COMVERSE UNIVERSITY

Unified Platform Manager (UPM)

Lesson Objectives

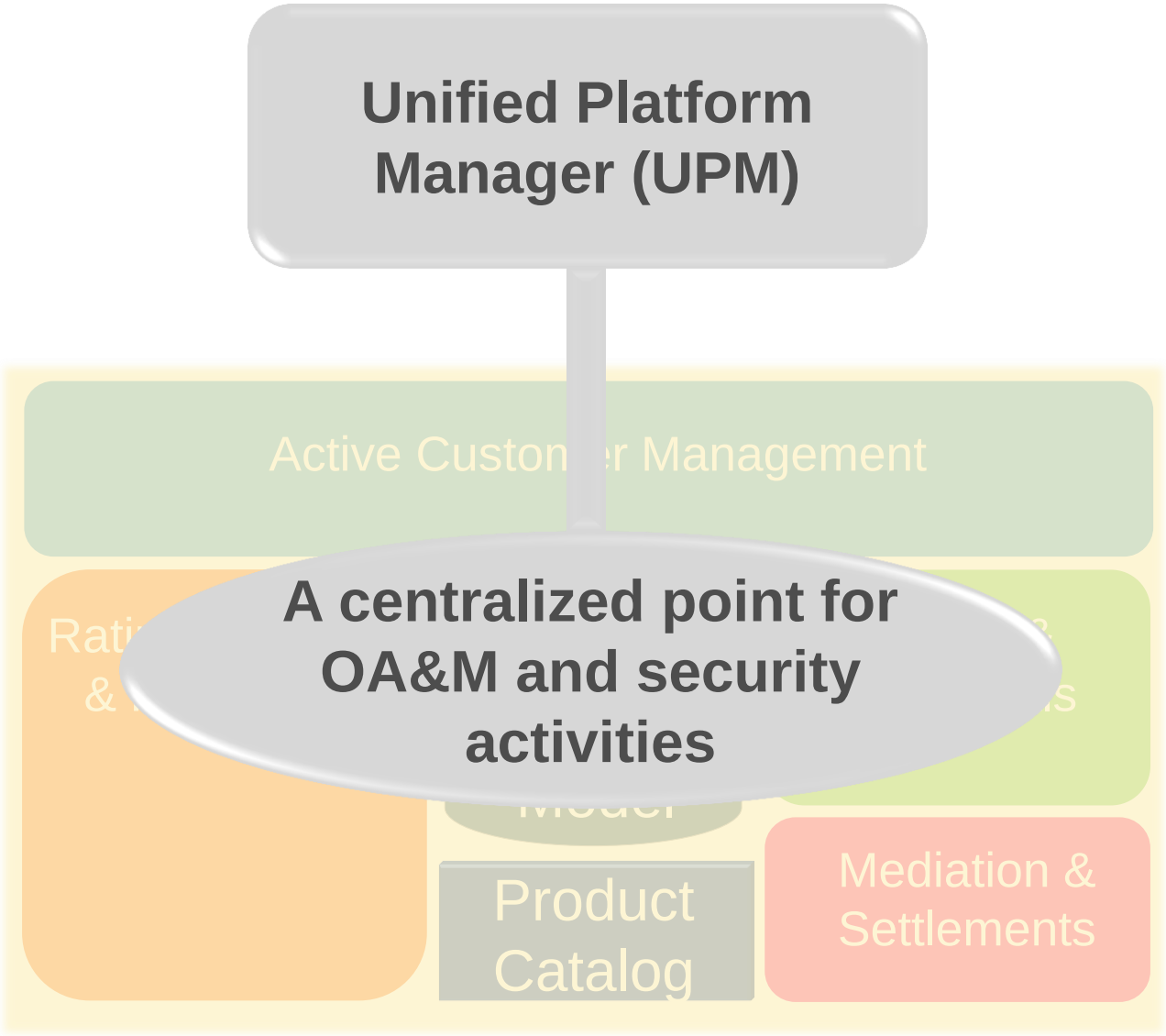
By the end of this lesson you will be able to describe the UPM functionality and the relevant operation for each service:

- Alarm and event
- Job management
- Process management
- File transfer

Agenda

- **UPM Overview and Concepts**
- UPM Alarms and Events
- UPM Process Management
- UPM Jobs and Workflows
- UPM Inventory Reports
- Logs and File Management
- Administering the UPM

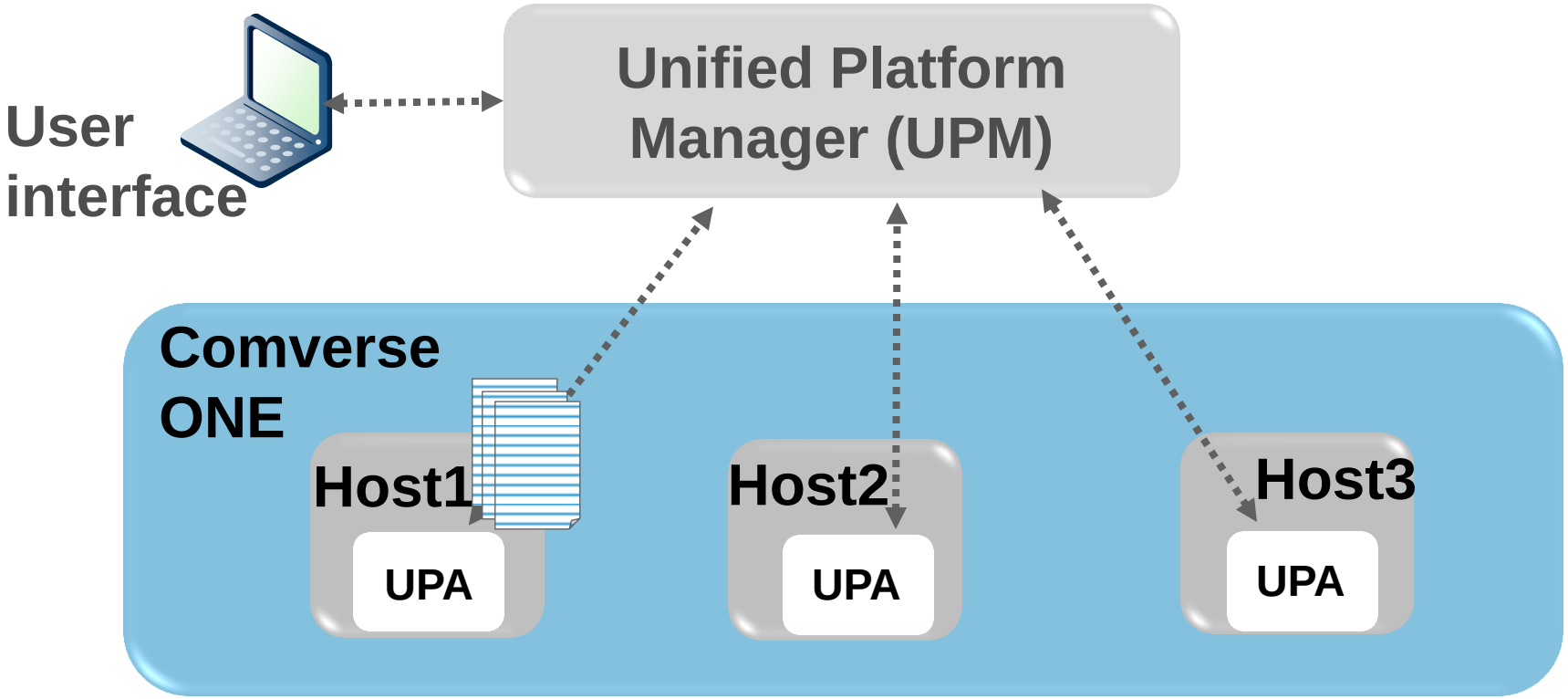
Unified Platform Manager (UPM) – Overview



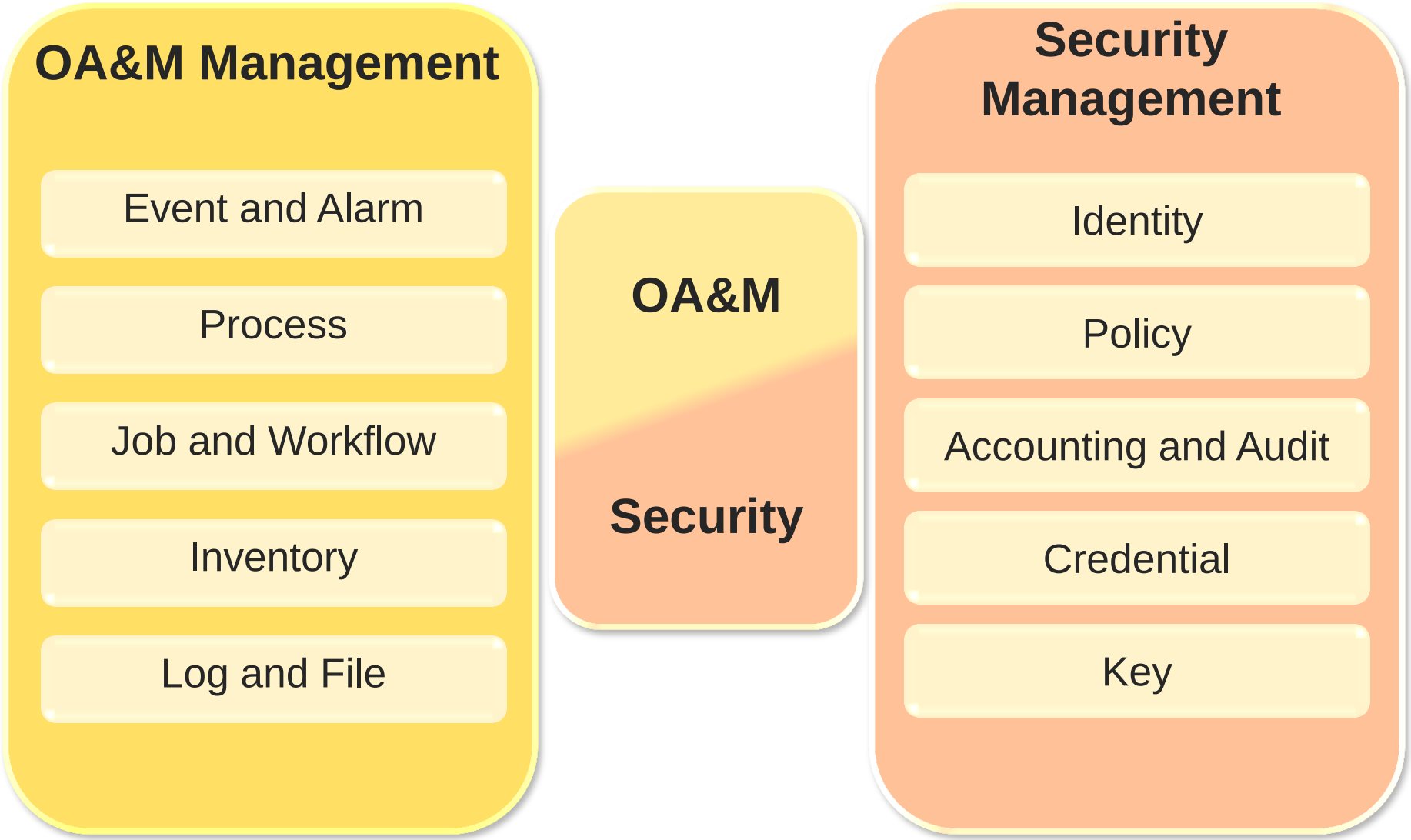
Unified Platform Architecture

The Unified Platform architecture consists of:

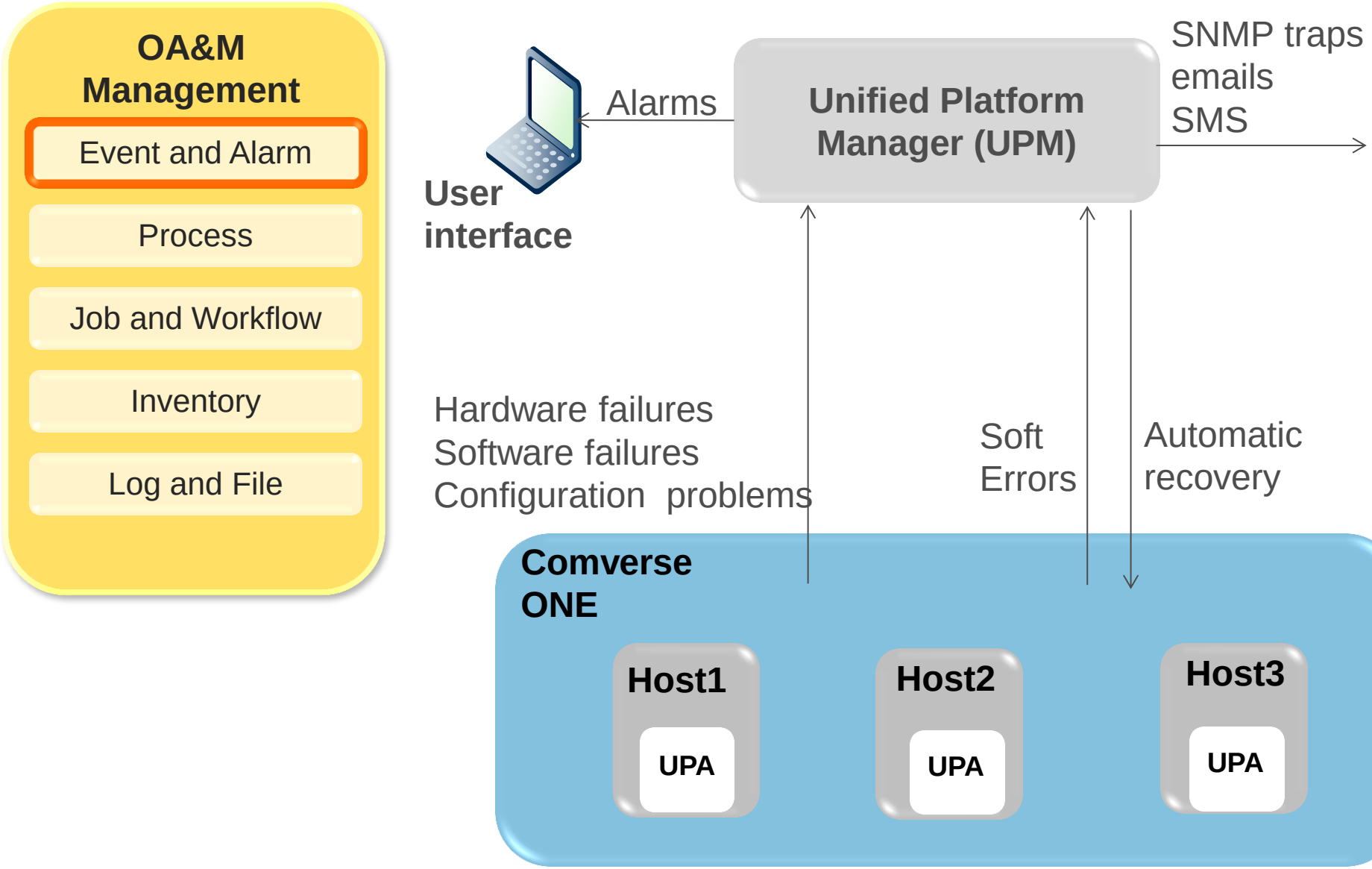
- Centralized Unified Platform Manager (UPM)
- Unified Platform Agent (UPA) on each managed node
- Management Shell command line interface (CLI) or the Management Console graphical user interface (GUI).



UPM Services



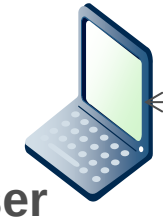
Event and Alarm



Process Management

OA&M Management

- Event and Alarm
- Process
- Job and Workflow
- Inventory
- Log and File



User interface

Unified Platform Manager (UPM)

Start
Stop
Suspend
Resume

Status
Statistics
Heartbeat

Comverse ONE

Host1 Process 1

Host2 Process 2

Host3 Process 3

Job and Workflow Management

OA&M Management

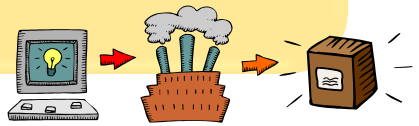
- Event and Alarm
- Process
- Job and Workflow
- Inventory
- Log and File

Job

A periodic or on-demand operation that is performed on a node, such as purging of database records

Workflow

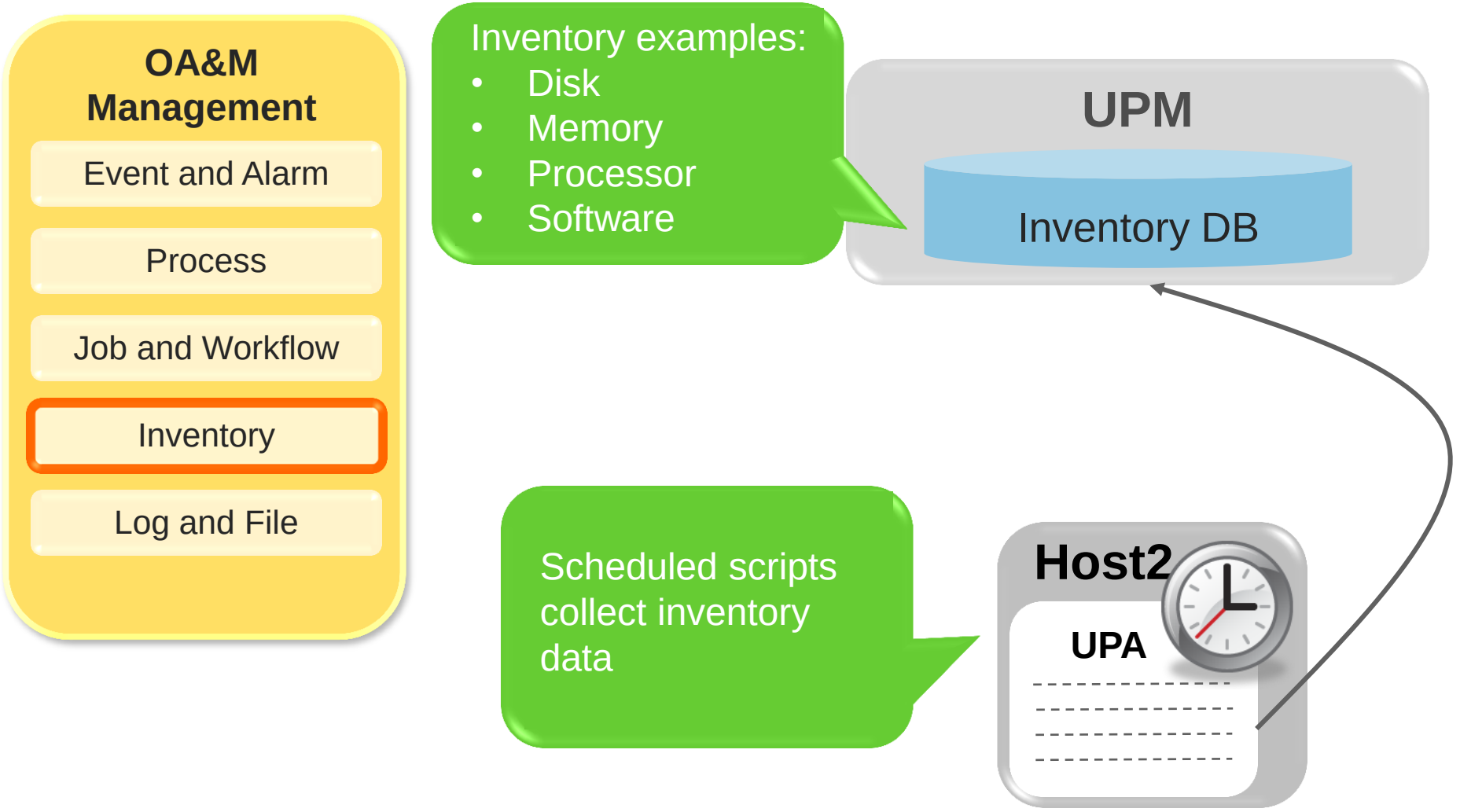
- The interaction of workflow entities
- A workflow entity can be any simple or complex job, monitor, process, or other workflow such as payment cycle



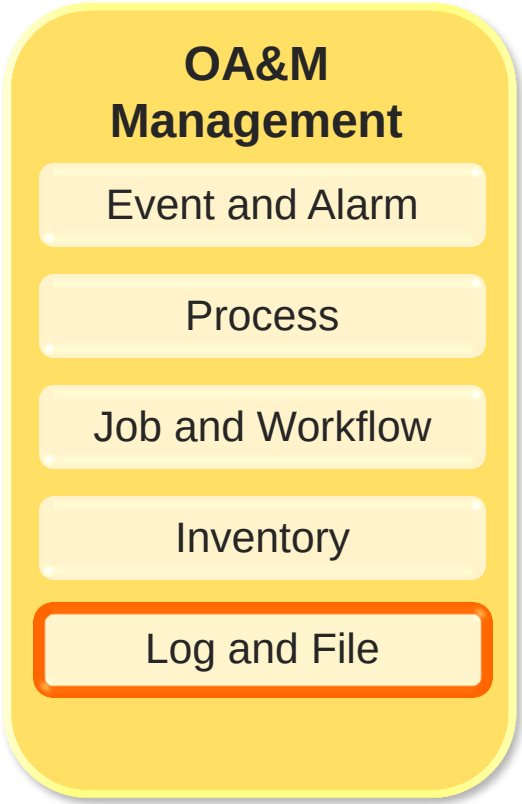
UPM

- Manages jobs and their schedules across all related units
- Manages workflows that define execution dependency of related jobs in multiple steps
- Aggregates and provides running jobs and job execution history across all related units

Inventory Management



Log and File Management



- Turns on/off tracing
- Adjusts log level
- Aggregates and provides application logs across all units
- Manages and rotates applications logs

Review Questions

Which functionality of UPM is used for?

