



hp availability stats and performance extension software

availability-monitoring API for ASAP software

a product description from hp

features at a glance

- Provides an application program interface to ASAP software
- Supports domains of service
- Fully supports the ASAP Entity Definition Language
- Calculates and generates metrics automatically
- Provides alerts based on objectives
- Manages service levels
- Includes domain aggregation and built-in metrics

A powerful option to HP Availability Stats and Performance (ASAP) software, HP Availability Stats and Performance Extension (ASAPX) software provides an interface for HP NonStop™ server-based applications to participate in the ASAP object-based availability monitoring architecture.

Applications use the ASAPX application program interface (API) to update counters and other data values directly in memory. At predetermined intervals, ASAPX software samples the application data to produce productivity and quality metrics that show how the application is performing against service-level objectives. The software provides a view into the internal workings of the application. It can be used to monitor application productivity metrics such as transaction or error rates. It can monitor performance metrics such as utilization and response time. Most important, it can also monitor application states and availability.

ASAPX software sends application data to ASAP software for display, archival, and operator monitoring. ASAP software provides many functions such as providing alerts on graphs and grids for domains that do not meet their objectives, and providing custom views.

provides an application program interface to ASAP software

ASAPX software provides an application programmer with six procedure calls to use from within a C, COBOL85, Transaction Application Language (TAL), or pTAL program. The API procedures are used to register a domain with the ASAPX product, update application counters and other data values being stored in memory, activate and deactivate ranking for the domain, remove the domain from the registered set, and update the operational state and status text for the domain.

The six ASAPX API procedures are

- *ASAP_REGISTER_* Registers a domain with ASAP software. A program can call this procedure multiple times if it participates in multiple domains.
- *ASAP_UPDATE_* Updates a data value in shared memory. The update can be an add or replace operation.
- *ASAP_UPDATELIST_* Updates multiple data values with a single procedure call.
- *ASAP_CONTROL_* Activates and deactivates ranking.
- *ASAP_REMOVE_* Removes a domain from the registered set. This procedure is useful for batch and other short-duration programs.
- *ASAP_OPSTATE_* Lets the application directly set the operational state and status text reported for its domains.

The API procedures control all communication with other ASAPX software components and control the shared memory used to store application data. Boundary tags and checksums are used to validate all shared memory, thereby ensuring the consistency of all application data.

supports domains of service

ASAPX software supports the concept of domains of service and requires an application to provide its domain name when registering. A domain name is a unique logical name composed of up to five component levels. The following are all examples of domain names:

- Atm\Chicago\West\Branch27\Unit3
- Sales\Accounts\Receive\ABC
- Funds\Transfer\NYC.#S2
- Servers\Location-231\Serv27
- Comms\Drivers\Line36.#su321
- Automation\Belt-2\Assembly-0498A

Domain names are used to identify application components and provide operational views into the application from other ASAP components. For example, ASAP software's Object Integration Layer (OIL) tree window displays the status of application domains (see figure 1).

Domain names are constructed to provide optimum value for the operator in application monitoring. They allow resources to be grouped according to any logical scheme that best represents how a business is managed.

