

GTSG MAINFRAME SERVICES

GLOBAL
TECHNOLOGY
SOLUTIONS
GROUP



SKILLS AND STAFFING

THE SKILLS CHALLENGE

Many of our clients struggle to attract and retain mainframe skills, and at the same time, lack budget dollars to fund the transition from their mainframe veterans to the next generation.

We address both issues:

- We provide an environment for mainframe SMEs where skills are valued, and their needs for growth, ongoing education and affinity are met; both long-time mainframers and the younger workers we've proven our ability to train. We meet their need to be among like-minded professionals.
- The way in which we transition is sensitive to your budget constraints. Frequently, we can minimize transition cost through the execution of a project that brings you value while we learn your environment and its particular challenges.

Gartner recognizes GTSG as a source of mainframe skill.

WE SCALE TO YOUR SCOPE

What our clients find most attractive — apart from our skills and proficiency — are our flexible models. We've been able to help our clients by leveraging pooled resources in an affordable model, readily scalable in both directions.

We operate in 4 distinct models:

- Staff Augmentation
- Project Services
- Hybrid Managed Model
- Managed Services

Frequently, we get to know a client by providing either staff augmentation or project services. The skills we provide or the projects we perform may fill a gap in the staff, execute an upgrade, create additional capacity through performance and workload management engagements, analyze a software portfolio, or even execute a migration.

In fact, Gartner recognizes GTSG for skill in mainframe migration.

We regularly provide technical direction and accountability of customer personnel. Clients need not separate or repurpose their current mainframe resources: we can't recall a scenario where we displaced a mainframe resource.

As customer resources move on, we assume control of that scope. Cost efficiency generally improves as we absorb more, because of the shared model that we utilize.

WE SCALE TO YOUR SCOPE (CONTINUED)

If workloads are moved off the mainframe platform, we implement a fractional resource approach to staffing skills/roles requiring less than a FTE. A corresponding decrease in effort is matched with a corresponding cost decrease.

We normally find that our clients want us to function as part of the technical support organization. In short, we're part of the client's team. We're just bringing them a level of flexibility that comes from our scale, based on an ongoing commitment to the platform.

PERFORMANCE AND AVAILABILITY

In BMC's recent mainframe survey, availability was prized by more respondents than any other feature of the mainframe. Transaction throughput and the ability to fully utilize system capacity ranked fourth and fifth, respectively.

PERFORMANCE AND WORKLOAD MANAGEMENT

The mainframe is still the engine behind over half the world's transactions, and behind the mobile storefront. Yet budget for additional capacity is always at a premium; "throwing hardware" at a perceived capacity problem is not a solution. With skilled resources stretched and becoming scarcer, organizations are subject to the "sneak attack:"

- SLAs are increasingly missed
- Help desk lines ring more often
- Availability is questioned- is it "available" if it doesn't meet the needs of the business?
- Seasonal pressures put a spotlight on smaller non-seasonal issues

To mitigate these symptoms, GTSG helps clients with **Performance** and **Workload Management**.

Performance Management is the practice of iteratively eliminating or reducing the consumption patterns of a given job, schedule, transaction, or query. "Tuning" is a term commonly used to describe this process; it is MIPS elimination/reduction — plain and simple.

Workload Management is the practice of prioritizing workloads and delivering computing resources where they are needed to meet SLAs. Almost always overlooked, Workload Management is critical if you want to avoid unnecessary processor upgrades.

Capacity Management is the practice of modeling future computing resource requirements based upon historical consumption, achievement of SLAs, business forecasts, the effects of the tuning work, and anticipated business events. Nothing is worse than having to brute-force a capacity upgrade and deal with the fallout of software licensing, board proposals, etc. that accompany a significant unexpected expenditure.

Obviously, there are close relationships among the three. Workload Management becomes more difficult when the Capacity is improperly

planned; Capacity Management predictions are skewed if savings from tuning are not accounted for; and SLAs are missed by inadequate Workload Management. This leads to a false perception – either that the capacity program is flawed or that more hardware is needed. Adding hardware is obviously not the right answer when the assignment was to reduce spending.

These duties are important enough that when we manage someone’s mainframe environment, we accept this responsibility willingly as part of the relationship.

AVAILABILITY

No platform rivals the mainframe for reliability. For some organizations, a High Availability (HA) solution may be appropriate, built on Parallel Sysplex features. We see its benefits very specifically:

- The elimination of single points of failure within the local environment
- The ability to recover a failed unit of work, upon restart, on the surviving member(s) of the HA complex (transaction, batch job, DDF connection, etc.)
- The ability to sustain scheduled outages in a member of the environment without impacting delivery of service to the enterprise.

High Availability is not a “product” — it’s a capability. It is achieved by:

- a holistic approach to implementing HA, utilizing numerous technologies
- implementation of a plan for horizontal growth
- a review of the business applications to determine which are critical and require HA infrastructure alternatives, or application modification
- adoption of regularly practiced HA exercises — including failover, giveback, takeback, and most importantly, recovery exercises
- adoption of a future state application development architecture

Our consultants would be delighted to discuss an approach with you.

COST REDUCTION

When you spend as much time as we do on the mainframe, you're going to be asked how to run it more efficiently from a cost perspective.