1. Detecting that a server is down?
   a. Events and alarms management
   b. Process management
   c. Inventory management
   d. Job and workflow management

2. Stopping a process?
   a. Events and alarms management
   b. Process management
   c. Inventory management
   d. Log management

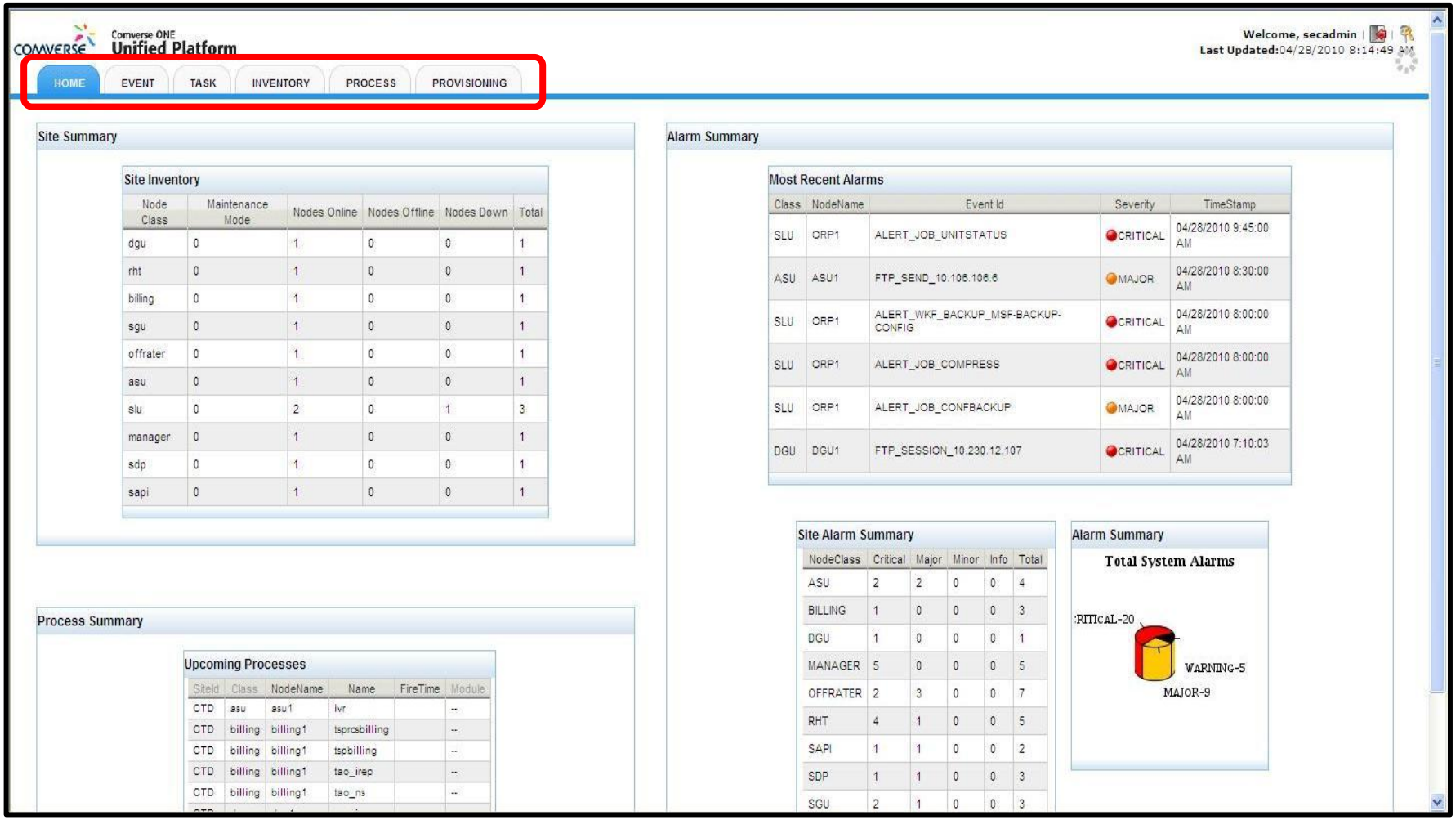
3. Performing scheduled backup
   a. Events and alarms management
   b. Process management
   c. Inventory management
   d. Job and workflow management

4. Finding what is the free disk space on a server?
   a. Log and File management
   b. Process management
   c. Inventory management
   d. Job and workflow

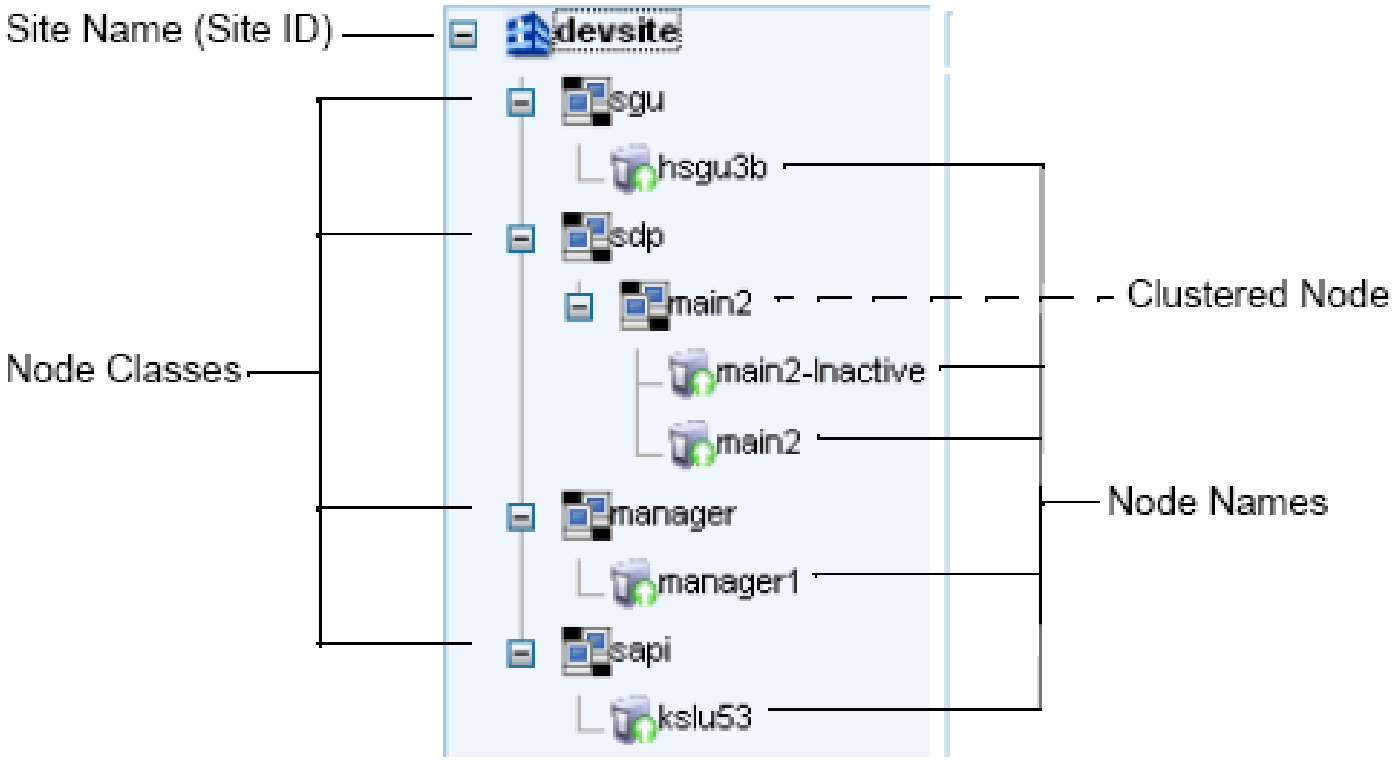
5. Transferring files form a server to the UMP
   a. Log and File management
   b. Process management
   c. Inventory management
   d. Job and workflow

UPM GUI Access

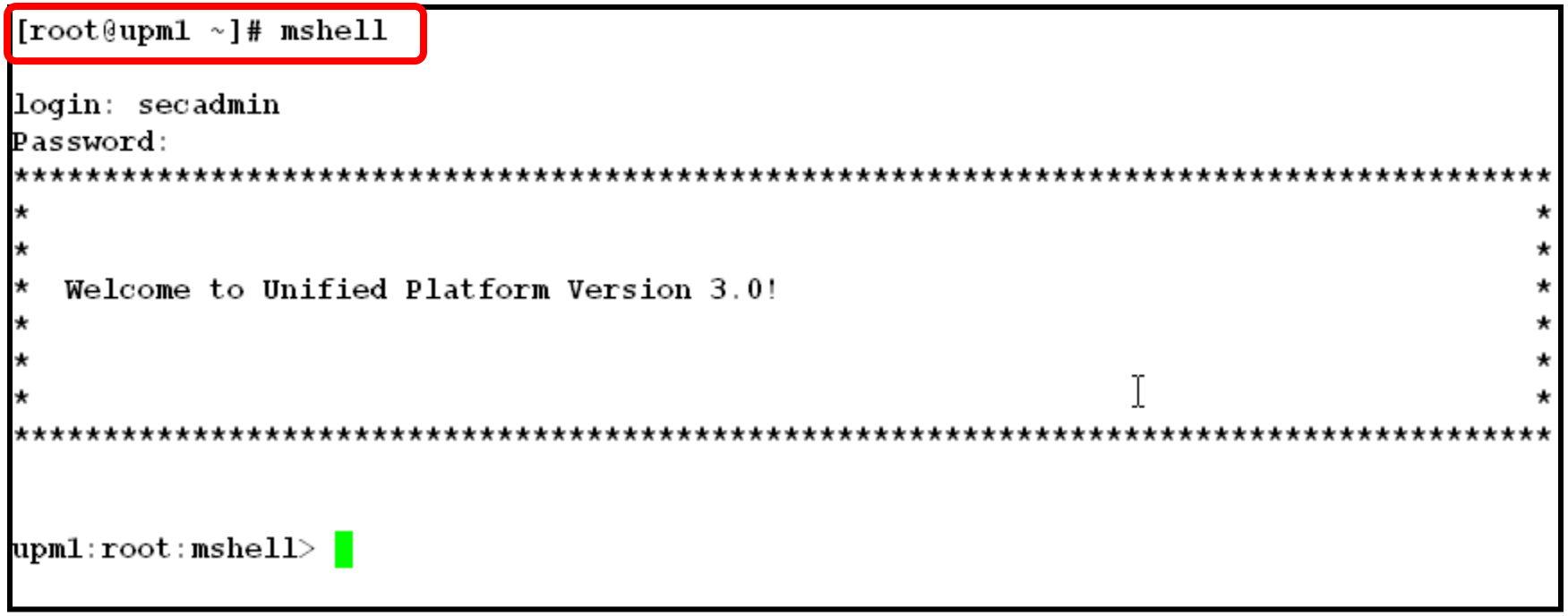
http://<*UMP Server IP address*>:8800/upm/,



Using the Navigation Tree



UPM CLI Access



mShell resides in the UPM and in all the UPAs.

mShell Parameters

Use global variables in either the UPM or UPA to limit the result set.

`-i <ignorelist>`	Provides a list of field names that will not be displayed in the result set
`-f <filterlist>`	• Provides a filter to select records by values in specified fields • The format is: fieldName:fieldString
`-q <query-type>`	Predefined in build_favorite, the query type is used within the build_report command to retrieve a saved query

```
kosa4:root:mshell> list_active_events -mon sdp1 -i SiteID,NodeClass,NodeName,NodeInstance

EventID                 Severity  Instance  TimeStamp                Escalated  Acknowledged
ALERT_FS_USR            MAJOR     USR       03:33:01 04/06/2008      no         no
ALERT_JOB_RECOMP_INV    CRITICAL  HIST      16:30:03 03/28/2008      no         no
ALERT_JOB_RECOMP_INV    CRITICAL  PCAT      16:30:03 03/28/2008      no         no
```

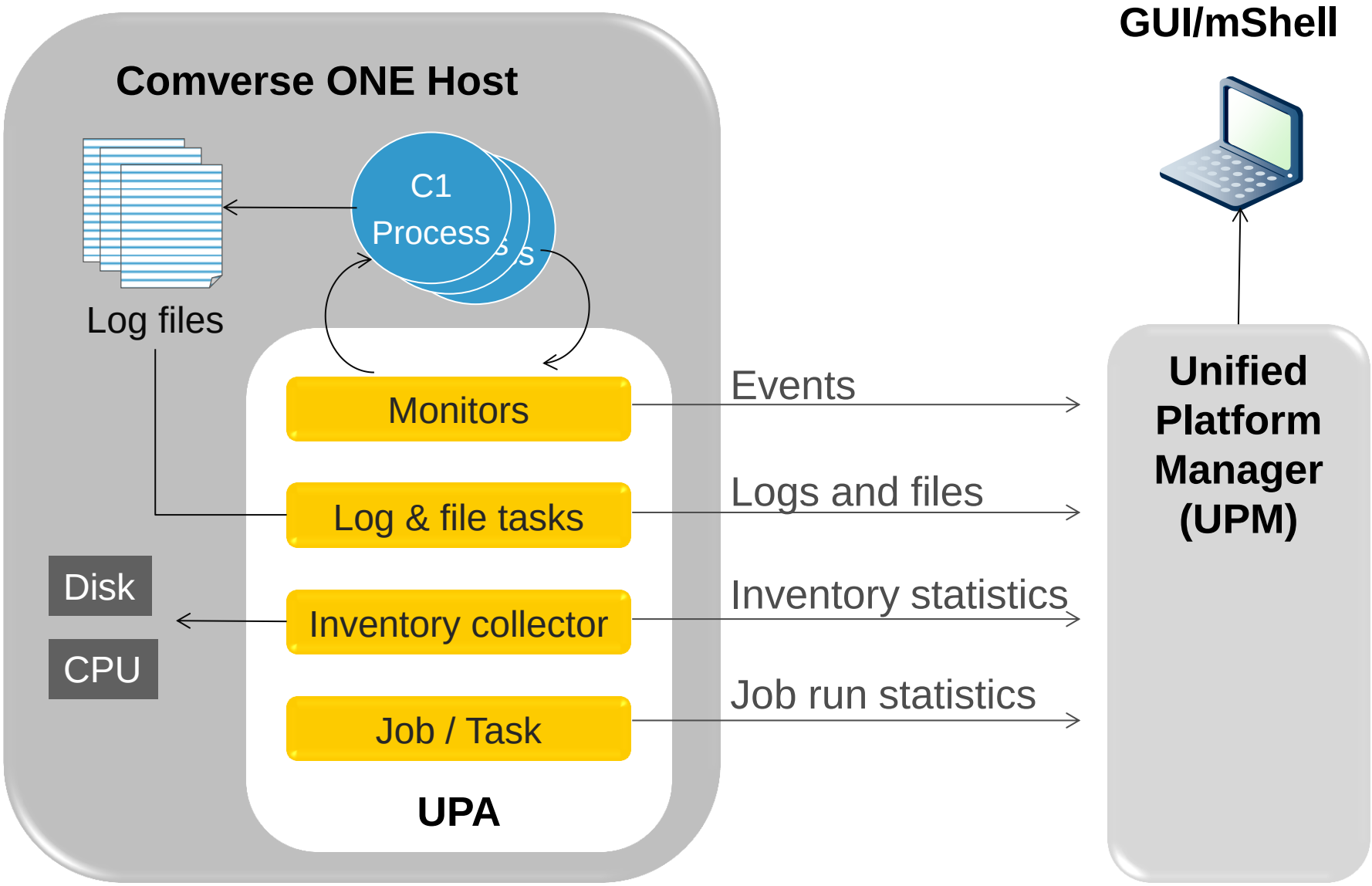
mShell Manager Variables

Used only in the UPM, manager variables return results for specified nodes.

