

Comverse ONE Product Catalog

Agenda

Overview

Configuration Layers

User Interface

Architecture

New Product Development

Summary



Product Catalog

What is it?

Central point of Product configuration for Rating, Billing & Active Customer Management

- Unified single model converging the rating and billing environments
- Multiple configuration tools merged into one unique Product Catalog Application

Main benefits of the unified single model

Marketing and Product Flexibility

- Complete convergence of offerings, across all lines of business and payment models
- Branding / VNO support
- Segmentation keys and product rules used for market offer profiling and differential pricing
- Supports seamless transition to converged market offers from prepaid or postpaid

Improved efficiency and cost-effectiveness

- 'Building Block' concept: billing & rating objects are easily re-used to define marketing offers & bundles
- Re-use maintains coherency, improves accuracy and reduces risk of revenue leakage

Main benefits of the Product Catalog Application & Architecture

Ease of use

Marketing-driven user interface for quick and coherent product and rule definitions

Lower operational costs and improved quality

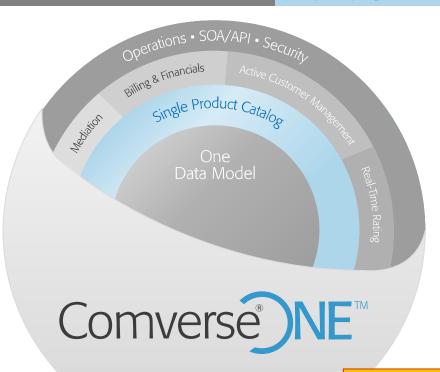
- Single "point of truth" configuration in Product Catalog applies across Comverse ONE
- Full lifecycle management that seamlessly integrates with test and production environments
- Supports multiple concurrent users (Roles & Scopes managed via Security Server)



Single Unified Interface

A Single Interface for the design and creation of service provider's offers

Create plans, promotions, bundles, packages, discount and bonus based offers, and loyalty generating programs Supports, and allows the mix of, all types of payments, lines of business and end users



- Eliminates duplication of efforts. Quick and accurate creation and management of offer components
- Marketing-offer personalization & segmentation through a holistic view of data
- Reduced Time to Market: Faster turnaround time from product conception to market availability
- Logical configuration layers aimed at different user groups

Faster Time-to-Market with Flexible Products



Product Catalog – Main Capabilities

Upgrade Enabler

- Enables upgrade from existing RTB, FX, and CCBS installations
- Leverage value proposition of Standalone RTB and FX deployments

Single tool For Configuration. All Deployment Modes

- Easy to use marketing oriented GUI
- Unified single model mapping to both rating and billing environments
- Deployment mode sensitive

 Converged, Prepaid,
 Postpaid

Main Capabilities

Reduce Time to Market

- Layered Model and Building Block concept: Lower level billing & rating objects are re-used to define higherlevel marketing offers & bundles
- Prepaid and Postpaid products co-exist, can be mixed and bundled together

Product Life Cycle Management

- Product life cycle managed configurable (via work point) version life cycle
- Better delimitation of production and nonproduction environments with controlled propagation of versions

Marketing Flexibility

- Branding / VNO support
- · Global vs. Regional Offer support
- · Product rules and segmentation keys facilitate offer profiling



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Product Catalog Configuration Layers

Basic System Infrastructure

Configuration of basic system data such as units and currencies

Service

Defining usage activities and service-related details such as notifications & access #

Rating & Billing

Setting up rates, balances, accumulators and promotions

Marketing / Packaging

Configuring customer-facing market offers

Dealer / Reseller Configuration of dealers and resellers



Service Layer

Primarily contains reseller-specific service provisioning information

- Some global (service-versioned) information is included in this layer for ease of use
 - For example:
 - Initial Activity Usage Types (AUTs) global info
 - Final AUTs reseller-specific info (managed together with global info)
- Hides complexities of Basic Infrastructure and Service data



Rating & Billing Layer

The Main, Reseller-Specific, Building Blocks from which Marketing Offers are Composed

 Usage Plans: Group together usage items that associate usage activity to tariff plans.

Service Plans: Contain service provisioning information.

 Promotion Plans: Define awards and discounts to be an time, depending on thresholds applied to accumulators

 Tariff Plans: Define charging conditions Supplementary subscribers. Depending on their composition, these may provisioning aspects of the subscriber (for example, acc services) or may simply impact usage rating

Account Offers: Apply to accounts, typically associating accumulator definitions

For example, via a usage plan that the

For example, a service

For example, unlimited weekend SMS for \$5/month



Marketing Layer: Design Entities (Alternative)

Grouping by functional & operational domains for better visibility and management

Bundles

Account Bundle, Subscriber Bundle, Bundle Display Group

Offers

Account Offer, Primary Offer, Supplementary Offer; offer display group

Rules

Geographical Availability, Subscriber/Account Prerequisite rules, Bundle/Offer Prerequisite rules, Transition rules, Exclusion rules.

