Events that act on multiple scenarios
 - GPAT
 - R Scripts
- Results are files in the study folders

Recent Enhancements

- Many User Interface improvements
- Tracking Internal and External Modifications
- Re-generate and re-simulate scenarios
- Placeholder Events
- Plugins for
 - R Scripts
 - GPAT Graphs

Closing Remarks

- RiverSMART could be a really useful tool for many studies
 - More usage will help iron out the crinkles
 - Let us know how it goes and how we could assist
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- Video Demonstration and User Guide:
<http://www.riverware.org/tutorials/RiverSmart/index.html>