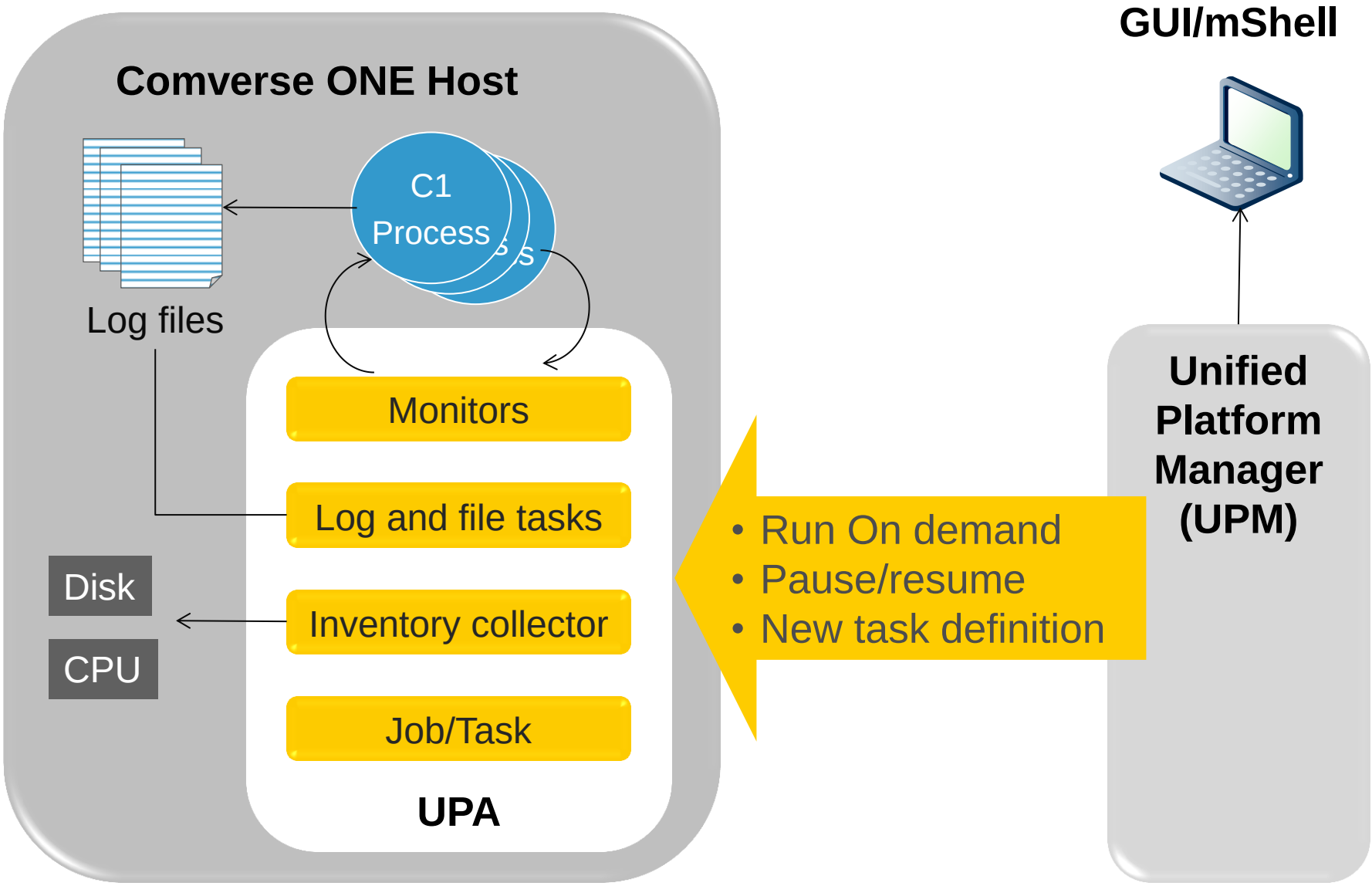
`-c <NodeClass>`	Returns results from all nodes within the specified node class
`-mon <NodeName>`	Returns results for the specified node name
`-n <NodeInstance>`	Returns results for a specified node identified by ip address
`-m <mode>`	Returns results for the specified active or passive node in a cluster

```
upm:root:mshell> export_inventory -inv memory -c sdp
Status message:
                Operation Successful
```

UPM Architectural Summary – UPA to UPM



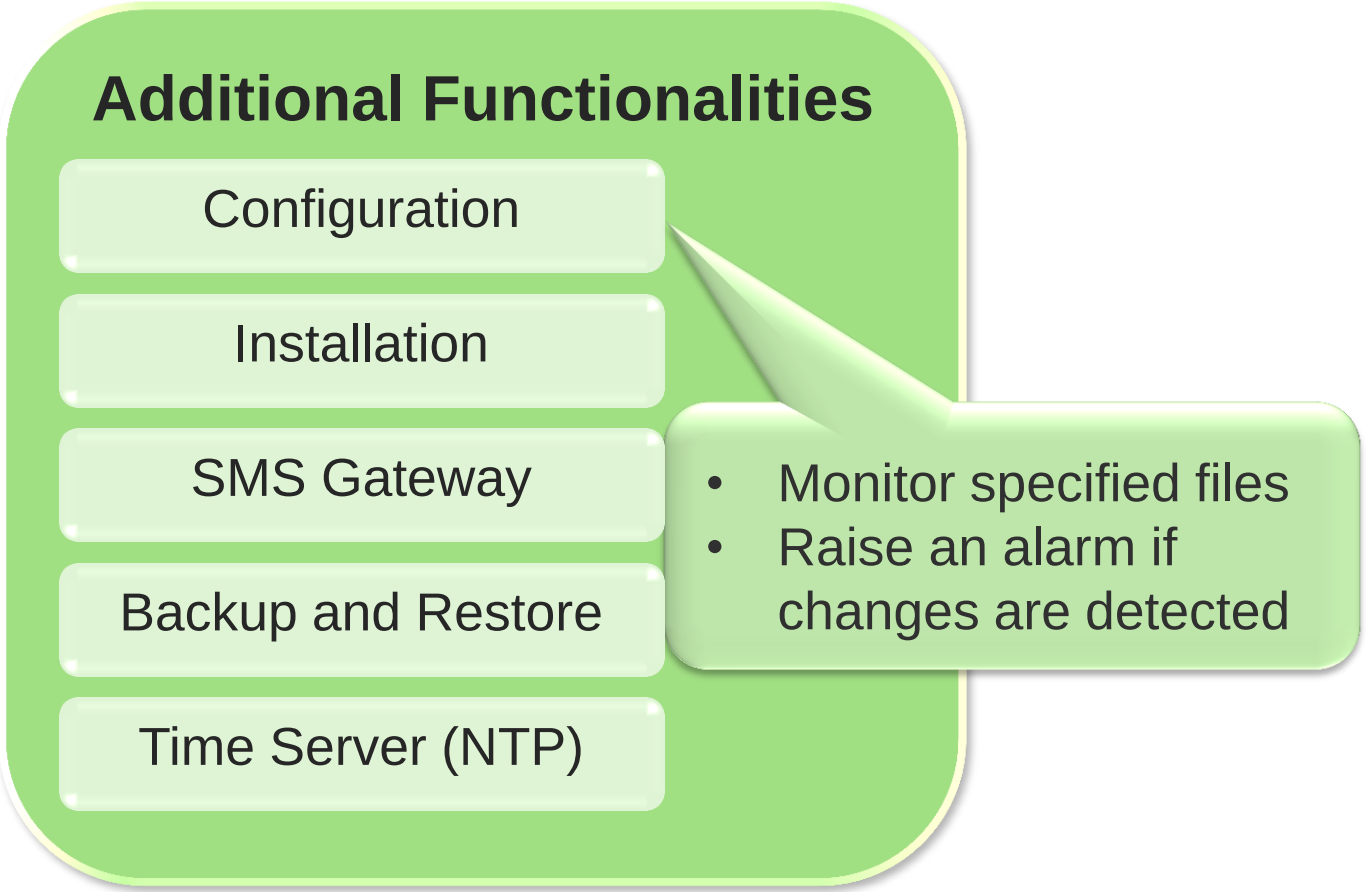
UPM Architectural Summary – UPM to UPA



Additional UPM Functionalities

OA&M Management

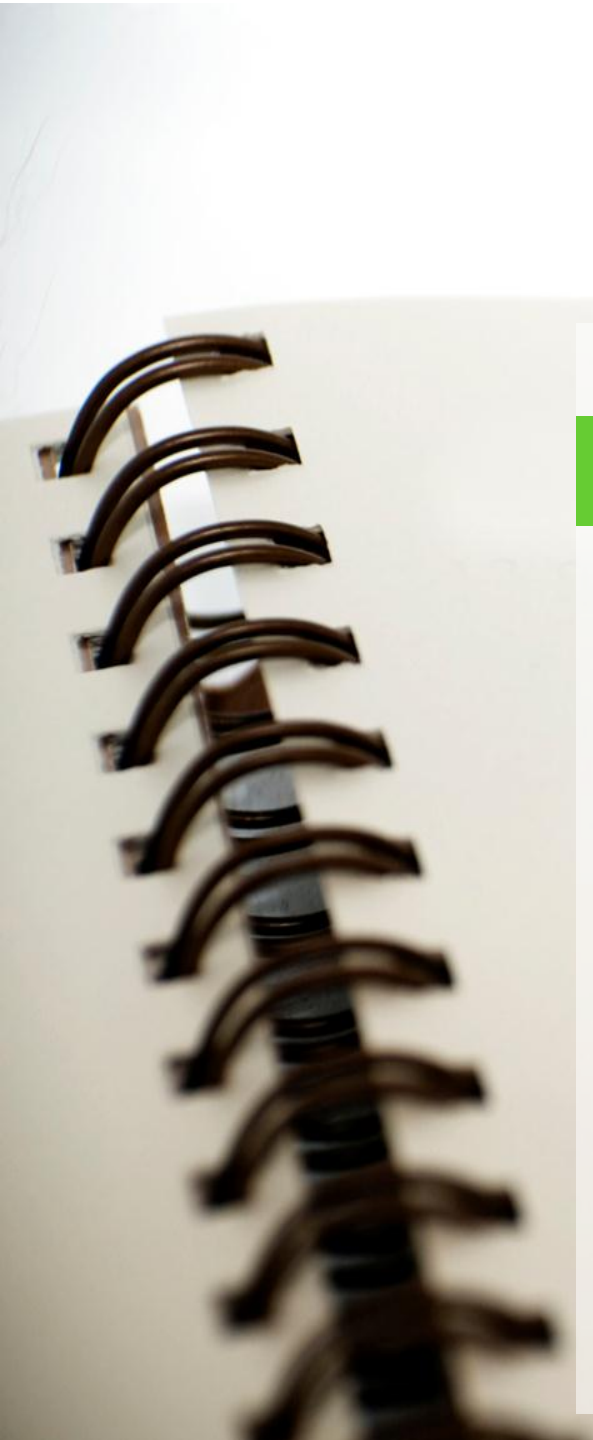
Security Management



Review Questions

1. You would like to manage a specific node, for example an SLU1. How do you limit the information displayed in the GUI to this node?
   a. Access the GUI using the node IP
   b. Enter the node name in the search box
   c. Select the node in the navigation tree
   d. There is no way to limit the information displayed in the GUI to a single node.
2. Which parameter enables you perform CLI operations on a single Comverse ONE node (for example an SLU1)?
   a. -i
   b. -c
   c. -mon
   d. -f
3. Which of the following components that run on a Comverse ONE host is NOT part of the UPA?
   a. Event monitor
   b. Process
   c. Inventory collector
   d. Job/task

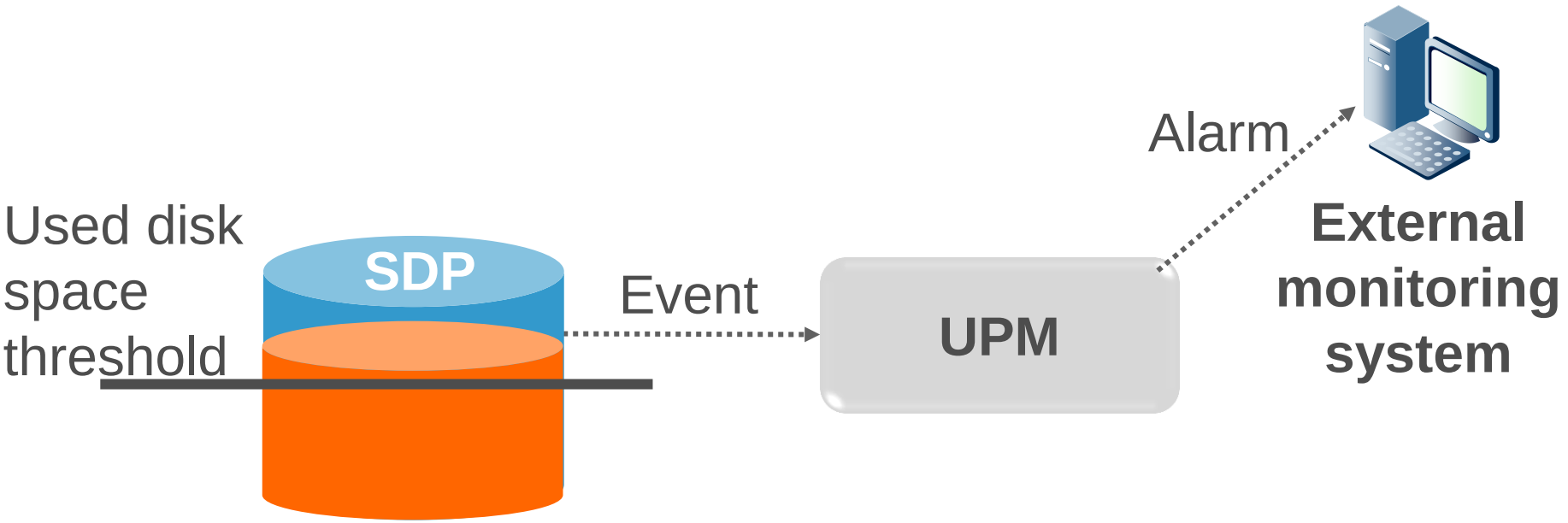
Agenda



- UPM Overview and Concepts
- **UPM Alarms and Events**
- UPM Process Management
- UPM Jobs and Workflows
- UPM Inventory Reports
- Logs and File Management
- Administering the UPM

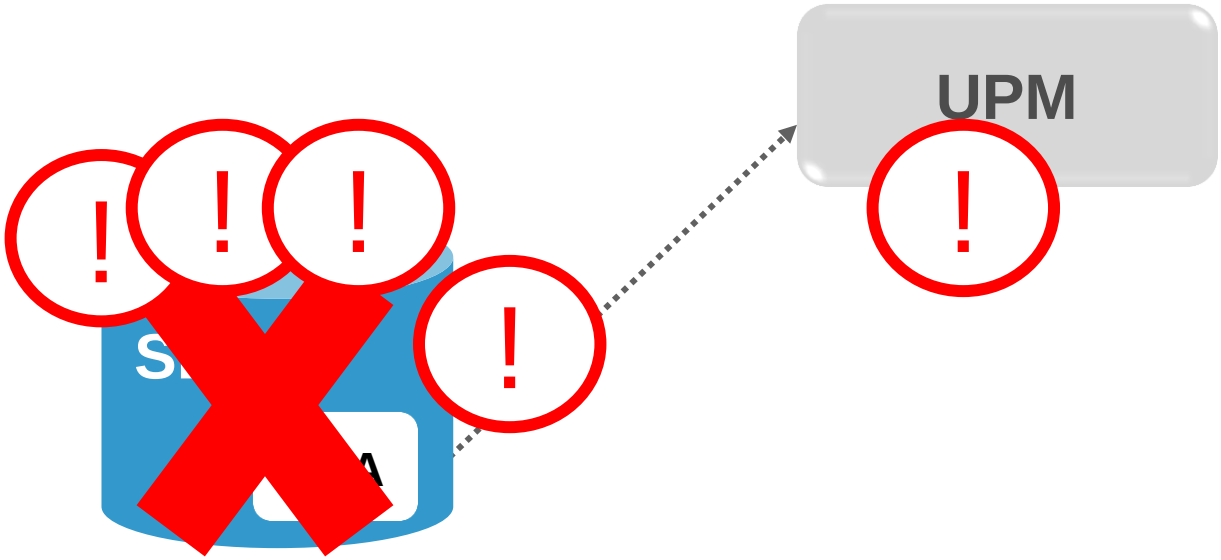
What Are Events and Alarms?

- An **event** is generated when an event condition is violated.
- An **event condition** is a threshold associated with a monitored resource.
- **Alarms** are events that get forwarded to external servers.



Event and Alarm Management

- Provides a remote interface to view alarms
- Monitors units for the detection of HW and SW failures
- Correlates related alarms
- Groups and filters alarms
- Aggregates alarms