Templates

Subscriber Compatibility, Account Compatibility, Plan Override, Liability Redirection

Terms

Recurring charge, non-recurring charge, contract.
Grouping: Product Groups and Product Lines

Recharge Control Table

Configuration of recharge based offers

Dealer & Resellers Layer



Reseller Definition:

- Defining a new reseller is the equivalent to creating a new brand or VNO.
- Once defined, information relevant to this reseller can be created in other layers and versions of the dealer & reseller layer
- Information can be circulated to the Online Catalog



Dealer Definition:

- Defining a new dealer is equivalent to creating a new distribution channel for a reseller
- Dealer groups allow products to be associated with specific dealers. Used together with the region concept mentioned earlier, dealer and dealer groups allow flexible support of various product distribution scenarios

Resellers & Dealers

Define Multiple Reseller-Specific Market Offers and Circulate Reseller Versions Independently

- Branding and Virtual Network Operators (VNO): Each brand or VNO corresponds to a different reseller
 - User access can be limited to one or more reseller data sets (versions)
 - Resellers can manage their data sets (versions) remotely
 - Multiple dealer/dealer groups can be defined per reseller
 - Data shared across all resellers is defined in service version.
- Security and Scope Configuration: Product Catalog user access can be limited to one or more resellers
- Regional Product Variations for Geographically-Dispersed Operators:
 Resellers can be associated with regions Separate data sets (versions) for
 each reseller/brand can be defined

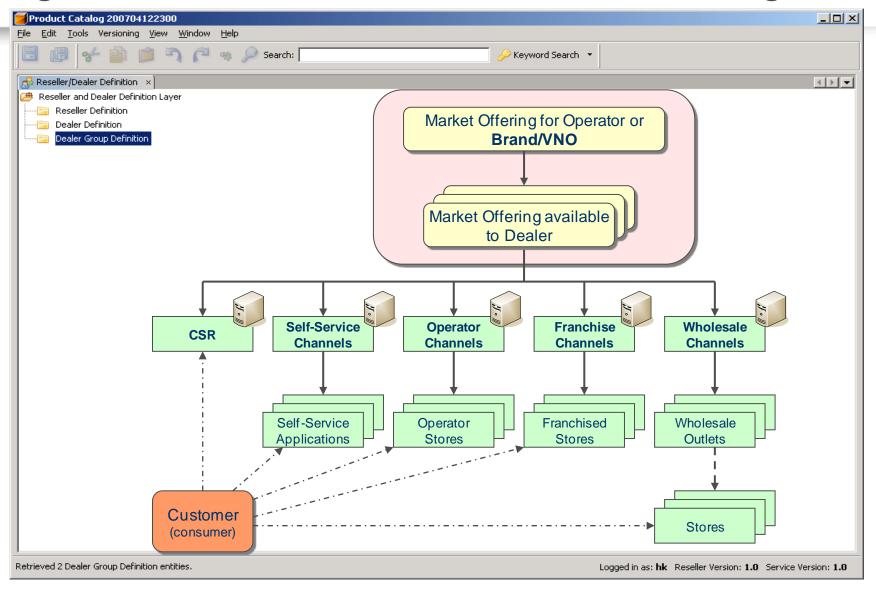


Segmentation and Virtualization of Operations

- Several system-wide attributes have been introduced to support data segmentation and virtualized operations
 - VNO / Reseller
 - Multiple resellers can be defined
 - Resellers could real resellers or operational units of the same telecom operator
 - Resellers can have their own configuration sets and versions
 - Region (Business Domain)
 - Data segmentation key for reference data (products) as well as dynamic data access/update
 - Can be associated to Resellers and Dealers
 - Dealers / Dealer Groups
 - Dealers entity can be used to represent large or small dealer organisations with multiple distribution points
 - Dealers can be associated to Dealer Groups
 - Access control rules can be associated to dealer groups
 - Reseller Dealer association is also supported
 - Account Segment
 - Existing parameter (carried over from Kenan FX) to control and restrict access of dynamic data by CSRs
 - Security Server
 - Environment through which associations and permissions are defined



Segmentation based on Reseller/Branding/VNO



- Resellers can have their own versioned configuration sets
- In addition, Offers and bundles can be restricted by regions and dealers

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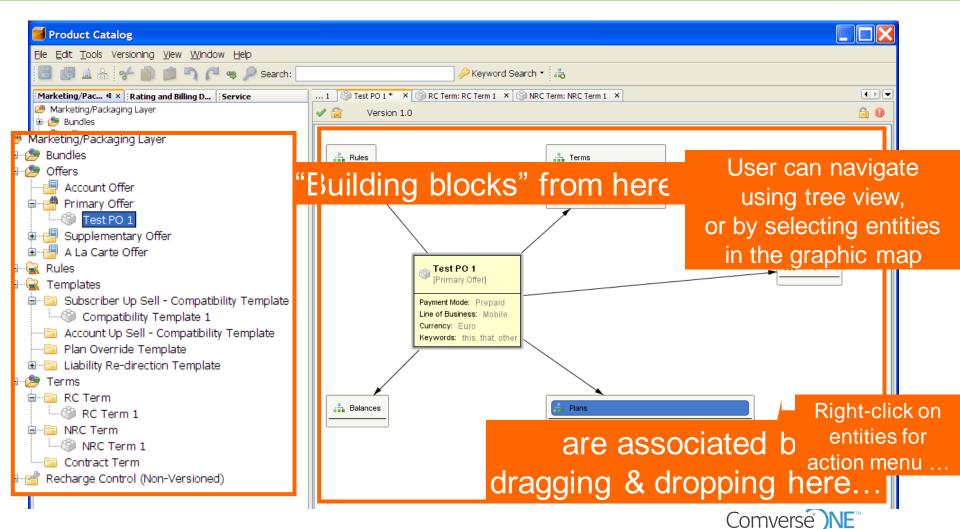
New Product Development

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Easy-To-Use, Intuitive, User Interface

