



**Netmagic Migrates and Consolidates  
Credit Information Company's Data Center**

# CASE STUDY

The client stores and manages the credit history of millions of commercial and consumer borrowers and provides credit information reports to its member banks, financial institutions, non-banking financial companies, housing finance companies, state financial corporations and credit card companies. In its years of existence, the client has come to play a critical role in India's financial system – their products and services have changed the way the credit life cycle is managed by both loan providers and consumers.

## Technology Challenges and Business Impact

The client's data center was in-house at their office and a co-located data center at another third party provider at Mumbai. Their clients, over 200 member banks, would connect to their co-located data center at Mumbai. They had a back-to-back connectivity to their in-house data center.

As a credit information company, the client handles a large and expanding volume of critical financial data. Unfortunately, the underlying IT infrastructure was not adequate to handle the growth that the company was going through. The data center, or server room, at their office was unreliable with high downtimes due to several issues including mechanical problems, HVAC issues, etc.

The company also lacked in-house resources to maintain the data center and had to depend on outsourced resources to manage the same. The increasing reliability and downtime issues at the data center were a drain on the IT team and thus lacked effectiveness needed for the business.

There was an eminent need to consolidate their IT infrastructure including both locations – their server room located at their office as well as co-located data center. They also wanted to virtualize their servers in view to consolidate and optimize.

Another issue facing the IT team at the company was the management of numerous number of vendors to run and maintain the IT infrastructure piece. There was a need to consolidate the number of vendors they managed.

Due to numerous vendors working on running and maintaining their data centers, they were paying on resource-based model. To optimize cost of infrastructure management there was a need to move this to a SLA based management model.

Information kept growing and the business kept growing. When it became clear that managing this information growth and addressing their infrastructure challenges was beyond the capability of their in-house datacenter, the client made a detailed survey of available options.

Data center consolidation and migration approach seemed the best option to address these multiple challenges facing the client. They decided to approach an able partner to help them consolidate and migrate the data center, co-locate their servers to a state-of-the-art data center facility from a third party provider.

## Planning the migration

Even before being awarded the contract for data center consolidation and migration, Netmagic charted out a detailed migration plan for the client. "We on-boarded a service delivery project manager and a solution engineer before the contract was awarded to showcase to the client that we understand challenges during data center relocation and migration very well. We needed to educate and comfort the client by detailing the general pitfalls during projects such as this and ways and means to address them," says Mandar Kulkarni, Senior Vice President at Netmagic Solutions.

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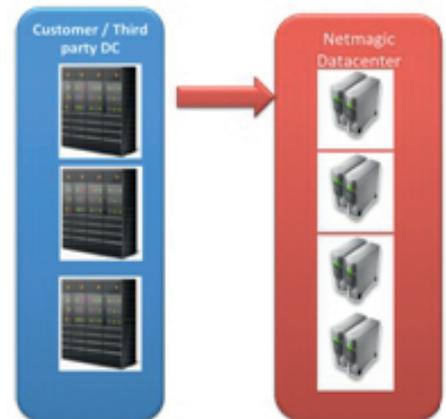
The company had proprietary HP Itanium servers, which were expensive and not feasible to have standby machines. Therefore it was not possible to provide standby for these servers during the relocation procedure. Netmagic involved HP also into the program. Similarly OEMs were involved in the relocation and migration plan as contingency in case of hardware failures.

Security was another concern for the company that needed to be addressed. Not only data security but also physical security since the machines and storage devices contain highly critical and sensitive information. Armed guards and physical security for the move was thus planned and put into place.

Micro-level planning ensued, and the final plan was detailed with the client. The client approved the relocation and migration before work began.

## How was the migration done?

Netmagic experts followed a bubble migration strategy. The network at the client had over 70-80 leased circuits. There was a parallel architecture similar to the client's network set up at Netmagic's Mumbai data center facility. Explains Jino John - Associate Vice President - Service Delivery Operations at Netmagic Solutions, "data center infrastructure such as servers and storage devices can be moved easily but the network migration is a critical piece. We did a classic bubble setup for migrating the client data center to our data center facility."

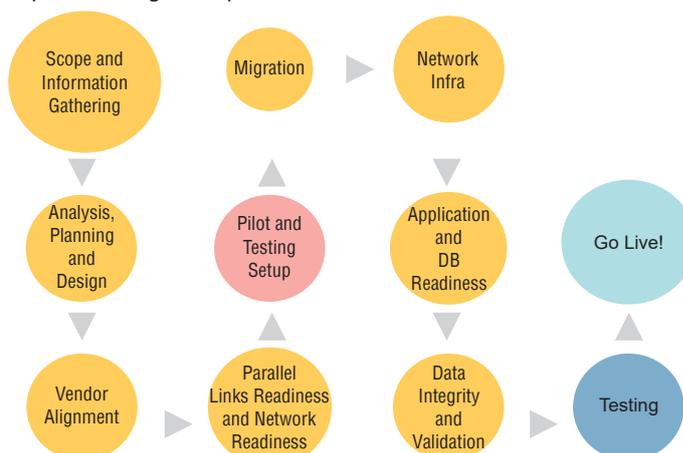


"We created a bubble setup for both their in-house data center as well as the co-located one and had connectivity with the client's running infrastructure. This was done much earlier and was running in parallel," he adds. The plan was to create a bubble setup at the new DC, and then move application-by-application, environment-by-environment, step-by-step. See figure 1.1.

