



Using TTCN in IPv6 Ready Interoperability test

About IPv6 Ready

Why we try to use TTCN-3 ?

What we done

Next steps

Think again of TTCN-3

IPv6 Ready is ...

- The IPv6 Forum (<http://www.ipv6forum.com>) IPv6 Ready Logo Program is a conformance and interoperability testing program intended to increase user confidence by demonstrating that IPv6 is available now and is ready to be used.
- The IPv6 Ready Logo Committee mission is to define the test specifications for IPv6 conformance and interoperability testing, to provide access to self-test tools and to deliver the IPv6 Ready Logo. The Key objectives and benefits of the IPv6 Ready Logo Program are to:
 - Verify protocol implementation and validate interoperability of IPv6 products.
 - Provide access to free self-testing tools.
 - Provide IPv6 Ready Logo testing laboratories across the globe dedicated to provide testing assistance or services.

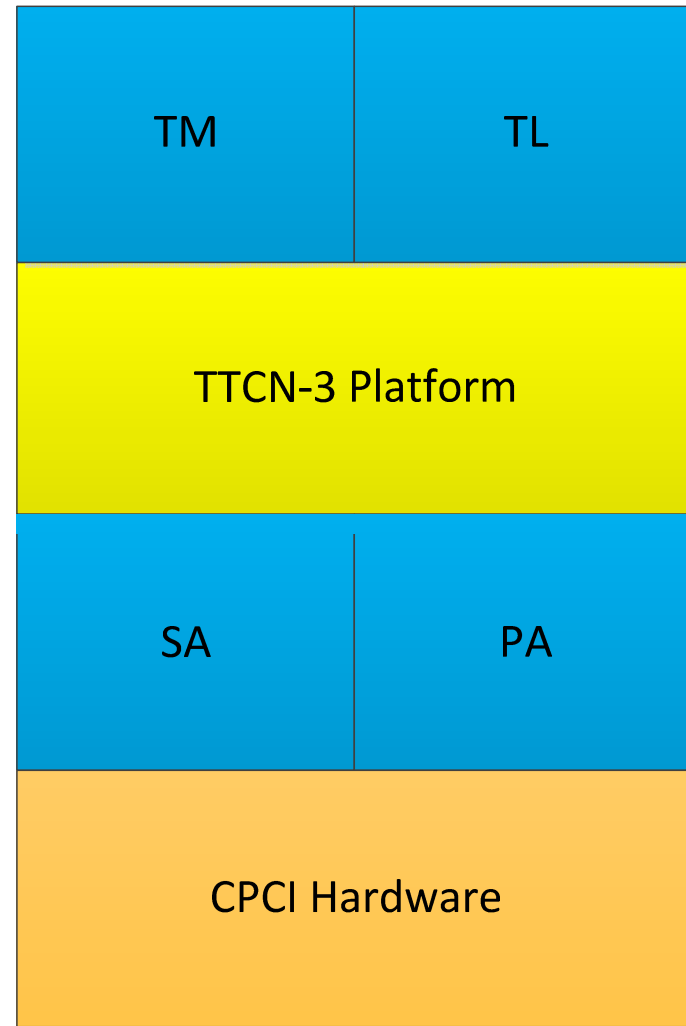


Why we try to use TTCN-3 ?

- Specified Language for test
- Modularization
- Reusable
- Easy to split to different teams

Introduce of project

- A development project in Chinese CNGI project of next generation Internet test equipment
 - An integrated equipment for function test (conformance and interoperability test) and performance test
 - Target SUT: Network Device in NGI



Teams



User Interface Team

Tech. Domain:

- UI Design
- Interactivity
- Graphics



Test Program Team

Tech. Domain:

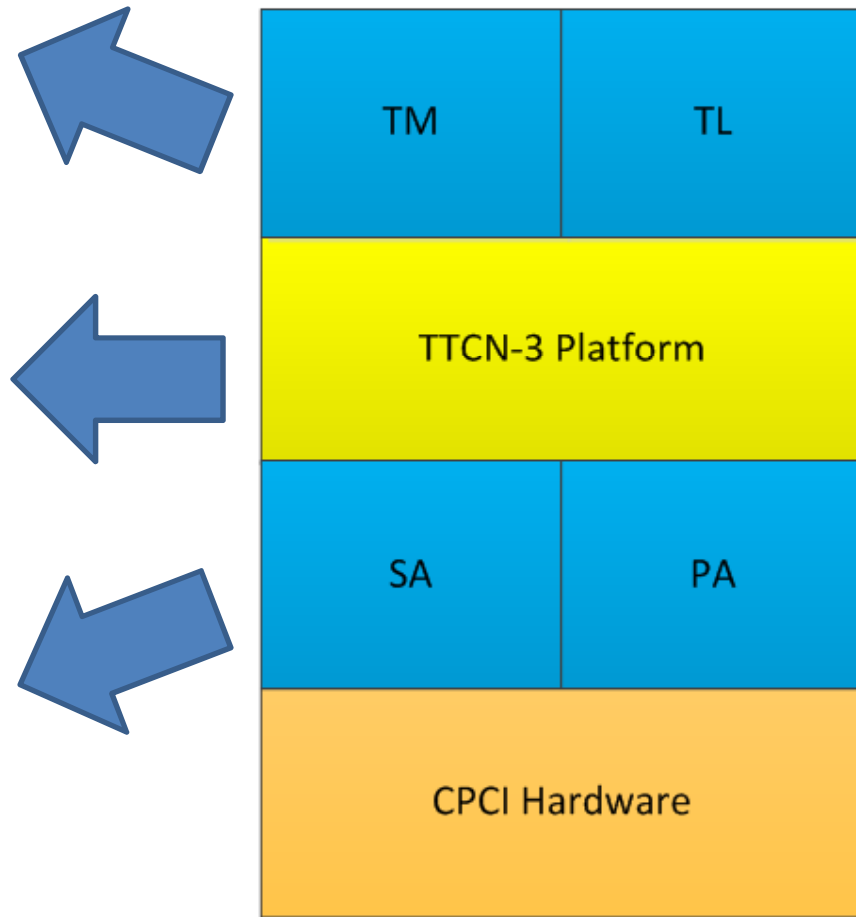
- TTCN-3
- Network Protocol



System Program Team

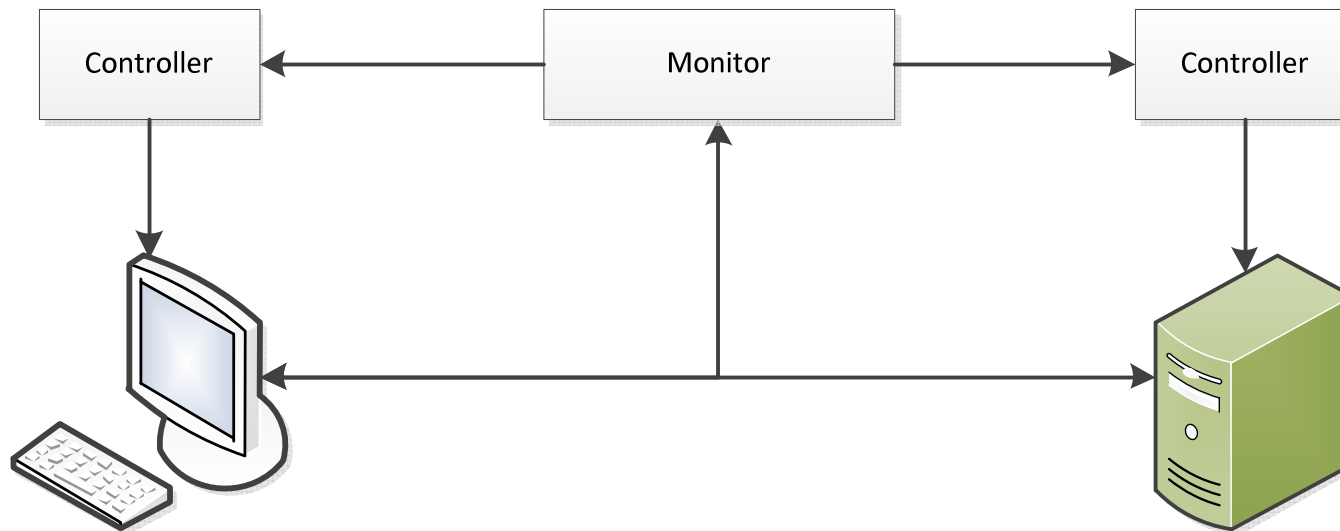
Tech. Domain:

- Linux
- Network device

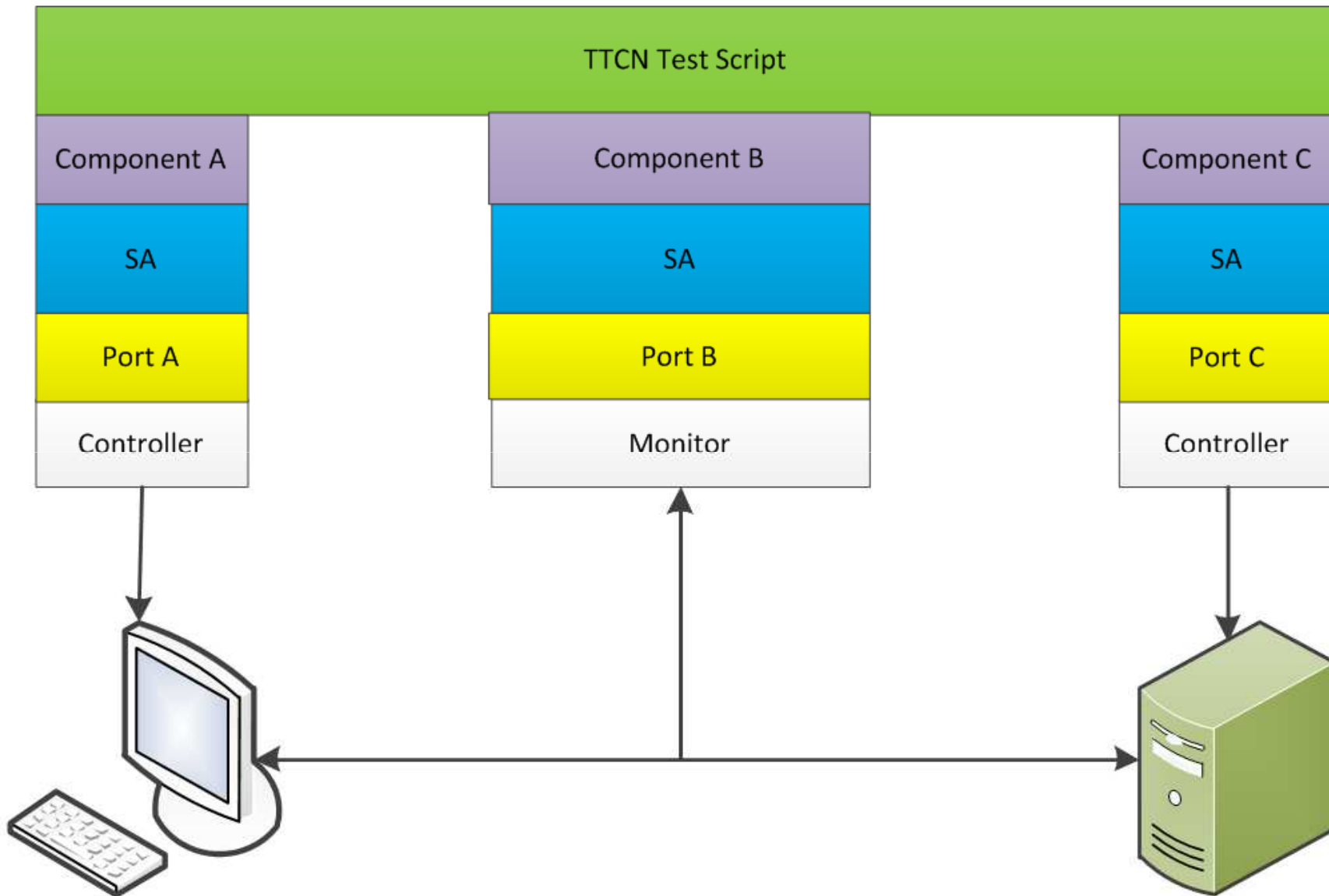


Logicity of Automatic Interoperability Test

