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CERES

Ceres is a tightly integrated billing, call routing and customer care solution developed specifically to offer platform services that enable third parties to easily roll out complete retail voice operations with full-featured products and services. These third parties, known as hosted service providers, can independently manage their products and services, carriers and customers. They can even connect their own gateways to Ceres for call origination and termination. This partitioning is made possible by Ceres's four-tier billing model.

Designed on an open architecture, Ceres is capable of interfacing with any voice gateway or switch using RADIUS and other middleware, and exchange data for call billing and routing. This feature enables converged billing and single-point customer care for multiple retail services operating on disparate voice gateways and switches.

Highlights

- Highly flexible rules-based call routing
- Comprehensive hosted service provider (HSP) management and billing
- Unlimited, extensive and highly customizable products and account management
- Real-time authentication, authorization, accounting (AAA) and CDR generation
- Real-time charge accrual, billing, ratings and statistics
- Corporate accounts with group billing
- Highly customizable reseller management
- Web-based management, customer care and self-provisioning interface
- Online monitoring and statistics
- Call-to-call profit/loss analysis
- Highly customizable reports
- Built-in data replication, redundancy and failover
- Open architecture and integration ready

Key Features

Products & Services

- Corporate and regular product/service type
- Comprehensive product/service types
- Unlimited number of products/services
- Fine-grained customization of products/services
- Integration of IVR
- Cross product/service discount

ID	Country	Start Date	End Date	Start Time	End Time	Day	Call Type	Rate
1	INDIA	12-01-04	12-31-04	00:00:00	23:59:59	ALL	RESIDENTIAL	0.000000
2	INDIA	12-01-04	12-31-04	00:00:00	23:59:59	ALL	RESIDENTIAL	0.000000
3	INDIA	12-01-04	12-31-04	00:00:00	23:59:59	ALL	RESIDENTIAL	0.000000
4	INDIA	12-01-04	12-31-04	00:00:00	23:59:59	ALL	RESIDENTIAL	0.000000
5	INDIA	12-01-04	12-31-04	00:00:00	23:59:59	ALL	RESIDENTIAL	0.000000
6	INDIA	12-01-04	12-31-04	00:00:00	23:59:59	ALL	RESIDENTIAL	0.000000
7	INDIA	12-01-04	12-31-04	00:00:00	23:59:59	ALL	RESIDENTIAL	0.000000
8	INDIA	12-01-04	12-31-04	00:00:00	23:59:59	ALL	RESIDENTIAL	0.000000

Adjusted Product Rates

Multiple Authentication Options

- Account Number/Card Number
- ANI
- PIN
- Tech-Prefix
- DNIS

ID	Name	Description	Action	Amount	Program	Type	Tax	Rate	Assign
1	Recurring Charge	Recurring Charge	Charge	0.00	Recurring	Percentage	0	0.000000	✔
2	Activation Fee	Activation Fee	Charge	10	Activation	Fixed	0	10.000000	✔
3	Setup Fee	Setup Fee	Charge	0.00	One Time	Fixed	0	0.000000	✔
4	Recurring Charge	Recurring Charge	Charge	0.00	Recurring	Percentage	0	0.000000	✔
5	Maintenance Fee	Maintenance Fee	Charge	10	Monthly	Fixed	0	10.000000	✔
6	Nonrecurring Fee	Nonrecurring Fee	Charge	0.00	Recurring	Percentage	0	0.000000	✔
7	Completion Fee	Completion Fee	Charge	0.00	Recurring	Fixed	0	0.000000	✔

Product Charges

Dial Options

- ANI Authorization
- Local Access Number
- Toll Free Dialing
- Abbreviated Dial (10-10)
- Speed Dial

IVR

- Credit Time or Balance Announcement Customizable through Product Configuration
- Multi-language IVR Support
- Customizable IVR Scripts
- Seamless integration of new IVRs

Multiple Surcharges

- Flat or Percentage Based
- Activation
- Periodic
- Recurring
- One-time

Multiple Billing Cycles

- Weekly
- Fortnightly
- Monthly
- Customizable by service provider

Flexible and Extensive Rating Rules

- Time of Day, Day of Week and/or Month of Year
- Vacation Rate
- Peak Time
- Flag fall
- Deny Call
- Based on ANI, DNIS
- Progressive
- Minute Fraction (Dual Credit Time)
- Adjusted Incremental/Declining Rates

Ceres is not tied to any single billing model. Instead, the most flexible approach possible has been taken, allowing complete flexibility to implement the business rules required to support virtually any billing model. This

provides the service provider the ability to launch new products and services quickly in full support of market demands and regulatory requirements.

