GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
RAILWAY BOARD

No.2006/C&IS/WP2007-08/UTS Server CE & DMS/16 New Delhi, Dated 22.05.2007

The General Manager,
Northern Railway,
New Delhi.

Subject: Sanction for the work of "Capacity Enhancement and Disaster Management System of UTS servers over Indian Railways: under Plan Head 17 – Computerisation.".

The work of **"Capacity Enhancement and Disaster Management System of UTS servers over Indian Railways"** has been included in the **Pink Book for the year 2007-08** (Pink Book Item No.68/2007-08). The estimated cost and segment wise details are tabulated below: (Rupees in lakh)

SN	**Item**	**Cost**
1	System Cost including hardware and software and CRIS charges	**7498.00**
2	Electrical Cost	**900.00**
	Zonal Railway establishment cost	**739.00**
	Total Cost of the project	**9137.00**

2 Scope of the work includes:

Looking to the projected server utilization on different Railways, following server clusters have been sanctioned:-

(i) 64 GB RAM and 4 CPU server clusters one each for NR, SR, WR and SCR.

(ii) 48 GB RAM and 4 CPU server cluster one each for NWR, ER, NFR, CR, NER and ECR.

(iii) 32 GB RAM & 2 CPU server cluster one each for NCR, SWR, SER, ECoR, SECR and WCR.

2.1 The existing server clusters to be upgraded and dedicated for off-line activities such as application testing, database management, batch report generation such as daily periodical and monthly and MIS reports, fare enquiry and SMS reporting. The existing 6 zonal server clusters with 16 GB RAM & 2 CPU would be utilized over ER, SER, SR, SCR, WR & CR. No augmentation/ up-gradation are proposed on them. The balance two, 8 GB RAM and six 2 GB RAM servers would be upgraded to a uniform 16 GB RAM configuration and would be used independently over NER, ECR, NCR and NWR. 6 additional server clusters of same configuration and capacity would be required for NFR, SECR, ECoR, SWR, WCR and CRIS(development cluster).

2.2 At present there are 8 SAN storage boxes at Patna, Gorakhpur, Kolkata (2), Chennai, Secunderabad and Mumbai(2). Additional 9 storage boxes of 2 TB each have been included for the balance 8 zonal railways and one for development activity at CRIS.

2.3 Enhancement of mobilink server cluster including license cost for synchronization of data from embedded client/ATVM to the central/zonal server would be required to the existing synchronization server clusters.

2.4 Payment gateway servers (includes web servers, application server and necessary firewall) for integration of UTS servers with internet payment gateways per zone is required to support realization of railway revenue through ticket disbursed through debit/credit cards.

2.5 Augmentation of the backup infrastructure includes LTO drive, data cartridge etc. for all zonal railways.

2.6 Necessary software license for clustering and high availability option would be required for all zonal railways.

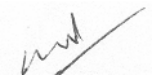
2.7 The existing UTS clusters have been provided with 1:1 redundancy and operate in high availability mode. A Disaster Management System for UTS should be built up on the lines of PRS and FOIS applications. Since the work of DR site for PRS/FOIS is planned in Secunderabad, the same approach and location is also proposed for UTS. The advantage of this approach would be the sharing of civil and telecommunication infrastructure for all sensitive customer interface application.

2.8 The configuration of the server for DR is to be 128 GB RAM and 8 CPU server (clusters of 2 servers in HA mode) keeping in view that DR site should be able to cater at least 2 biggest sites at any point of time. Similarly storage capacity has also been kept on a higher side to have data of all the 16 Zonal Railways at any point of time.

2.9 Network cost would be shared between the disaster recovery sites of PRS and FOIS.

3.0 Northern Railway should send a detailed estimate duly vetted by FA & CAO for Board's sanction.

This issues with the concurrence of Finance Directorate of Ministry of Railways



(Chhatrasal Singh)
Director (C&IS)

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Copy to :

1. The FA & CAO, and FA & CAO/Const., Northern Railway.

For Financial Commissioner/Railways

Copy to :

1. F(X)-II and Budget Branches of Railway Board
2. Chief Commercial Manager, Northern Railway.
3. Managing Director, CRIS, Chanakyapuri, New Delhi.