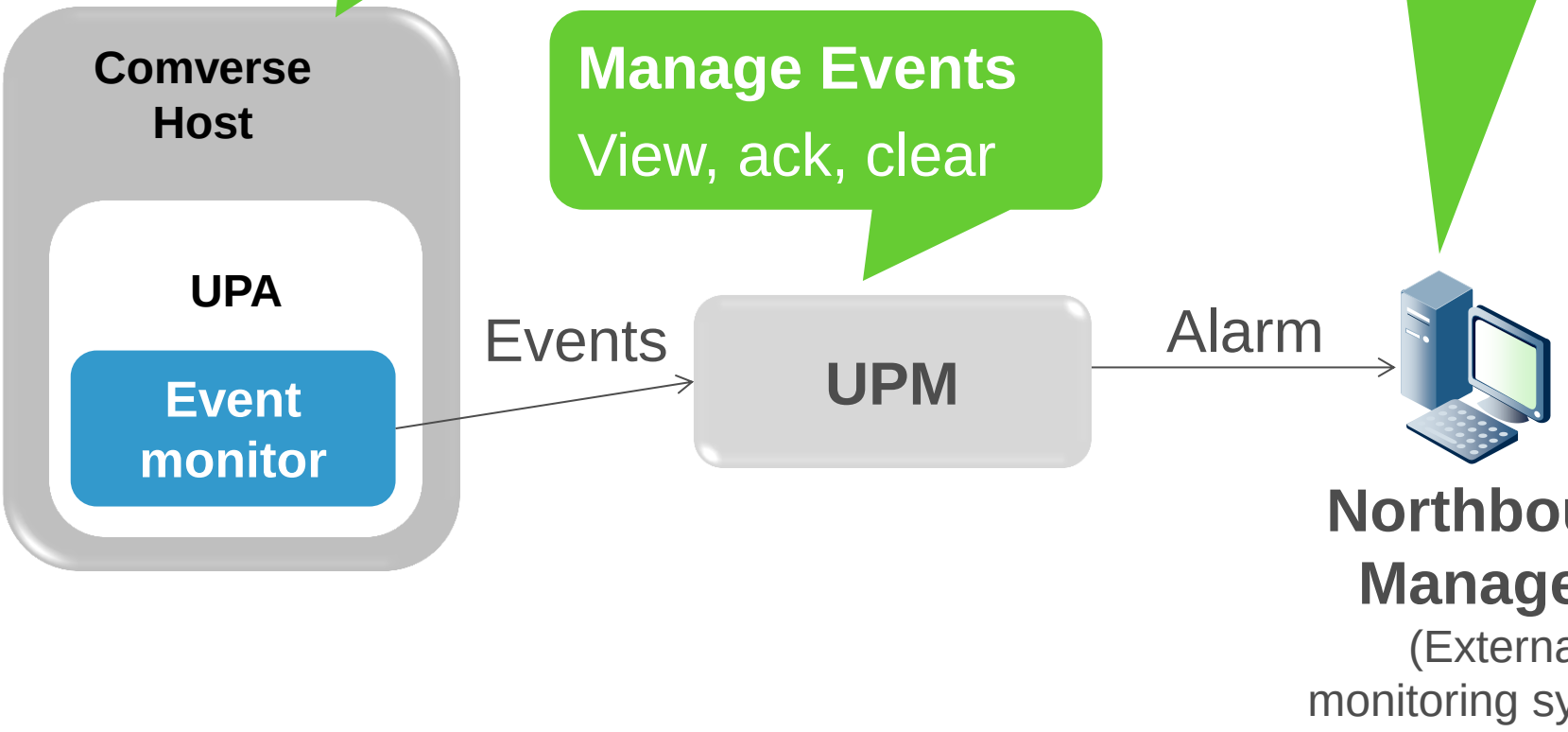


Event-Processing Components and Management

Manage Monitors
Add, schedule, view history

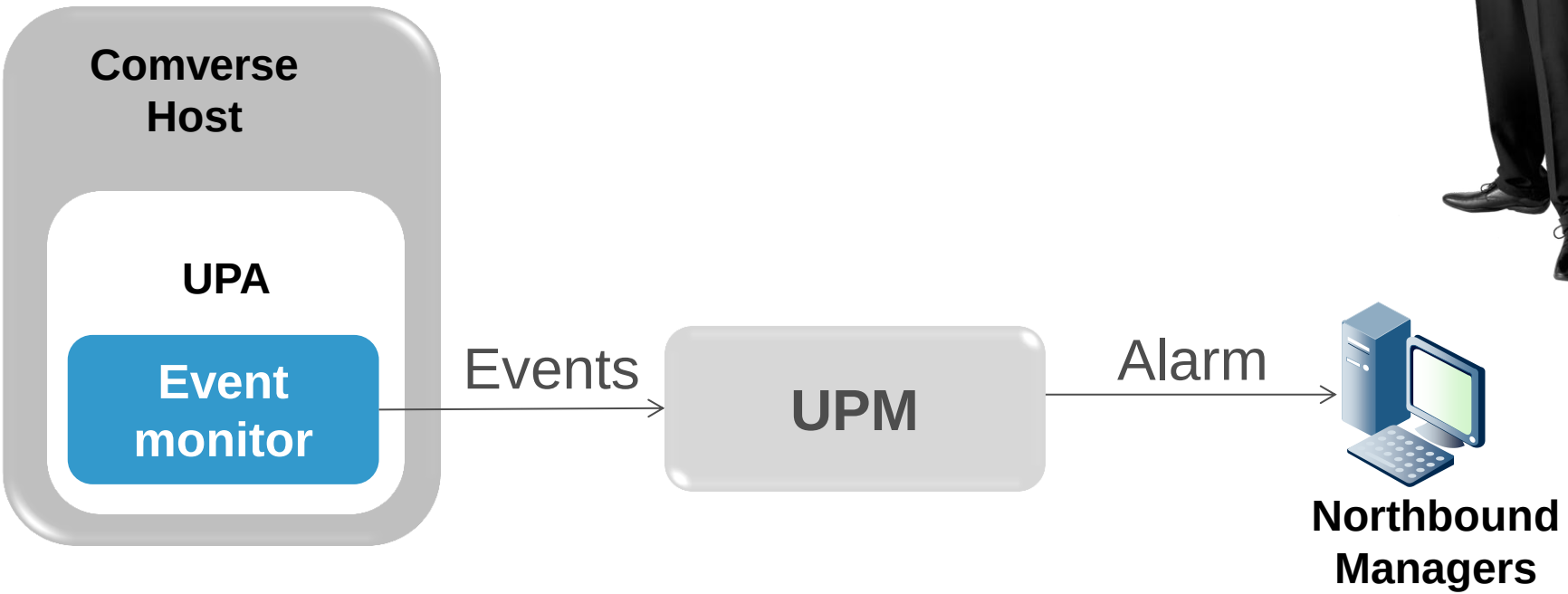
Manage Northbound Managers
View, define

Manage Events
View, ack, clear

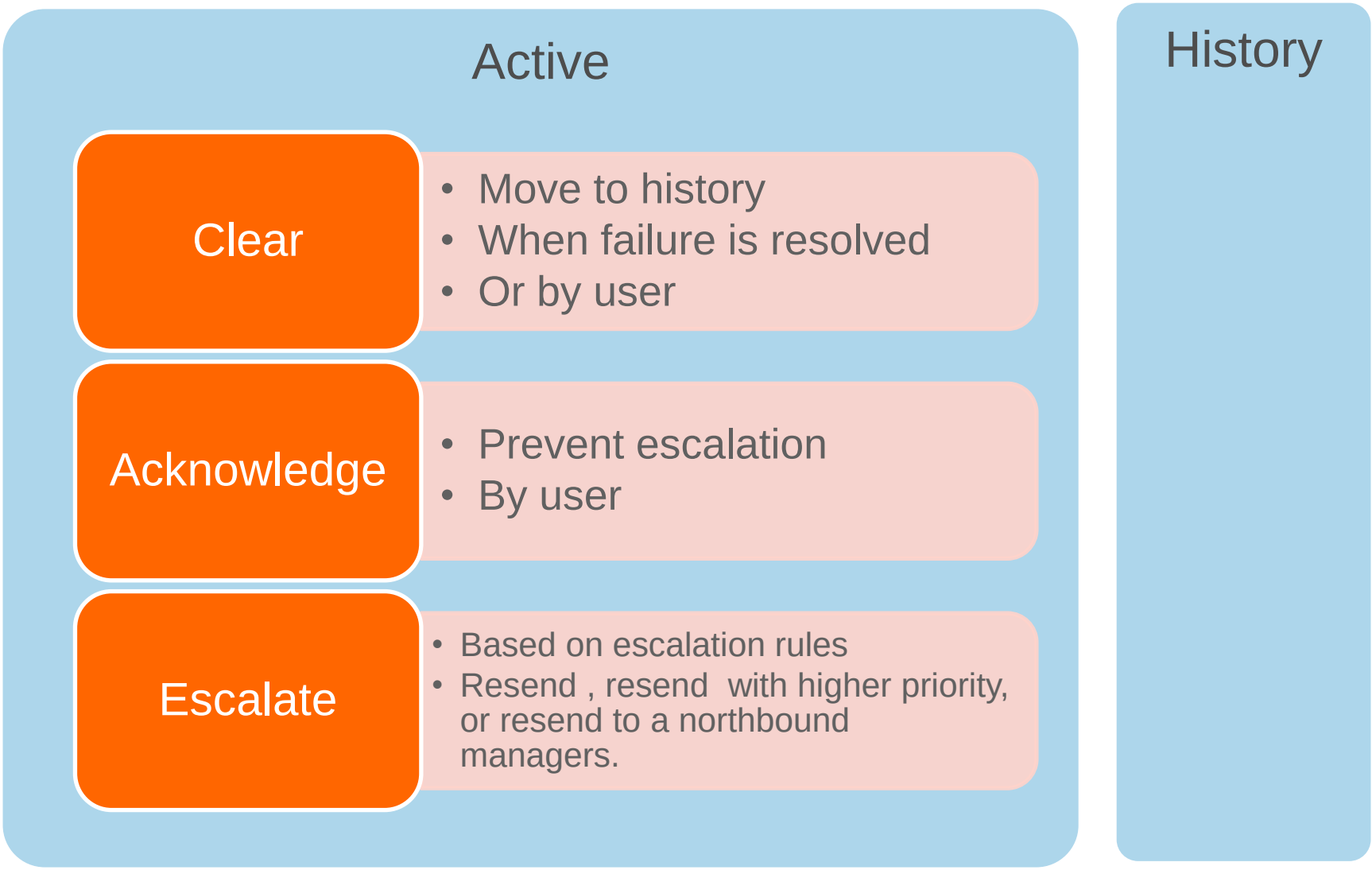


Which Events Are Monitored?

- How can event definitions be modified?
  - By modifying the monitors
- I'm not interested to view an event type, what can be done?
  - Disable monitor
  - Suppress events – incoming or outgoing from UPM



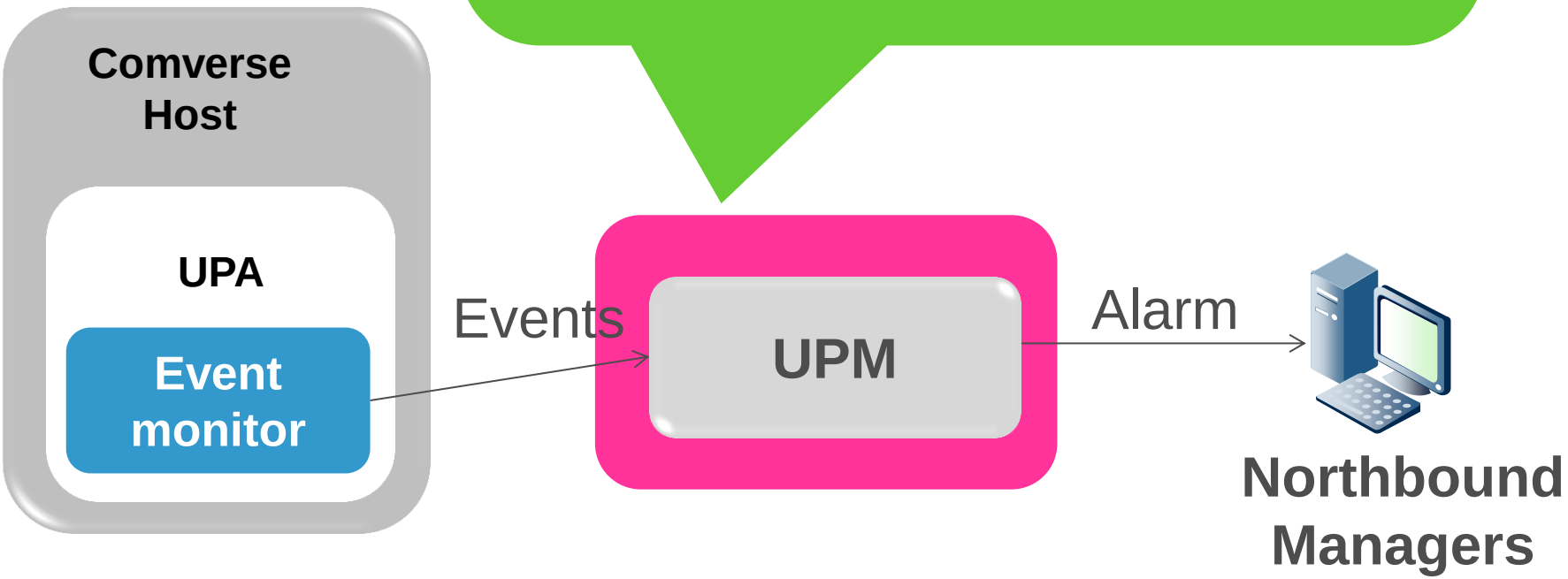
Event States and Actions



Event Management

Manage Events

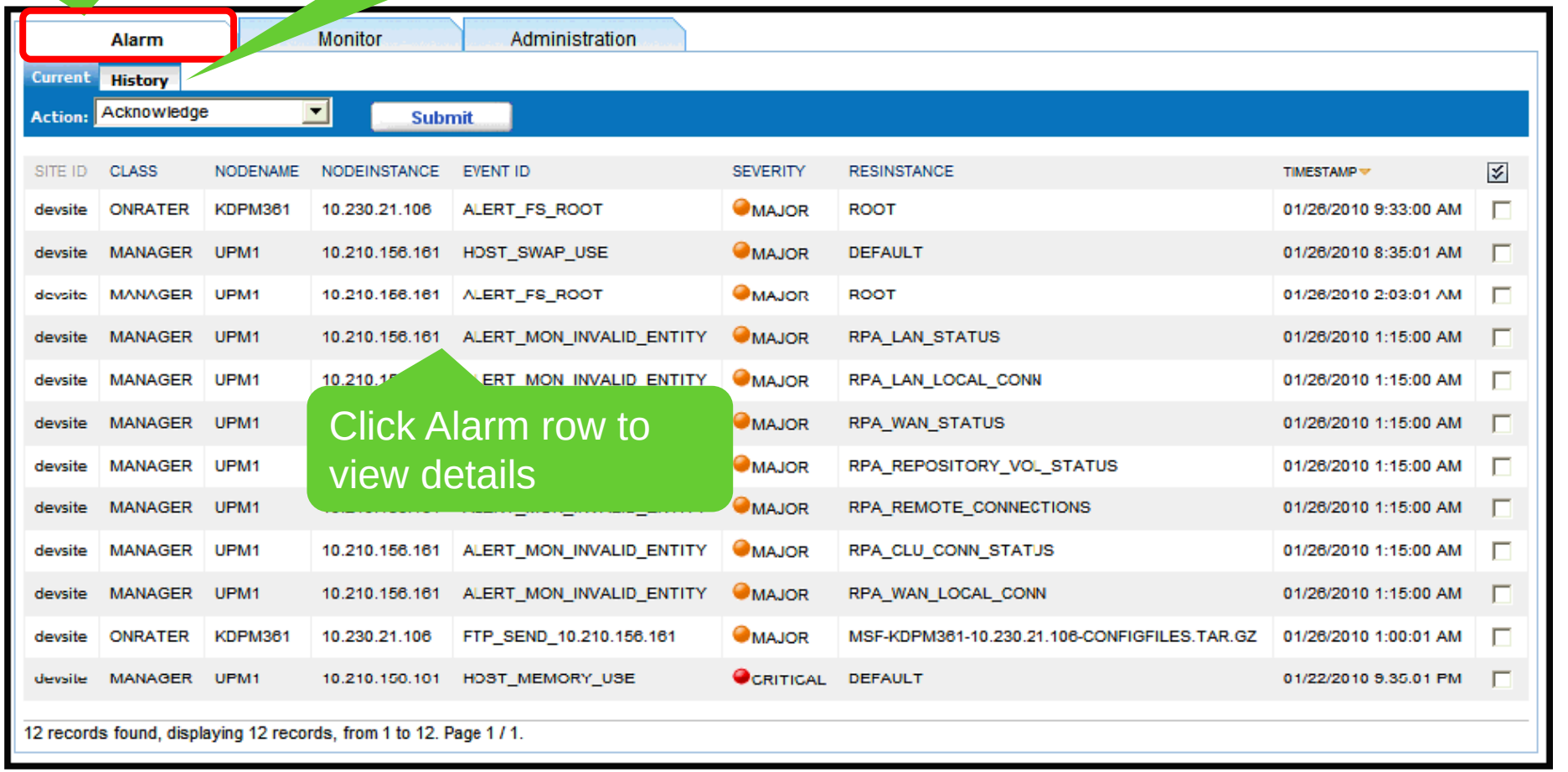
- View current and historic events
- View event properties
- Perform actions on events: acknowledge or clear
- Managing Escalation rules



UPM GUI – Viewing Alarms

Select Alarms tab

View current or historic Alarms



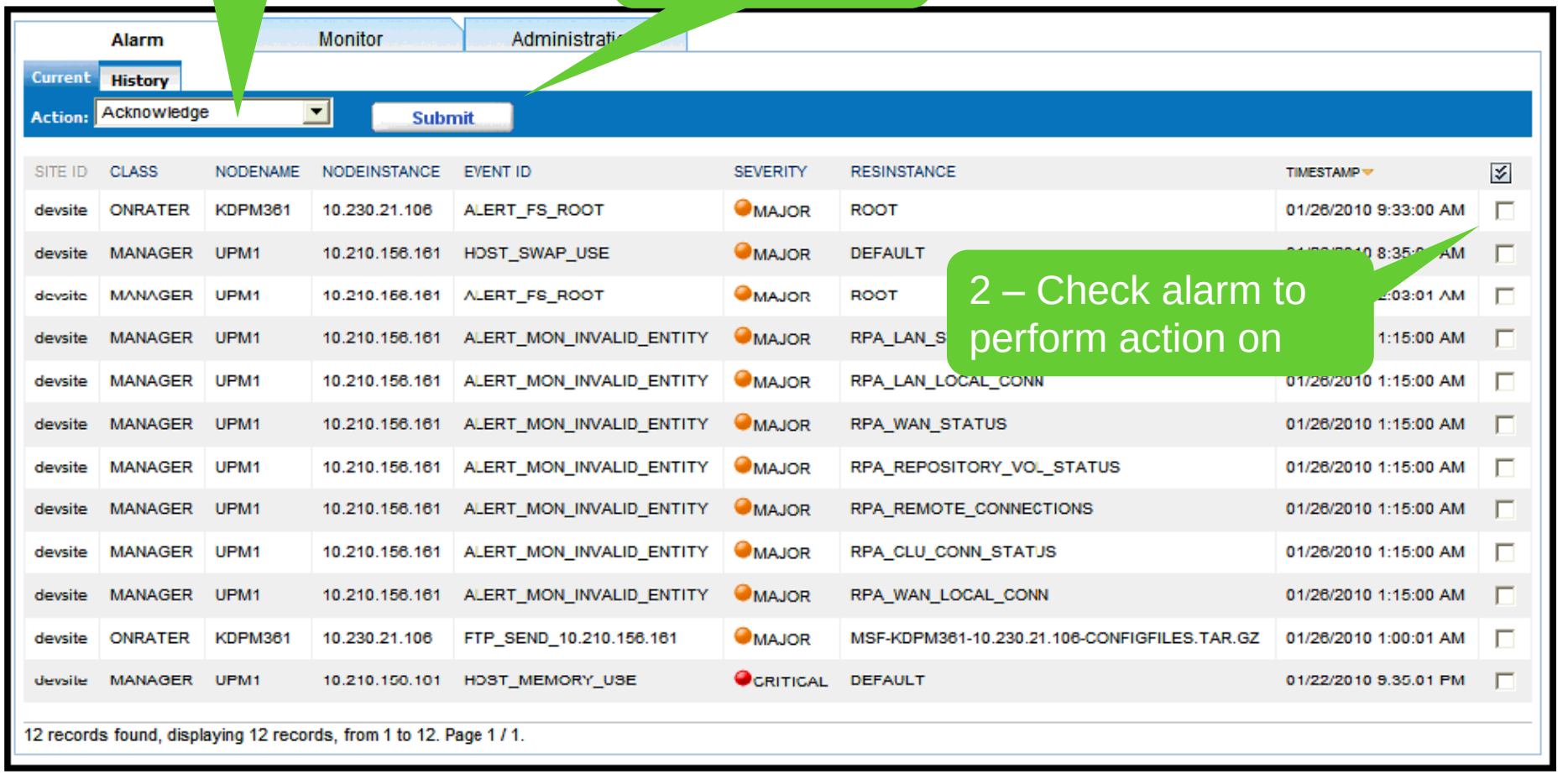
Click Alarm row to view details

UPM GUI – Performing Actions on Alarms

1 – Select the action

3 – Click Submit

2 – Check alarm to perform action on



mShell – Viewing Active Events

All active events for the entire site, or active events for a given node or nodes, can be viewed.

