

Ministry of Justice Case Study

O-DEAT Oracle 11g, Options and Enterprise Manager Packs

National Offender Management Service Boosts Performance and Strengthens Security on Offender Data Evaluation and Analysis Solution



Ministry of
JUSTICE

www.justice.gov.uk

Industry:

Public Sector

Employees:

77,000

Budget:

£8.8 billion

Oracle Products & Services:

Oracle Enterprise Manager

Database

Enterprise Management

- Diagnostics
- Tuning

Enterprise Edition Options:

- Partitioning
- Advanced Compression
- Advanced Security

Oracle Partner:



Beyond Systems

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The National Offender Management Service, an executive agency of the Ministry of Justice, commissions and delivers the highest quality correctional services and interventions in order to protect the public and reduce re-offending. NOMS brings together the Probation Service and HM Prison Service and aims to provide a coherent end to end service by managing offenders across the entire life of their sentence.

Detailed offender assessments are recorded to help in predicting likelihood of reconviction, identifying areas of criminogenic need and assessing risk of serious harm. An offender's assessment helps to determine the work that will be carried out with that offender in order to reduce their likelihood of re-offending and to protect the public. The assessment is updated over the course of a sentence enabling the assessor to monitor change. In this way new assessments can be merged and the offender can be monitored over the course of their criminal career.

The O-DEAT (Offender Data Evaluation and Analysis Team) are responsible for undertaking quantitative and qualitative analysis on offender data in order to assist NOMS in meeting its key government objectives on public protection and reducing re-offending.

Performance Management

The O-DEAT database is the first of its kind in Europe and holds more than 3 million offender assessments taking data from 42 Probation areas and 132 Prisons. There is an expectation that the number of assessments will grow by 750,000 each year.

Over the next year this represents an increase of 25% on its current size and would impact not only the size of the database but also the overall performance of data loading, analysis and extraction. Some action was required not only to improve the current performance but also to counter the anticipated growth and ensure that the system continues to deliver the data to O-DEAT in a timely fashion.

Upgrading the database from 9i to 11g Enterprise Edition immediately achieved performance improvements of 30% through Automatic Shared Memory Management and a faster PL/SQL engine.

Implementing the Enterprise Manager Diagnostics and Tuning packs along with the Advanced Compression and Partitioning database options provided the tools to undertake a system-side performance review and to manage the system going forward.

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Customer feedback

“Deploying Oracle’s Enterprise Manager and products has improved performance and security in addition to mitigating risk from this key system holding highly sensitive data” – **Dr. Robin Moore, Senior Research Officer, NOMS, Ministry of Justice**

- The Automatic Database Diagnostic Monitor (ADDM) identified issues and provided recommendations which proved fruitful in improving performance
- SQL Tuning Advisor helped to identify and tune some of the 30,000 lines of bespoke code used in the application
- Interval Partitioning was implemented to improve access times to key Offender tables along with helping to manage historical data and future growth
- Advanced Compression was used to reduce the overall database storage footprint and backup capacity in Production as well as the Test and Support environments
- Using Advanced Event Notification via Oracle Enterprise Manager, the O-DEAT system is automatically monitored to ensure that it remains available and delivers optimum performance

Security Management

Security of the O-DEAT system is of paramount importance due to the sensitivity of the data and the entire system falls under Home Office DSU (Departmental Security Unit) accreditation.

Oracle Advanced Security transparent data encryption (TDE) provides O-DEAT with a robust solution to safeguard its sensitive data against unauthorized access at the operating system level or through theft of hardware or backup media.

Delivered Benefits

The inherent performance and manageability features of 11g Enterprise Edition coupled with the capabilities afforded by the Enterprise Manager packs and database options implemented ensures that O-DEAT’s data is protected, delivered on-time and mitigates the risk as volume grows.

This project also delivered a healthier utilisation of technical resources via automation and increased productivity through better availability and performance.

About Beyond Systems

Beyond are a Oracle Certified Advantage Partner for both Oracle Business Intelligence Applications and the Oracle Database. Beyond focus on the delivery of complex, high-risk projects with leading edge software encompassing the design, deployment and optimisation of solutions for Oracle E-Business, Oracle Business Intelligence and bespoke Oracle development. We also offer a full Oracle database and application support service with a specific emphasis on security and optimisation.