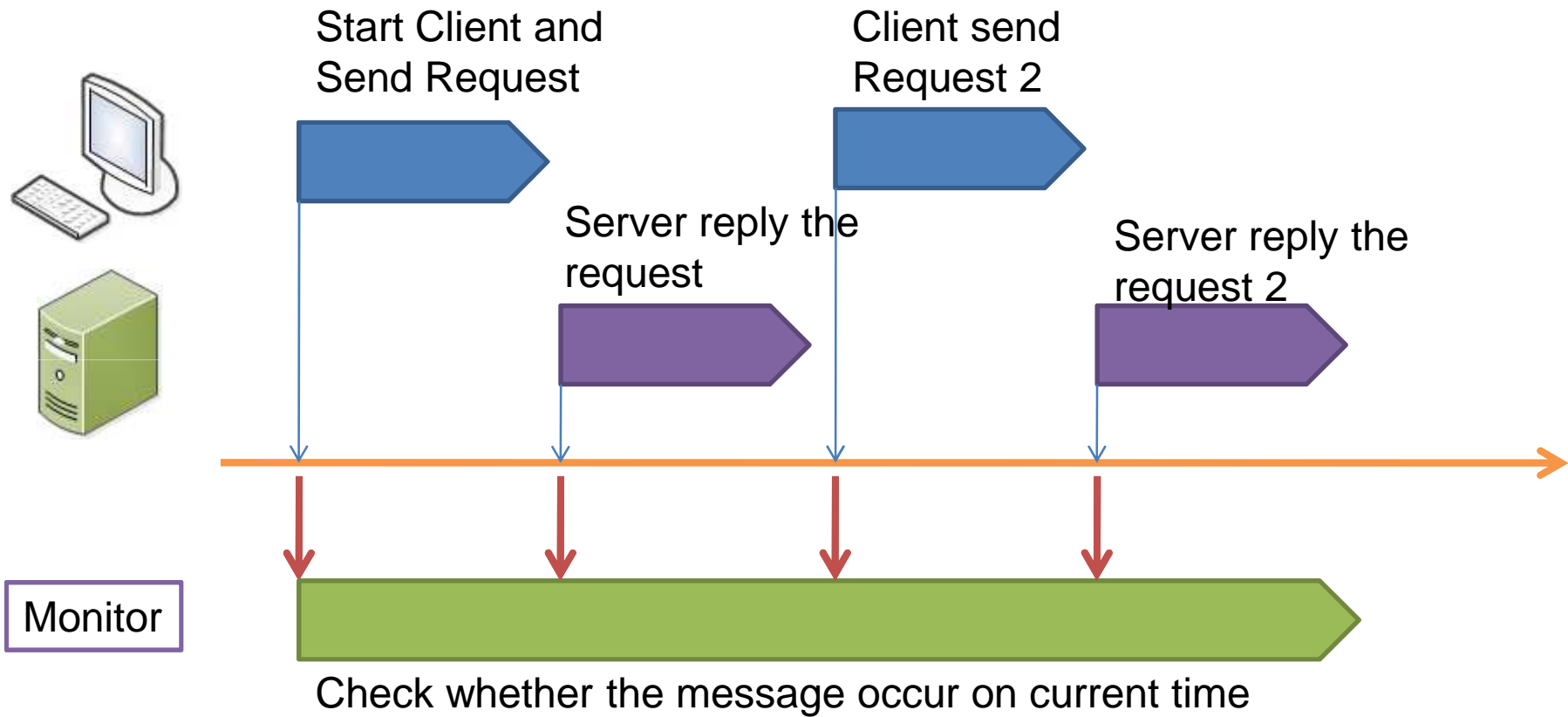
- Basis : Monitor & Feedback



Integration with TTCN platform



Basic processes