We attack the problem in its three elements: hardware, software and personnel.

HARDWARE

We'll start with the most straightforward first. As discussed above, we use the complementary techniques of performance, workload and capacity management to ensure that our clients can avoid upgrades, achieve SLAs, or even downgrade a processor in a sunset scenario.

SOFTWARE RATIONALIZATION

Software is the most significant cost for most mainframe environments. We utilize a four-step process to look for opportunity:

Step One: Eliminate tools used by a small audience. Survey all the tools; quantify the audience size; assess the impact of possible elimination; propose alternatives if the impact cost trumps the tool cost.

Step Two: Replace a product with an existing feature. z/OS has numerous features now that might not have been available when you purchased a specific-function product. We exploit all these inherent features in a cost-pressured environment.

Step Three: Competitive displacement of a low-use product. For an expensive product used by a small group within your organization, if you can't do without the product (*Step One*) and can't replace it with a built-in z/OS feature (*Step Two*), consider a swap of Vendor A for Vendor B with locked in pricing for the term you feel is most appropriate for you. Then do the math on the training and migration required.

Step Four: Competitive displacement of a high-use product. When Steps One through Three do not work — consider this. This is tough sell to the audience of the product — but if the financials support the acquisition of the tool, the implementation of the tool, and the training required can be justified — the research is certainly warranted.

We are also engaged to provide input on negotiations with mainframe software vendors, on some occasions “in the room” with the vendor, and on others in the background.

STAFFING

As discussed previously, one place we can help is in looking at which skills are more effectively provided from a pool to take advantage of the economics of a fractional resource model. In most shops, if you have CICS, DB2, and maybe some IMS mixed in, it's not uncommon to have a specialist for each. In some cases, the CICS expert might be able to support IMS or DB2 from a Systems Programming level but comes up short for DBA support.

Rather than provide our clients three resources in the example above, we right-size the time requirement to the size of the environment. CICS might need only 20 hours, IMS 15, and DB2 20-25 — so this is what we provide. No more staffing with a fully burdened 40-hour-per-week resource — we give you what you need, yet let you have more when you need it. The other thing we do is contract to a gradual decrease in monthly charges relative to the workload, being moved off the mainframe.

STRATEGY AND THE WAY FORWARD

Many organizations today are evaluating the “best execution venue” for their workloads, given the complex set of alternatives available today among on-premises, colocation, and the various cloud styles.

Gartner recognizes GTSG in its research which guides the building of a Hybrid Cloud Workload Placement Strategy.

GTSG combines

- decades of mainframe expertise,
- an understanding of the re-architecture, re-platforming and other mainframe alternatives (MFA) available in the marketplace, and
- a core competency in consulting

to build a realistic plan which balances the costs and expected outcomes of application migration efforts. We also help to build a plan to understand the impact on overall cost of the transition period.

Thank you for your interest in our observations.

For 30 years, GTSG has worked exclusively on Data Center transformation and optimization.

Please reach out if we can help you in any way.

Thank you.

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HYBRID CLOUD STRATEGY AND MIGRATION

Strategic Approach

- Business case development
- Transition planning
- Technical modeling
- Non-disruptive execution

Application Analysis Methodology and Tools

- Decomposition
- Affinities
- Wave planning

Project Leadership

Implementation Subject Matter Expertise

INFRASTRUCTURE SUPPORT SERVICES

Managed Services

- Multi-platform including DB & MW
- Service-level based or FTE-based
- Architecture, administration, programming, systems management
- Remote or Onsite

Project Based Services

- Platform upgrades
- Workload migrations
- Implementation services
- Consulting and Assessment (performance, DR, HA....)
- Project Management

INFRASTRUCTURE TRANSFORMATION

Transition Services

- Insourcing/Outsourcing
- Knowledge transfer and interim support
- Application migration
- Service management design

Disaster Recovery Design and Implementation

High Availability Design and Implementation

Application Assessment and Deployment

- Reference Architecture
- Infrastructure Alternatives/Recommendations
- Implementation/Migration

INFRASTRUCTURE OPTIMIZATION

Architecture Assessment and Design

Server Virtualization/Consolidation

Storage Optimization

Data life-cycle management

- Tiering
- Standardization/Automation

Application Decomposition Application

Re-design/Remediation Performance

Management and Tuning Latency

Analysis and Consulting

GTSG is Your Mainframe Infrastructure Partner

Flexible Staffing

For over 30 years, GTSG has built a Center of Excellence, where systems programmers and other mainframe professionals find themselves deeply valued and are available to you as you need them



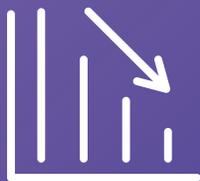
Performance & Availability

Decades of experience maximize performance and throughput in the face of growth, seasonal pressures and other challenges to execution and client experience.



GLOBAL TECHNOLOGY SOLUTIONS GROUP

MAINFRAME
MANAGED SERVICES



Cost Reduction

Whether avoiding an engine upgrade, removing unnecessary software from a license, negotiating with a provider, or with a flexible staffing solution



Strategy

We develop the analysis and roadmap to get workload to the best execution venue, and as the profile changes, help to keep the cost profile competitive.