



SIP Application Testing AGNITY SIPr 2.0

Open-source and professional editions for simulating and testing mobile, fixed-line, converged and IMS applications.

With the emergence of IMS, Web 2.0 and SOA, a new breed of converged applications and services are mushrooming in the market. The quality assurance of these applications by means of testing is posing a great challenge for manufacturers and service providers. In addressing this gap AGNITY has taken a unique approach and created an Application Testing Framework called SIPr™.

SIPr (pronounced 'sipper') is built on an easy-to-use and powerful APIs that provide an application server style programming model and a range of constructs using the Ruby programming language for writing of complex test cases. SIPr is fully configurable at each layer of the protocol stack enabling developers to write and verify complex test cases in minutes.

Tests are created in an iterative fashion allowing for automation and incremental testing. SIPr cover a wide range of test cases including multi-protocol test cases like SIP, HTTP and Diameter. Since SIPr is also a simulation environment, any call flow conceivable can be simulated rapidly. The SIPr axiom is "simulate any call flow – no exceptions."

Introducing AGNITY SIPr™ 2.0

SIPr 2.0 is a comprehensive toolkit for converged SIP and HTTP testing with a robust media implementation. Version 2.0 completes the offering in the converged IMS space and provides the users complete flexibility and control. With SIPr 2.0 there is no need to leave the test bench to perform any kind of application simulation or testing, thereby saving time and money in the development and quality assurance process.

In trials and actual testing, SIPr 2.0 has reduced test cycle times by an average of 75 percent. SIPr is fully configurable at each layer of the protocol stack, enabling developers to write and verify complex test cases in minutes. Tests are created in an iterative fashion allowing for automation and incremental testing.

SIPr 2.0 – Key New Features

- IMS/ISC compliance
- Digest Server authentication support
- Presence event and registration event support
- TCP Transport support
- NAT traversal
- Simpler gem installation
- Simplified load generation, any test can be run under load
- Reworked and simplified Media APIs
- Integrated Webserver for converged SIP/HTTP Server tests

SIPr 2.0 is the most complete open-source testing platform available to developers. Supporting end-to-end testing from the network layer to the application layer, SIPr offers complete SIP/ISC and IMS support.



Test Frameworks

SIPr Test Frameworks (STFs) include best-of-breed tools and technologies from both AGNITY and the open source community. In its next release of SIPr, AGNITY plans to include the Diameter interface and other enhancements aimed at delivering the most comprehensive test environment for IMS and converged applications.

The SIPr API supports various voice, data and converged applications. Conceptually the API is similar to Java SIP Servlets API, but with richer and more powerful constructs. Any converged application—consisting of SIP, HTTP and RTP—can be tested with SIPr. Typical simulation models include:

- SIP UA, SIP B2BUA
- SIP Proxy Server, SIP Registrar, SIP Redirect server
- SIP Subscribe/Notify, SIP MWI
- IMS/3GPP Enablers
- SIP converged with HTTP, including testing mashups
- RTP Media testing with multiple codecs

Standards Supported

A number of RFCs, such as RFC 3261 (SIP), 3262, 3265 (SIP Specific Event), 2327 (SDP), 2617 (Digest), 2833 (DTMF), 1889 (RTP), are natively supported by SIPr.

Since SIPr is an application development framework, complying with a new RFC that does not change any basic protocol behavior is simple work. Even for stack-affecting changes, hooks are provided at each layer to modify the default behavior of the stack by writing extensions.

Operating Environment

Operating System supported: Windows, Linux

Language supported: Ruby

Full Support for IMS and Application Integration/Deployment

SIPr 2.0 offers complete SIP/ISC support including several additional RFCs required for IMS. Not only does it offer complete toolkit to create user agents but it is the only tool in the marketplace that can be used to simulate any IMS entity in the network.

This not only helps to parallelize the testing effort but it is an invaluable aid in interop/acceptance testing phase. For example, testing an application and its behavior on specific vendor equipment can occasionally lead to anomalies and delays if the application does not behave as anticipated.

With SIPr 2.0, the development team can quickly simulate hardware equipment behavior or act like a B2BUA and modify the SIP message to unblock the testing. This is a great time saver and gives the development team time to work on addressing non-compliant behavior in parallel.

Get started for FREE at <http://sipr.agnity.com>



About AGNITY, Inc.

AGNITY is a global applications solutions and technology services company with the deep knowledge and proven experience required to help businesses, network equipment manufacturers and service providers design, develop and deploy application solutions rapidly and cost-effectively. Founded by industry veterans, AGNITY is a team of trusted advisors to communications service providers and enterprises with best-in-breed strategies and solutions as well as proven R&D skills to help lead our clients' solutions and product development.

AGNITY is headquartered in Fremont, California, with development centers in Noida, India, Kitchener, Ontario, and Richardson, Texas. For more information, visit www.agnity.com.



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