

Monitoring Hosts and Applications with Tivoli

Chuck Augustine

CIT Enterprise Services

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Tivoli Architecture

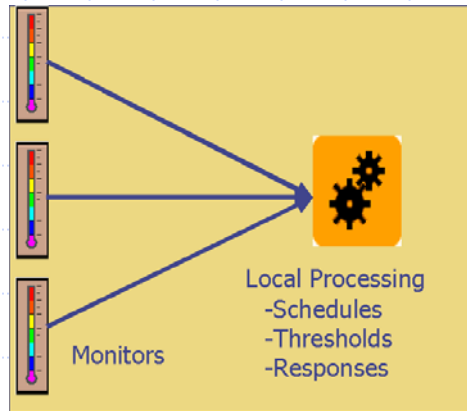
◆ “Framework”

- Distributed object database
- ORB or proxy agent on each managed host
- Configuration: Profiles and distributions
- Security: Policy regions and roles

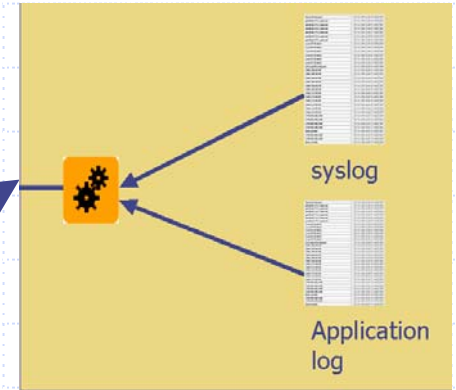
◆ Applications

- Distributed Monitoring
- Software Distribution
- Inventory
- ...