Industry-standard keyboard, mouse and visual interfacing



General Product Catalog GUI

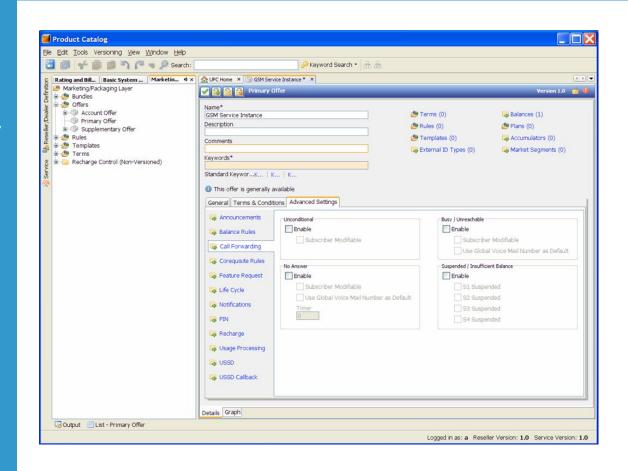
Standard visual interface patterns

Easy to Learn for any user familiar with typical business applications

Navigation within layers

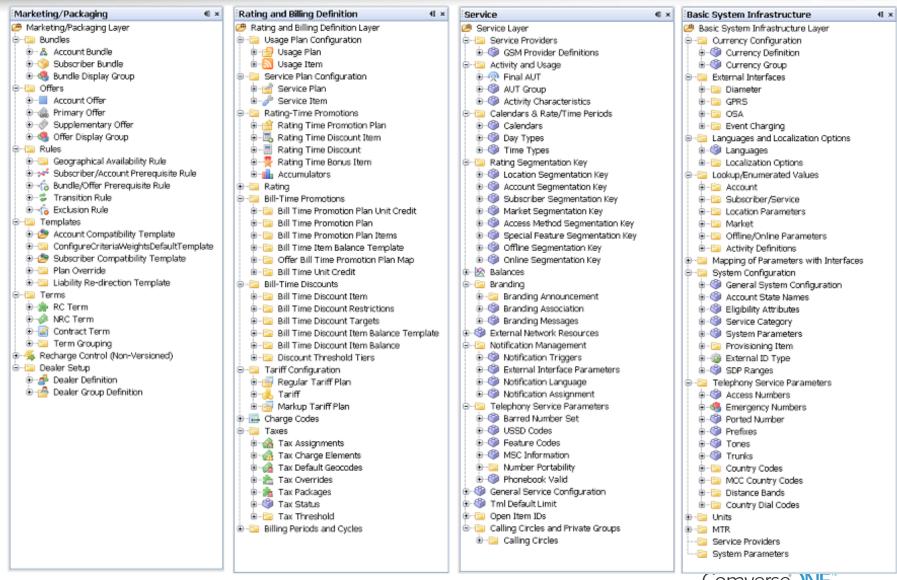
Menu and toolbars

A dynamic workspace

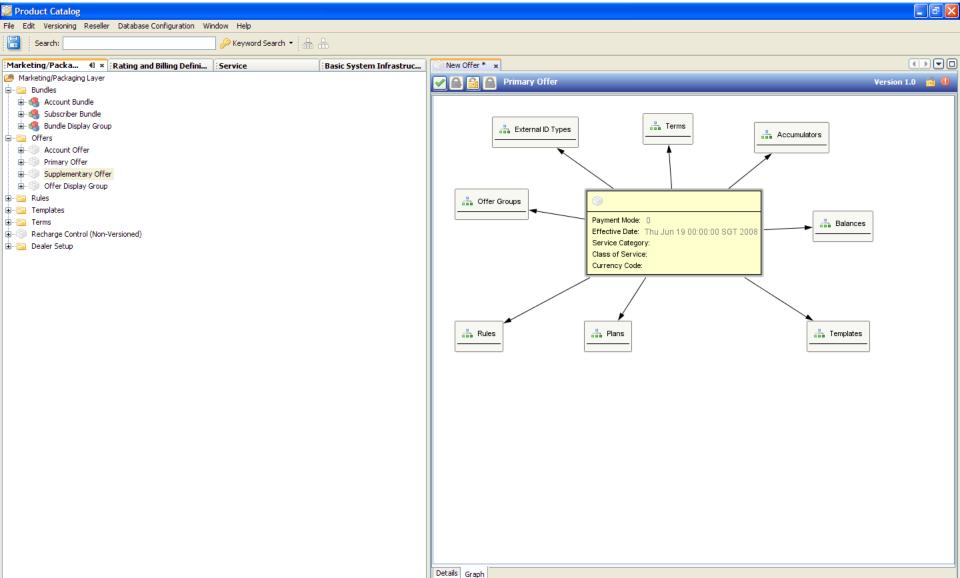




Layers in the Product Catalog GUI

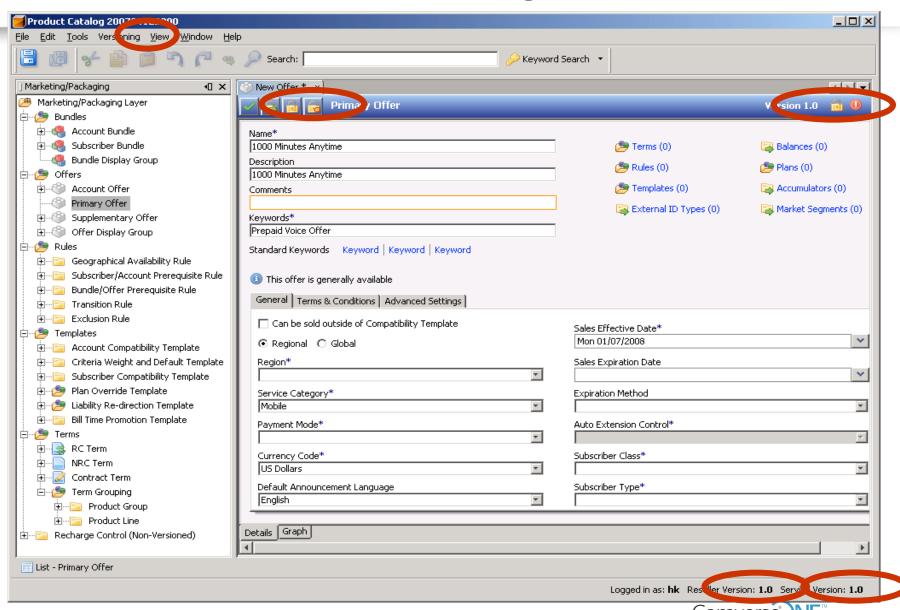


Product Catalog - Marketing/Packaging Layer

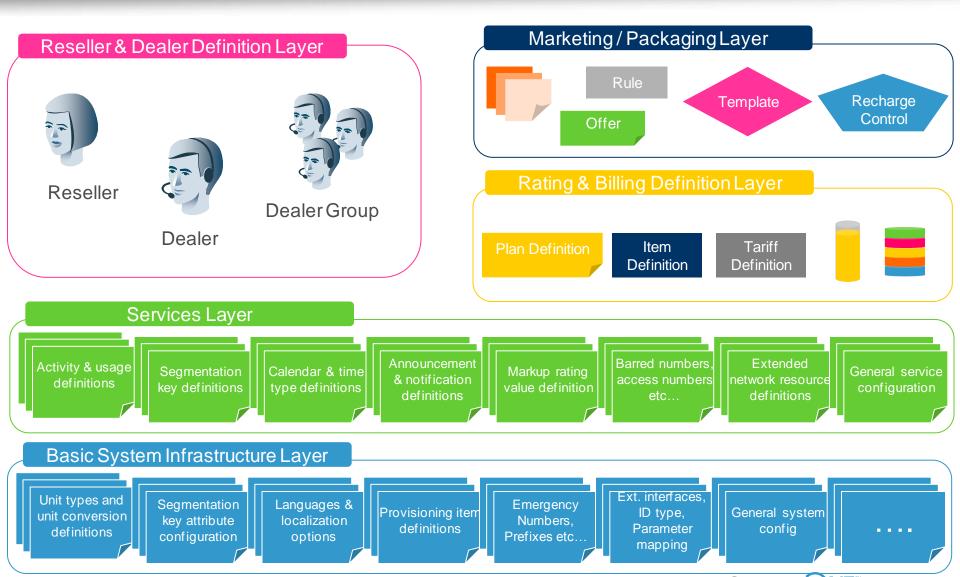


Logged in as: autologin Reseller Version: Global Reseller 1.0 Service Version: 1.0

Screens and Version Management



Summary – Product Catalog Layers View



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Architecture Components – Product Catalog

Off-Line Catalog

- The GUI provides an easy-touse interface for managing data in the Offline Catalog.
- Can contain multiple versions per reseller

Service Versions

