**Progression logo**

**Snapshot**

Konkan Railway Corporation Limited (KRCL) is the operational body of the Konkan Railways, a subsidiary zone of the Indian Railways. Headquartered at Belapur, Navi Mumbai, the corporation runs passenger and freight services from Roha in Maharastra to Mangalore in Karnataka, a distance of 750 kms. The corporation has three regional offices at Ratnagiri, Karwar and Madgaon.

**Challenges**
- Old IT infrastructure
- No backup solution
- Relying on manual backup processes
- Risk of revenue loss

**Solution**

The backup solution chosen was HP DataProtector 6.11. This backup software automates several tasks for the client. Progression also installed DataProtector 6.11 Cell Manager at the client's Central Office (CO), Regional Offices (RO) and Hubs.

**Benefits**
- Scheduled online backups
- Adequate provisions for scalability
- Pre-defined backup retention policy
- Backup job related alerts
- No data loss
- Automated media creation for offsite storage

**Reviving IT Infrastructure**

*With its revived IT infrastructure and new backup solution in place, KRCL can now focus better on its operations and on developing new technologies*

Konkan Railway Corporation Limited (KRCL) is a subsidiary of Indian Railways. It became operational in the year 1998. Ever since its start, KRCL has been a front runner in the research and development of new technologies and concepts.

The IT infrastructure of KRCL was established in the mid-90s and is distributed across three major areas. These are its Central Office, Regional Offices and Hubs. All stations across these

regions report to their respective hubs. As the IT infrastructure was very old, KRC L wanted to go for a complete IT overhaul. What was required was a new, robust infrastructure, with an architecture that could offer several levels of redundancy and in-built event monitoring systems.

**Challenges**

- **Old IT infrastructure**: The IT infrastructure of KRCL was very old and was near End of Support from OEMs. It was unable to handle the production pressure, and needed a complete overhaul.
- **No backup solution**: Not having a backup solution in place was a big challenge for KRCL. This meant that the huge amount of user data was always at risk.
- **Relying on manual backup processes**: In the absence of any backup solution, KRCL relied heavily on manual backup processes through tools like ontape, onbar and tar.
- **Risk of revenue loss**: There was a constant threat to data, which could lead to possible loss of revenue. Taking manual backups also meant revenue loss on account of time and manpower wastage.

**Why Progression?**

Progression Infonet has a proud history of successful project implementations. For complex projects, like in the case of KRCL, it is one of only two companies in India with the skills needed to carry out a successful implementation.

Based on its prowess at execution, Progression has, for a long time, been an implementation partner with HP and with several other technology giants. It believes in identifying technologies for the future, and then investing in and nurturing the skill sets required for those technologies. Having certified Data Protector experts set the company apart.

Progression has expertise in all aspects of technology, be it software, data, servers, operating systems, or anything else. But what gives it a clear edge over its competitors is its outstanding change management. This is one factor that was required in the case of KRCL.

**Solution**

The new IT infrastructure is based on industry standard components. The best proven technology was used to ensure optimum power consumption, and fulfill the rack space and cooling requirements. The infrastructure is scalable enough to take care of future increases in the user load, even beyond the deployed capacity.

The backup solution chosen was HP DataProtector 6.11. This backup software automates several tasks for the client. Progression installed DataProtector 6.11 Cell Manager at the client's Central Office (CO), Regional Offices (RO) and Hubs. Using a mix of both onsite and remote implementation skills, the implementation was completed in the year 2011.

The solution offers the three-tier backup system of Client Servers-Staging Disk-Tape Device. This minimizes the possibility of data loss to zero. The backup capture frequency is every 12 hours for full backups, and every 1-2 hours for log backups. This, coupled with the minimum backup window, ensures that there is no adverse impact on the production servers.

**Benefits**

Progression implemented the project in the year 2011. The new IT infrastructure has solved most of the challenges that KRCL was facing. The real benefits of the project will be observed over a period of time.

- **Scheduled online backup**: Scheduled online backup means that full backups can be taken at a time when there would be least impact on production servers. Also, the backup window is minimized to prevent any impact on production.

- **Adequate scalability provisions**: The solution is scalable, and will be able to handle any increase in the user load, beyond the deployed capacity.