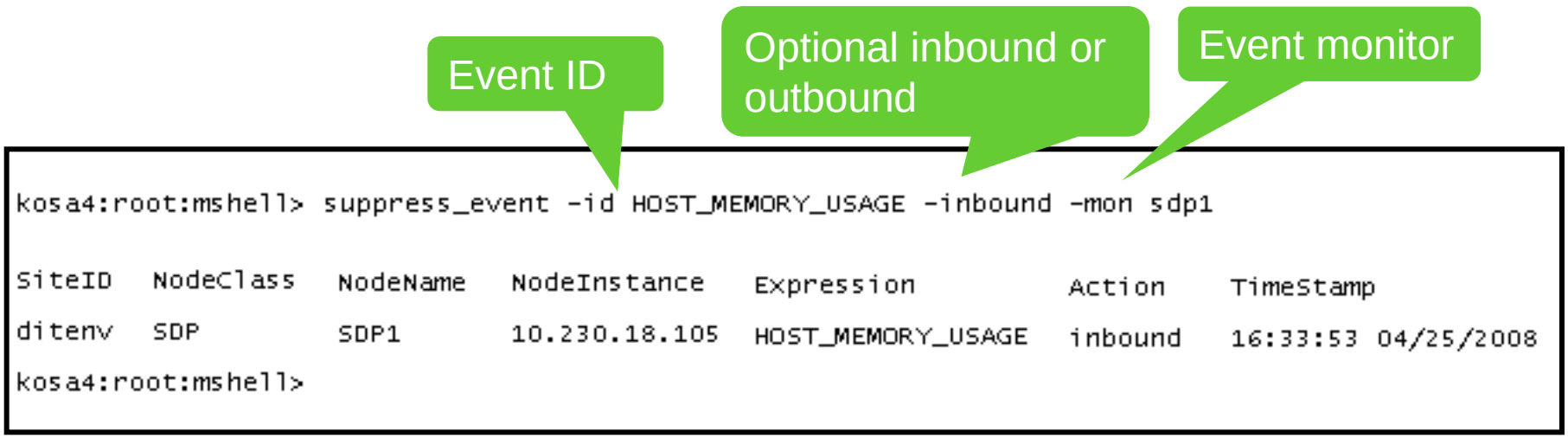
Show only events collected by this monitor

Do not show these event attributes in output

```
kosa4:root:mshell> list_active_events -mon sdp1 -i SiteID,NodeClass,NodeName,NodeInstance

EventID                 Severity  Instance  TimeStamp              Escalated  Acknowledged
ALERT_FS_USR            MAJOR     USR       03:33:01 04/06/2008    no         no
ALERT_JOB_RECOMP_INV    CRITICAL  HIST      16:30:03 03/28/2008    no         no
ALERT_JOB_RECOMP_INV    CRITICAL  PCAT      16:30:03 03/28/2008    no         no
ALERT_JOB_RECOMP_INV    CRITICAL  MAIN      16:30:03 03/28/2008    no         no
SDP_DB_HIST             CRITICAL  DB_HIST   18:02:26 03/24/2008    no         no
SDP_DB_MAIN             CRITICAL  DB_MAIN   18:02:22 03/24/2008    no         no
SDP_DB_LSNR             CRITICAL  DB_LSNR   17:52:18 03/24/2008    no         no
ALERT_MON_ENQUEUE       MINOR     HIST      17:50:07 03/24/2008    no         no
ALERT_MON_ENQUEUE       MINOR     PCAT      17:50:07 03/24/2008    no         no
ALERT_MON_ENQUEUE       MINOR     MAIN      17:50:07 03/24/2008    no         no
```

Event Suppression

Depending on an organization's particular setup, certain alarms might not be required.




```
kosa4:root:mshell> suppress_event -id HOST_MEMORY_USAGE -inbound -mon sdp1

SiteID   NodeClass   NodeName   NodeInstance    Expression          Action    TimeStamp
ditenv   SDP         SDP1       10.230.18.105   HOST_MEMORY_USAGE   inbound   16:33:53 04/25/2008
kosa4:root:mshell>
```

```
kosa4:root:mshell> list_suppressed_events -mon sdp1

SiteID   NodeClass   NodeName   NodeInstance    Expression          Action    TimeStamp
ditenv   SDP         SDP1       10.230.18.105   HOST_MEMORY_USAGE   inbound   09:27:57 04/28/2008
ditenv   SDP         SDP1       10.230.18.105   ALERT_JOB.*         outbound  09:28:46 04/28/2008
kosa4:root:mshell>
```

Adding Escalation Rules

```
upm1:root:mshell> add_escalation_rule -id HOST_ESCALATION_RULE -x HOST.* -d "Esc Rule for HOST Events"
-i SiteID,NodeClass,NodeName,NodeInstance

RuleId    State     Timer  Type     Severity     Retry   Expression      Message
--        enable    1440   resend   CRITICAL     3       HOST.*          --

upm1:root:mshell>
```

Additional escalation actions:

List_escalation_rule	View details for all escalation rules or for an individual rule.
Disable_escalation_rule	events associated with the rule will not be escalated
Remove_escalation_rule	Remove rule form escalation map. Events associated with the rule will not be escalated

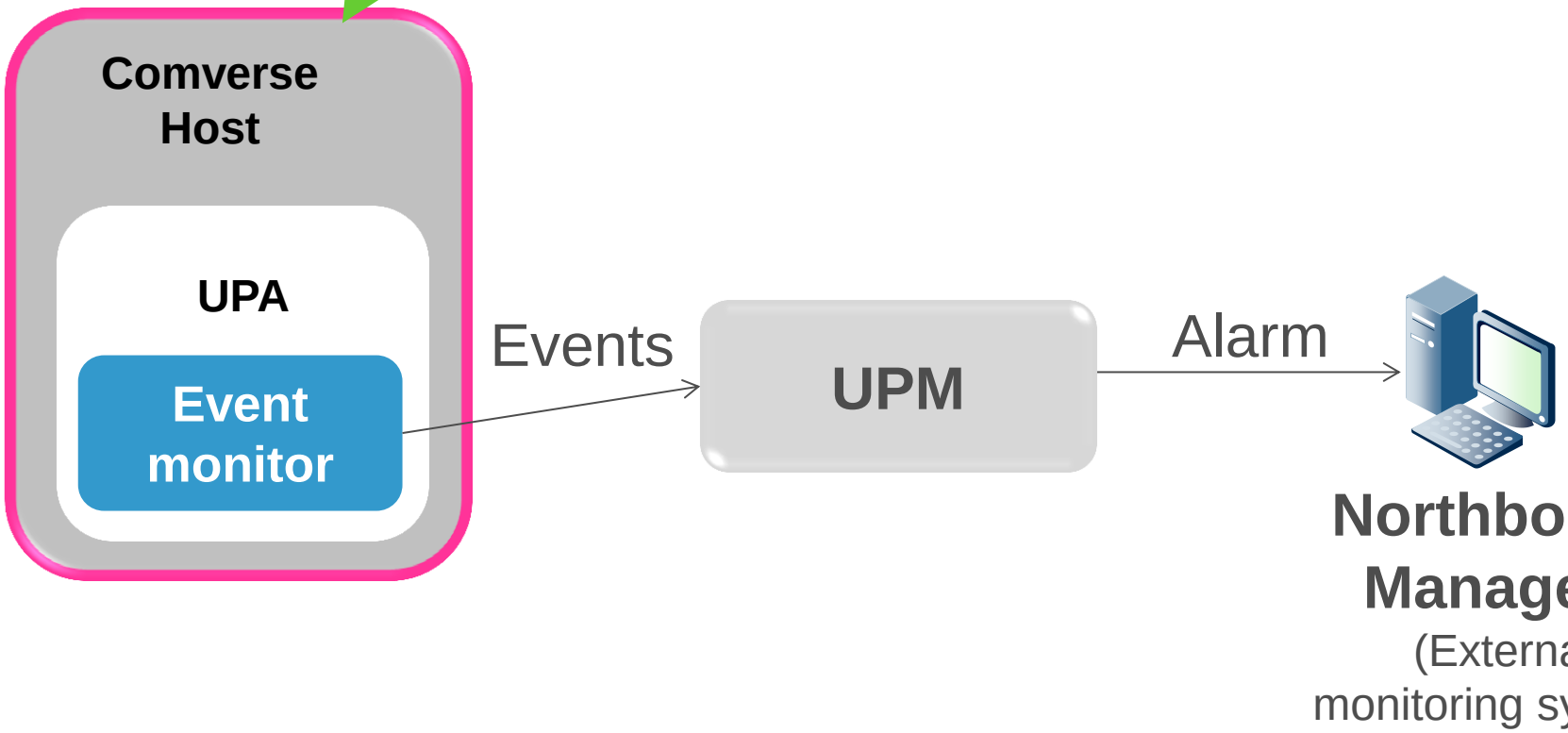
Review Questions

1. When does an event get escalated?
   a. When a user clears it.
   b. When a user acknowledges it
   c. When a user escalates it
   d. Automatically based on defined escalation rules
2. How are escalation rules defined?
   a. Using the GUI
   b. Using the CLI
   c. Within the monitor definition
3. You would like to view a specific event id in the UPM GUI, but would not like the event to be sent to northbound managers. How can you do it?
   a. Disable the monitor
   b. Disable the northbound manager
   c. Use the CLI command suppress_event with the –outbound parameter
   d. Use the CLI command suppress_event with the –inbound parameter

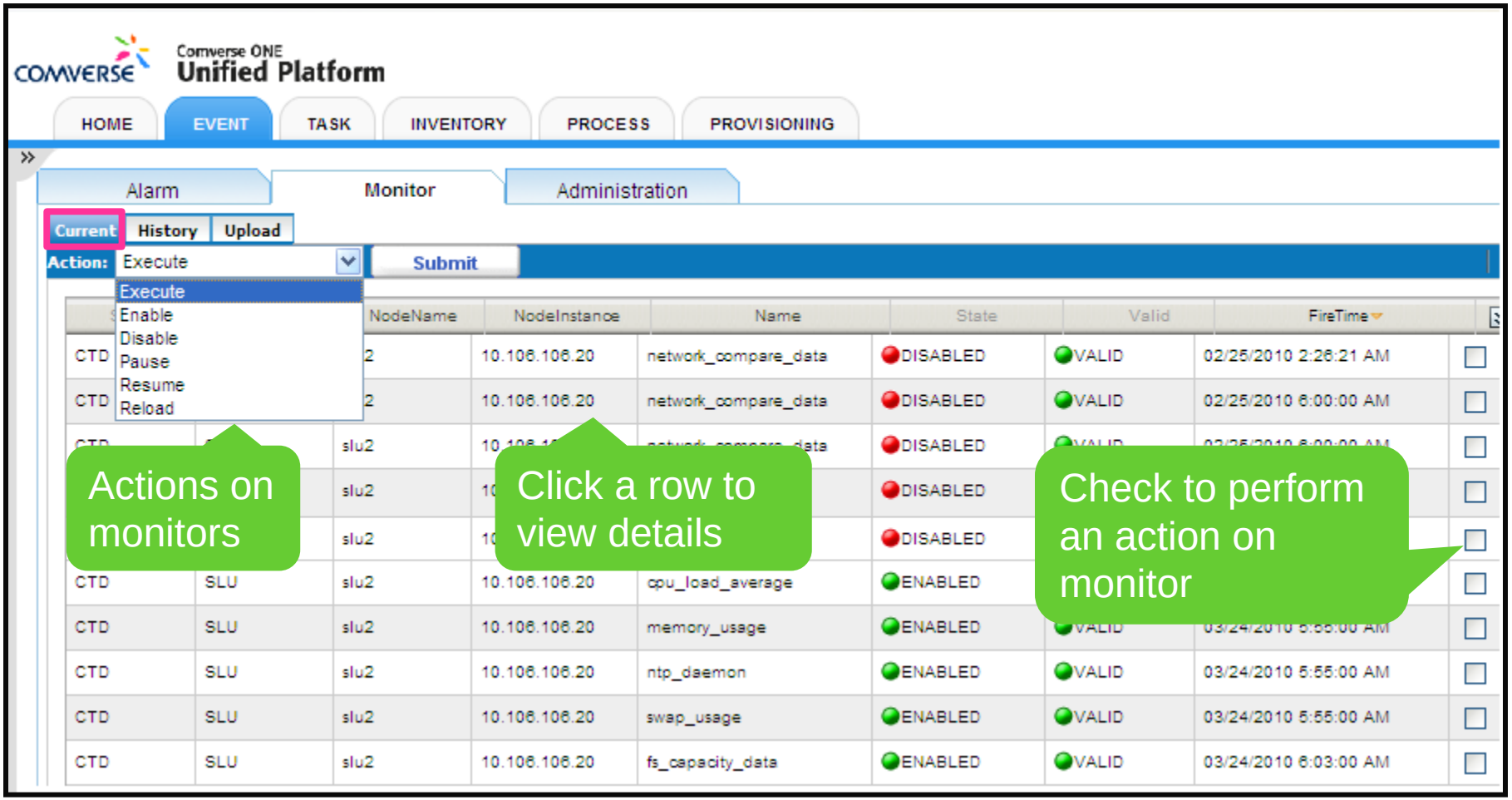
Event-Processing Components and Management

Manage Monitors

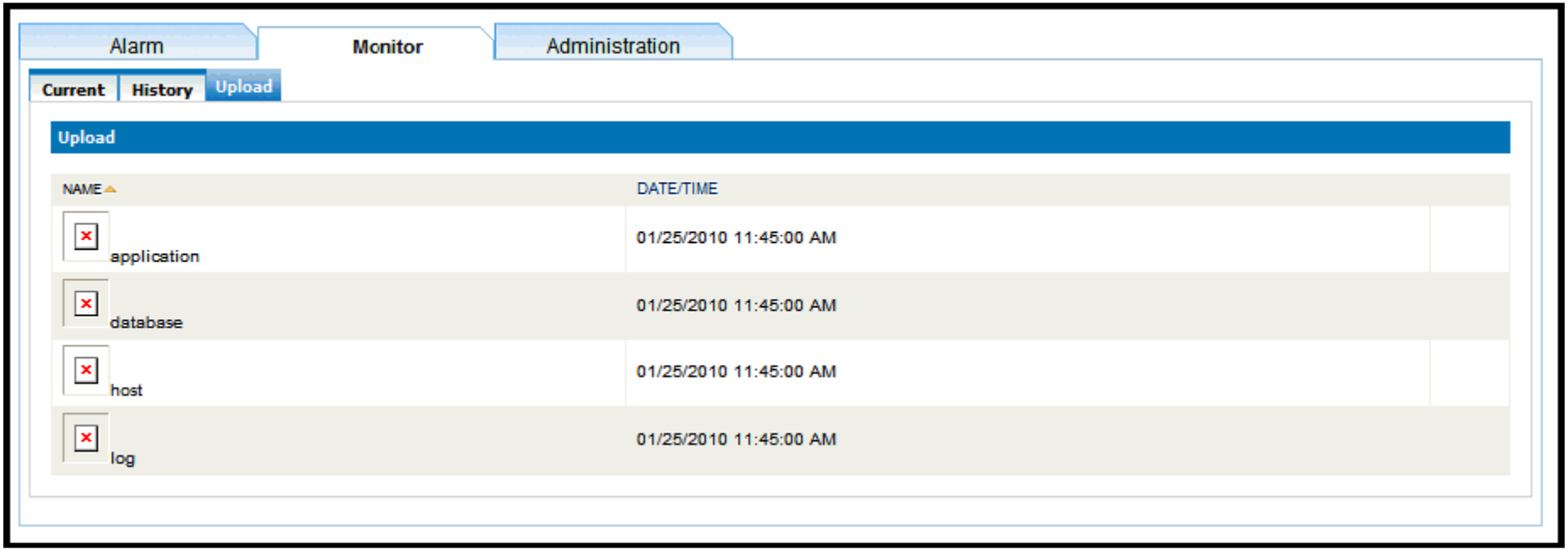
Add, schedule, view history

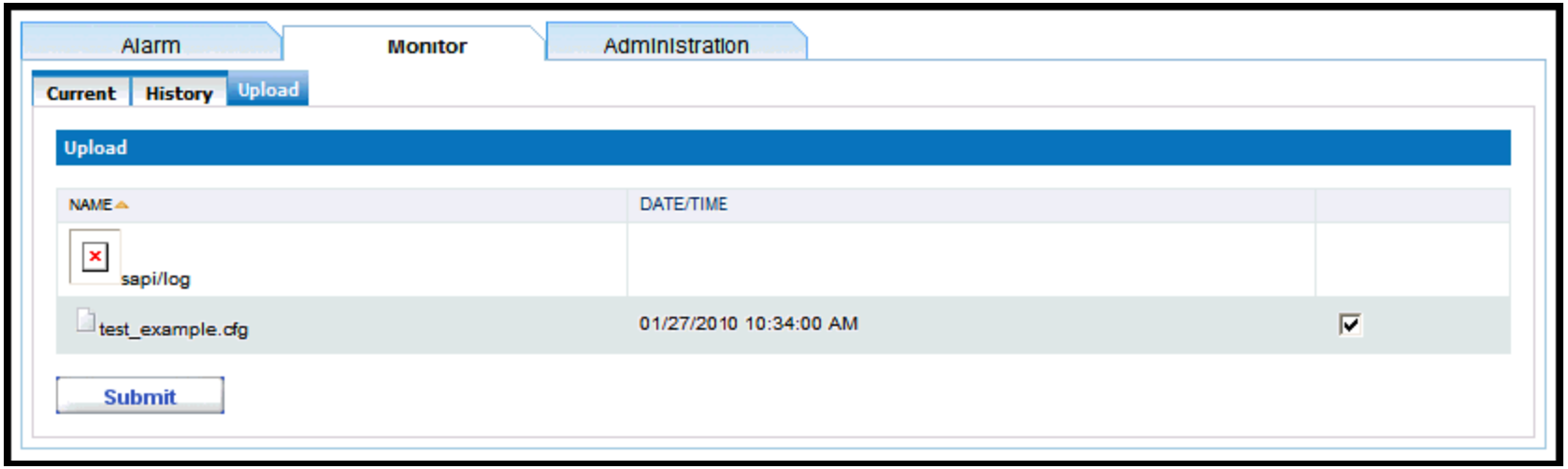


UPM GUI – Event Tab (Monitors)