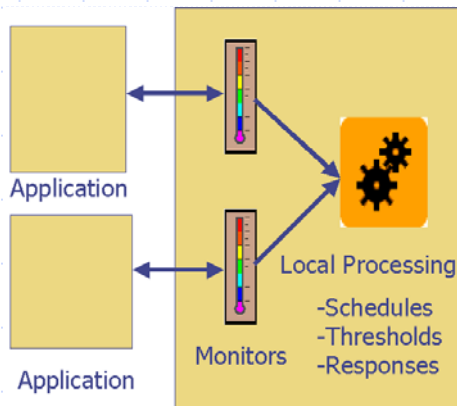
Tivoli Monitoring Architecture



Distributed Monitoring



Logfile monitoring



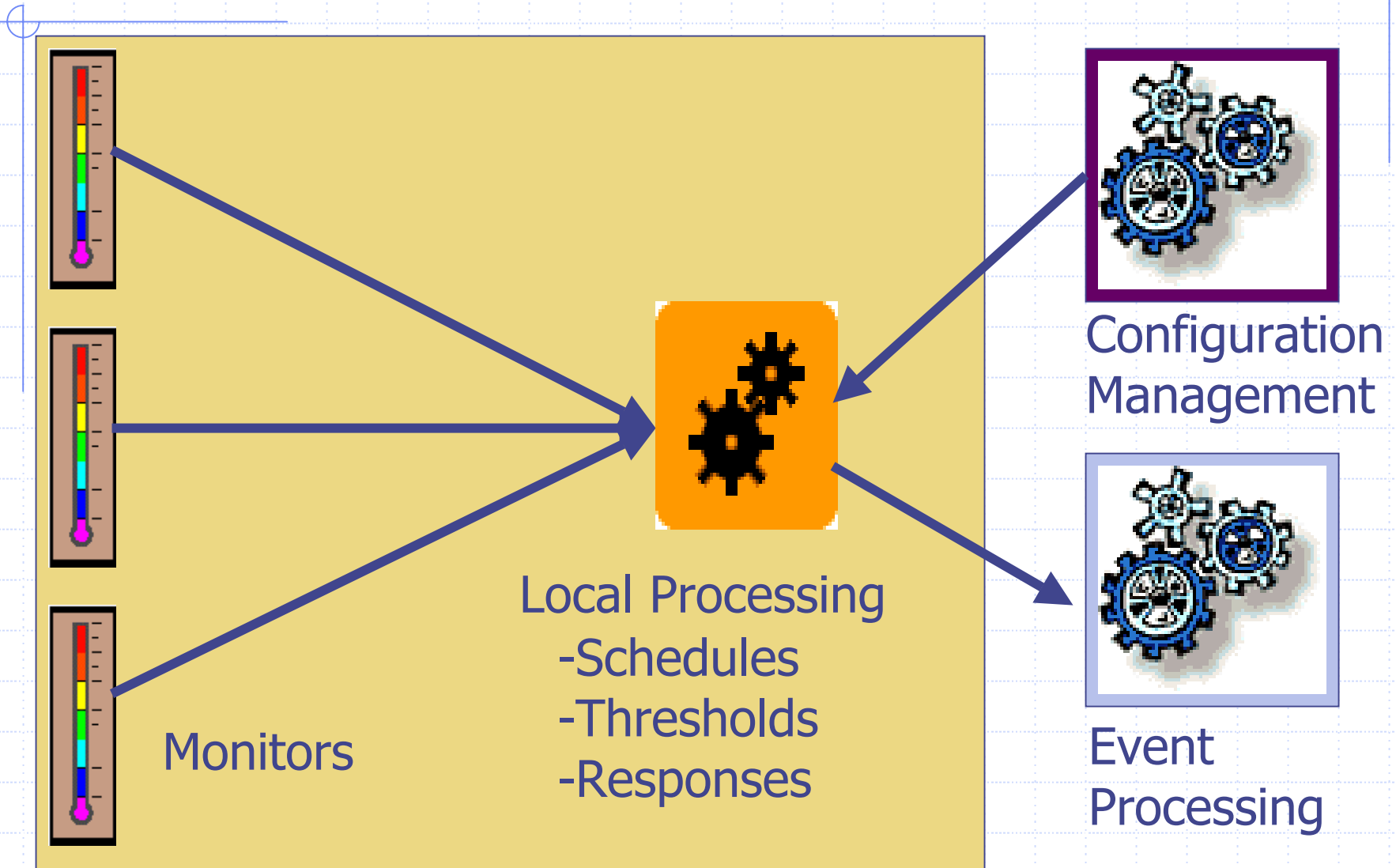
Application performance



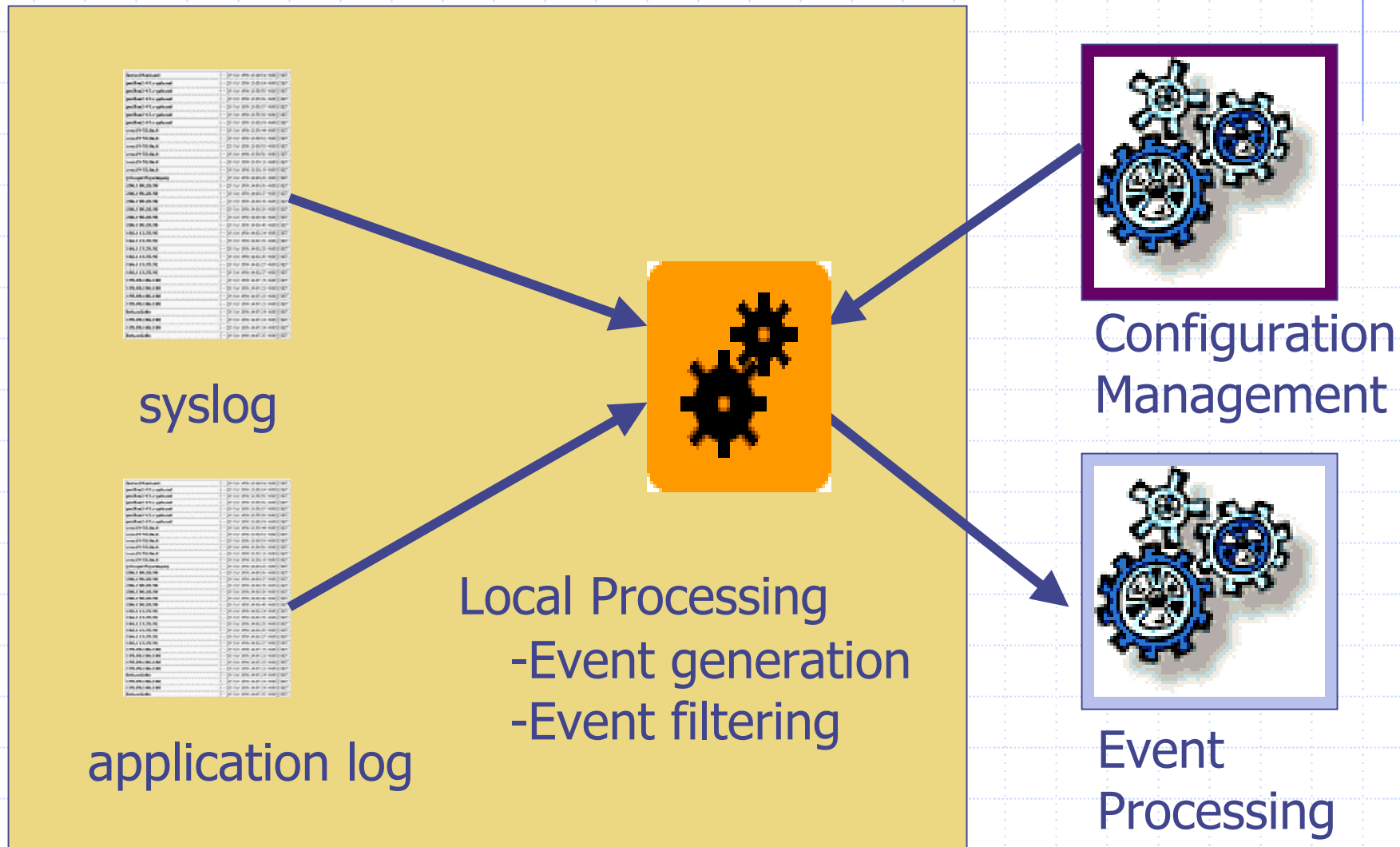
Configuration mgmt.
and event processing