The advantages to the client about this approach are based on their need to migrate, consolidate and run state-of-the-art data center for their growth plans. Some of the advantages to this approach are:

- ▶ Safest approach – least chances of failures and downtimes
- ▶ Moderately expensive – ensures moderate cost of migration and upgrading IT infrastructure
- ▶ Gives clients an opportunity for hardware refresh and create architecture that is future-ready

See figure 1.2 for steps in the migration process.



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## Testing the plan and migration

To test the plan, which was on paper, Netmagic setup their network similar to the client's in-house setup as well as their co-located setup. Then a small portion of the infrastructure was moved before the actual relocation and migration of the entire infrastructure. This was tested to see if the network architecture was functioning properly.

Post successful testing and client approval, Netmagic did a 'lift-and-shift' migration, which was done in a single night over a weekend.

Steps involved in the physical migration of the infrastructure:

- ▶ Test systems by shut down and restart to check if all systems are working fine after restarting
- ▶ Numbering and marking all pieces of the infrastructure from sockets to cables and all devices
- ▶ Physical diagram of the entire infrastructure and photographing the entire infrastructure for reference
- ▶ Physical move of the infrastructure with support of armed security guards

Netmagic enabled a seamless migration of the company's mission critical IT infrastructure to their datacenter without any disruption to their operations within a week.

## Consolidation and Virtualization of State-of-the-Art DC

Once the move was done, the client along with Netmagic began the next step of their migration and consolidation exercise. Operational optimization and stabilization was done for around 5-6 months after which Netmagic started on further requirements that the client had.

The client had needs that were stringent and not limited to relocation and management. They needed a datacenter specialist who could provide:

- ▶ 24x7 availability and expand-as-you grow scalability to accommodate future volume growth and bandwidth requirements
- ▶ Carrier neutrality to accommodate multiple internet connectivity providers
- ▶ Proven robustness and security to protect critical customer information
- ▶ Centralized and standardized monitoring of the hosted IT infrastructure
- ▶ Transformation of IT Infrastructure operations and leveraging BMC

Netmagic provided a comprehensive basket of services for IT infrastructure management to the company. For them, this meant that as their business grew, their IT infrastructure seamlessly scaled up in line with business needs.

"One of the key requirements that the client had was that they wanted state-of-the-art tools. They now use our shared BMC platform. They would have to spend a few crores to do this instead of a few thousands that they are spending now," claims Mandar Kulkarni.

Netmagic offered a depth of capability and expertise well beyond the contracted requirements. Netmagic provided link utilization monitoring and weekly reports for the company during business spikes – services that would have hindered business efficiency and speed if they were not available. Moreover, the company is assured of scalability to support additional data and users as and when required.

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Since the client wanted to move from resource-based DC management to SLA-based, Netmagic proposed and provided a dedicated NOC. This was a key requirement, as the company wanted their own processes to be followed and customization for support processes. The dedicated NOC addresses their L1 and L2 support requirements – for their custom processes. For everything else, they used Netmagic’s shared NOC, and the client can pull resources as and when they need them. “We have a large pool of expert resources that we call Center of Excellences or technology towers which are basically L3 and L4 skills available on-demand,” says Mandar Kulkarni.

Netmagic also provided complete customized monitoring services on an OpEx model to the company to suit their specific requirements for monitoring their applications hosted with Netmagic and other business queries raised by the users. Netmagic developed a mechanism whereby custom alerts via SMS could be sent to the company in case some critical applications were down or sluggish or if there was a security breach.

After the migration was stabilized, running from Netmagic infrastructure for a few months, the provider virtualized 50 physical servers to 5 RHEV (Red Hat Enterprise Virtualization) servers thus reducing the server sprawl and increasing/improving efficiency.

## Benefits Derived

With IT infrastructure solutions provided by Netmagic now well into the operational phase, the company is assured of a highly available and scalable IT infrastructure to support its growing business.

Netmagic’s 24x7x365 monitoring and management services ensure 99.99% uptime for the company’s IT infrastructure, making certain that there is no disruption to its business at any point of time.

Benefits for the company have been substantial, the key ones are:

- ▶ The company has been able to achieve significant cost savings by outsourcing their datacenter instead of investing in additional IT infrastructure in-house
- ▶ Virtualization of 50 physical servers to 3 RHEV (Red Hat Enterprise Virtualization) servers helped in reducing the server sprawl and improving efficiencies and reducing operational costs
- ▶ Custom monitoring and alerts for monitoring and trending the business applications resulted in cost efficiencies for the company
- ▶ IT infrastructure costs have shifted from upfront capital expenditure to a more manageable operational expenditure
- ▶ A single window to monitor their entire IT infrastructure – network, servers, application, availability and performance – led to better management of the infrastructure
- ▶ High availability and reliability of IT infrastructure – Tier III+ standards ensuring 99.99% availability and N+1 redundancy
- ▶ Access to vast pool of industry leading technology experts to Netmagic CoEs (Center of Excellences)

Additionally there was a lot of knowledge transfer and documentation of processes that was to be done for the client, which Netmagic’s dedicated project manager completed successfully.

The engagement has now scaled up by over three times since inception with an increased number of member banks using the system – a clear demonstration of the company’s continuing trust in Netmagic.

### SOLUTION SNAPSHOT

- ▶ DC consolidation and Migration
- ▶ IDC and Managed Hosting – Colocation, Leased Line, Remote Hand Support, Physical and Logical Security (access control, camera)
- ▶ Infrastructure Management Services
  - A dedicated NOC for technical support and complete infrastructure management for the company
  - Application operation support for member banks and end customers of the company
  - Custom monitoring configured for monitoring and trending their business applications
  - Automated monitoring and management through BMC software solution
- ▶ DC consolidation and Virtualization using RHEV