Uploading Monitors



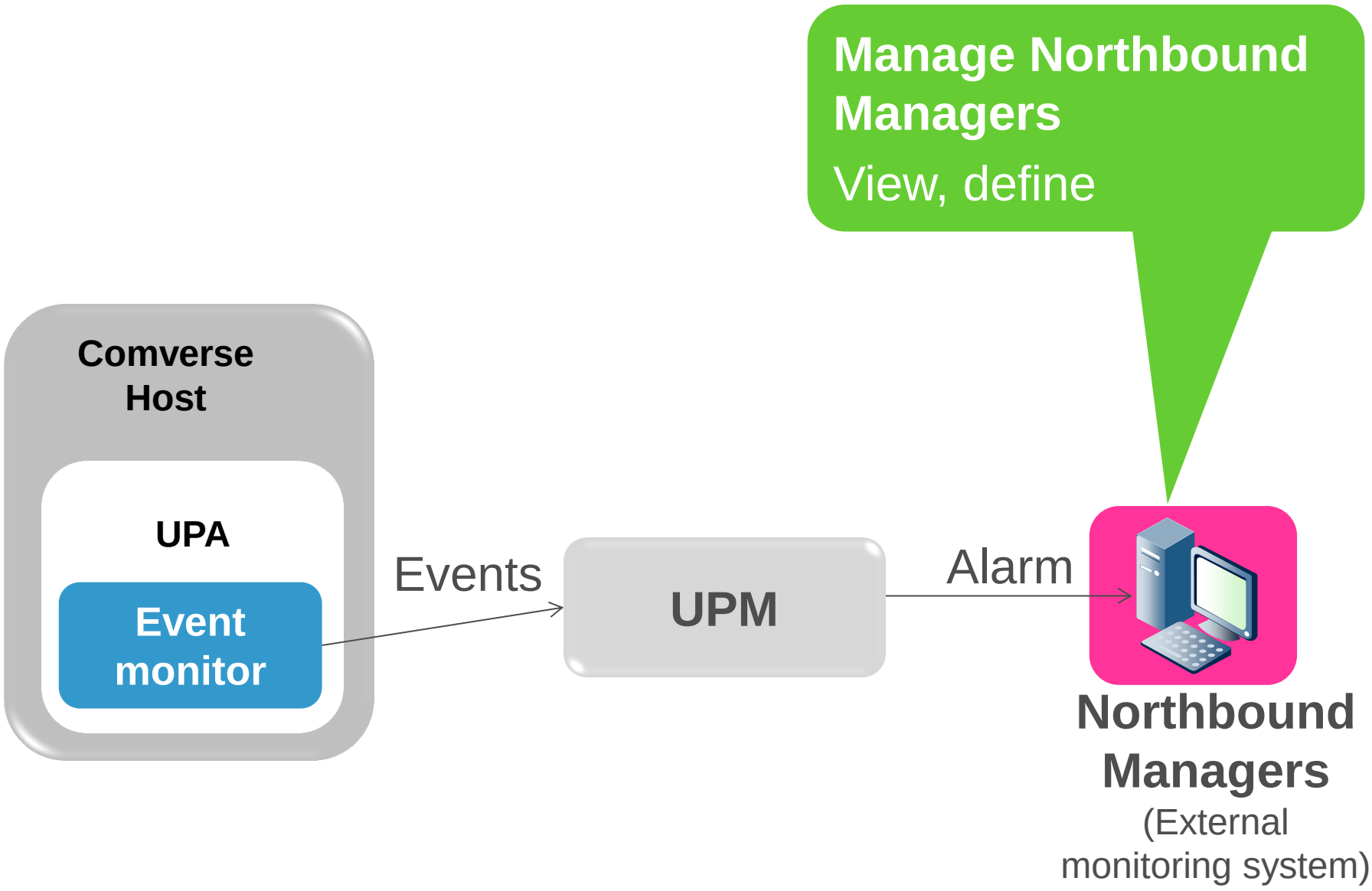


View Running Monitors – mShell

You can view schedules for all monitors.

```
kosa4:root:mshell> list_running_monitors -mon sdp1 -i NodeClass,NodeName,NodeInstance,TimeZone
Running Job Listing

Group      Name                 Instance    Pid       State      Status     Value  FireTime
database   enqueues             main        2179108   COMPLETE   MINOR      1      15:45:00.019
database   enqueues             pcat        2072790   COMPLETE   MINOR      1      15:45:00.019
database   enqueues             rcat        2072792   COMPLETE   CLEARED    0      15:45:00.019
database   enqueues             hist        2072794   COMPLETE   MINOR      1      15:45:00.019
database   ora_error_check      main        454720    COMPLETE   OK         0      15:20:00.011
database   ora_error_check      pcat        2281640   COMPLETE   OK         0      15:20:00.011
database   ora_error_check      rcat        2142424   COMPLETE   CLEARED    0      15:20:00.011
database   ora_error_check      hist        1937420   COMPLETE   OK         0      15:20:00.011
host       fs_capacity_oradump              835678    COMPLETE   OK         3      15:33:00.454
host       fs_capacity_histvol              2171058   COMPLETE   OK         1      15:33:00.220
host       network_admin                    2375756   COMPLETE   OK         0      15:45:00.273
host       cpu_number_monitor               2072776   COMPLETE   MAJOR      1      15:45:00.045
host       cpu_load_average                 1937542   COMPLETE   OK         0      15:45:00.021
host       fs_capacity_bckpvol              2330812   COMPLETE   OK         16     15:33:00.019
host       swap_usage                       454788    COMPLETE   OK         1      15:45:00.274
host       fs_capacity_root                 454762    COMPLETE   OK         2      15:33:00.859
host       cluster_monitor                  2179254   COMPLETE   OK         0      15:49:00.015
host       fs_capacity_var                  835682    COMPLETE   OK         5      15:33:01.095
host       fs_capacity_oracle               1937458   COMPLETE   CRITICAL   86     15:33:00.422
host       fs_capacity_archive              2130156   COMPLETE   OK         23     15:33:00.018
host       fs_capacity_staging              454760    COMPLETE   OK         1      15:33:00.860
host       fs_capacity_oracle8              2130160   COMPLETE   OK         1      15:33:00.449
host       fs_capacity_tmp                  454764    COMPLETE   OK         57     15:33:00.860
host       memory_usage                     2142322   COMPLETE   OK         0      15:45:00.273
host       fs_capacity_usr                  835660    COMPLETE   MAJOR      76     15:33:01.065
host       fs_capacity_opt                  835674    COMPLETE   OK         33     15:33:00.221

kosa4:root:mshell>
```

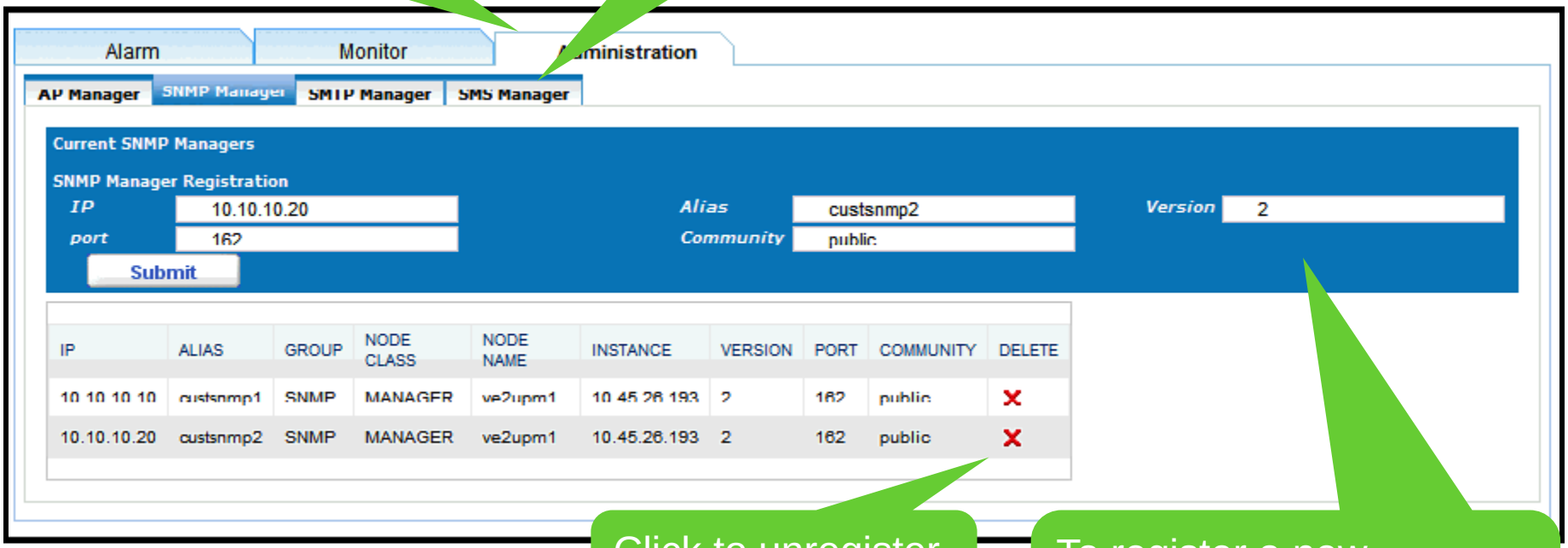
Managing Northbound Managers



UPM GUI – Event Tab (Administration)

Northbound managers administration is under the Administration tab

Organized by communication method



Click to unregister a manager

To register a new manager, enter details and click Submit

Registering/Unregistering Northbound Managers

Defines where events (alarms) are forwarded.

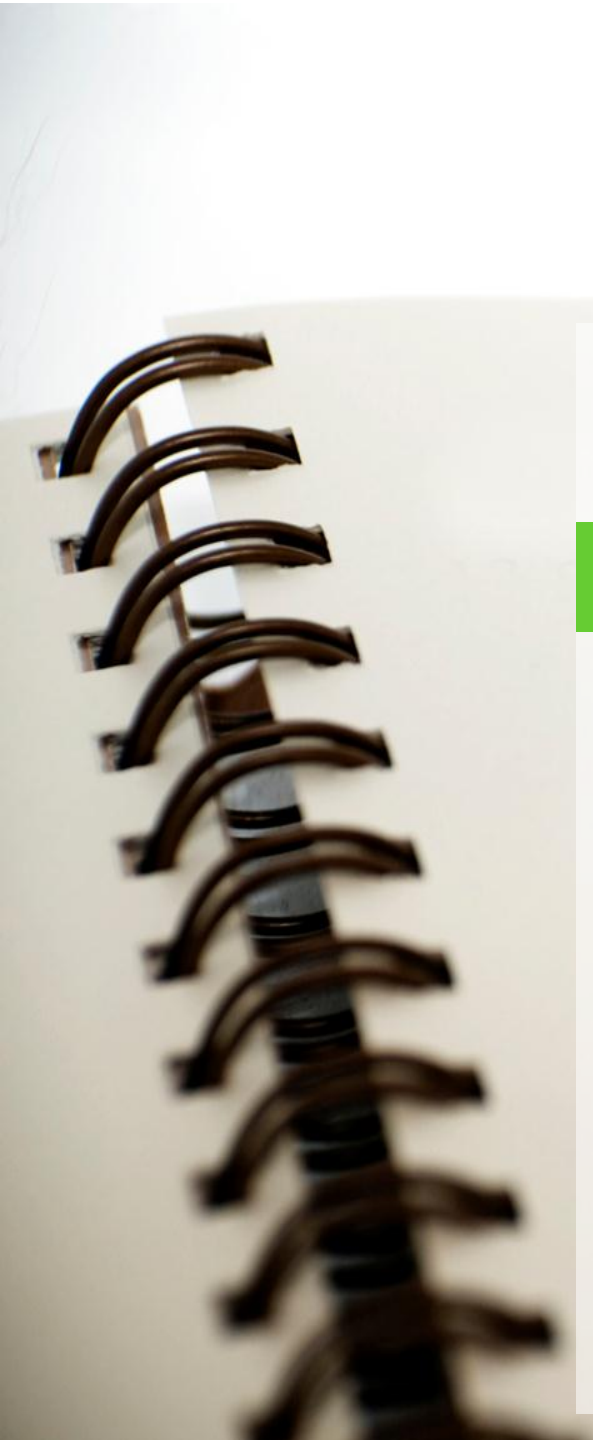
```
upm1:root:mshell> register_manager -g snmp -h 10.230.1.140 -a cust1
SNMP Manager Listing

NodeClass NodeName       NodeInstance      Manager Address          Port      Version   Alias
MANAGER   MANAGER1       10.230.12.37      10.230.1.140             162       2         cust1

upm1:root:mshell>
```

```
upm1:root:mshell> unregister_manager -g snmp -h 10.230.1.140
SNMP Manager Listing

NodeClass NodeName       NodeInstance      Manager Address          Port      Version   Alias

upm1:root:mshell>
```

Review Questions

1. Which of the following actions is not available in the GUI of managing monitors?
   a. Execute
   b. Delete
   c. Disable
   d. Pause
2. Which tab is used for defining northbound manages?
   a. Alarm
   b. Monitor
   c. Administration
   d. Managers
3. What is the possible communication method between the UMP and the northbound managers?
   a. SMS
   b. SNMP
   c. SMTP
   d. All of the above

Agenda



- UPM Overview and Concepts
- UPM Alarms and Events
- **UPM Process Management**
- UPM Jobs and Workflows
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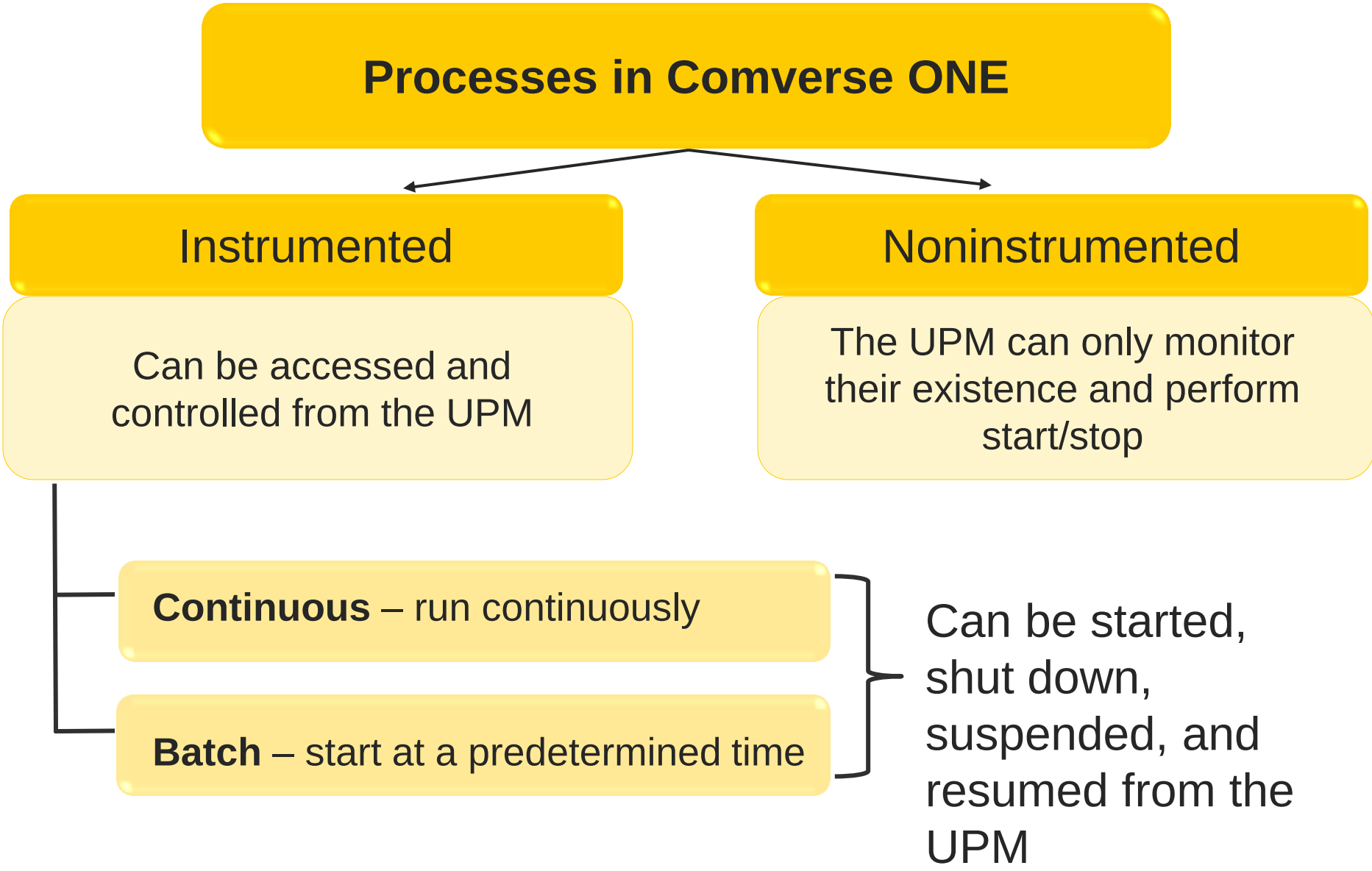
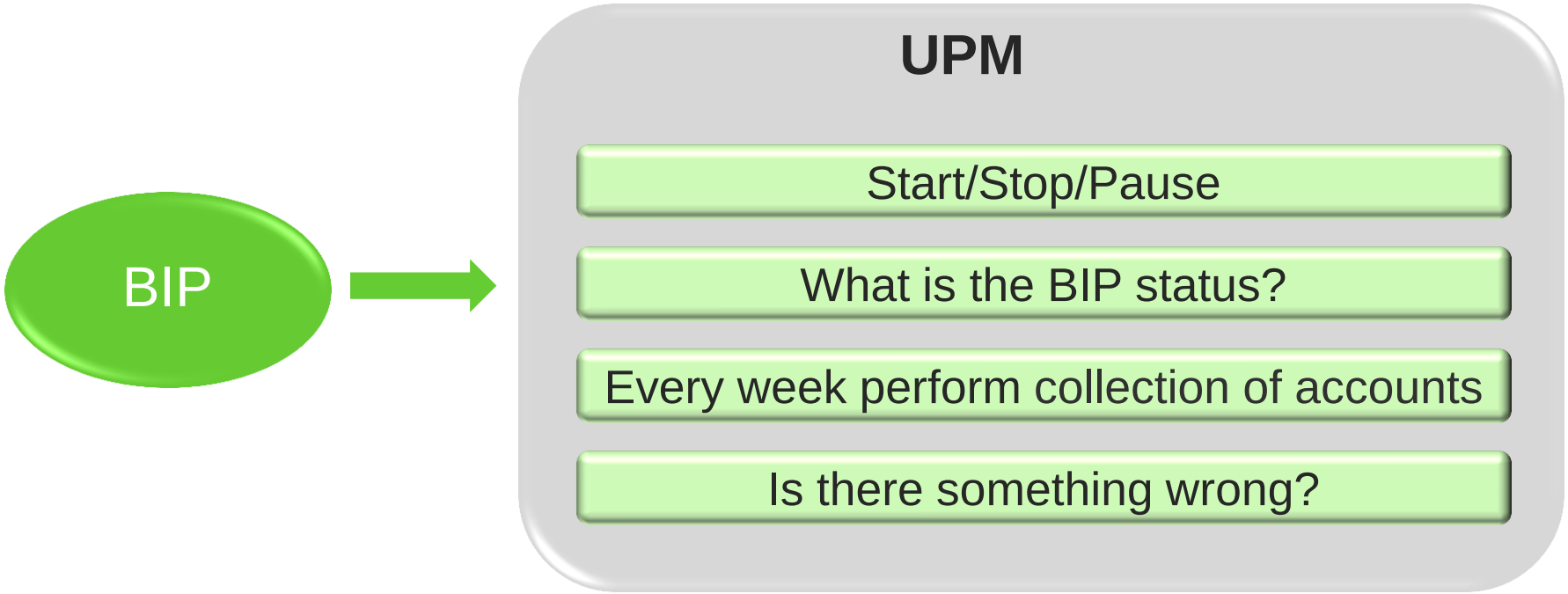
- Administering the UPM

Types of Processes



Process Management

- A remote interface to view processes, determine their status, and control their life cycle
- An interface to any UPA to send alarms and track the health of a long-running process



Comverse ONE Managed Objects

ADMIN	Admin/Catalog Database Server
ASU	Network Self Care Application Server
BILLING	Billing Database Server
CMS	Comverse Media Server
DGU	Diameter Gateway Unit
DMROAM	Date Mediation and Roaming Server
SAPI	Single API Server, Request Handling and Tracking Server
SDP	Rating Database Server
SECSERV	Standalone Security Server
SGU	Signaling Gateway Unit
URE	Unified Rating Engine (instances configured for input messages)

Processes for the ASU, DGU Node Types

ASU:

Process Name/ Process Type	Managed by the Unified Platform?	Instrumented/ Noninstrumented	Batch/ Continuous
IVR	Yes	Noninstrumented	Continuous

DGU:

Process Name/ Process Type	Managed by the Unified Platform?	Instrumented/ Noninstrumented	Batch/ Continuous
OMNI	No	Noninstrumented	Continuous

Processes for the Billing Node Type

Process Name/ Process Type	Managed by the Unified Platform?	Instrumented/ Noninstrumented	Batch/ Continuous
AMP process type	No	Instrumented	Batch
APN process type	Yes	Instrumented	Batch
ARCH process type	No	Instrumented	Batch
ARM process type	Yes	Instrumented	Batch
ARMSERV process type	Yes	Instrumented	Batch
BID process type	Yes	Instrumented	Batch
BIP process type	Yes	Instrumented	Batch
BIP (server) process type	Yes	Instrumented	Continuous
CAS process type	Yes	Instrumented	Batch
CMCAP process type	Yes	Instrumented	Batch
COM process type	Yes	Instrumented	Batch
CPM process type	Yes	Instrumented	Batch
EFT process type	Yes	Instrumented	Batch
HDP process type	Yes	Instrumented	Batch
IGEN process type	Yes	Instrumented	Batch
IGEN (server) process type	Yes	Instrumented	Continuous
JNL process type	Yes	Instrumented	Batch
LBX process type	Yes	Instrumented	Batch
LTP process type	Yes	Instrumented	Continuous
LWSERV process type	Yes	Instrumented	Batch
MIUB process type	Yes	Instrumented	Batch
RCS (server) process type	Yes	Instrumented	Continuous
SCOM process type	Yes	Instrumented	Batch
SIN process type	Yes	Instrumented	Batch
TAO_IREP	Yes	Noninstrumented	Continuous
TAO_NS	Yes	Noninstrumented	Continuous
TSP	Yes	Noninstrumented	Continuous
TSS process type	Yes	Instrumented	Batch
UFA process type	Yes	Instrumented	Batch
URC process type	Yes	Instrumented	Batch