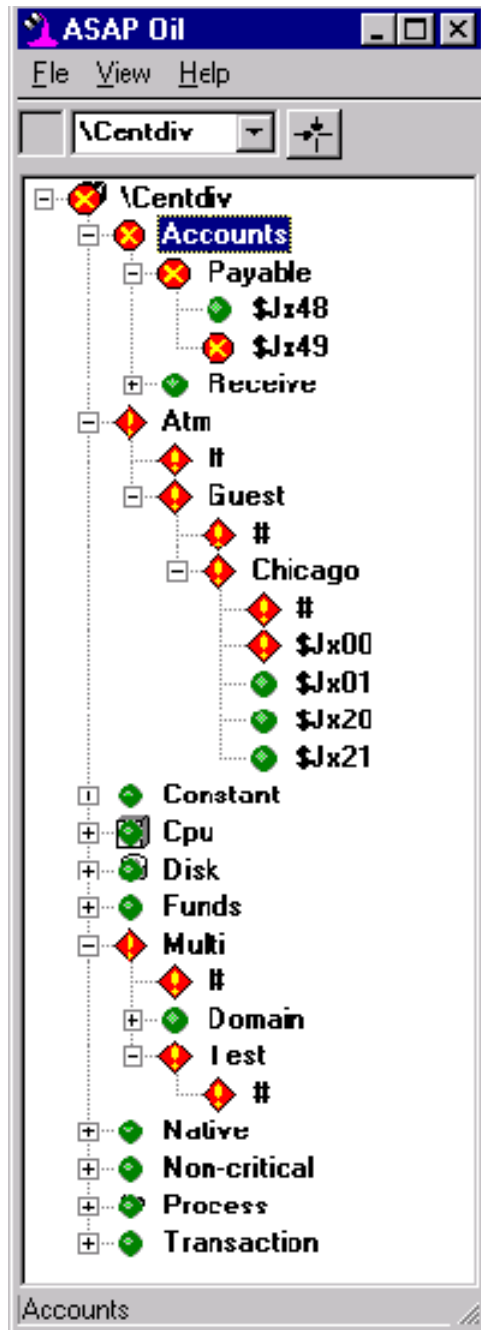


Figure 1. The Object Integration Layer (OIL) tree window.

fully supports the ASAP entity definition language

ASAPX software fully supports ASAP software's Entity Definition Language (EDL). Each subset or superset of application components can be defined individually as ASAP entities using EDL.

Each entity defined in EDL has distinct properties in ASAPX software. The counters and other items defined in shared memory, the computations performed by the software to

produce metrics, and the data record produced for a domain at each interval are all controlled by the EDL definition for the entity.

calculates and generates metrics automatically

ASAPX software automatically calculates metrics using stored application data values. It can generate multiple metrics based on a single value or combinations of application data values. For example, an application might bump a transaction counter data value each time a transaction is completed successfully and add to an error counter each time one fails. ASAPX software can be used to produce many metrics based on these two simple counters. It can produce a total transaction count and rate, a completed count and rate, an error count, an error rate, a success percentage, and an error percentage.

ASAPX software also handles constant values such as states. Your application can update its state metric each time it enters a new processing state. The software will report that constant value to the ASAP product for immediate display to the operator.

Another type of constant might be the cash remaining in an ATM. Each time a withdrawal is made, the cash remaining in the account is computed and updated by the application, and ASAPX and ASAP software display the updated information to the operator.

provides alerts based on objectives

For each metric that ASAPX software computes and sends to ASAP software, it also computes an associated state for that metric. Within ASAP software, metric states are used to determine highlighting and alerting to the operator.

ASAPX software supports multiple objectives for any application metric using the ASAP Discrete Objectives Thresholds (DOTs) infrastructure. This means that ASAPX software uses DOTs to compare objectives against the metric value computed at each interval to determine the state to report for the metric.

Setting a "less than" objective for a metric sets a productivity indicator for that metric. For example, if you know the normal transaction rate for a server is 100 transactions per second, you might set a less than objective at 80 transactions per second. This would indicate degradation of service.

Six objective operators can be used to define objectives for a metric. They are greater than (>), less than (<), equal to (=), not equal (<>), greater than or equal (>=), and less than or equal (<=). One objective of each type can be defined for a metric; for example, "Busy > 29, Busy < 85" defines an operating range for a Busy metric.

When objectives are not met, ASAPX software uses DOTs to set alert state levels automatically on the failed metric, which are then sent to ASAP software. ASAP software highlights the alert for immediate attention by the operator.

Figure 2 shows the domains of service monitored on a NonStop server named \Centdiv. The domains are presented graphically and include the domain application detail. The status of the domain Payable\Jx49 is "down."

