

# Case Study of Deployment of Breeze thin clients at UTS/PRS/New PRS/SMC of India Railways

## **Customer Details:**

CRIS & Indian Railways  
All Over India

## **Opportunity:**

CRIS wanted to deploy a multi purpose thin client at which can cater to UTS,PRS,New PRS and SMC applications on same device at 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.

## **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
- 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

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## **Requirements:**

- CRIS UTS,PRS,New PRS and SMC application runs on different environment
- UTS,PRS,New PRS and SMC application to be loaded locally on to the flash
- Thin Client should be able to hold more than 15 days ticketing data in case of UTS.
- Two Flash, one in primary & secondary each for redundancy
- Latest Mozilla Browser
- 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
- 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

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## **Solution:**

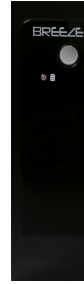
Deployed Breeze ECC LXR Thin Client

## **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.



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*By deploying Breeze thin client following objectives were achieved in addition overcoming all the challenges mentioned above -*

As a unified Thin Client any or multiple applications from UTS,PTS,New PRS & SMC can be run from same Thin Client

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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