Flexibility

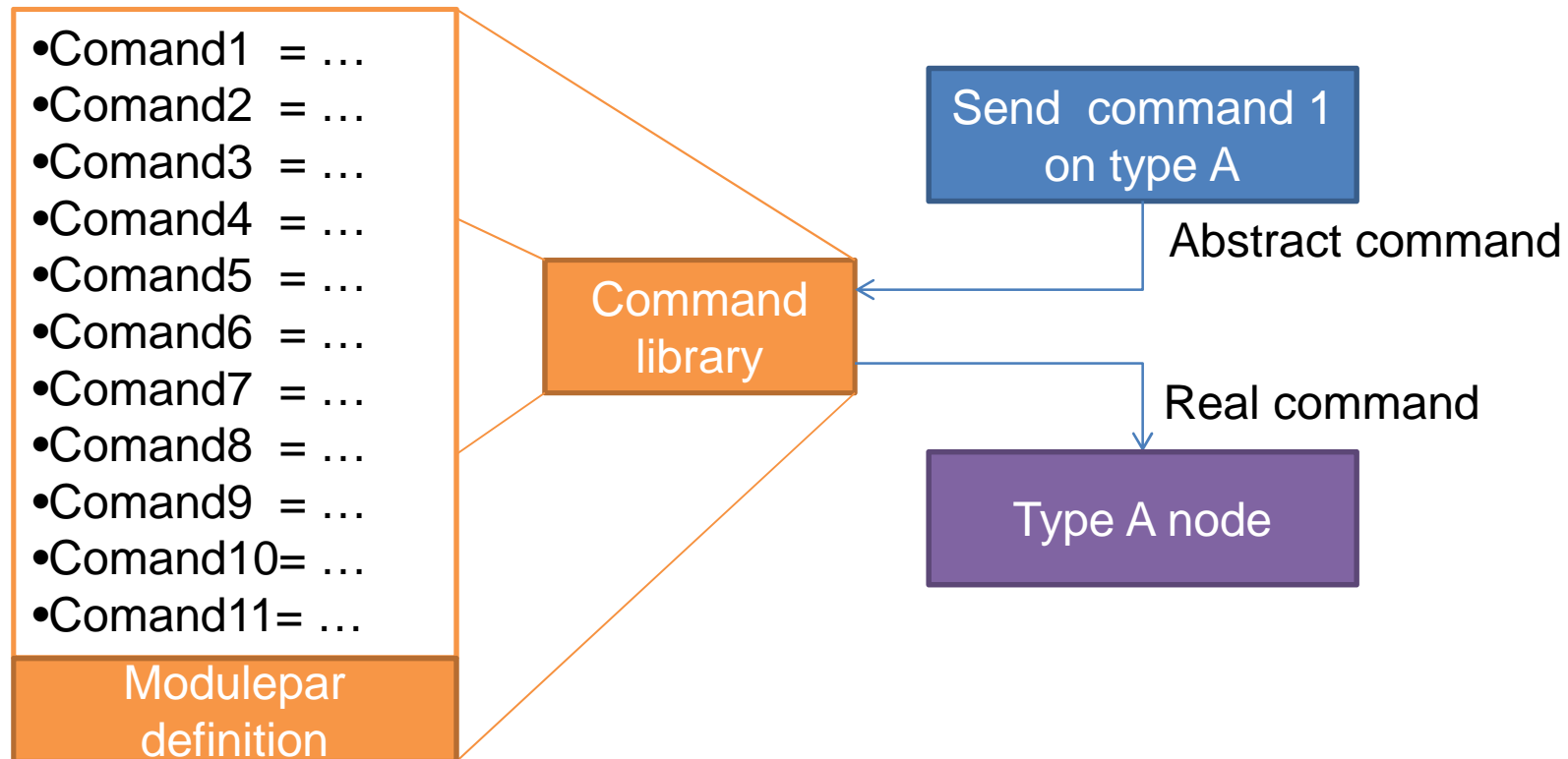
- Adapt to different node type in interoperability test

