GURU Product Brief

RI Guru

What is Guru?

Cassini is a collection of focused modules functioning as a single unit. Guru is the nervous system that connects it all together. It's an application that works in the background with the system's software to provide the user with three important tools in one:

- An easy to use interface for controlling the release of software updates and applications.
- A tool for locating and organizing test configuration files, resources, and data.
- An automated repository and backup service that makes test design iteration and setup recovery simple.

Communication Hub

Guru's integrated networking capabilities provide a secure and dedicated link to pass data between testers, servers, and third-party services. Data flow and permission controls are built in and accessed through the Guru Agent interface. This assistant simplifies networked data sharing, facilitating management of large amounts of test information. Distribution of test setups or data between multiple local or remote Cassini's is an integral part of Guru.

Network to Other Gurus

Guru connects to other Gurus using a hierarchy structure to control the flow of information.   If a requested file on a local drive cannot be found, Guru automatically requests it from its parent Guru.   Data, tester configurations, and test code can be shuttled from one tester to another through this framework for quick distribution and validation. Files can be searched and selected using keys and values assigned by the user, for example, to send any new data to a special FTP account for processing by a separate database. The setup is highly flexible allowing for any number of networked schemes that can be expanded to suit a customers specific needs.

The flowcharts below demonstrate Guru's hierarchy structure for distributing information.   Figure 1 shows a simple setup that can receive updates or using a server,
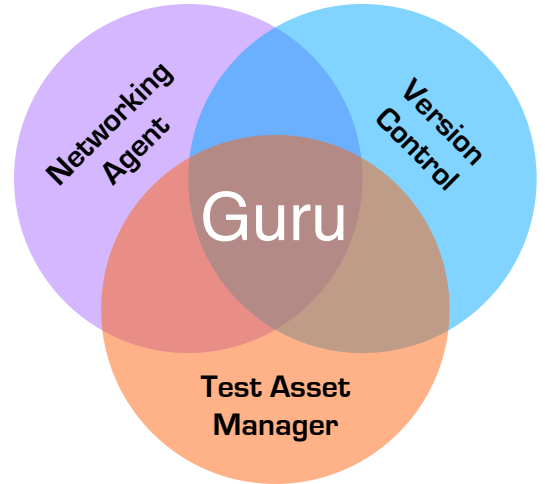
keep continuous backups of tester setups. Figure 2 shows a more advanced scheme for networking Cassini testers on multiple sites in order to control "development" releases to "production" and share tester configurations, test code, and data between locations.

Guru is Secure

Security is a high priority when sharing information between sites, and Guru has multiple built-in safeguards:

- *Guru only talks to Guru.* Every file is digitally signed by the Guru which created it. When an object is received the signature is verified and if the signer is unknown to the receiver, the document is not trusted.
- *Files can be encrypted.* A user can set a generated key for files that only a matching key can decrypt and provide access.   The encryption/decryption process is done automatically so the user is not burdened with insuring data protection.
- *Connections are firewall-safe.* Guru was designed to be compliant with existing network security or as a stand alone to prevent intrusion and block unauthorized access.
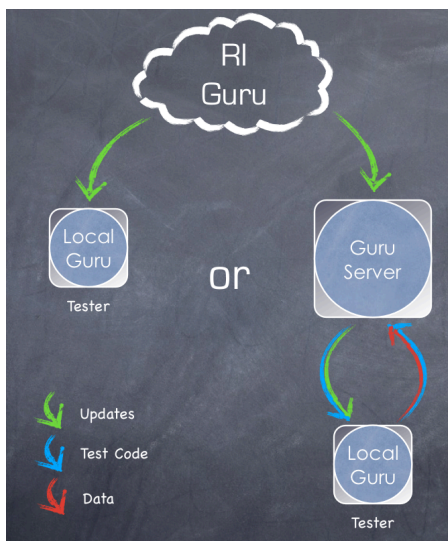
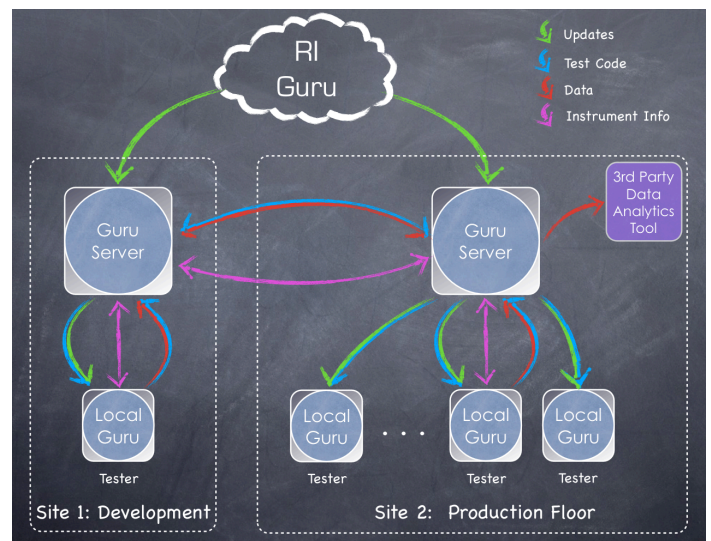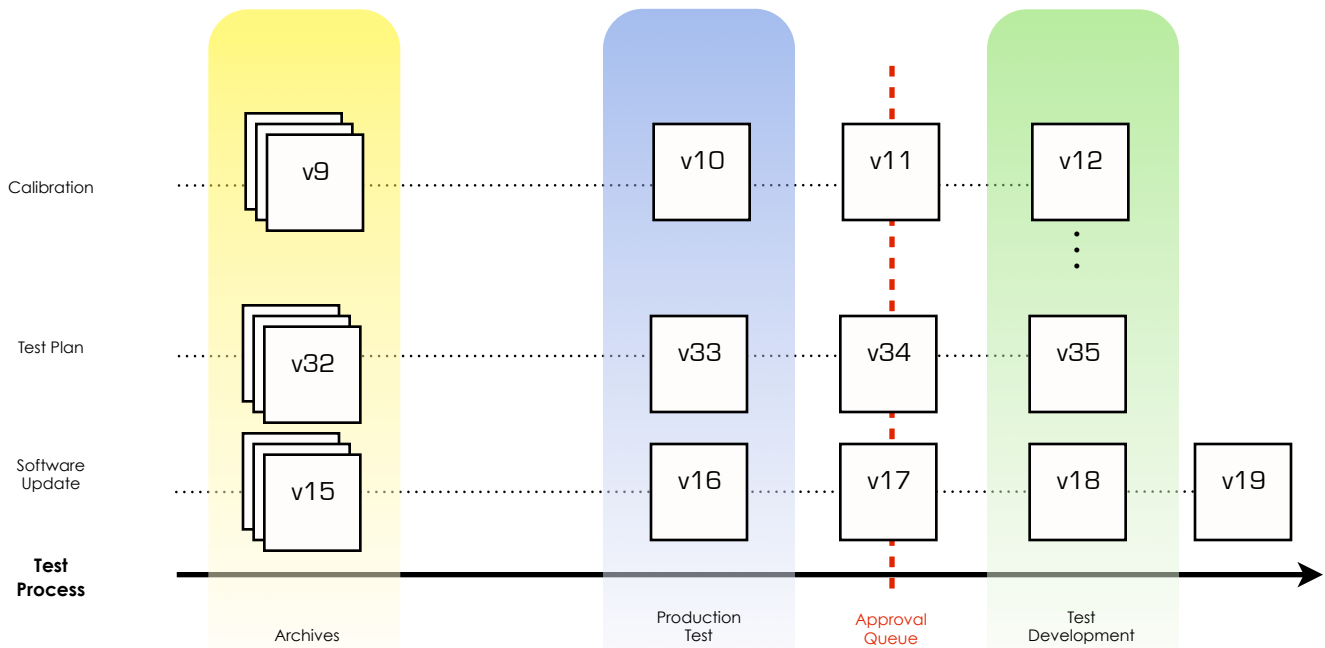Figure 1: Simple or Local Guru Data Flow