Custom
monitoring

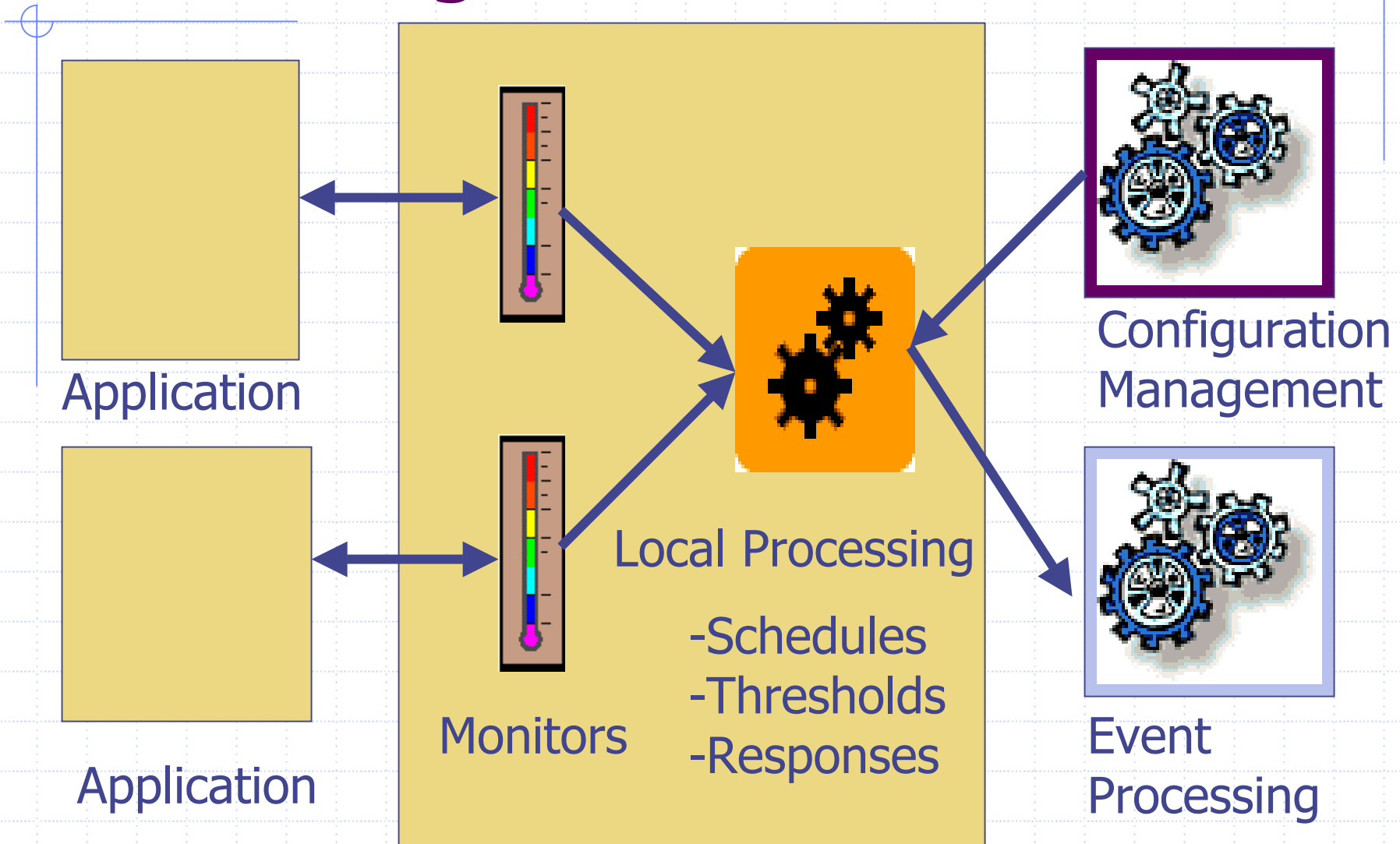
Tivoli Distributed Monitoring



Log File Monitoring



Application Performance Monitoring



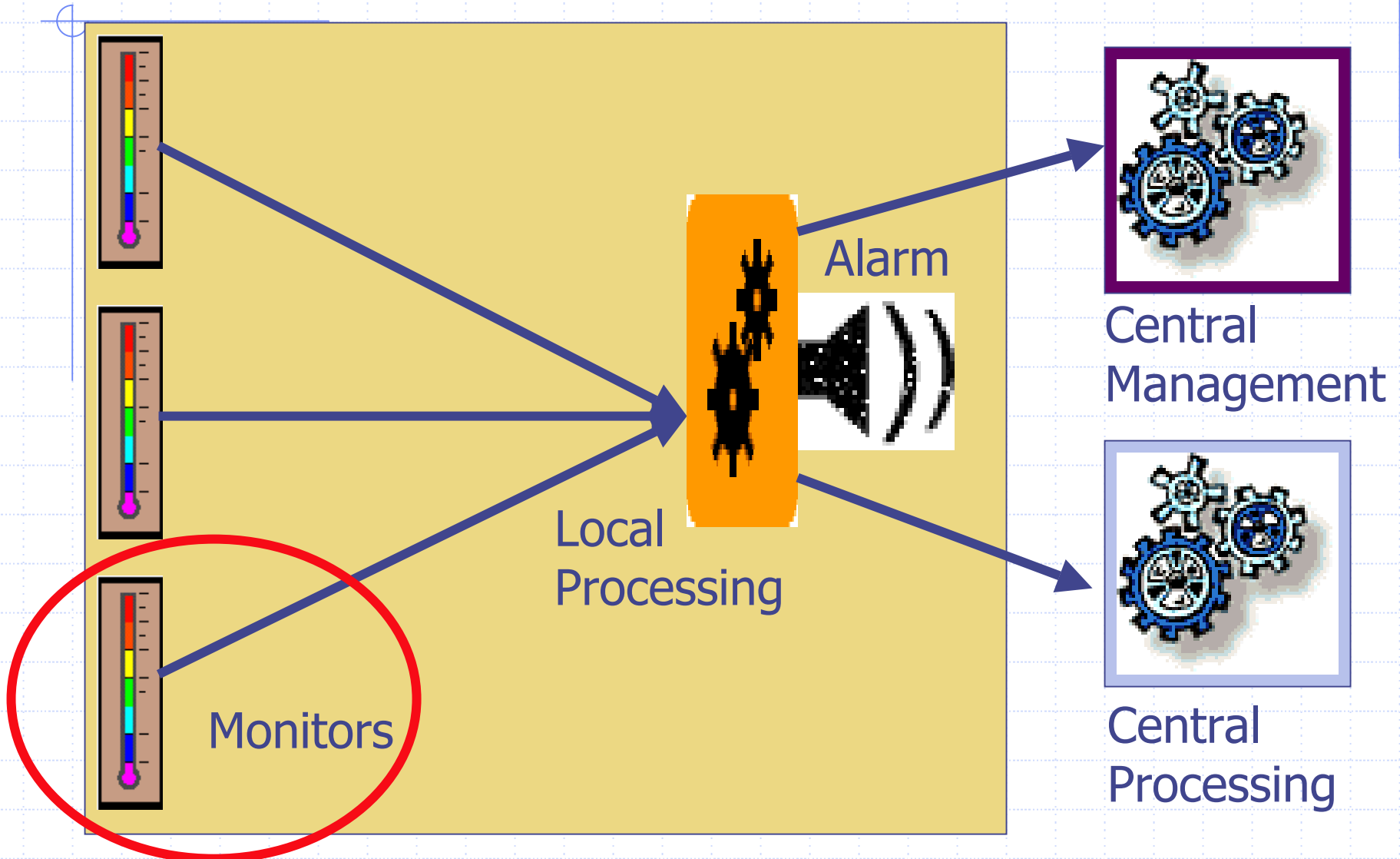
Custom Monitors

- ◆ Application log file filters
- ◆ Custom monitoring probes
- ◆ Send events from scripts or programs

Application log file filters

- ◆ Define message types
- ◆ Match log file messages to types
- ◆ Map message fields to event fields
- ◆ Filter unwanted events

Custom Monitoring



Custom Monitors

◆ Script wrapper

- Argument is program or script to run
- Returns a numeric or string value
- Several are in use at Princeton

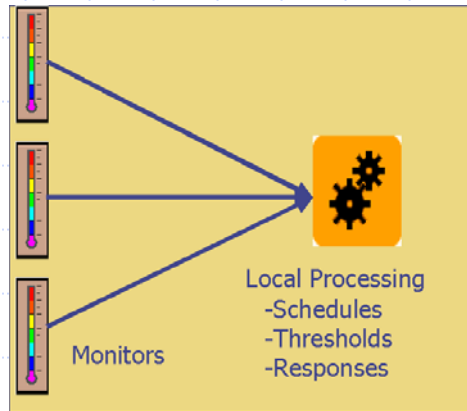
◆ Custom monitor

- More complex to create
- Arbitrary arguments
- Returns a numeric or string value

