OCAF
a focus group of ITU-T

Open
Communication
Architecture
Forum

Open Communications Architecture Forum

OCAF Focus Group

Charter

OCAF Focus Group: Charter

The objective of this document is to introduce a new Focus Group that will help Service Providers and the supporting ecosystem of vendors and partners address the complexity of transitioning to next generation network infrastructure and to invite your active participation.

Introduction

To compete in today's highly competitive telecommunications market, Service Providers must continually find ways to drive costs out of their infrastructure and deliver new innovative offerings to deliver shareholder and end user value.

There are three fundamental changes impacting and affecting the business environment for the Telecommunications Service Provider:

1. The rapid adoption and deployment of Commercial-Off-The-Shelf (COTS) technology by enterprise customers and Service Providers to reduce the total cost of ownership of delivering existing communications services and new IP-based applications
2. The evolution of open industry-wide standards now make it possible for Telecommunications Service Providers to purchase components for the core network from multiple vendors and "mix and match" to achieve the best possible price performance
3. The increased involvement of the subscriber in provisioning and administrating entitled services.

Service Providers and their key suppliers recognize the advantages posed by COTS technology and are active in examining COTS derived total cost of ownership benefits. In most cases the Service Provider will elect to transition in stages to the Next Generation Network (NGN) environment adhering to industry open standards to achieve the cost of ownership savings of mixing and matching best in class COTS hardware and software.

Numerous standards bodies and industry consortiums have established key industry standards for NGN solutions; some of the key forums include:

- ITU-T SG 13, ATIS, ETSI, 3GPP, Open Mobile Alliance, IETF are leading in the service/solutions standards
- Open Source Development Lab Carrier Grade Linux working group and the Service Availability Forum for middleware and OS
- TMForum, ITU-T SG 4 and DMTF in the OAM space
- OSA/Parlay, Jain and other Service Creation Environments and
- Hardware platform forums such as PIC-MG and PCI-SIG

It is necessary to define a common approach that helps the suppliers navigate through the appropriate interfaces and options to deliver an open, integrated, communications platform using these standards.

Carrier Grade Open Environment

No complete framework exists today to outline and represent relationships with open interfaces and standards required to assemble COTS components across all layers of an NGN solution. The OCAF FG intends to define a comprehensive component framework that enables the creation of network elements, platforms and applications into a common open framework called the Carrier Grade Open Environment (CGOE).

The CGOE is a hardware and software agnostic architecture for the telecom industry. It is intended to create an open, standards-based platform that will facilitate advanced solution development and deployment using commercial off the shelf (COTS) components from any vendor conforming to the OCAF-agreed categorization. The CGOE enables the integration of open standards, off the shelf software including but not limited to open source software and commercially available components into the Service Provider's network delivery platforms (such as call control, switching, and network element management) and simplifying and facilitating the external delivery of new and/or third-party services, content and applications. CGOE allows a Service Provider to improve time to market and develop and deliver lower cost value-added enhancements (such as IP Centrex, IP PBX, Softswitch, etc.) to both customers and third parties.

Complexity of interoperability of multiple vendor products is among the major issues Service Providers face in transitioning to next generation infrastructure to deliver new packet communications services. As COTS hardware and middleware technology continues to drive price/performance advantages for new infrastructure, CGOE enables Service Providers to plug and play different COTS components without the added cost and complexity.

Open Communications Architecture Forum Focus Group

The Open Communications Architecture Forum (OCAF) Focus Group consists of industry leaders teaming to build on the theme of accelerating the cost benefits of the adoption of COTS technology through the Carrier Grade Open Environment (CGOE). The CGOE roadmap is based on open industry standards for the integration of COTS servers, COTS storage, COTS data and voice communications equipment, carrier grade features of Linux, and COTS middleware to deliver integrated carrier class platforms for next generation network elements such as call controllers, radio network controllers, media gateways, feature servers, etc.

The OCAF FG is intended to facilitate the implementation by Service Providers, Solution Providers, ISVs and Technology Providers of the Carrier Grade Open Environment. The objective of the OCAF FG is to accelerate the implementation of COTS-based open, integrated, communications solutions by:

1. Promoting and endorsing a set of open industry standards (using existing standards whenever possible) to ease the interconnectivity and interoperability of third party components used in next generation network elements.
2. Facilitating the interoperability and validation of component suites in CGOE designated labs designed to support component "plug fests" to reduce the overall testing and integration complexity and cycle time for suppliers to deliver "plug and play" carrier class offerings.
3. Providing technical assistance and go to market support for participants endorsing the CGOE direction.
4. Accelerating the ecosystem of COTS providers who support the CGOE by establishing a Working Group for technical user groups to prioritise and influence future evolution of the CGOE
5. Making sure that the OCAF FG remains both in practice and in perception an open and fair organization to all member companies and the ecosystem at large.