- **Pre-defined backup retention policy**: The pre-defined retention policy of two-tier backup ensures availability of the backup at the time it is needed.

- **Backup jobs related alerts**: These alerts inform users about the status of backup jobs—about their success and failure, or about the need for intervention.

- **No data loss**: The new solution means that backups are always available, so the possibility of data loss is now reduced to zero. This, in turn, would ensure that there is no revenue loss either.

- **Automated media creation**: Automated media creation for offsite storage means savings on time and manpower, which translates into higher revenues.


Blurb

The new solution means that backups are always available, so the possibility of data loss is now reduced to zero. This, in turn, ensures that there is no revenue loss either.
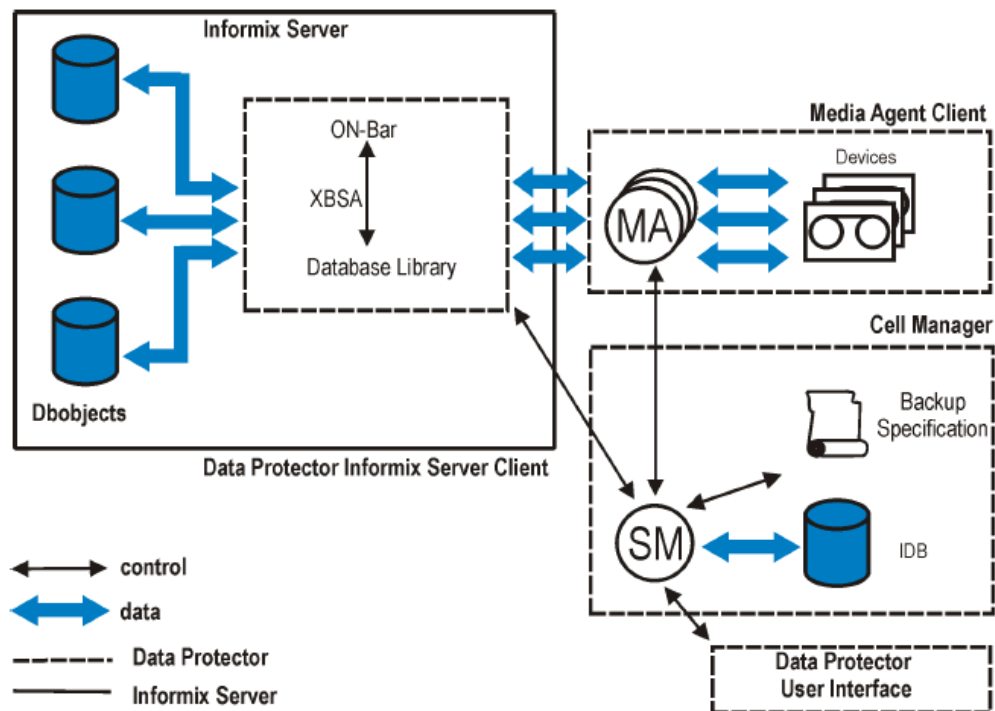
Legend

| | |
|---|---|
| SM | Data Protector Session Manager: Backup Session Manager during backup and Restore Session Manager during restore. |
| ON-Bar | ON-Bar executes backup and restore requests from Data Protector and from the Informix Server command line. |
| XBSA | X/Open Backup Services Application Programmer's Interface, through which ON-Bar and Data Protector exchange control and data. |
| Database Library | A set of Data Protector executables that enable data transfer between an Informix instance and Data Protector. |
| MA | Data Protector General Media Agent. |
| Backup Specification | A list of objects to be backed up, backup devices, and options to be used. |
| IDB | The Data Protector Internal Database. |

<mark>Caption</mark>

**Data Protector integration with Informix for online backup**

**About Progression**

Progression Infonet Pvt. Ltd. was incorporated in 1995 with a vision to provide and optimize IT computing infrastructure. We are an end-to-end systems integration company having key partnerships with VMware, HP, Sun-Oracle, Microsoft, Linux, Solaris, and Oracle. All our engineers are certified for designing and architecting, selling, servicing and optimizing computing infrastructures based on solutions from these market leaders. Progression is a process driven organization. We ensure service delivery as per the ITIL framework. We are headquartered in Gurgaon and are present in New Delhi, Noida, Mumbai and Bengaluru.