Velocity

- 'Real-time' checking of online message

Adapt to different node

- Design a command library for each kind node

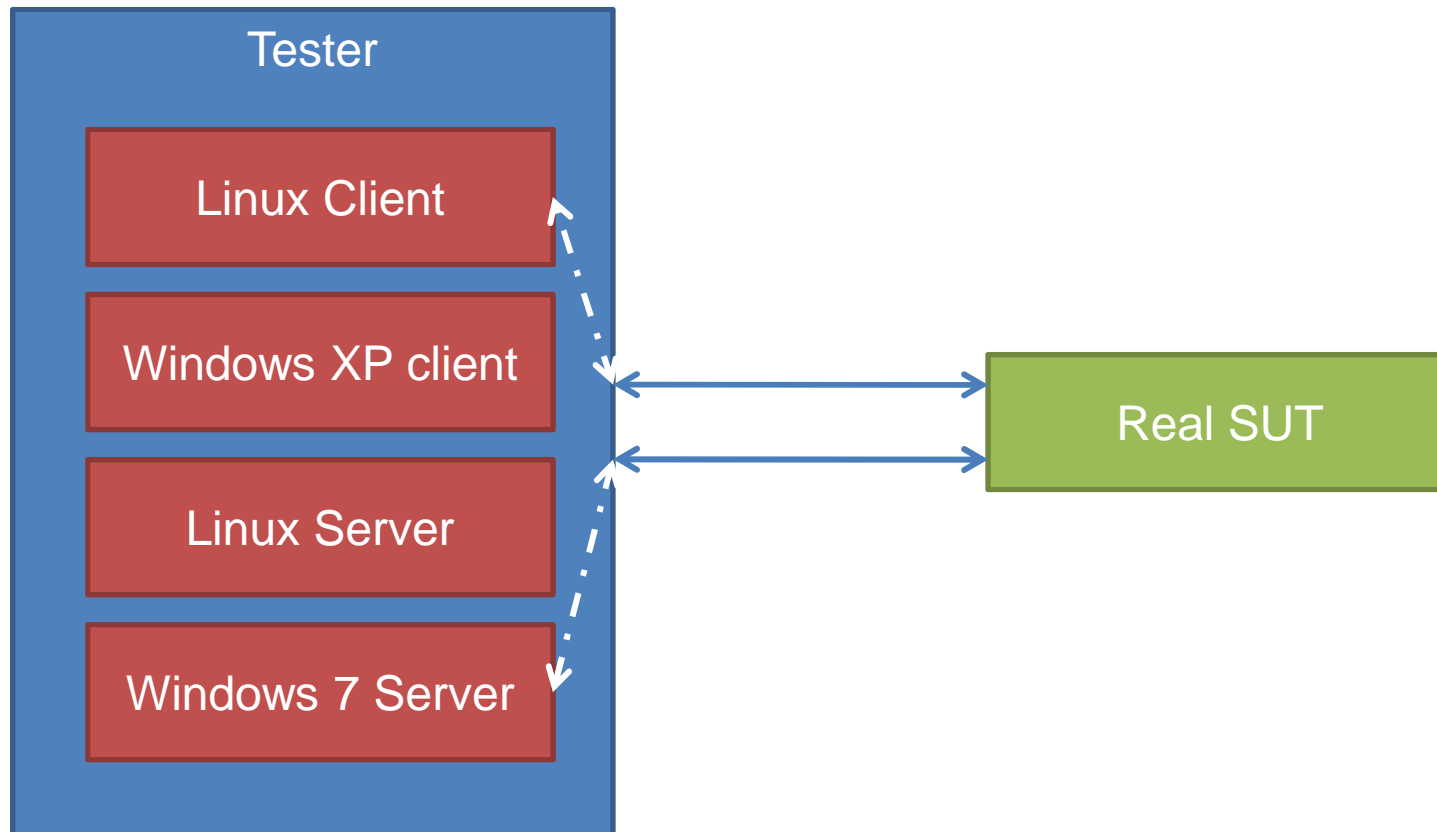


'Real-time' checking of online message

- Using external function to improve the checking speed
 - External function is native library which can use C++ or Java to code.
 - Using Native modules (CD, SA, PA, TM, TL) to do the time-consuming job
- Using external function to re-write or add some speedy feature.
 - Rapid sub-string search