The OCAF FG is designed to promote the rapid adoption of key industry standards and accelerate the movement to next generation network infrastructure. We believe the OCAF FG helps fill a void present today by enabling a customer focused next generation ecosystem of tested and integration platforms – from Network Solution Providers, ISV, Applications Service Providers, and Solution Integrators.

OCAF FG Founding Principles

1. Industry leaders teaming to build on the theme of accelerating the cost benefits of the adoption of COTS technology
2. Jointly working to improve time to market and reduce risk to develop COTS based solutions by promoting a stable framework and exchange considerations for reference implementations
3. Provide a framework to navigate appropriate interfaces and options, promote the rapid adoption of compute oriented standards based communications solutions
4. Do not re-specify existing industry standard architectures but act as an umbrella organization to support a single framework that establishes relationships between open standards, interfaces and components for those developing COTS based NGN solutions
5. Align as much as possible to existing standards such as OSDL, CGL and SAF
6. Encourage open, integrated, modular communications platform with reusable components based on the Carrier Grade Open Environment (CGOE)
7. Broad industry participation from SPs, TEMs, ISVs and Platform Vendors
8. Work within the ITU/SAF organizations to develop a roadmap to refine the CGOE
9. Prioritize CGOE requirements, support ongoing solution mapping against the CGOE, when necessary, launch or support projects, to address missing components or interfaces
10. Membership requires ratification of the Charter, signing the Multi-Party Nondisclosure Agreement (NDA) and active participation
11. A Board of Directors, CGOE Working Group and Solution Working Group will be established by the members
12. The Board of Directors will approve the CGOE architecture roadmap, structure internal working practices and represent the OCAF FG to other standards bodies and the industry at large
13. The CGOE Working Group chair will coordinate the group's activities, communicate details of the CGOE to the Board of Directors, and coordinate with the Solution Working Group to introduce new enhancements to the CGOE.
14. The Solution Working Group chair will coordinate focus area selection, create and administer a process to create Solution Maps for selected areas and communicate details of the Solution Working Group to the Board of Directors
15. OCAF FG deliverables will include a CGOE Reference Document, CGOE Requirements Document and Solution Maps for selected focus areas
16. New techniques, products, and experiences related to CGOE will be highlighted and demonstrated at OCAF FG user conferences, "plug fests" and through newsletters and reports published through OCAF FG member companies and through affiliated forums. User Conferences will also act as a meeting place to prioritize improvements to the CGOE
17. External announcements including reports, recommendations and marketing collateral relating to OCAF FG (including CGOE) works programs, mission and achievements must be approved by a majority of the OCAF FG membership or all founding members of OCAF FG

What is the OCAF FG Value?

OCAF FG members may make available to the other OCAF FG members on an open and non-discriminatory basis, access to the CGOE community solving advanced industry COTS network-related challenges, test and integration facilities, COTS planning expertise, proof of concept pilot programs and white papers of COTS experiences. OCAF FG members will thus save valuable time and investment in resource to develop a framework, maintain roadmap and test facilities as well as influence CGOE future enhancements and focus. By making available use of such facilities, the CGOE members could receive significant technical assistance to accelerate the transition time to new platforms to support next generation services and to address demand for cost competitive IP-based services.

Each OCAF FG member will be expected to contribute to these programs to help further the advancement of open frameworks and CGOE adoption.

OCAF Objectives:

1. Promote standards and a common framework to reduce cost, enhance functionality and improve time to market for all COTS based solutions for NGN
2. Define the CGOE components and interfaces to realize a Carrier Grade open, plug and play environment
3. Establish critical mass to identify requirements and reduce individual investments
4. Exchange considerations for reference implementations to facilitate COTS development
5. Reduce the cost and risk of developing new NGN services by promoting the expansion of COTS component options
6. Accelerate availability of CGOE compliant components and offerings from OCAF FG member companies

The ultimate value OCAF FG represents in the industry is in accelerating the transformation and reducing the costs of deploying and maintaining new network infrastructure and network services based on COTS.

CGOE provides a technical framework to integrate COTS and leverage open industry standards for carrier class solutions.

OCAF FG provides the forum to ensure CGOE continues to focus on leading market issues and represents the voice of Service Providers, Network Operators and Solution Providers supporting an ecosystem of partners and suppliers.

