



**IBM Planning Analytics  
Performance Maintenance & Tuning (Team):  
Mandate, Benefit, Responsibilities & Enablement**

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Created By:

**Andreas Kugelmeier**  
Executive Consultant, FOPM  
Planning Analytics Architect  
IBM Data and AI Expert Labs  
Mobile Phone: +1-215-384-7302  
Email: [kugelmeier@us.ibm.com](mailto:kugelmeier@us.ibm.com)

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## **1 Mandate & Benefits**

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For larger and more complex Planning Analytics 'Enterprise' environments IBM Recommends the establishment of a dedicated (yet small) Performance Maintenance & Tuning team. Depending on the overall Planning Analytics environment, this may be a part-time role.

### **1.1 Mandate**

The team's mandate will be to conduct ongoing performance monitoring, tuning, configuration & troubleshooting/analysis across all PROD environments (across all TM1 domains) as well as to Monitor, Analyze and Determine the root causes of possible thread-contention, performance issues and other locking behaviors.

### **1.2 Benefits**

- Significantly higher level of services (to the System Owners) due to higher availability & performance
- Efficiency/productivity gains (dedicated experts, rather than general IT support)
- Operational Scalability (regular developers can be freed of evaluating and making configuration decisions which often can only be properly determined in a production-like environment. Developers can hence focus on design (yet following TM1 guidelines and standards that are to be established). The Performance tuning team – while having to be knowledgeable in TM1 design practices – can focus their attention on performance tuning, optimization and root cause analysis.

## 2 Responsibilities

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### 2.1 Monitoring, Analysis & Remediation of thread-contention

Why:

- Maintain high quality User Experience
- Ensure Scalability
- Avoid redundant/unnecessary HW utilization caused by contention
- Avoid 'Locks'

Technical Topics/Areas:

- Building & using Subsets & Views in a multi-threaded environment
- TM1 Lock States
- Monitoring & Analyzing TM1 Log outputs

### 2.2 Configuration-Optimization

#### 2.2.1 TM1 Database & Web Application Server Instance configuration parameters

Why:

- Ensure proven practices & standards are met and only approved configuration parameters are used => consistency in TM1 instance behavior and basic configuration, aligned with tested and proven practices

Technical Topics/Areas:

- TM1s.cfg, tm1web\_config.xml

##### 2.2.1.1 Multi-Threaded Queries

Why:

- Optimize Query performance,
- Optimize HW utilization

Technical Topics/Areas:

- TM1 Multi-Threaded Query (MTQ) Configuration,
- HW configuration (Hyper-threading)

##### 2.2.2 Configuration-Optimization: TM1 cache

Why:

- Optimize Query performance,
- Optimize HW utilization

Technical Topics/Areas:

- VMM (Cache Pool), VMT (Query Time Threshold),
- VMM & VMT with TM1 Multi-Threaded Queries (MTQ),
- Monitoring & Analyzing cache utilization

##### 2.2.3 Configuration-Optimization: Internal Cube Dimension Sort Order

Why:

- Optimize Query performance,
- Optimize HW utilization (more efficient RAM utilization)

Technical Topics/Areas:

- Internal Dimension Sort Order Optimization

### 2.3 Recommended reading & training

- IBM Whitepapers/Materials: see column 'Configuration & Performance Tuning' in the [IBM Planning Analytics Advanced Enablement Session & Materials Matrix](#).