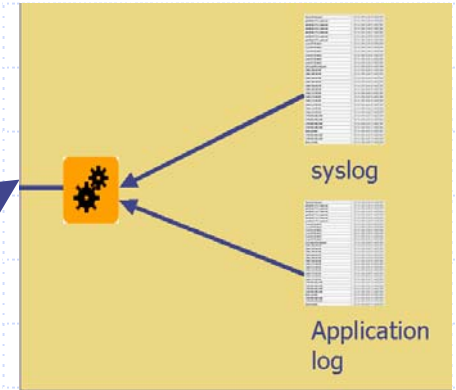
Send events from a script

- ◆ Define event name and contents
- ◆ Call program to sends the event
- ◆ Via Tivoli framework or tcp/ip
- ◆ Princeton documentation

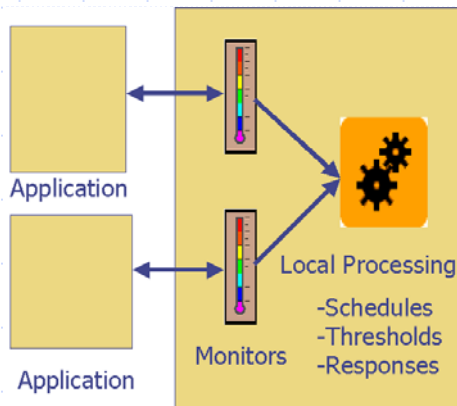
Tivoli Monitoring Architecture



Distributed Monitoring



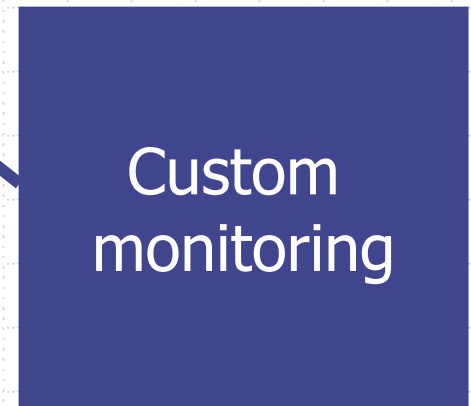
Logfile monitoring



Application performance



Configuration mgmt.
and event processing



Custom
monitoring

Configuration Management

- ◆ Distribute monitors
- ◆ Set and examine thresholds
- ◆ Set and examine schedules
- ◆ Set and examine response actions
- ◆ Both command line and GUI access

Event Processing

- ◆ Tivoli Enterprise Console (TEC)
- ◆ Display events
- ◆ Close events
- ◆ Prolog-based rules engine

Tivoli Event Display

- ◆ Windows or X-Windows versions
- ◆ Sort and select events
- ◆ Define views (event groups)
- ◆ Close events



Update ON

Number of Messages

509 Entries

0 2 1 2 150 0

FATAL
 CRITICAL
 MINOR
 WARNING
 HARMLESS
 UNKNOWN
 OPEN
 ACK
 CLOSED

	Sub_Source	Class	Hostname	Status	Message	Date
CRITICAL	SystemsNT	Host_Down	winscape	OPEN	Ping failed on winscape.	Jun 07 21:42:42
CRITICAL	SystemsNT	nt_SysPrcTotCpuTime	ddsp	OPEN	= 99.9431, was 99.9401	Jun 11 12:31:11
MINOR	Tivoli	universal_filesize	tiv-2	OPEN	/var/local/Tivoli/tiv-2.db/odb.log, -c = 13342	Jun 11 11:16:12
WARNING	Tivoli	OservRestarts	tiv-2	OPEN	= 38, was 37	Jun 11 11:44:16
WARNING	CSG	Tivoli_Down	coursinfo	OPEN	Since Jun 11, 2001 11:57	Jun 11 12:13:27
HARMLESS	WebServices	Tivoli_Up	sweb	OPEN	Since Jun 11, 2001 12:04	Jun 11 12:04:07
HARMLESS	WebServices	Tivoli_Up	storage	OPEN	Since Jun 11, 2001 12:04	Jun 11 12:04:07
HARMLESS	WebServices	Tivoli_Up	oracle	OPEN	Since Jun 11, 2001 12:04	Jun 11 12:04:07
HARMLESS	WebServices	Tivoli_Up	new-sweb	OPEN	Since Jun 11, 2001 12:00	Jun 11 12:00:09
HARMLESS	WebServices	Tivoli_Up	new-campuscgi	OPEN	Since Jun 11, 2001 12:00	Jun 11 12:00:10
HARMLESS	WebServices	Tivoli_Up	hulk	OPEN	Since Jun 11, 2001 12:05	Jun 11 12:05:08
HARMLESS	WebServices	Tivoli_Up	courseinfo	OPEN	Since Jun 11, 2001 12:05	Jun 11 12:05:12
HARMLESS	WebServices	Tivoli_Up	cnn	OPEN	Since Jun 11, 2001 12:06	Jun 11 12:06:07
HARMLESS	WebServices	Tivoli_Up	campuscgi	OPEN	Since Jun 11, 2001 12:05	Jun 11 12:05:17

