CTS Northern Grid Rollout Meeting

Grid Cheque Truncation System

Delhi – 10/01/2014

NPCi भारतीय राष्ट्रीय भुगतान निगम
NATIONAL PAYMENTS CORPORATION OF INDIA

AGENDA

Background

Clearing House Interface (CHI) Upgrade

Capture System Upgrade

Network Bandwidth Upgrade

NFS

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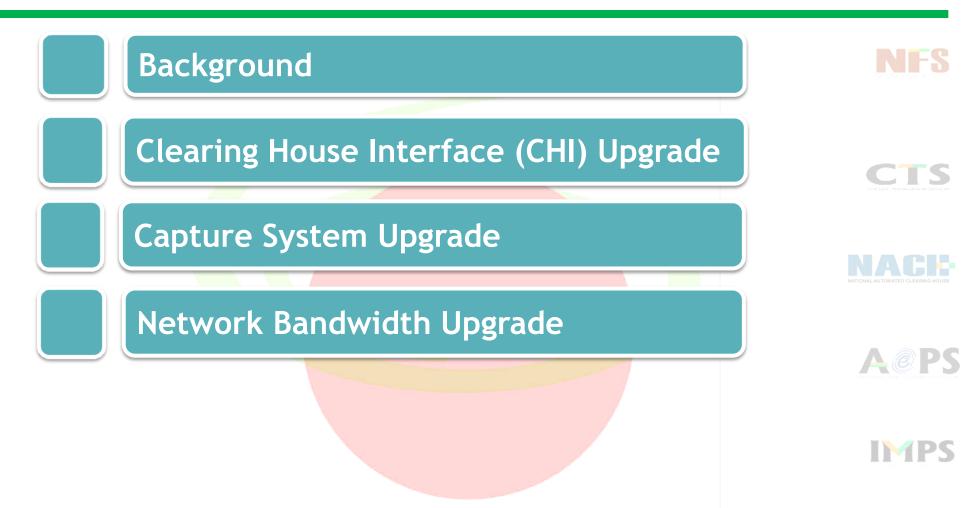
RuPay

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Background

❑ Northern Grid banks to be on-boarded on CTS by April 2014 as mandated by RBI

❑ Northern Grid is comprises of Delhi, UP, Rajasthan, Jammu & Kashmir, Punjab, Chandigarh Uttaranchal, Bihar Jharkhand

❑ Direct Participant's of Delhi CTS to review and upgrade their infrastructure to handle the entire volume of Northern Grid

❑ Following aspects four to be reviewed for upgrade
    1. Clearing House interface (CHI)
    2. Capture Solutions and Scanners
    3. Network Bandwidth between CHI and CH
    4. Bank's internal network capacity

For Point 2 and 4 banks will have to take care internally
For Point 1 and 3 bank will have to interact with NCR and NPCI Network team

Background

❑ Summary of CHI infra available at Delhi.

S. No.	Type of CHI	Processing Ability	No. of Banks
1	Mini	1 - 10,000	15
2	Small	10,000 - 30,000	13
3	Medium	30,000 - 1,00,000	19
4	Large	1,00,000 - 2,50,000	4
5	Very Large	2,50,000 - 4,00,000	2

❑ Delhi Grid CTS - Network Options Availed

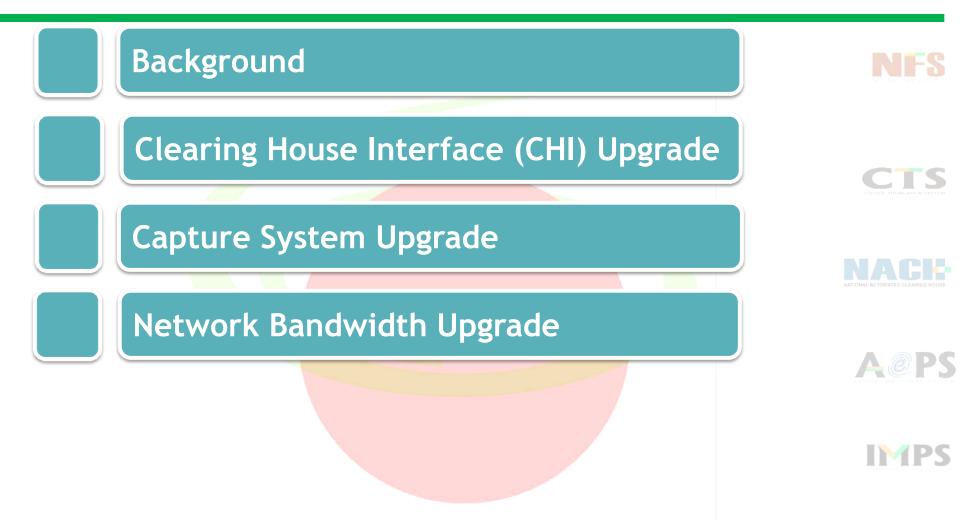| S. No.	Type of Network	No. of Banks
1	Option 1 (Single Link – RCOM and Airtel)	13
2	Option 2 (Dual Link – Reliance and Airtel)	40