- Included in the Offline Catalog
- Holds operator-wide service definition and system configuration information that does not vary per reseller.

On-Line Catalog

- Information from the Offline Catalog is propagated to an online catalog.
- Multiple propagation target Online Catalogs - to support distinct test and production environments

The API:

- The online Product Catalog API is part of the Converged Billing Suite's Single API.
- Uses information in the Online Catalog and primarily provides product selection and browsing services for CSM and selfservice.

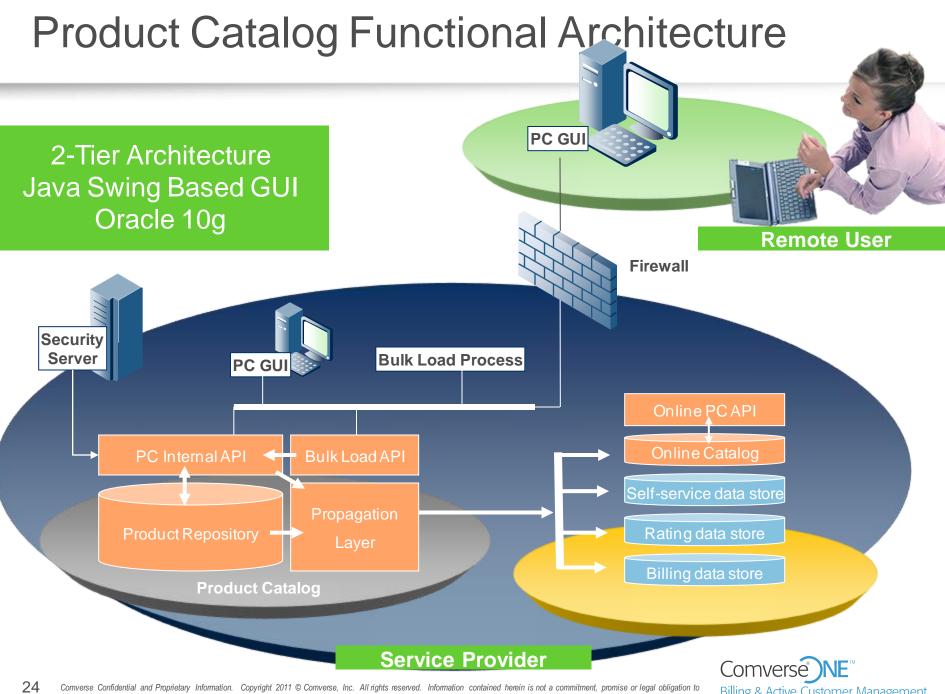
The GUI

- A Java-based graphical user interface
- Can be deployed locally or remotely via secure connection.
- Security services handle user authentication and drive role and scope authorizations

Live Versions

- The Online Catalog contains current live versions and may contain future-dated versions.
- Only one service version and one version per reseller can be live at any given time.