Processes for the Manager (UPM) Node Type

Process Name/ Process Type	Managed by the Unified Platform?	Instrumented/ Noninstrumented	Batch/ Continuous
CMCAP process type (used on this node type for outage record processing)	Yes	Instrumented	Batch
COM process type (used on this node type for outage record processing)	Yes	Instrumented	Batch
MIUB process type	Yes	Instrumented	Batch
ORLTP process type	Yes	Instrumented	Continuous
ORLTP process type (batch)	Yes	Instrumented	Batch
SMSGW (Kannel SMS Gateway)	Yes	Noninstrumented	Continuous
UFA process type	Yes	Instrumented	Batch

Processes for the OFFRATER, ONRATER Nodes Types

OFFRATER:

Process Name/ Process Type	Managed by the Unified Platform?	Instrumented/ Noninstrumented	Batch/ Continuous
CCAP process type	Yes	Instrumented	Batch
TSP	Yes	Noninstrumented	Continuous

ONRATER:

Process Name/ Process Type	Managed by the Unified Platform?	Instrumented/ Noninstrumented	Batch/ Continuous
OMNI	No	Noninstrumented	Continuous

Processes for the RHT, SAPI Nodes Type

RHT:

Process Name/ Process Type	Managed by the Unified Platform?	Instrumented/ Noninstrumented	Batch/ Continuous
ASYNC	Yes	Noninstrumented	Continuous
RHT	Yes	Noninstrumented	Continuous

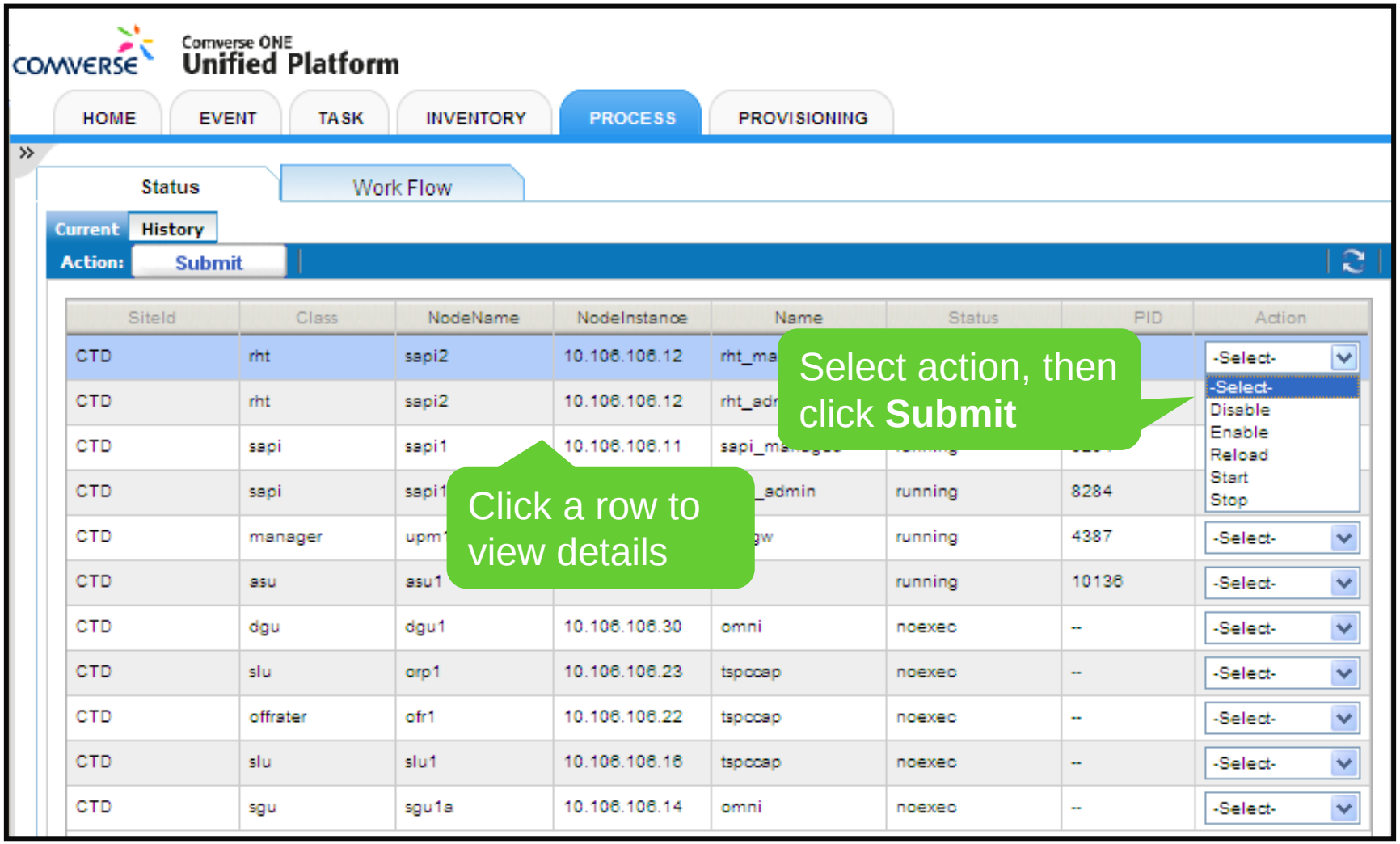
SAPI:

Process Name/ Process Type	Managed by the Unified Platform?	Instrumented/ Noninstrumented	Batch/ Continuous
SAPI (Single API, also known as the Unified API)	Yes	Noninstrumented	Continuous

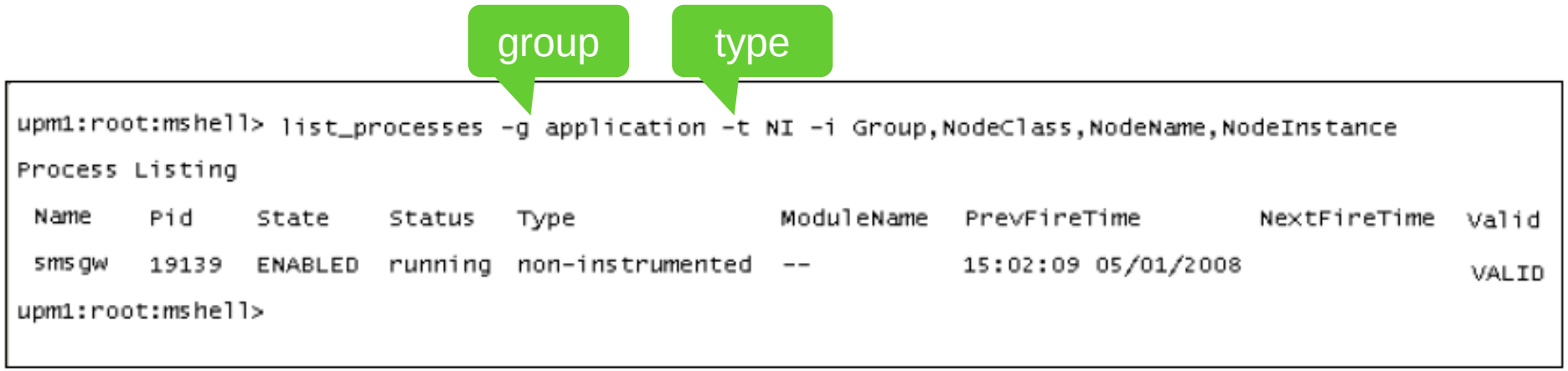
Processes for the SDP Node Type

Process Name/ Process Type	Managed by the Unified Platform?	Instrumented/ Noninstrumented	Batch/ Continuous
AMP process type Real Time only	No	Instrumented	Batch
DWH (Data Warehouse: optional component) Real Time only	Yes	Instrumented	Batch
MHT process type Converged only	Yes	Instrumented	Continuous
RCS process type Real Time only	Yes	Instrumented	Batch
RCS (server) process type Real Time only	Yes	Instrumented	Continuous
RCT process type Converged only	Yes	Instrumented	Continuous
SDSAGENT (Recharge Agent)	Yes	Noninstrumented	Continuous
TSP Real Time only	Yes	Noninstrumented	Continuous
URR process type Converged only	Yes	Instrumented	Continuous
URT process type Converged only	Yes	Instrumented	Continuous

UPM GUI – Process Tab



List Process



List Process Properties

list_process_properties

group

Process name

```
kosa4:root:mshell> list_process_properties -g application -p smsgw -i NodeClass,NodeInstance

NodeName        Name                          Value                                          Message
MANAGER1        module.group                  application                                    --
MANAGER1        module.resource.group         host_rg                                        --
MANAGER1        module.schedule.format        cron                                           --
MANAGER1        module.type                   process                                        --
MANAGER1        module.valid                  valid                                          --
MANAGER1        process.agent.stop            true                                           --
MANAGER1        process.description           Kannel sms-GW                                  --
MANAGER1        process.memory.expression     0 0/2 * * * ?                                  --
MANAGER1        process.monitor.expression    0 * * * * ?                                    --
MANAGER1        process.monitor.path          /usr/local/jboss/process/smsgwMonitor.pl       --
MANAGER1        process.monitor.timeout       5                                              --
MANAGER1        process.monitor.user          root                                           --
MANAGER1        process.name                  smsgw                                          --
MANAGER1        process.start.expression                                                     --
MANAGER1        process.start.path            /usr/local/jboss/process/smsgwStart.pl         --
MANAGER1        process.start.timeout         10                                             --
MANAGER1        process.start.user            root                                           --
MANAGER1        process.terminate.path        /usr/local/jboss/process/smsgwstop.pl          --
MANAGER1        process.terminate.timeout     10                                             --
MANAGER1        process.terminate.user        root                                           --

kosa4:root:mshell>
```

List Process Types

```
sdp1:root:mshell> list_process_types
Process Types List

CMCAP
BIP
UFA
ARCH
TSS
ARMSERV
RCS
COM
ARM
EFT
LTP
IGEN
SIN
MIUB
ORLTP
LBX
JNL
URC
LWSERV
HDP
CPM
BID
```

Disable/Enable a Process

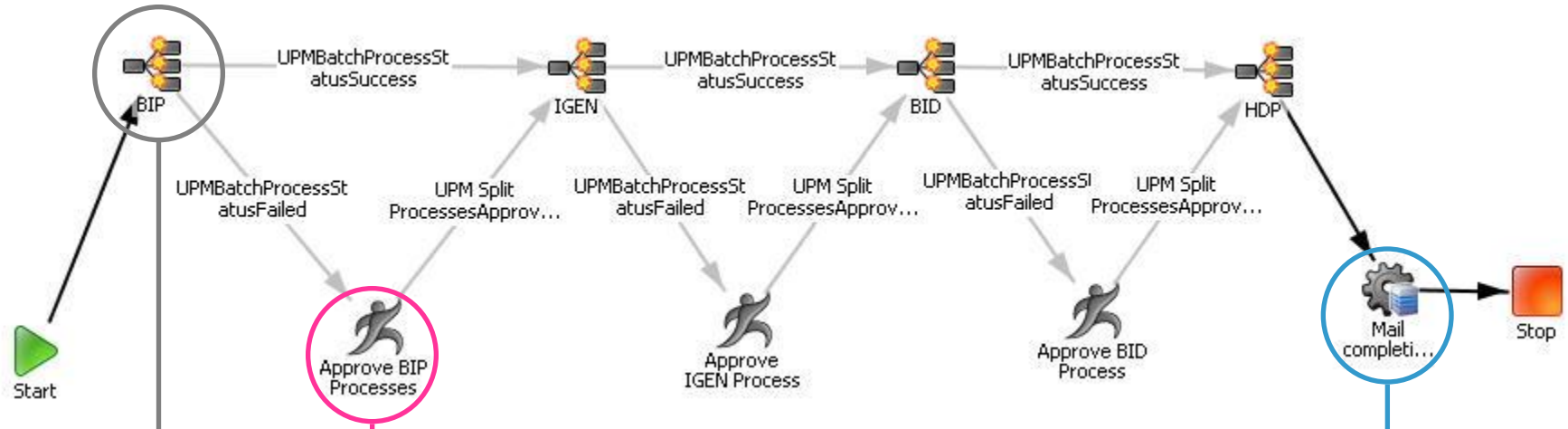
group

Process name

```
upm1:root:mshell> disable_process -g application -p smsgw -i NodeClass,NodeInstance
Disabled Process Listing

NodeName        Group           Process             Duration        Message

manager1        application     smsgw               --              Operation Successful

upm1:root:mshell>
```

```
upm1:root:mshell> enable_process -g application -p smsgw -i NodeClass,NodeInstance
Enabled Process Listing

NodeName        Group           Process             Message
manager1        application     smsgw               Operation Successful

upm1:root:mshell>
```

