

# Action Services

## Enterprise Monitoring Appliance Plus

### Monitor, Alert, Fix

#### Proactive Database Monitoring and Alerting

The Action Enterprise Monitoring Appliance Plus (EMA+) is a single interface for monitoring your Ingres/Vector environment. The EMA+ can be configured to monitor and display a considerable number of Ingres, Vector, Operating System, Network and HVR data points. An EMA+ can proactively monitor multiple servers, installations and databases around the clock, providing early warnings and alerts so you can quickly resolve problems or prevent them from occurring.

#### Performance and Trend Analysis

The EMA+ includes a performance module to quickly identify problems which can help maximise system efficiency by fine tuning the Ingres configuration and database layout. A data repository within the EMA+ facilitates fault investigation, capacity planning, retrospective analysis and SLA reporting.

#### Key Benefits

- Proactive Monitoring and Alerting
- Reduce Incidents
- Improve Stability and Availability
- Improve Performance
- Custom Setup
- Full System Visibility
- Graphical Interface

### Service Checks

The EMA+ includes a comprehensive set of Service Checks:

#### X100/Vector:

- PDT memory
- Write-Ahead log
- Error log file check
- Active sessions
- Committed transaction memory
- Index memory
- Open transactions
- Query execution memory
- X100 process

#### Availability:

- Server\*
- Installation\*
- Database\* (\*suitable for uptime and SLA reporting)

#### Network:

- Latency check

#### Performance:

- Long running query (LRQ) detection
- DMF cache analysis
- Locking analysis
- Logging analysis
- Dbmsinfo analysis (CPU, DIO, BIO)
- Database health review

#### Backup:

- Checkpoint check (validity, existence and freshness)
- Cloud backup check

#### HVR:

- HVR error log file check
- Scheduler and Job check

#### Status Reports:

- Checkpoint, journal, disk usage and error log file

#### Action X/Ingres:

- Ingres processes check
- Transaction log file check
- User session count
- User connect count (GCC/GCD)
- Locking check - time based
- Locking check - percent based
- Error log file check
- License check

#### Operating System:

- CPU check
- RAM and swap memory check
- Disk usage check
- Disk I/O performance

## Quick Install

The current release is EMA+ A (Affinity) and is based on CentOS, Nagios, Apache and Ingres components and is supplied as a bundled image which can be deployed on most VM's. It has a modest footprint requiring 2 vCPU's, 4GB RAM and 40GB storage.

## Custom Setup

The EMA+ is highly configurable. Alerts are sent when defined thresholds are breached. Bespoke plugins can be added to monitor specific activity e.g. batch job completion, daemon processes.

## Service Level Agreements and Escalations

The EMA+ can accommodate Service Level Agreements (SLAs) and can be integrated with IT Service Management software. It records and can report system availability and uptime statistics.

## Graphical Interface

A single graphical interface can view your entire estate. The example below shows the Services screen, showing just 1 server (3-EMA), 1 installation (II) with 1 main database (emadb) with a few Service drill downs:

## About Actian

Actian makes data easy. We deliver cloud, hybrid and on-premises data solutions that simplify how people connect, manage, and analyze data. We transform business by enabling customers to make confident, data-driven decisions that accelerate their organization's growth. Our data platform integrates seamlessly, performs reliably, and delivers at industry-leading speeds. Learn more about Actian, a division of HCLSoftware: [www.actian.com](http://www.actian.com)

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**EMA Service Status Details For All Hosts**