Key Highlights

Manageability and APIs



- Basic APIs for retrieving marketing offers/bundles and loading basic rating/charging data
- Support for bulk changes to bundles & offers
- Keyword based search capability across all PC entities
- Multi-lingual support (Internationalization and Localization)

Security, Auditing, and Extensibility



- Separate roles/privileges for create, view, modify, and version state transition
- All operations that change data or version state are audited
- Existing tables can be extended and new tables can be created, data for which can be populated via PC GUI



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New Product Roll-out Why the Comverse ONE solution is efficient

Single Service Provisioning point

Single Catalog as source of product and service provisioning throughout the Comverse ONE solution

- One "source of truth" improves data coherency and reduces test & debugging effort
- A single application to use and centralized propagation reduce operational effort

Full product lifecycle management via versioning and propagation

- Good safeguards for ensuring production environment integrity and robustness
- Methodical approach to design, test and apply new products

Convergence & Flexibility

A unified data model that brings together rating and billing capabilities across multiple lines of business

 Innovative and complex market offerings and pricing models can be created by simply configuring in the Product Catalog, without any need for extension or customization

Layered Model and functional building-block approach

Layers correspond to functional domains; some Layers are rarely modified....

- Users are interested in differing domains and can be more efficient without "clutter" from other layers
- Basic Infrastructure Layer is typically only modified when adding new network-related features
- Service Layer changes generally apply when adding a new service into the solution

Graphical view and easy composition of entities

- The majority of product roll-outs concern promotions and discounts or repackaging of existing features and services into new products – i.e. Bundles, Offers, Plans & Terms
- Product Catalog Application makes definition of these products simple and efficient



Highly Developed Segmentation Capabilities

Lines of Businesses

- Definition of multiple lines of businesses
- Definition and management of separate VNOs including separate data sets.
- Cross-Product and Cross-Market Bundling of Offers

Multiple Brands

- Separate data sets for each Brand, with user access limit configuration
- Reseller specific market offers
- Support for regional variations

End-User Segmentation

- End User Segment Definition
- Market offer profiling based on segmentation key, advanced filtering & rules
- Prepaid and Postpaid products co-exist, can be mixed and bundled together

Support for Multiple Lines of Businesses, Brands, VNOs, Resellers & Dealer

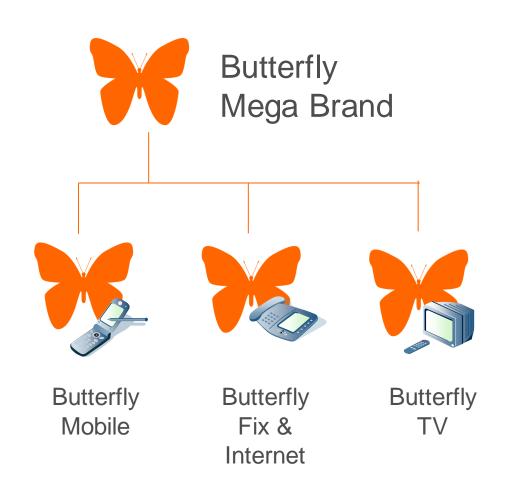


Support for Multiple Lines-of-Business

Definition of multiple lines of businesses

Definition and management of separate VNOs including separate data sets.

Cross-Product and Cross-Market Bundling of Offers



Customer Segmentation

Teens:

- Teen 1
- Teen 2
- Teen 9-12
- Teen 13-15



Family:

- Family 1
- Family 2
- Family (Group)
- Family (Max 4)
- Family (Max 7)



Youth:

Youth 1

Oncumor.

Migrate Customers from One Segment to Another According to Lifecycle Phase

- Student 1
- Student 2
- Student (University A)
- Student (University 2)

Multi-Cultural Groups

- By Religion
- By Ethnicity / Affiliation
- By Language



Business:

- Small
- Freelance
- Small (Max 5)
- Small (Max 10)
- Small (Max 15)
- Medium 1

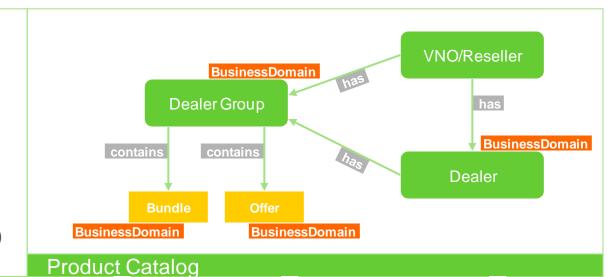




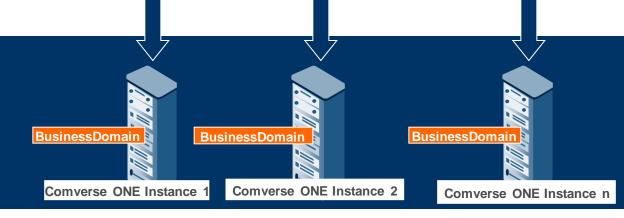
Product Segmentation and Market Distribution

Defined & Managed in Product Catalog:

Bundles & Offers,
Dealers & Dealer Groups
Can be targeted to one or more
Business Domains, OR
Flagged as global
(i.e. valid for all Business Domains)