View Message...

View Action Status...

Acknowledge Message

Close Message

Select All

Deselect All

Web Event Display

- ◆ View with any browser
- ◆ Automatically updated
- ◆ Summary page and drill-down
- ◆ Reads event repository database
- ◆ Sort detail page on any field

Tivoli event summary: Mon Jun 11 12:28:09 2001

Subtotals		CRITICAL	MINOR	WARNING	HARMLESS
	All Alerts	1	1	2	150
cfsmiscservers	8				8
clusters	36				36
csg	16 1			1	15
dms	18				18
irix	4				4
publicunix	2				2
systemsnt	54 1	1			53
tivoli	6 2		1	1	4
webservices	10				10

Event Breakdown

This display updates every 5 minutes.

Count	Critical
1	Host_Down
	Minor
1	universal_filesize
	Warning
1	OservRestarts
1	Tivoli_Down
	Harmless
110	Tivoli_Up
36	Maintenance_Mode
2	Maestro_Inextday
1	PU_eventTimer
1	TEC_Start

Hosts down (updates every 180 seconds)

Severity	Hostname	Class	Last Event	Repeat
WARNING	coursinfo	Tivoli_Down	Jun 11, 2001 12:13	0
CRITICAL	winscape	Host_Down	Jun 07, 2001 21:42	0

* for ALL systems as of Mon Jun 11 12:44:10 2001 [Back to Summary Page](#)

Severity	Group	Host	Event Class	Message	Date	Repeat
CRITICAL	DMS	isserver6	PU_mutex	= 433, was 9	Jun 11, 2001 12:40	0
CRITICAL	SystemsNT	winscape	Host_Down	Ping failed on winscape.	Jun 07, 2001 21:42	0
CRITICAL	SystemsNT	ddsp	nt_SysPrcTotCpuTime	= 99.6828, was 99.9431	Jun 11, 2001 12:41	0
WARNING	CSG	coursinfo	Tivoli_Down	Since Jun 11, 2001 11:57	Jun 11, 2001 12:13	0
WARNING	Tivoli	tiv-2	OservRestarts	= 38, was 37	Jun 11, 2001 11:44	0
HARMLESS	CFSMiscServers	maestrodev	Maestro_Inextday	Inextday OK	Jun 11, 2001 07:29	0
HARMLESS	CFSMiscServers	maestrodev	Maestro_Inextday	Inextday OK	Jun 11, 2001 07:29	0

Event Breakdown

This display updates every 5 minutes.

Count	Critical
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1	PU_mutex
1	nt_SysPrcTotCpuTime
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1	universal_filesize
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Prolog Rules Engine

- ◆ Select events to act on
- ◆ Modify event record
- ◆ Correlate with previous events
- ◆ Set timers on events
- ◆ Call external scripts

Current Projects

- ◆ Manager for Oracle
- ◆ Improved notification
- ◆ Update to current version

Coming Attractions

- ◆ Web transaction performance
- ◆ Manager for NT
- ◆ Manager for Unix
- ◆ Graphical system health display