



Monetizing the Services Ecosystem™

Creating the Business, Process, and Technology Framework

The economics and dynamics of the Communications Industry are undergoing rapid and fundamental changes that will have far-reaching consequences. The traditional value chain is disintegrating: Communications Service Providers (CSPs) can no longer control service delivery from the core network to the end user. In the new value chain that is emerging, content providers, content aggregators, and content distributors are creating a unique and powerful Services Ecosystem that allows users to share information and entertainment in creative new ways. Ways that threaten to marginalize CSPs as dumb pipes.

The Disintegrating Value Chain

For over a hundred years, CSPs have been the reliable source of secure communications. They have owned and managed networks that deliver proprietary, high-volume services. They have controlled this integrated value chain tightly and maintained their dominance as communications providers.

This value chain is now being threatened by a Services Ecosystem in which content enablers, suppliers, and distributors are creating communications, entertainment, and information services based on new business and technology models.

The New Services Ecosystem

The old CSP value chain is characterized by single ownership of all the elements that connect, create, and deliver a service. The new Services Ecosystem, on the other hand, is more collaborative — each entity contributes a unique aspect or capability that benefits other entities, and collectively they create a mutually beneficial, interdependent system that enables the rapid creation and distribution of services.

This vibrant ecosystem allows new technologies and business models to be introduced quickly. Those that work can be kept and developed; those that don't can be discarded.

An entertainment and communications ecosystem is already being formed by social networking players like Google, YouTube, Facebook, MySpace, and Skype. This ecosystem is challenging the CSP model by creating, distributing, and monetizing new services that are driven by content diversity and user loyalty. This

ecosystem is threatening the traditional relationships between CSPs and their customers and is increasingly pushing CSPs lower in the value chain. While CSPs are a part of this ecosystem, they are essentially passive participants, and in the minds of users, provide little more than connectivity.



The New Services Ecosystem

The Challenge

To avoid being marginalized as dumb pipes, CSPs need to participate actively in the Services Ecosystem. They need to discover ways of creating the business, process, and technology framework that will enable them to benefit from the Services Ecosystem and, ultimately, elevate their position in the value chain.

The Services Ecosystem has many independent components that are far more complex and difficult to control than the elements in the old CSP model. The business and technology challenges — both internal and external — have increased exponentially.

Embracing the Services Ecosystem requires that CSPs change their mind set and redesign their operational processes fundamentally. A more difficult challenge is the need to give outsiders access to functionality that has always been protected inside the CSP.

The external challenge is a technical one — to create a service using service components from a diverse set of ecosystem partners. The service components need to be integrated and executed across the ecosystem in a manner that is transparent to the end user.

A range of OSS functionality, such as service management and customer experience management, must be orchestrated across the ecosystem partners.

The biggest challenge is creating the integrated business and technical foundation that will enable CSPs to monetize their investment in the new ecosystem.

The Solution

Monetizing the Services Ecosystem™ requires CSPs to:

1. Abstract service elements from the network
2. Build atomic service elements and a service assembly infrastructure
3. Expose APIs and make Software Development Kits (SDKs) available to third parties

Ecosystem partners can then create new, personalized



Requirements of the New Services Ecosystem

services by accessing — and paying for — CSP functionality and applications.

- **Service Abstraction:** CSPs must first abstract service elements such as service configurations, service templates, and QoS parameters from the network and place them in a separate Service Layer. Without this separation between the Network Layer and the Service Layer, service elements could not be exposed to ecosystem partners.

In service abstraction, service attributes are modeled in the Service Layer. The abstracted services and their attributes are stored in a Service Catalog and are exposed to ecosystem partners using industry-standard interfaces. Many NetCracker customers are abstracting their services into NetCracker's Service Catalog to separate the Network and Service Layers.

- **Service Assembly:** The process of sharing the abstracted service elements with ecosystem partners is called "service assembly" (or "service syndication"). In service assembly, pre-qualified players make service components available for service creation by others, thus stimulating a mutually beneficial Services Ecosystem. A CSP, then, can offer service elements to a variety of partners tailored to the requirements of specific markets.

This component-based approach provides a collaborative way to design, launch, and manage increasingly complex services.

NetCracker is participating in the TM Forum's Managed Services Syndication Catalyst, providing service abstraction and assembly capabilities.

NetCracker enables the assembly of service components provided by different CSPs and the delivery of syndicated services over any architecture.

- **Service Creation:** Service creation makes service elements available to anyone who wants to participate in the Services Ecosystem, whereas service assembly requires ecosystem partners to be pre-qualified. Using published APIs and an SDK, any individual or corporation can access a wide range of CSP capabilities — location, presence, preferences, billing, SQM, fulfillment, and provisioning — to customize, combine, and create unique services for their own consumption or for resale.

CSPs who implement these three requirements will build the integrated business and technical foundation that will enable them to participate in the new ecosystem and monetize their investment.

The Benefits

CSPs who embrace the Services Ecosystem will reap the following benefits:

- **Monetization:** CSPs can monetize their investment in the ecosystem by offering service elements that would not otherwise be available to ecosystem partners. These include guaranteed quality of service, user location and preference data, and presence and personalization information.
- **Faster Time to Market:** CSPs can use elements offered by ecosystem partners (user-created videos, networking profiles, Friends Lists, and more) to deliver unique service offerings without incurring the development time needed to build the capabilities themselves.
- **Cost Savings:** The cost of creating and deploying a service bundle can be lowered dramatically by using industry-standard APIs instead of custom interfaces and by using service elements that have been made available to the ecosystem.
- **Flexible New Business Models:** CSPs can trial new business models (for example, advertising based) or new billing models (for example, pre-paid or micro-billing) without significant investment.
- **Enhanced Value:** CSPs can become more than dumb pipes by offering new services, by creating new services using partner service elements, and by exposing service elements to others so they can create higher quality services and improved user experiences.

A fundamental shift in the way users acquire, share, and manipulate content is already taking place. CSPs that embrace the Services Ecosystem will open up a world of exciting new possibilities — and new markets — that will enable them to grow and prosper.

Monetizing the Services Ecosystem™



Profit from the new economy of content creation, aggregation, and distribution:

- Abstract services from the network
- Expose service elements to partners
- Enable partners to create new content
- Syndicate services with content creators
- Empower end users and devices to customize services
- Merge the Power of Network and IT™

NetCracker's innovative approach enables service assembly and syndication with partners and end users to create new services