Only entities
with corresponding
Business Domains
are taken into consideration
by each Comverse ONE
instance





Segmentation with Business Domains (Regions)

Defined & Managed in Product Catalog:

Product Definitions per brand
Assignment of products to Dealers
Propagation to online systems

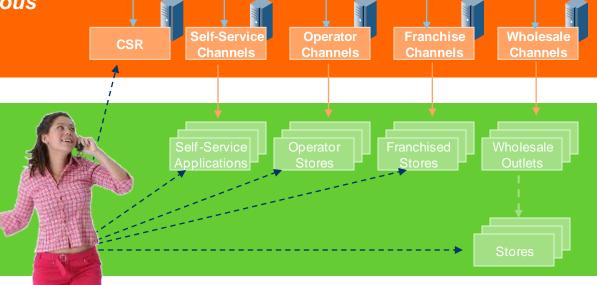
Market Offering for Service
Provider or Brand

Market Offering
Available to Dealer

Product Catalog

Online systems drive various sales and distribution channels...

...that Bring Offers to the Market for Customers



Example

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Billing & Active Customer Management

Creating Offers – Building Blocks

Bundles & Offers

- Bundles and Offers are only sellable entities
- Offers are associated to Bundles

Plans & Items

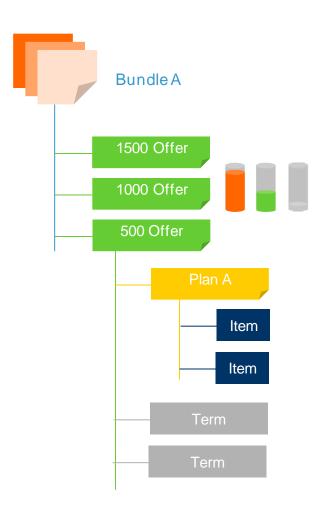
- Plans/Items define usage/non-usage services, rating/billing promotions
- Plans are associated to Offers

Terms & Balances

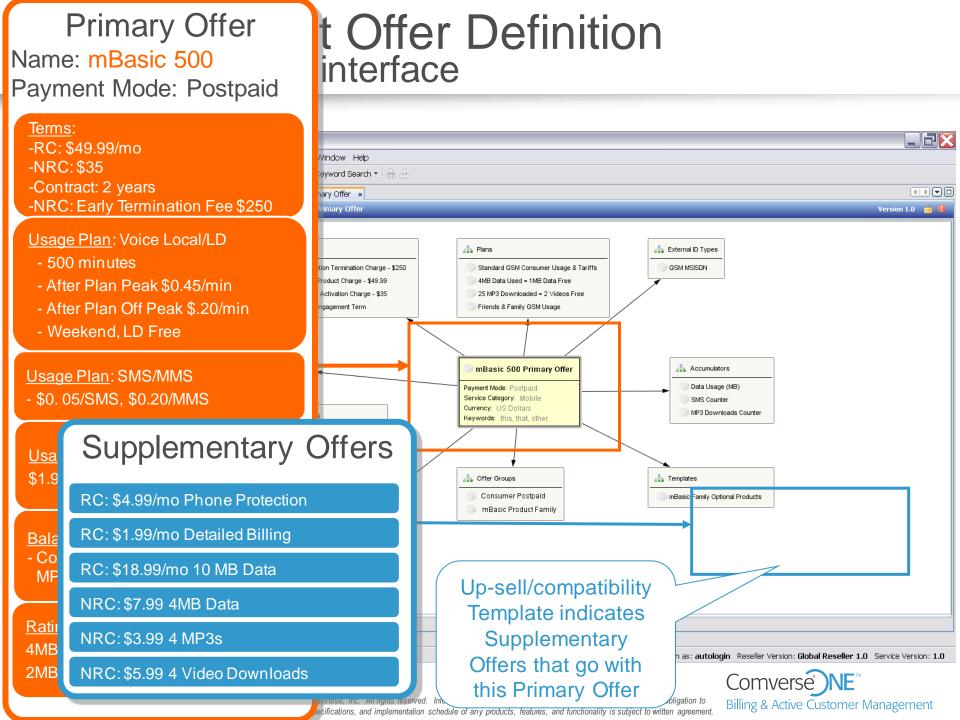
- RC/NRC Charges and Contract duration; Real/Shadow balances & Credit Control
- Terms are associated to Offers and Bundles
- Balances are associated to Offers

Rules & Templates

- Enables/Restricts which bundles/offers are available where and to whom
- Rules/Templates are associated to Offers and Bundles