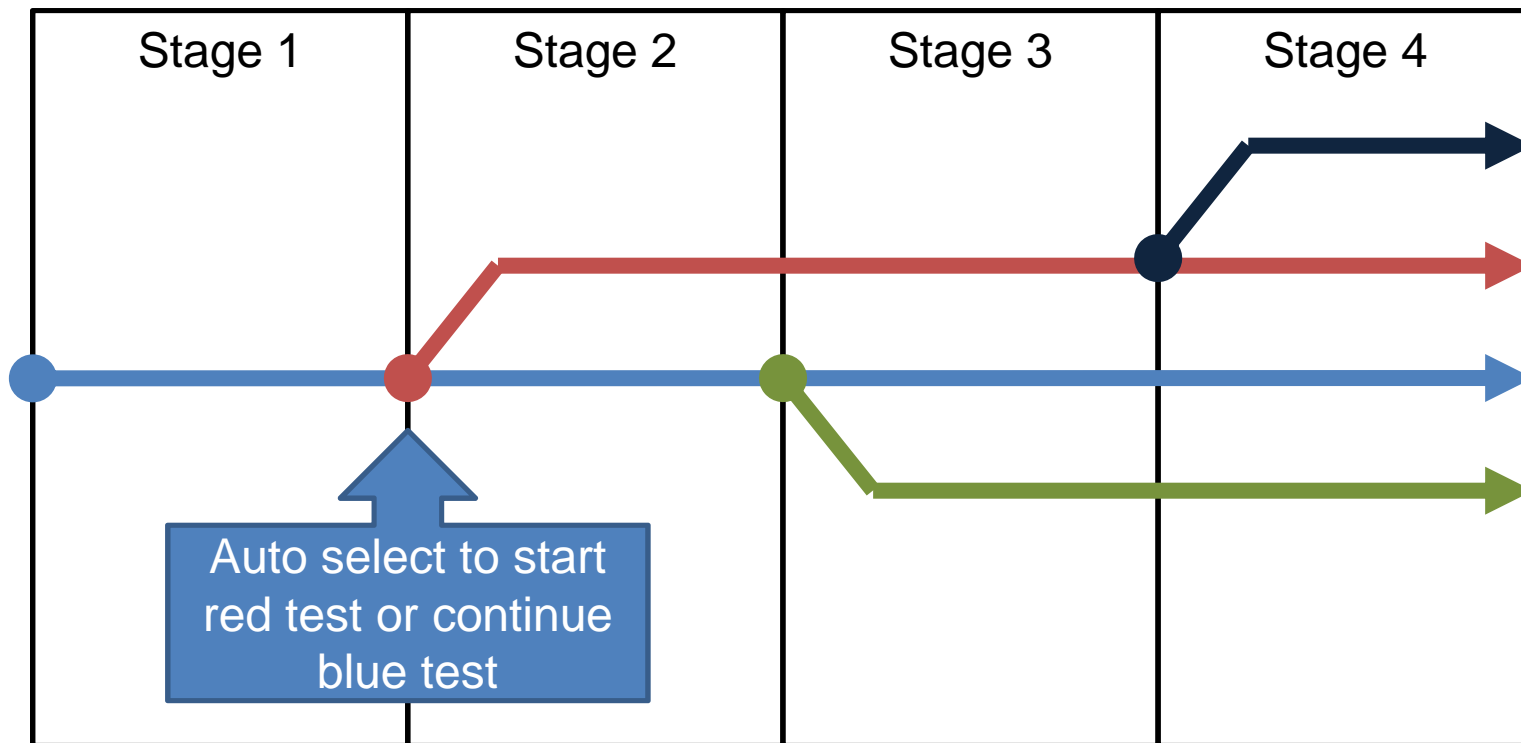
Implement

- Virtualization : Useful tool for interoperability testing



Next Step

- Automated distribution of test case according to real interoperation



Think again of TTCN-3

- Team Building
 - Different requirement for different modules
 - Something like external function make corporation more complicated
- External function libraries
 - Immigrate useful function into Standard TTCN-3 function
- Improve the usability of TTCN-3 language
 - String functions
 - Array functions
 - Map classes
 - Hash Map

Thank You !