Host	Service	Status	Last Check	Duration	Attempt	Status Information
3-EMA	Ingres II Cloud Backups	WARNING	03-11-2017 15:44:07	2d 1h 44m 19s	1/1	Cloud backup agent not running
3-EMA	Ingres II DBMS Processes	OK	03-11-2017 15:44:18	0d 3h 25m 45s	1/1	Correct number of Ingres servers running
3-EMA	Ingres II Daily Reports	OK	03-11-2017 15:59:20	0d 4h 45m 3s	1/1	Reports consolidated and distributed
3-EMA	Ingres II Installation Availability	OK	03-11-2017 15:44:20	0d 3h 25m 44s	1/1	Available
3-EMA	Ingres II License	OK	03-11-2017 15:44:20	5d 6h 34m 28s	1/1	License is valid (423 days remaining)
3-EMA	Ingres II Log errlog.log	OK	03-11-2017 15:44:20	0d 3h 25m 54s	1/1	No significant Ingres errors reported
3-EMA	Ingres II Perf DMF Cache	OK	03-11-2017 15:03:27	3d 21h 57m 22s	1/1	Hit ratio: Private (41316): 99%
3-EMA	Ingres II Perf DMF Cache	OK	03-11-2017 15:03:27	3d 21h 57m 22s	1/1	DBMS ID: (41316)
3-EMA	Ingres II Perf Locking	OK	03-11-2017 15:03:27	3d 21h 57m 22s	1/1	Lock waits: 26020 Lock escalates: 0
3-EMA	Ingres II Perf Logging	OK	03-11-2017 15:03:27	3d 21h 57m 22s	1/1	Log buffer utilisation: 4%
3-EMA	Ingres II Transaction Log File	WARNING	03-11-2017 15:44:18	0d 0h 0m 5s	1/1	Transaction log file usage: 61%
3-EMA	Ingres II User Connections	OK	03-11-2017 15:44:19	0d 3h 25m 45s	1/1	GCC connections: 0 GCD connections: 0
3-EMA	Ingres II User Sessions	OK	03-11-2017 15:44:21	0d 3h 25m 46s	1/1	Active sessions: 3 System threads: 9
3-EMA	Ingres II emadb Availability	OK	03-11-2017 15:44:18	0d 3h 24m 16s	1/1	Available
3-EMA	Ingres II emadb Checkpoint	OK	03-11-2017 15:44:17	0d 3h 24m 17s	1/1	Last checkpoint (1951) is valid
3-EMA	Ingres II emadb Health	OK	03-11-2017 12:42:46	1d 4h 5m 28s	1/1	Database size (Ingres + Vector): 543 MB
3-EMA	Ingres II emadb LRU	OK	03-11-2017 15:44:22	4d 7h 44m 19s	1/1	Tr=1 S=0 U=1 H=0 D=0 (Updated: 15:44 GMT)
3-EMA	Ingres II emadb Lock Waits - Percent Based	OK	03-11-2017 15:44:17	0d 3h 22m 43s	1/1	Waiting sessions: 0 Active sessions: 2
3-EMA	Ingres II emadb Lock Waits - Time Based	OK	03-11-2017 15:44:14	0d 3h 24m 19s	1/1	No waiting locks identified
3-EMA	Ingres II isbdb Checkpoint	OK	03-11-2017 15:44:20	0d 3h 25m 45s	1/1	Last checkpoint (0501) is valid
3-EMA	Ingres II isbdb Health	OK	03-11-2017 08:00:00	19d 23h 23m 21s	1/1	Database size: 20 MB
3-EMA	Ingres II imadb Availability	OK	03-11-2017 15:44:20	0d 3h 25m 45s	1/1	Available
3-EMA	Network Latency to wharna01-rfwm02	OK	03-11-2017 15:43:28	1d 2h 5m 29s	1/1	Network latency: 0.11 secs
3-EMA	OS CPU Load	OK	03-11-2017 15:42:28	0d 3h 5m 45s	1/1	CPU load 15 minute average: 6.84
3-EMA	OS Disk Perf	OK	03-11-2017 15:03:27	7d 2d 0h 49m 11s	1/1	Disk I/O
3-EMA	OS Disk Usage	OK	03-11-2017 15:44:22	19d 4h 45m 2s	1/1	Disk OK: 3
3-EMA	OS Free RAM Memory	OK	03-11-2017 15:44:21	19d 4h 44m 42s	1/1	RAM usage: 34% (1316 of 3832 MB)
3-EMA	OS Exam_Swap	OK	03-11-2017 15:42:28	101d 1h 53m 30s	1/1	Swap usage: 0% (18 of 3967 MB)
3-EMA	Vector II log vectorwise.log	OK	03-11-2017 15:44:19	0d 3h 24m 16s	1/1	No significant Vector errors reported
3-EMA	Vector II emadb Active Sessions	OK	03-11-2017 15:44:17	0d 3h 24m 16s	1/1	Active sessions: 4
3-EMA	Vector II emadb Committed Transaction Memory	OK	03-11-2017 15:44:19	0d 3h 24m 16s	1/1	Allocated: 0 bytes Max: 1.8 GB - 0%
3-EMA	Vector II emadb Index Memory	OK	03-11-2017 15:44:17	0d 3h 24m 17s	1/1	Allocated: 3.6 MB Max: 1.8 GB - 0%
3-EMA	Vector II emadb Open Transactions	OK	03-11-2017 15:44:18	0d 3h 24m 19s	1/1	Open transactions: 4
3-EMA	Vector II emadb PDT Memory	OK	03-11-2017 15:44:17	0d 3h 24m 19s	1/1	Allocated: 0 bytes Max: 479.0 MB - 0%
3-EMA	Vector II emadb Query Execution Memory	OK	03-11-2017 15:44:19	0d 3h 24m 17s	1/1	Allocated: 100.0 MB Max: 1.8 GB Peak: 170.0 MB - 5%
3-EMA	Vector II emadb Write-Ahead Log	OK	03-11-2017 15:44:16	0d 3h 24m 15s	1/1	Size: 31.2 KB Condense threshold: 32.0 MB - 0%
3-EMA	Vector II emadb X100 Process	OK	03-11-2017 15:44:17	0d 3h 24m 17s	1/1	Port number: 44887 PID: 6016

**Total values**

Request lock: 315288224

Escalate: 30

Lock wait: 26877087

Deadlock: 0

Deadlock search: 7511

LKB highwater: 1100

Lock resource utilisation: 3%

Database size (Ingres + Vector): 564 MB

Journing: Disabled MVCC: Disabled X100: Enabled

Ingres data: File system: 541 MB

Vector data: File system (compressed): 23 MB

Uncompressed projection: 25 MB

Compression ratio: 1.08 : 1

Database size by location: Location: II\_database Objects: 141 Size: 541 MB

Number of objects by type: Type: T Objects: 122

Type: V Objects: 56

Type: I Objects: 19

Transaction log file usage: 68%

Transaction log file size: 1000MB

Potential log filling query (may be part of MST): User: Ingres

Query: update tran\_log set name = 'Ringo Star' where name = 'John Smith'

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