Figure 2: Multi-Location Guru Data Flow

	Archives	Production Test	Approval Queue	Test Development	
Calibration	v9	v10	v11	v12	
Test Plan	v32	v33	v34	v35	
Software Update	v15	v16	v17	v18	v19

Test Process

Automated Backups

Each RI ATE system has a local Guru that backs up every test, configuration, and resource file automatically to a "backup" Guru server. If the controller fails on Cassini, getting back up is as simple as rolling out a new controller, inserting the Guru key, and plugging in the network cable. As soon as the tester is powered up, the empty Guru will request files from the backup Guru automatically.
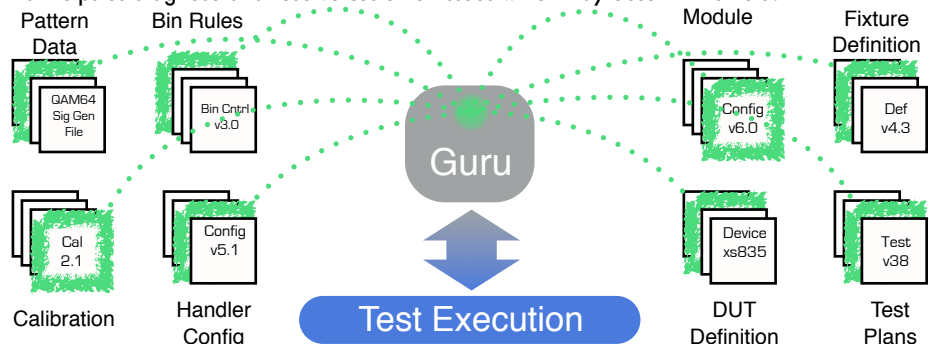
Test Distribution

Guru provides control mechanisms for reliable and simple software release for both development and production use. New software enhancements can be tried without disrupting production. After release, test plans, configurations, and software versions are locked, permission to modify files or setups can be restricted, and the user interface is simplified to display only essential controls to execute tests

Managing Information

Cassini calls upon handler configurations, test patterns, calibration data, fixture definitions, etc to execute a test. Guru keeps these resources organized and linked to their respective test plans. When files are created or modified, they are shown chronologically so there is a revision history that mirrors the test iteration process. Guru also allows the creation of "metadata," or tags and values assigned to these files by the user in order to group them. For example, a test plan, handler config, and test pattern can have tags such as "in development" or "released to production" associated with them. This allows the user to locate and load them as a set or to easily control which ones should or should not be seen by operators on the production floor.

Guru Helps RI Support the Tester

We maintain a Guru server at Roos Instruments which distributes software updates to our customers. It also gives customers a way of sending back data as "service request" information that helps us diagnose and resolve customer issues which may occur in the field.

Pattern Data — QAM64 Sig Gen File

Bin Rules — Bin Cntrl v3.0

Module — Config v6.0

Fixture Definition — Def v4.3

Guru

Calibration — Cal 2.1

Handler Config — Config v5.1

Test Execution

DUT Definition — Device xs835

Test Plans — Test v38

For further information contact sales@roos.com or see www.roos.com