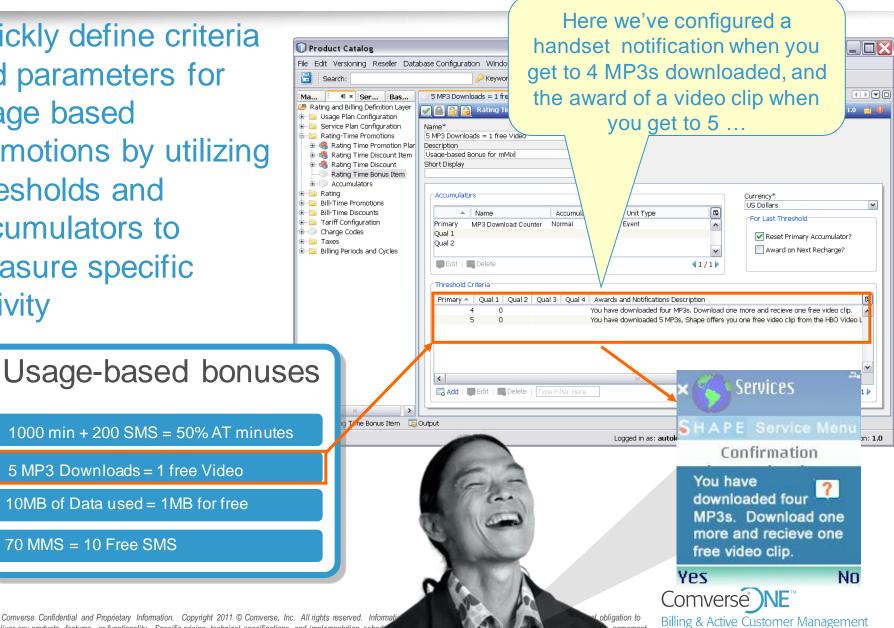
Usage Based Promotions

Quickly define criteria and parameters for usage based promotions by utilizing thresholds and accumulators to measure specific activity

5 MP3 Downloads = 1 free Video

10MB of Data used = 1MB for free

70 MMS = 10 Free SMS

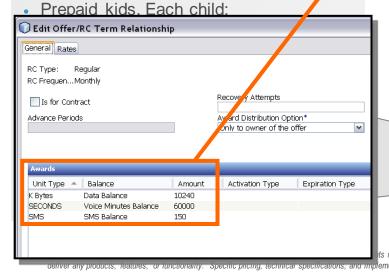


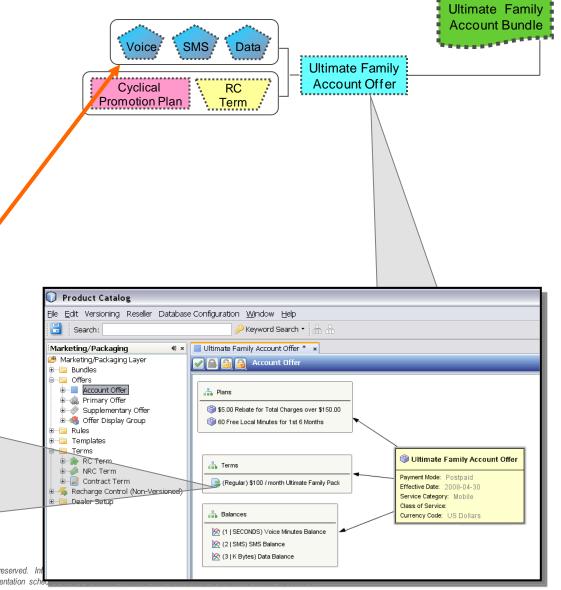


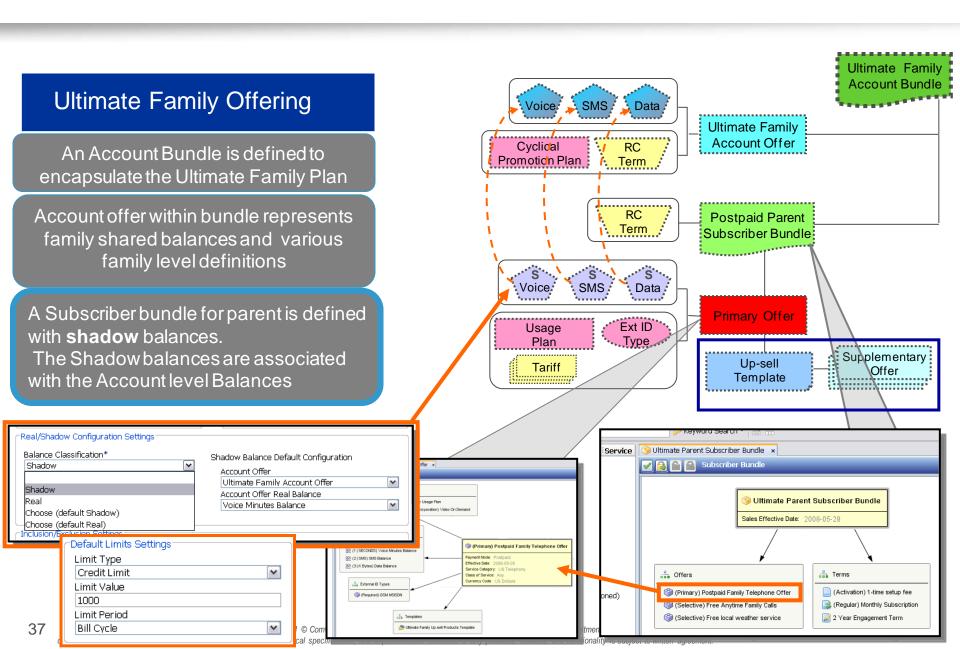
An Account Bundle is defined to encapsulate the Ultimate Family Plan

Account offer within bundle represents family shared balances and various family level definitions

- · Data units for parents only
- Voice, SMS and Data units awarded against a monthly recurring charge
- Cyclical promotion and a loyalty plan







Ultimate Family Offering

An Account Bundle is defined to encapsulate the Ultimate Family Plan

Account offer within bundle represents family shared balances and various family level definitions

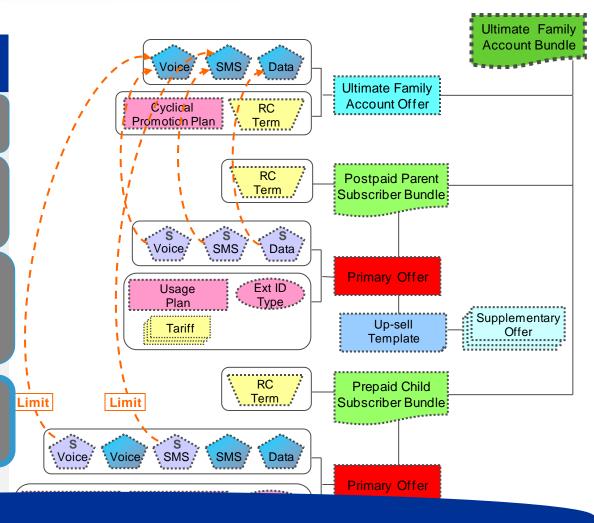
A Subscriber bundle for parent is defined with **shadow** balances.