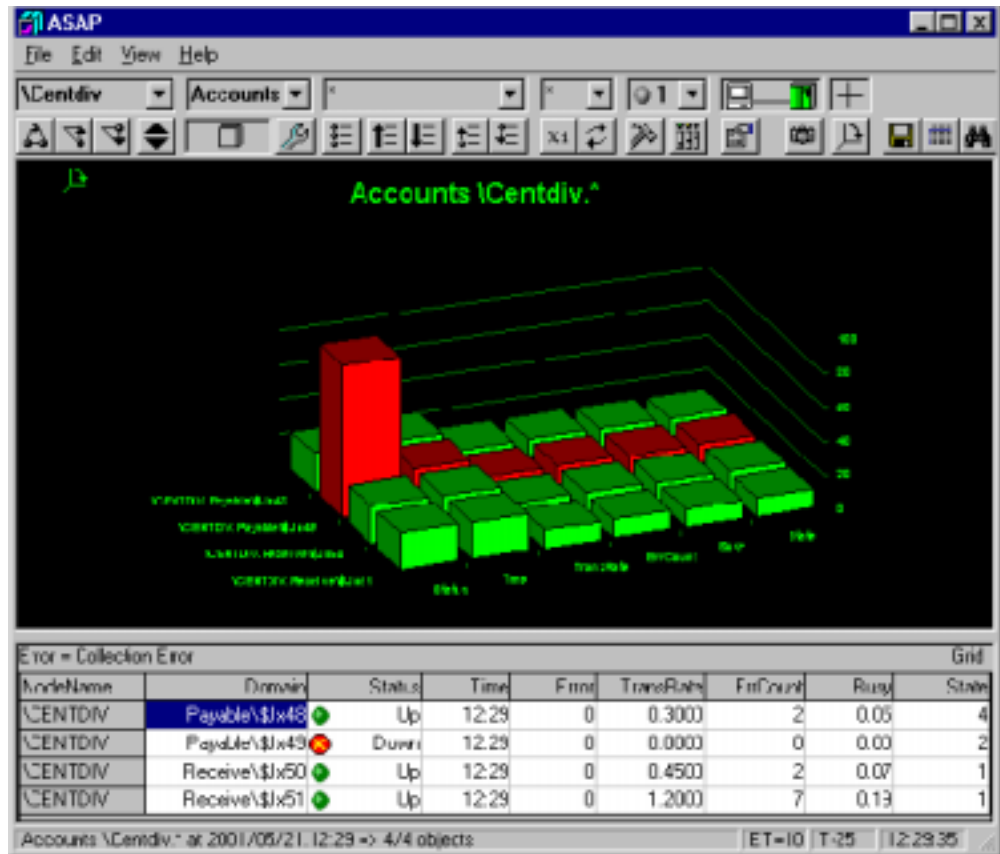


Figure 2. Graphical presentation of application data for downed domain.

manages service levels

ASAPX software gives you the ability to record service-level information directly within your application. You can generate service-level metrics at each interval, which are ranked automatically against the service-level objectives for those metrics. You can monitor your application based on the criteria on which you judge its effectiveness.

includes domain aggregation and built-in metrics

ASAPX software provides many other value-added functions such as monitoring applications that stop updating metrics and monitoring the availability of all application domains. It provides 11 built-in metrics that can be added to any application. In addition, it provides aggregation across all levels of domain names so that you can view your entire application in one aggregate domain. ASAPX software does the work so that your application doesn't have to.

ordering information

<i>product ID</i>	<i>description</i>
SE30v2	Availability Stats and Performance (ASAP) software
SE31v2	Availability Stats and Performance Extension (ASAPX) software

specifications

ASAPX

hardware	Any NonStop server
software	Software supported by the NonStop Kernel operating system, Release Version D42 or later

ASAP Client

hardware	Any NonStop server IBM compatible computer (200-MHz Pentium® processor or higher) configured with a minimum of 64 MB of memory and 20 MB of disk space
software	NonStop Kernel operating system, any supported release Microsoft® Windows 95 or 98, Windows NT 4.0, Windows 2000, Windows Me, or Windows XP

For more information, go to www.hp.com/go/nonstop.

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