Fraud Management

- Simultaneous calls are not allowed for end-user accounts, unless configured for post-paid customers.
- Attempts to authorize PINs belonging to batches that have not been sold indicate PIN leaks.
- Within a predefined interval, if more than a predefined number of different PIN authorization attempts are made from a single ANI, all further calls from that ANI are blocked.

Call Matching, Reconciliation, Settlements & Dispute Management

- Reconcile bills of interconnecting partners by matching billing records
- Generate and send statements to carriers and interconnecting partners
- Settle accounts of interconnecting partners through reconciliation and settlement adjustments for disputed items

Rate Plans Analysis, Reports & Audits

- Ability to model new rate plans and analyze the impact on costs and revenues
- Carry out mass rate updates
- User customizable and predefined traffic and management reports
- User definable roles and access privileges the system access and restriction
- Audit history of user activities & transactions

Carrier Account Management and Billing

- Create and manage multiple carrier accounts
- Create and manage destination codes
- Define buying and selling rates per destination code per carrier
- Define multiple billing cycles
- Rates for time of day, day of week, holidays and exceptions
- Define usage-based, fixed and recurring charges

No.	Rate	Card Number	Validity Start	Validity End	Subscriber	Balance	Rate
1	00-000-0000	00-0000-0000000000000000	00-00-0000	00-00-0000	0000000000	00.00	00
2	00-000-0000	00-0000-0000000000000000	00-00-0000	00-00-0000	0000000000	00.00	00
3	00-000-0000	00-0000-0000000000000000	00-00-0000	00-00-0000	0000000000	00.00	00
4	00-000-0000	00-0000-0000000000000000	00-00-0000	00-00-0000	0000000000	00.00	00
5	00-000-0000	00-0000-0000000000000000	00-00-0000	00-00-0000	0000000000	00.00	00
6	00-000-0000	00-0000-0000000000000000	00-00-0000	00-00-0000	0000000000	00.00	00
7	00-000-0000	00-0000-0000000000000000	00-00-0000	00-00-0000	0000000000	00.00	00
8	00-000-0000	00-0000-0000000000000000	00-00-0000	00-00-0000	0000000000	00.00	00
9	00-000-0000	00-0000-0000000000000000	00-00-0000	00-00-0000	0000000000	00.00	00
10	00-000-0000	00-0000-0000000000000000	00-00-0000	00-00-0000	0000000000	00.00	00
11	00-000-0000	00-0000-0000000000000000	00-00-0000	00-00-0000	0000000000	00.00	00
12	00-000-0000	00-0000-0000000000000000	00-00-0000	00-00-0000	0000000000	00.00	00
Total						00	000.00

Call Records

No.	Name	Mobile No.	Valid From	Valid To	Balance	Call Duration (min)	Last Recharge
1	John Doe (ANI)	0000000000	00-00-0000	00-00-0000	00	00	00
2	Jane Doe (ANI)	0000000000	00-00-0000	00-00-0000	00	00	00
3	John Doe (ANI)	0000000000	00-00-0000	00-00-0000	00	00	00
4	Jane Doe (ANI)	0000000000	00-00-0000	00-00-0000	00	00	00
5	John Doe (ANI)	0000000000	00-00-0000	00-00-0000	00	00	00
6	Jane Doe (ANI)	0000000000	00-00-0000	00-00-0000	00	00	00

Product wise list of Customers

Ceres Platform-Owner Management Console

Ceres provides the platform owner a comprehensive, intuitive and user-friendly Platform-Owner Management Console. It enables the platform owner to manage all the aspects of the Hosted Service Provider (HSP). HSPs can be configured to be up and running in practically no time. It has never been easier to launch a retail voice service provider. The accounting works in a simple prepaid model – the HSP deposits funds from which call termination and service charges are deducted. Once the HSP’s balance is depleted, the account is automatically deactivated and no further calls from end-users under the HSP are allowed.