The Shadow balances are associated with the Account level Balances

· Carr use rarniny voice minutes and

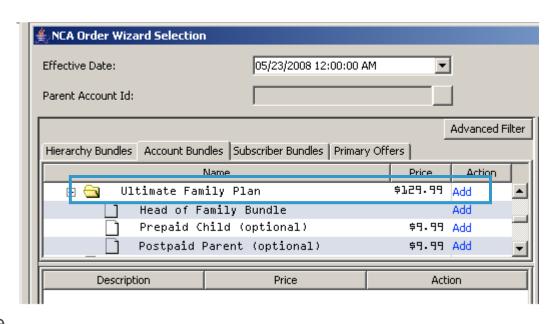
A Subscriber bundle for child is defined. Include **shadow** balances with limit and regular balances (e.g., for recharge)

 Usage based promotion plan rewarding with voice minutes for data



Flexible definition within Product Catalog.... significantly simplifies customer acquisition

CSR views Bundles & Offers during customer acquisition process and selects the Family Plan.



CSR Ordering (acquisition) Steps:

- 1. Select Family Plan Account Bundle
- 2. Add Optional Postpaid Parent Subscriber Bundle

Call Center

- 3. Add Optional Prepaid Child Subscriber Bundle for each Child
- 4. Set Voice and Date Usage Limits on shadow balances of each Child Subscriber.
- 5. Enter Account Billing Information
- 6. Commit Order



Product Lifecycle Management

Off-Line Editing and Validation: Information is edited and validated within an offline catalog, before being propagated to an online catalog that provisions Comverse ONE components

Check-in / Check-out Paradigm: Multiple users may edit Product Catalog information simultaneously without risk of corruption or confusion

Time Based Versioning: Data to be propagated to target systems is clearly segregated into versions — time-stamped sets of service provisioning information that become the live data at the appropriate times

Change Management: A full audit trail is maintained of all data changes and propagation operations

One-to-Many Distribution: Supports propagation of versions to multiple test and production environments



Criteria and Eligibility Rules

Marketing, Organization & Logic

Bundle/Offer pre-requisite rules

Product A requires one of B, C, F, X or Y

Exclusion Rules

Product A is incompatible with B, C, F, X and Y

Subscriber/Account pre-requisite rules

- Expressions based on Subscriber or Account attributes; product is available/eligible if evaluates to true Plan Transition Rules
- Guided swapping of Primary Offers and Bundles. Example: migration from G2 to G3 plan

Account Compatibility Template

Identify available Bundles and Offers based on Account Criteria

Subscriber Compatibility Template

Identifies Bundles and Offers available to the subscriber (based on the Primary Offer that was selected)

Rating & Charging Rules

Rating Segmentation Keys & AUT Translation

- Ability to differentiate usage by various criteria and to vary rates depending on various criteria
 Tariff Plan Override Rules
- Example: apply half-price tariffs on the subscriber's birthday Rating & Billing Promotions
- Applied based on usage and other criteria

Provisioning Rules

External ID co-requisites

- Identify referential values needed for provisioning (ex. GSM Price Plan requires an MSISDN) Provisioning Items
- Define parameters, managed via the Extended Data Framework, that can be used by workflow Comverse NE®

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Single Product Catalog: In Summary

Faster time to market for new products

- Single point of configuration eliminates duplication of effort, facilitates coherence
- Enhanced lifecycle management eases operational constraints
- · Easy-to-use object-oriented graphical interface
 - less low-level billing system knowledge required
- Faster turn-around from product conception to market availability

Product Convergence

- Offers covering multiple lines of business can be bundled together
- Prepaid and postpaid offers co-exist and can be managed via a single interface and model

Flexible market product definition

- · Converged multi-play offers
- Extensive capabilities for market segmentation, offer profiling and interproduct rules
- Multi-lingual and multi-currency product, billing, rating & charging definitions

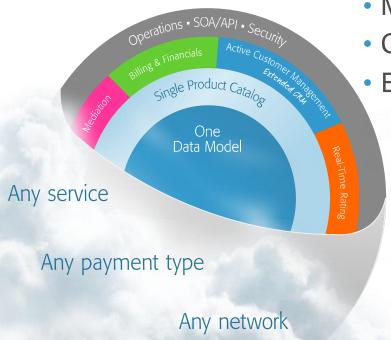
Increased efficiency and lower cost of operations

- Efficient centralized product, rating & billing definitions improves accuracy of configuration. Less configuration errors = reduced revenue leakage
- Layered model facilitates GUI specialization for different Product Catalog actors (marketing, service definition ...)



Product Catalog take-aways

- Unified Data Model, merging rating and billing capabilities
- Complete convergence across lines of business
- Easily create complex and innovative offers
- Flexibility and reusability with "building block" approach



- Multiple brands / VNOs in a single catalog
- Comprehensive product lifecycle management
- Easy to use market driven UI
 - Single Service Provisioning point
 - Improved accuracy
 - Full centralized track of changes
 - Reduced risk of revenue leakage
 - Quick time to market