OCAF FG Process

1. Establish a framework to outline and represent relationships with open interfaces and standards required to enable COTS components across all layers of an NGN solution.
2. The OCAF FG intends to define a comprehensive component framework that enables the creation of network elements, platforms and applications.
3. The OCAF FG intends to develop a Carrier Grade Operating Environment (CGOE). The CGOF has been provided as a framework and template for the CGOE.
4. The OCAF FG will solicit the submission of other frameworks and will integrate and normalize submitted frameworks into a single CGOE. OCAF FG will adopt much of the extensive work in other forums on lower layers of CGOE. OCAF FG will then focus on

upper layers above the OS in the CGOE (including platform services, middleware and enablement applications) using a bottom up approach

5. A CGOE Working Group will be established to evolve the CGOE and to create two deliverables to support the CGOE:
   - The CGOE Reference Document is an iterative document to describe the CGOE and address architecture, component description, and the relationship and interfaces between components within the CGOE. The CGOE-Reference Document will also function as a tool to normalize other submitted frameworks with the CGOF outline.
   - The CGOE Component Requirements Documents will address and prioritize gaps or new requirements identified by exercising Solution Maps against the CGOE.
6. A single Solution Working Group (SWG) will be established, comprised of multiple sub-groups, to identify Solution Maps for each selected focus area. SWG deliverables may include:
   - Solution Maps for selected focus areas prioritized by Service Providers
   - A list of components and standards required by each CGOE layer
   - An outline of minimum CGOE components required for a specific solution
   - Identified CGOE gaps and suggested approaches to resolve
   - Best practices recommendations/report for selected operating environments in the form of a blueprint or cookbook
7. Specific Projects may also be identified by the SWG to further rationalize use case scenarios for selected for selected focus areas against the CGOE.
8. Each Solution Map will be exercised against the CGOE to validate the existence of required components and interfaces and to identify gaps in the CGOE overall. Recommendations will be provided to:
   - The CGOE Working Group for inclusion in the CGOF Reference and Requirements Documents.
   - The Solution Working Group for inclusion in Solution Maps.

OCAF FG Membership

OCAF FG founding members see value in supporting open standards and the CGOE framework and agree to promote the OCAF FG and to develop at least one solution or one component for a CGOE based solution. Members will review and advise on matters related to the OCAF FG charter and help identify future requirements for the CGOE and OCAF FG.

Patent and Intellectual Property Rights

The ITU-T patent policy shall be used. (www.itu.int/itu-t/dbase/patent/)

Appendix A – Key Initial Milestones:

- IBM drafts OCAF FG outline and invites other founding members – October 2003
- A critical mass of founding members agree to support OCAF FG, refine charter and invite other members – November 2003
- Founding members agree on a draft charter and on potential hosting organizations – March 2004
- OCAF FG submits formal request to ITU-T to operate as a Focus Group under ITU-T SG 13 – 26 March 2004. The request includes:
  - Charter
  - Special terms
  - Suggested Milestones
- ITU-T responds to OCAF FG proposal (2 April 2004), including:
  - Confirms acceptance of terms and milestones
  - Assigns Subgroup contact
  - Assigns ITU-T Communications contact
- OCAF FG to set-up Working Groups and temporary Chairs and Vice-Chairs of the Working Groups (April 2004)
- OCAF FG Working Groups agree on initial scope of work and near-term deliverables/time line (May 2004)
- OCAF FG and ITU-T assign leaders to work towards 11 May 2004 approval of announcement package to include ITU Announcement, OCAF FG Charter and NDA
- ITU-T and OCAF FG leaders review final announcement package with OCAF FG team at face to face, 11 May 2004
- Final approvals of ITU-T announcement from OCAF FG members 11 May 2004
- ITU-T announces OCAF Focus Group on 14 May 2004
- Agreement of OCAF WG plans, deliverables and documentation at Chicago June 21-23, 2004 meeting
- Approval of OCAF documents by July 21, 2204 – NDA, OCAF Announcement, Charter and Procedures
- Review of 1st draft documents from WGs – Boston August 12-13, 2004 meeting
- Completion of initial Solution Maps – 4th Q, 2004
- Alignment of CGOE WG results (several iterations) – 4th Q, 2004

Appendix B – Overview of Carrier Grade Open Environment (CGOE)

Some key high-level requirements for CGOE include:

- CGOE should be grounded in the technology trends instituted by Linux and open source software, increased commoditization of hardware, and COTS technology.
- CGOE's must provide an open solution framework for distributed platforms that are the baseline for Next Generation Network services.
- CGOE will establish and maintain an open consistent architectural approach to the relationships among multiple COTS components associated with traditional framework layers for hardware, operating system, middleware, and applications.
- CGOE must enable consistent mapping of components to interfaces, establish boundaries between components that are common across nodes and components that are specific within nodes, and allow distribution, duplication and substitution of COTS technology for hardware, operating system, middleware, and application components.

Appendix C – Additional Related Information:

Open Source Development Lab (OSDL), www.OSDL.ORG/

Service Availability Forum SAForum, www.Saforum.org/

ITU-T SG 13 Next Generation Project 2004, www.itu.int/ITU-T/studygroups/com13/ngn2004/