Except Kangra Co-op Bank and RBI-PAD for rest of the single link banks PO is placed for secondary link and link delivery is in progress.

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Clearing House Interface (CHI) Upgrade

- Basis the mandate by RBI, banks are required to reassess their technology infrastructure.

- Banks are required to consider current NCR region volume along with volume at proposed MICR centres which are proposed to form part on Northern Grid

- Banks to procure the Hardware required for upgrade as per CHI specification 2.0 and above

- Since depending on internal procedures banks may require some lead time to issue PO, banks are required to initiate the review process immediately

- Bank to convey its readiness to their respective Relationship Managers and CTS Support Team Delhi

- NPCI will align NCR implementation team and communicate to banks

- Additional HSM card with back up device may be required for banks which need to upgrade to Very Large or Extra large variant. Banks requested to refer CHI Specification Version 2.0 and above for the details

Clearing House Interface (CHI) Upgrade

❏ Table shows the information on CHI type and volume processing capacity and hardware requirement

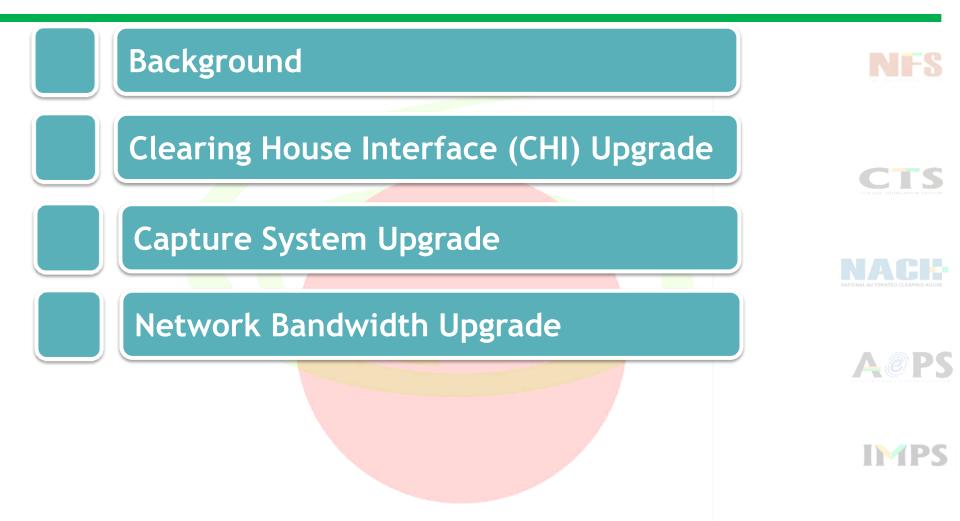| Type Of CHI	Volume Capacity (ITEMS/DAY)	No of CHI Servers
Mini CHI	Upto 10000	One
Small CHI	10000 to 30000	One
Medium CHI	30000 to 100000	One
Large CHI	100000 to 250000	Two (1-App, 1-DB)
Very Large CHI	250000 to 400000	Two (1-App, 1-DB)
Extra Large CHI	400000 to 550000	Two (1-App, 1-DB)
Extra Extra Large CHI	550000 to 800000	Two (1-App, 1-DB)

