

# Case Study of Deployment of Breeze thin clients at Unreserved Ticketing System of India Railways

## **Customer Details:**

CRIS & Indian Railways  
All Over India

## **Brief on Unreserved Ticketing System**

Twenty-one million passengers travel daily on Indian Railways using the unreserved journey facility. An unreserved ticket authorizes these journeys but offers no reserved seats or berths. The ticket is not specific to a train service either. This facility is predominantly used by commuters and suburban travellers – over short distances where assured seating is not a necessity. Tickets are issued to the unreserved passenger any time of day or night as booking offices remain open 24 hours a day, seven days a week.

The Unreserved Ticketing System (UTS) caters to this segment of the market and seeks to provide a centrally administered computerized ticketing system over the entire Indian Railways. Today more than ninety percent of the unreserved tickets are sold through this system.

## **Opportunity:**

CRIS wanted to deploy thin client at UTS ticketing counters, with fan less design and no moving parts due to the different climate condition across India which can't be sustained by any regular desktop computer as one application required for most of the users to run and do the UTS ticket booking.

## **Challenges:**

- Highly secured & lower maintenance client required for users to enable lesser downtime in terms of hardware & software
- 24 x 7 working
- Should be able to sustain different climatic condition like very high & low temperatures, humid conditions and on top of that no air conditioning environment at most of the places

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- Must be easily Manageable from remote to reduce the IT support calls and to reduce the Client down time
- Easy to Implement, Configuring & troubleshoot
- Ability to push patches etc. remotely
- Data security (Highly confidential information which should not be allowed to taken away from any of the UTS counters)
- Low footprint to ensure minimum physical space required, since counters has limited space

### **Server, Data Base, Application & other details:**

- HP Server (Itanium)
- Server OS – HP AUX
- Database ASE\_CE (Adaptive Server Enterprise Cluster Edition)
- Mobilink Server running RHEL OS for Syncing
- Client Application in C++



### **Requirements:**

- CRIS UTS application runs on emulation environment developed in C ++
- Client-side ASA 17 to be loaded locally on to the flash
- Thin Client should be able to hold more than 15 days ticketing data
- Two Flash, one in primary & secondary each for redundancy
- With Primary having OS, RDBMS, Fare table etc. and secondary having ticket data
- Fare Display connectivity thru serial ports
- Customised Linux with support of legacy applications
- OS and relative dependencies along with software packages, the size of Primary not exceeding 2GB
- ISCII library support to print Hindi on tickets

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- Dot Matrix and Thermal Printers used for ticket printing with any of the interface e.g.. LPT,Serial or USB port support
- USB ports to be disabled for storage device access for data security

### **Solution:**

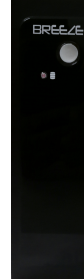
Deployed Breeze ECC LXR Thin Client

### **Configuration:**

**Operating System** – Embedded Customised Linux with kernel 4.x.xx (as required by CRIS) within 2GB

**Software** – Emulation suite, ISCII Library, JRE 1.6 & 1.8, Latest Mozilla Firefox and other required dependencies / packages.

**Hardware**- Min 1.1Ghz Quad Core processor with burst frequency 2.4Ghz , 4 GB RAM, 32GB OP FLASH,USB ports, one Parallel printer Port, Two Serial Port etc.  
*By deploying Breeze thin client following objectives were achieved in addition overcoming all the challenges mentioned above -*



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**As the thin clients are without any moving part, the maintenance is very low compared to regular desktop**

**The OS & Software's are stored in Flash drive which ensured faster speed**

**With USB storage disabled, no unauthorised access to data**

**No fiddling with configuration etc.**

**Protection from viruses and malware attacks**

**Consumes ¼ power compared to a regular desktop, ensuring Huge savings on power bills**

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