



Cell Power Auditor

What is Cell Power Auditor?

Cell Power Auditor is a transaction auditing system for monitoring, logging, and managing deposit and purchase transactions between 3rd-party electronic voucher resellers and the electronic voucher provider.

Cell Power Auditor is implemented as software that runs on a single server for small installations, or on a cluster of servers in the case of larger installations.

Who uses Cell Power Auditor?

Cell Power Auditor can be used by Electricity Utilities and Municipalities to provide an independent audit trail of all deposit and sales transactions performed by 3rd-party resellers of prepaid electricity. The comprehensive reports provided by **Cell Power Auditor** can be used to resolve disputes which may arise from discrepancies between the logs provided by the Utility's electricity voucher generation system and the 3rd-party reseller's vending system.

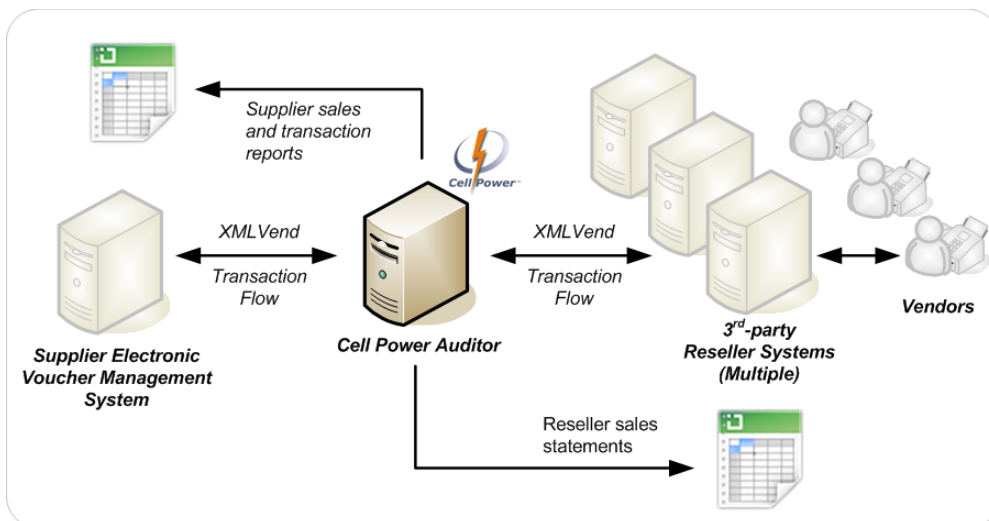
Cell Power Auditor can also be used by prepaid airtime wholesalers to provide an independent log of all deposit and sales transactions performed by 3rd-party resellers.

Cell Power Auditor Functionality

Cell Power Auditor performs the following functions:

- Accepts transaction requests from multiple 3rd-party reseller vending systems.
- Forwards the transactions to the voucher generation system.
- Returns transaction results to the 3rd-party reseller vending system.
- Ensures integrity by performing all transactions as "atomic" transactions which are either fully committed or fully rolled back.
- Logs all transaction details.
- Provides a source of independent sales reports for specified time periods.
- Provides separate transaction statements per 3rd-party reseller for specified time periods.
- Provides a mechanism to block 3rd-party reseller access to the system, should they not follow the rules when selling.
- Provides an optional mechanism to set up credit limits per 3rd party reseller. Access is automatically blocked when the limit is reached. Limits can be positive (where reseller in in credit) or negative (for temporary over-draft).

- Provides an optional mechanism to automatically update 3rd-party reseller credit limits, based on funds paid into a bank account.
- Provides the 3rd-party resellers with a secure login to download own transaction statements to perform their own internal audits independently. This can dramatically reduce the workload on the Utility/Municipality.



How does Cell Power Auditor work?

Cell Power Auditor operates within the live transaction stream as a **vending proxy server**, and uses standard open communication protocols to interface with existing systems. **Cell Power Auditor** uses an XMLVend 2.0 interface to connect to the supplier's voucher generation server and also provides an XMLVend 2.0 interface for downstream 3rd-party resellers to integrate their vending servers.

Cell Power Auditor provides auditing functionality in two ways:

- Detailed transaction logs containing both communication and billing events.
- Business rules can be configured to reflect the commercial agreement between the supplier and the reseller.

Cell Power Auditor is manufactured by Expertron Group (Pty) Ltd, South Africa.



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Cell Power Auditor

Specifications

| | | |
|---|---|---|
| Communication Protocols | Vending protocol between supplier system and 3rd-party reseller systems | XMLVend v2 |
| | Administration and Reporting Interfaces | HTTPS |
| | GSM Short Message Service (SMS) | SMPP v3 (or directly attached GSM modems) |
| Administration Interface | Web Browser | Microsoft Internet Explorer 7.X or higher, Mozilla Firefox 3.X |
| | Administrator Roles | Default: Superuser, Supervisor, Cashier, Management, Technician. Additional roles are configurable. |
| | Administrator Security | Server-side and client-side SSL Certificates. Administrator password to log in. |
| | Administrator Management | Add, Edit, Delete. |
| | Reseller Management | Add, Edit, Delete, Credit, Debit. Manage Reseller Groups Configure Business Rules per Reseller or Reseller Group |
| | Reseller Deposits | Credit reseller account on notification message (SMS or email) received from bank. Credit resellers on importing of bank statements. Configure deposit fee rules. |
| | Point-of-Sale (POS) Connection Management | Add, Edit, Delete, Assign to Reseller. |
| | Reports | Transaction logs. Administration logs. Sales reports (tabular and charted). Sales dashboards. Separate statements for reseller accounts. |
| | Alarms | Email and SMS alerts triggered on various system and fraud-detection events. |
| | Transaction Engine | Accounting |
| Point-of-Sale Connections | | Multiple 3rd-party reseller systems can connect to a single Cell Power Auditor instance via XMLVend protocol. |
| Audit trail | | Create a detailed audit trail of all transactions (communication and billing events). |
| Reseller Business Rules | | Fixed or percentage commissions per stock type, set according to sales value steps. Business rules can be configured for a chain of resellers. |
| Security | | Reseller vending controlled by time-of-day and day-of-week. Vending blocked when reseller prepaid balance or overdraft limit is reached. Sales transaction security by password and client-side SSL certificate. Administratively block reseller account or POS connection. |
| Transaction and Database Server Requirements | Operating System | Linux |
| | Database | MySQL |
| | Processor | 2 x dual-core Intel Xeon |
| | RAM | 4 GB |
| | Hard disk drives | 2 x 146 GB 15kRPM SAS Hardware RAID-1 (root partition) 3 x 300 GB 15kRPM SAS Hardware RAID-5 with Battery-Backed Write Cache (database data partition) |
| | Power Supply | Dual redundant, hot swappable |
| Administration and Reporting Server Requirements | Operating System | Linux |
| | Processor | 1 x dual-core Intel Xeon |
| | RAM | 2 GB |
| | Hard disk drives | 2 x 73 GB SAS Hardware RAID-1 |
| | Power Supply | Dual redundant, hot swappable |
| Reliability and Support | Redundancy | Dual-redundant servers with real-time database replication. |
| | Backups | Daily backups can be dumped to local Storage Area Network or external disk drives. |
| | Data archiving | Database log tables automatically rotated daily. |
| | Remote Support | Support over low-bandwidth links. |