Hardware Comparison of CHI

CHI Type	Mini	Small	Medium
Dual Intel Pentium Xeon Processor E5-2637	2C, 5M Cache, 3.00Ghz, 8.00 GT/s Intel QPI	2C, 5M Cache, 3.00Ghz, 8.00 GT/s Intel QPI	2C, 5M Cache, 3.00Ghz, 8.00 GT/s Intel QPI
Memory	16GB (DDR3, 1600 MHz)	16GB (DDR3, 1600 MHz)	24GB (DDR3, 1600 MHz)
SCSI RAID Enabled Backplane (or external SCSI/SAN Fibre Connect) Disk Drive Specification(RAID 1 on separate disk Spindles/SAN Volumes)	15K RPM	15K RPM	15K RPM
Disk 1 in Raid 1 (2 disks)	80 GB	80 GB	80 GB
Disk 2 in Raid 1 (2 disks)	28 GB 10 GB	56 GB	180 GB
Disk 3 in Raid 1 (2 disks)	20 GB 20 GB 30 GB	22 GB 22 GB	40 GB 20 GB
Disk 4 in Raid 1 (2 disks)	-	15 GB 30 GB	20 GB 60 GB
LUNA PCI E 7000 HSM from Safenet Inc	1	1	1
Windows 2008 (64 bit) Standard edition with appropriate CALs to handle the users within the Bank	Windows 2008 (64 bit)	Windows 2008 (64 bit)	Windows 2008 (64 bit)
Volume Handling Capacity	10,000 4,000 items in peak hour	30,000 12,000 items in peak hour	1,00,000 40,000 items in peak hour

Hardware Comparison of CHI

CHI Type	Large		Very Large		Extra Large	
Dual Intel Pentium Xeon Processor	E5-2637 ,2C, 5M Cache, 3.00 GHz, 8.00 GT/s Intel QPI	E5-2637, 2C, 5M Cache, 3.00 GHz, 8.00 GT/s Intel QPI	E5-2643, 4C, 5M Cache, 3.30 GHz, 8.00 GT/s Intel QPI	E5-2643, 4C, 5M Cache, 3.30 GHz, 8.00 GT/s Intel QPI	E5-2643, 4C, 5M Cache, 3.30 GHz, 8.00 GT/s Intel QPI	E5-2643, 4C, 5M Cache, 3.30 GHz, 8.00 GT/s Intel QPI
Memory	32GB (DDR3, 1600MHz)	32GB (DDR3, 1600MHz)	32GB (DDR3, 1600MHz)	32GB (DDR3, 1600MHz)	32GB (DDR3, 1600MHz)	32GB (DDR3, 1600MHz)
Disk RPM	15K RPM	15K RPM	15K RPM	15K RPM	15K RPM	15K RPM
Disk 1 in Raid 1 (2 disks)	80 GB 20 GB	80 GB 20 GB	80 GB 20 GB	80 GB 26 GB	80 GB 60 GB	80 GB 180 GB
Disk 2 in Raid 1 /10 (2 disks)	225 GB	25 GB 30 GB	360 GB	40 GB 48 GB	100 GB 300 GB	900GB
Disk 3 in Raid 1 /10 (2 disks)	225 GB	20 GB	360 GB	40 GB	100 GB	900 GB
Disk 4 in Raid 1 (2 disks)	-	20 GB	30 GB	40 GB	100 GB	50 GB
Disk 5 in Raid 1 (2 disks)	-	15 GB	-	24 GB	60 GB	-
Disk 6 in Raid 1/ Raid 10 (2 disks)	-	150 GB	-	250 GB	1200 GB	-
HSM from Safenet Inc	1		2		2	
OS Standard Edition	Windows 2008 (64 bit)	Windows 2008 (64 bit)	Windows 2008 (64 bit)	Windows 2008 (64 bit)	Windows 2008 R2 (64 bit)	Windows 2008 R2(64 bit)
Processing Capacity (OW +INW)	2,50,000 1,00,000 items in peak hour		4,00,000 1,60,000 items in peak hour		5,50,000 1,65,000 items in peak hour	

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Capture System Upgrade

- ❑ Capture System comprises of
  - ▪ Cheque Scanner
  - ▪ Scanning Software to perform required validations mentioned in CHI specs
  - ▪ User wise Class 2 (SHA2 Digital Signature Certificate) for applying DS on images & data files.

- ❑ Bank may require upgrade of their capture system to handle the additional volume of entire Northern Grid

- ❑ Bank also need to arrange additional scanners at hub location/branch location depending on its participation model

- ❑ NPCI has not prescribed any empanelled list of Scanners/ Capture Service Providers/ Hardware Vendors

- ❑ Banks need to follow internal procurement policy

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Network Bandwidth Upgrade

- ❑ Network is required to communicate between Clearing House Interface (CHI) and Clearing House (CH)

- ❑ Banks to coordinate with NPCI network team for upgrade requirement with Site address

- ❑ NPCI Network Team will carry out the feasibility

- ❑ Based on the feasibility NPCI will provide the commercials for network installation

- ❑ Banks to provide the go ahead on the commercials

- ❑ Banks to keep the site ready for installation of network devices

Thank You !!!

NPCI @ 2020…Touching Every Indian

Contacts

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