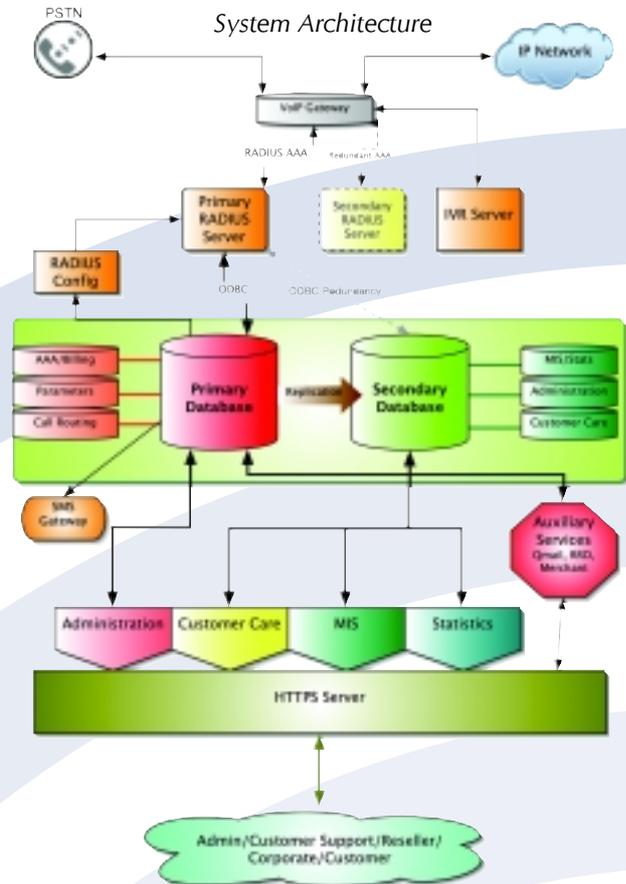
Name	Type	Downloaded	Remaining	Subscribed	Unsubscribed	Card Value	No. Cards	Expiry Period	Status
India Prepaid A	Prepaid	100	74	24	0	100	3	180	Active
California	Prepaid	100	100	0	0	100	3	180	Active
Call Start	Prepaid	100	100	0	0	100	3	180	Active
Europe Street	Prepaid	100	74	25	0	100	3	180	Active
RFID Subscribers	Prepaid	100	100	0	0	100	3	180	Active
India Prepaid	Prepaid	100	100	0	0	100	3	180	Active
India Prepaid	Prepaid	0	0	0	0	0	3	180	Active
India United Kingdom	Prepaid	1000	100	0	0	100	3	180	Active
Europe Commission	Prepaid	100	100	0	0	100	3	180	Active
India	Prepaid	100	100	0	0	100	3	180	Active
India United Kingdom	Prepaid	100	100	0	0	100	3	180	Active
World Commission	Prepaid	0	0	0	0	0	3	180	Active

Product List

Feature Highlights

- Define a new Hosted Service Provider
 - ▶ Create a new HSP Account
 - ▶ Define Code, Description, Nick-Name for HSP
 - ▶ Define HSP Business Entity’s Phone Numbers, E-mail, URL, Logo, etc.
 - ▶ Select the appropriate Time Zone, Currency and Language for the HSP
- Select Subscribed Services and Define Rates
 - ▶ PSTN access for inbound calls
 - ▶ Global voice termination
 - ▶ Intelligent Call routing with ability to add new carriers
- Credit Allowance and Invoice Management
 - ▶ Allocate Credit Limit and Balance Amount
 - Each end user’s duration cost is deducted from the SP’s balance irrespective of the card type (Prepaid, Postpaid, ANI, Rechargeable variants, etc.)

- ▶ Configure Prefix and Suffix to be used in the invoices sent by the SP to its Customers
- ▶ Time Zone Support – Real-time billing, invoicing, reporting and other events happen in the SP's Time Zone
- Comprehensive Charge Application
 - ▶ PSTN Charge – When the end-user dials the HSP's access number, this charge is applied.
 - ▶ Global Voice Termination Charge – Every billable call terminated by the platform-owner
 - ▶ Platform Service Fee – Charged for every successful call from an end-user under the HSP
 - ▶ Define Activation Charge or One-time Charges that are applied when the HSP is created
 - ▶ Create Periodic Charges that are applied in any of the following periods – Daily, Weekly, Fortnightly, Monthly, Bi-Monthly, Quarterly, Semi-Annually and Annually
- Auxiliary Management and Support
 - ▶ Seamlessly Create Carriers
 - ▶ Define Carrier Rates for Countries
 - ▶ Define Billing Schemes for Carriers
 - ▶ Assign termination rates to HSPs
 - ▶ Track receivables from HSPs and payables to terminating carriers and PSTN access providers
 - ▶ Comprehensive HSP Performance Reports



Ceres System Architecture

System Components

Hardware

- Two Linux Servers. Recommended configuration: Intel Pentium Xeon 2.8 GHz, 1 GB RAM, 100 GB of RAID storage
- Any RADIUS-Compliant Voice Gateway (Cisco, Quintum) or Switch

System Software

- Ceres
- Apache Web Server with modules
- Oracle SE or PostgreSQL Database Server

Client Software

- Browser: Internet Explorer 5.5 or higher, Netscape 6.2 or higher, Mozilla 1.1 or higher



ASR Report