Many critical applications run in a batch mode executing highly important operational functions overnight. These applications have traditionally been kept on mainframe computers.

The Sun™ family of Sun Fire™ and Enterprise™ servers, running the robust Solaris™ Operating Environment, offer mainframe-like reliability and outstanding scalability while providing a more open, flexible, and cost effective platform for mission critical batch applications.

The Sun™ Mainframe Batch Manager (MBM) software provides the core middleware supporting this batch environment, plus the framework for integrating other related batch tools. Sun Mainframe Batch Manager provides the administration, execution and management of the batch workload, along with facilities that allow the integration of third-party system management software components. In addition, Sun Mainframe Batch Manager provides facilities for migrating z/OS, MVS and VSE JCL Job streams to the Sun Mainframe Batch Manager environment.

## Key Highlights

- **Sun Mainframe Batch Manager**
  - mainframe-like batch facilities
  - outstanding scalability
  - automatic JCL translation
  - administration of the batch workload
  - execution of the batch workload
  - management of the batch workload
  - includes Parallel Processing Facility feature
  - supports third-party products

- **End to End Services Architecture**
  - maximum service-level availability
  - minimal cost
  - minimal complexity

- **Batch Administration Manager**
  - configure databases
  - define security
  - specify accounting criteria
  - create job classes
  - define batch console

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### Business Logic

- **Batch View**
- **Schedulers**

#### Processors

- **VSE JCL**
- **MVS JCL**
- **Macro Language**
- **Sun Mainframe Batch Manager**

#### Languages and utilities

- **COBOL/PL/1**
- **PPF**
- **VSAM**
- **SORT**
- **RDBMS**
- **Print Spooler**

### Solaris Operating Environment
Operational Control
Sun Mainframe Batch Manager brings the mainframe concept of batch job steps to Sun servers by controlling batch jobs at the step level. This innovative technology brings the flexibility, control, and robustness from mainframe batch to Solaris. Sun Mainframe Batch Manager’s graphical user interface facilitates your ability to manage non-interactive jobs by enabling you to:

- Monitor active jobs and job classes
- List the status of a specific job
- List the execution report of a specific job
- Submit jobs
- Cancel jobs
- Suspend jobs that are in execution

In addition, you can restart a specific job step or procedure step. Jobs can also be assigned to specific job classes and assigned priorities within the job class. Graphical representation of CPU utilization of the batch environment can be displayed based on time of day.

Administration of Sun Mainframe Batch Manager
The Sun Mainframe Batch Manager software allows you to define, configure and administer your system using a menu-driven program, the Batch Administration Manager (BAM). BAM allows you to configure databases (VSAM, Cobol Files and RDBMS), define security, specify accounting criteria, create job classes, define the batch console, and specify many other attributes associated with Sun Mainframe Batch Manager. Multiple Sun Mainframe Batch Manager systems can be defined for different environments. For example, one system or domain could be used for production, another for testing, and another for development. This feature is designed to take advantage of the multiple Dynamic System Domains available in the Enterprise 10000, Sun Fire 3800-6800 and Sun Fire 15K servers.

Integration with Other Middleware
Sun Mainframe Batch Manager allows you to integrate your favorite middleware components—forming a complete software solution for supporting your business logic. Many of the third-party products supported on a mainframe environment are also supported in Sun Mainframe Batch Manager.

JCL Translation
The migration facilities provided in Sun Mainframe Batch Manager include z/OS MVS and VSE JCL translators. The translators generate macros that execute under control of Sun Mainframe Batch Manager. The concepts of jobs, job steps, and procedure steps are maintained, along with support of the most common mainframe facilities like IDCAMS and SORT. Macros allows you to maintain your job streams using IBM JCL or maintain, create, and modify the JCL streams. The JCL translators automatically generates a File MAP, mapping the mainframe files to the corresponding Solaris files. A GUI file editor is provided allowing you to graphically add, modify, or delete file entries or attributes. All files types are defined in the FileMap including Generation Data Group (GDGs), concatenated datasets, VSAM files, and flat files.

Migration and Development Toolkit
Sun Mainframe Batch Manager provides you with flexible, versatile, and complete batch management with a GUI-driven facility (Sun Mainframe Batch View), abstracting much of the laborious parameters needed for mainframe jobs. Sun Mainframe Batch Manager is designed to maintain the same business logic of your mainframe application on Sun Servers successfully and simply.

New Application Development
Additionally, Sun Mainframe Batch Manager brings enterprise application concepts, such as commit, rollback, and job restart, enhancing administration productivity of new applications development.

Remote Job Submission
Sun Mainframe Batch Manager provides a Remote Job Submission facility where users can submit z/OS MVS or VSE jobs to Sun Mainframe Batch Manager via ftp from the mainframe or Sun servers. Once the ftp is completed, Sun Mainframe Batch Manager automatically translates and submit the jobs for execution.
Many organizations face the problem of impacting their mission-critical, online applications by excessive needs for batch processing, the classic “batch window problem.” Sun Mainframe Batch Manager solves batch window constraints by addressing I/O-bound applications and by optimizing throughput with parallel processing technology. The results are batch applications completed in rapid time with no change to the business logic—leaving more time for customer-visible, online applications.

Sun Mainframe Batch Manager includes a Parallel Processing Facility feature to reduce the elapsed time of a job, shrinking the overnight batch window and liberating cycles and hours for online transaction processing.

When efficiency is less important, the PPF facility delivers the capabilities of advanced multi-processor, multi-domain Sun servers to batch applications. PPF enables a single batch job to be executed across these processors in parallel with excellent performance.

The typical batch application contains a number of steps serially executed. Normally, output from step 1 feed directly into step 2 using permanent or temporary files to store the results. Step 2 may include processing—more commonly it is a function of sorting or merging data. It may also be a utility function to back up data to a permanent critical file. Step 2 feeds into step 3 completing the processing of the application. Each step must complete before the next begins, and interim information is written to a temporary, external file.

When PPF views such an application, the backup activity can occur in parallel to feeding data to the next processing step. And, using memory-to-memory transfers instead of writing to temporary or permanent files, processing is further accelerated. The I/O to the disk is eliminated.

PPF manages the transfer of data from one step to another using the standard COBOL verbs, allowing all steps to execute in parallel. PPF manages this memory requirements on the system. Using PPF techniques, the elapsed time of traditional processing windows can be reduced substantially.

PPF Implementation
Since the PPF option requires some changes to the batch applications and the JCL, it generally requires implementation as part of a Sun Professional Services engagement (fig 3).

Sun’s End-to-End Services Architecture
Sun’s broad array of solutions and products are built to a single, focused, service-obsessed architectural vision. We call it the End-to-End Services Architecture. The goal: maximum service-level availability at minimal cost and with minimal complexity. For mission-critical environments where manageability, performance, and availability are key, Sun can offer significant advantages to expensive and non flexible mainframe environments while leveraging your legacy technology assets. Sun Mainframe Batch Manager raises the bar on batch administration and processing for mainframe batch environments.