Business Workflow

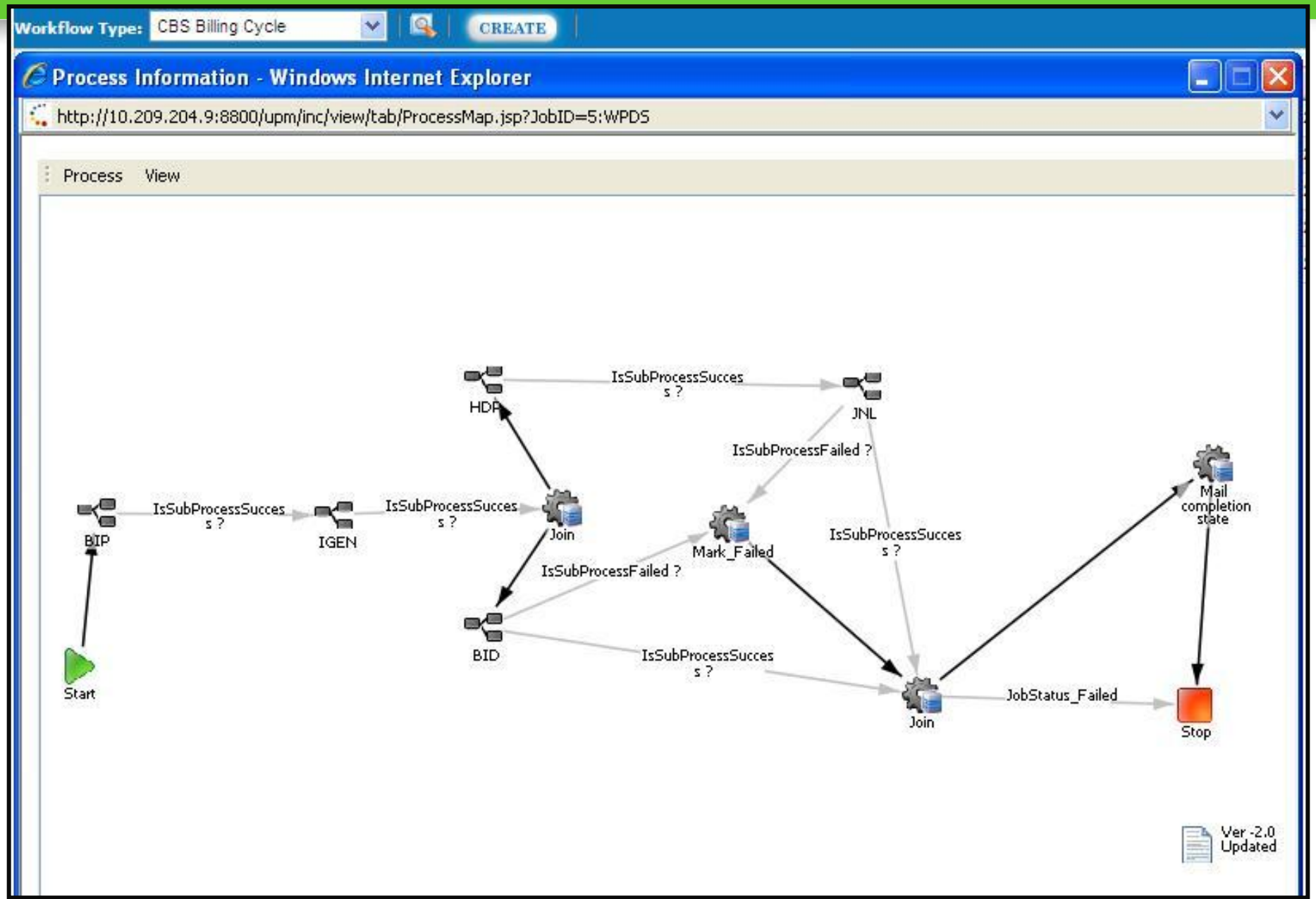


Process is automatically triggered

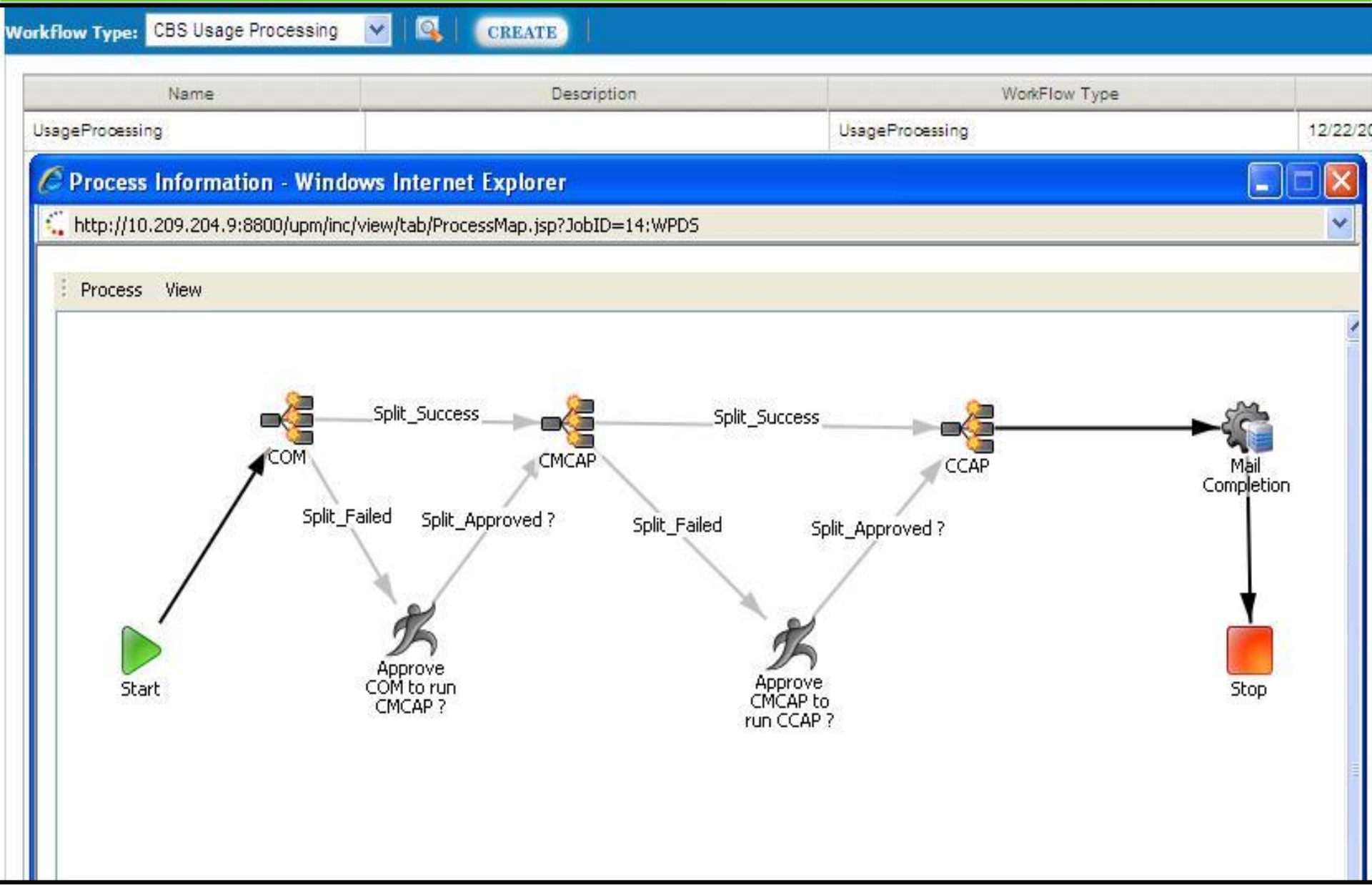
Process requiring manual input

Process that can be split into multiple instances

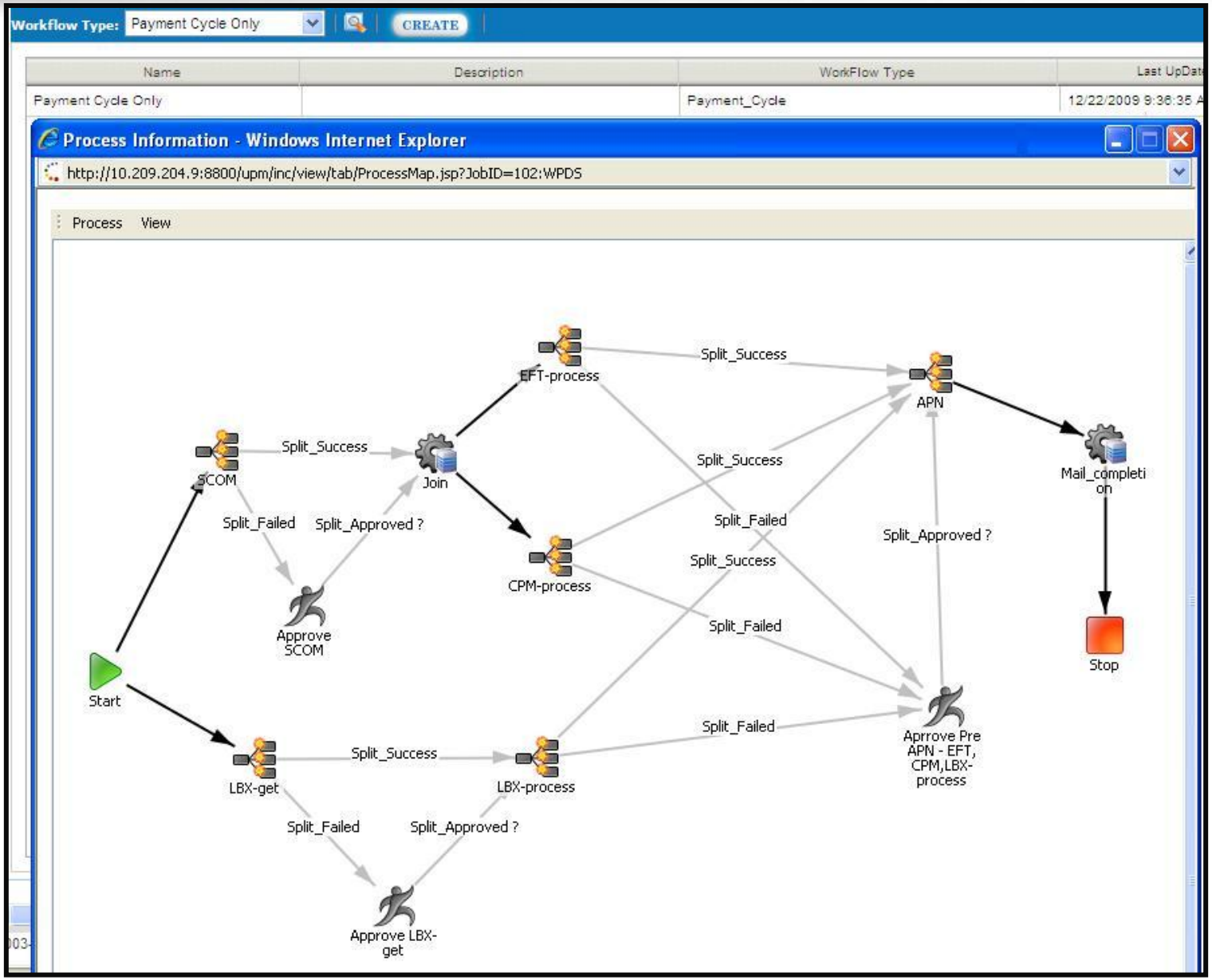
UPM GUI – Billing Cycle Workflow



UPM GUI – Usage Processing Workflow



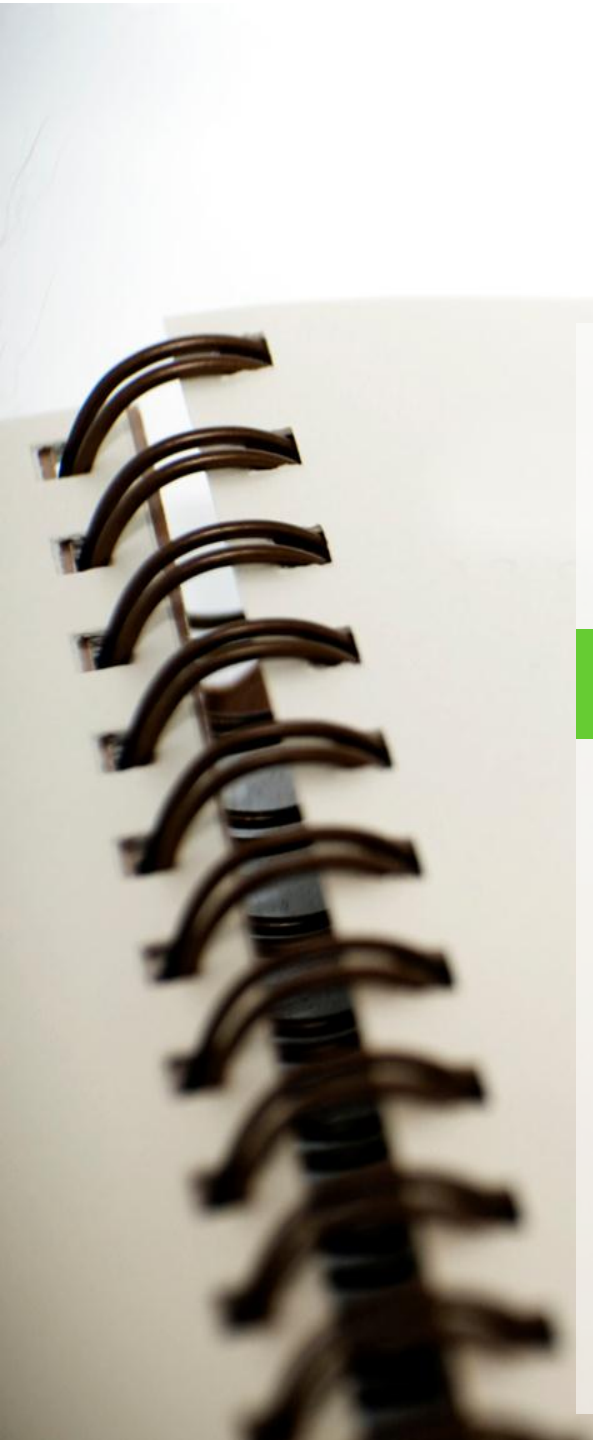
UPM GUI – Payment Cycle Workflow



Review Questions

1. What are instrumented processes?
   a. Can be accessed and controlled from the UPM
   b. The UPM can only monitor their existence and perform start/stop
   c. Always run continuously
   d. Always start at a predetermined time
2. How can you view a list of instrumented process types on a specific node? (2 correct answers)
   a. Using the UPM GUI
   b. On the node, use the ps -ef command
   c. On the node, use List_process_types command
   d. On the UPM, use List_process command with the node as a parameter
3. When will you use the “Reload” action on a process?
   a. To enable it after it has been disabled
   b. To start execution after it has been stopped
   c. After changes to it’s configuration properties
   d. All of the above

Agenda



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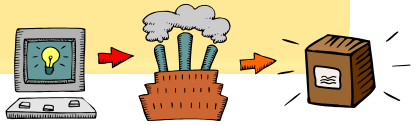
What Are Jobs and Workflows?

Job

A periodic or on-demand operation that is performed on a node, such as purging of database records

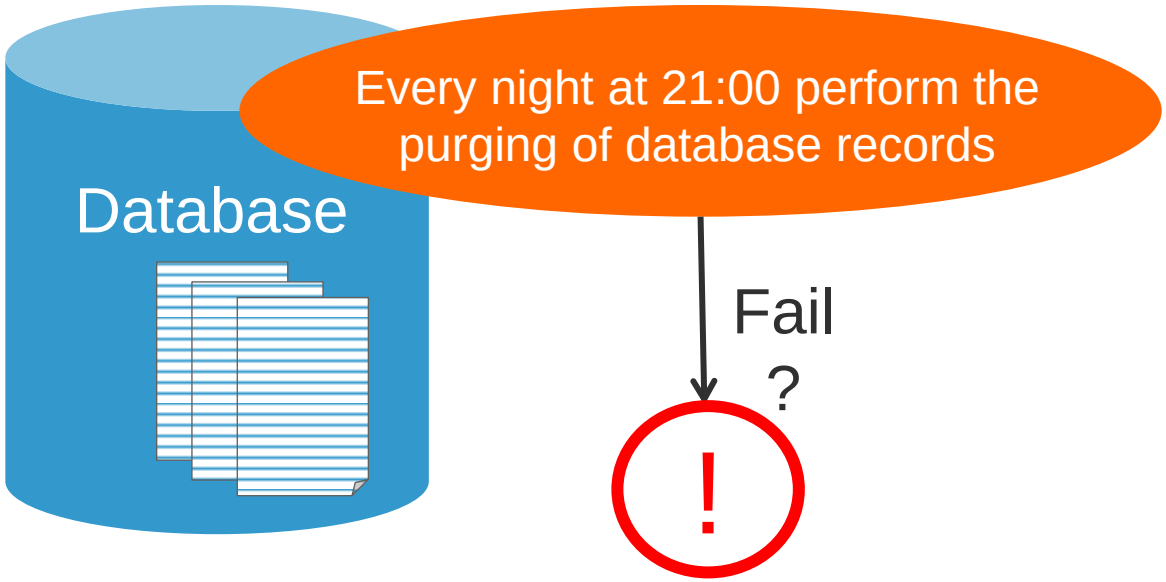
Workflow

- The interaction of workflow entities
- A workflow entity can be any simple or complex job, monitor

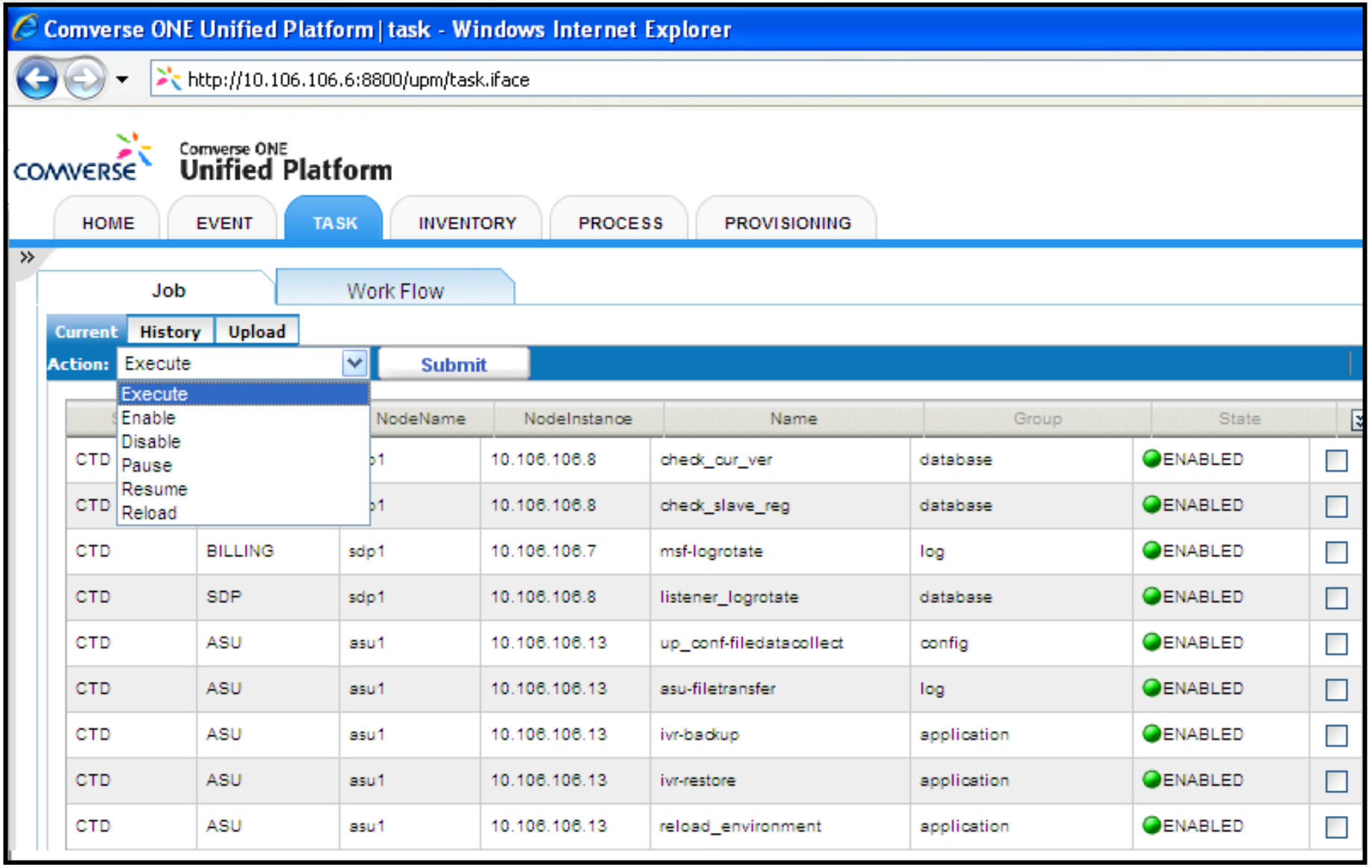


Job and Workflow Management

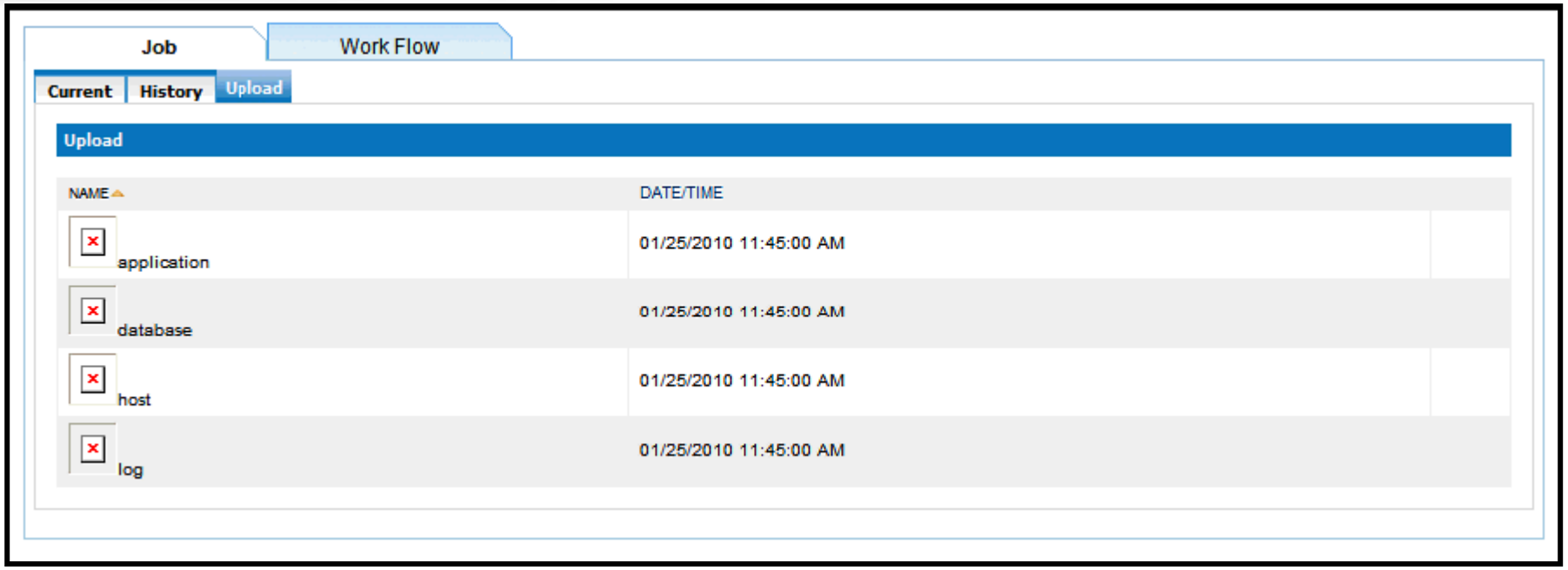
- Periodic and manual scheduling
- Historical reports
- A remote interface to view jobs and workflows, determining status and statistics

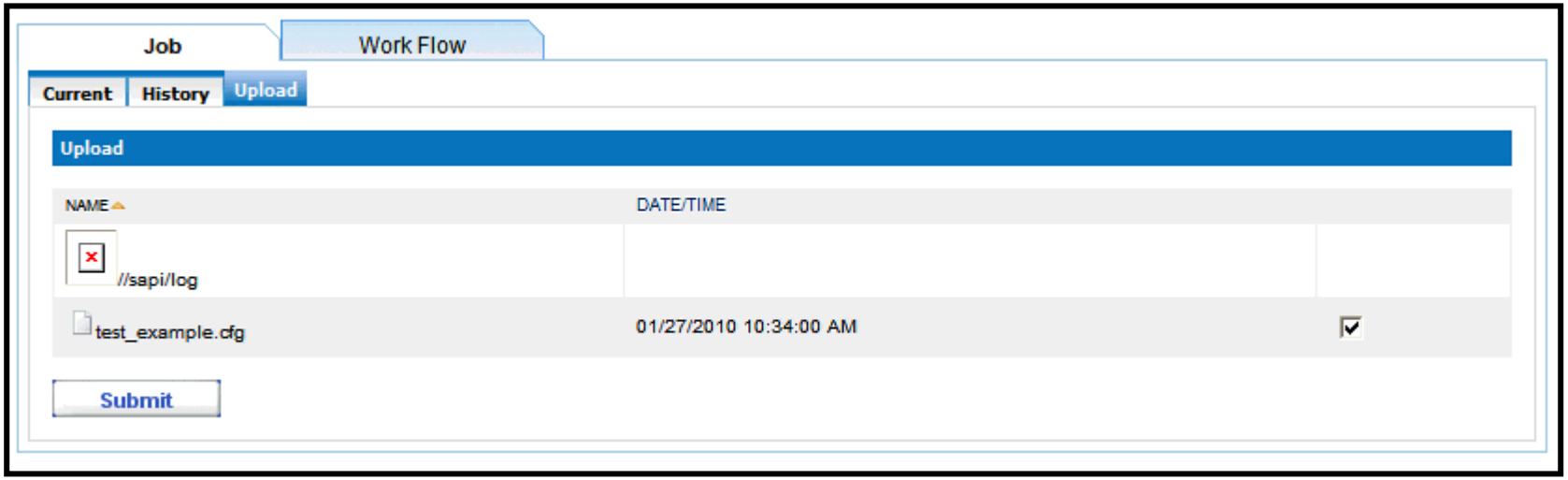


UPM GUI – Task Tab: Job Management



Uploading a Job





Viewing Jobs Scheduling

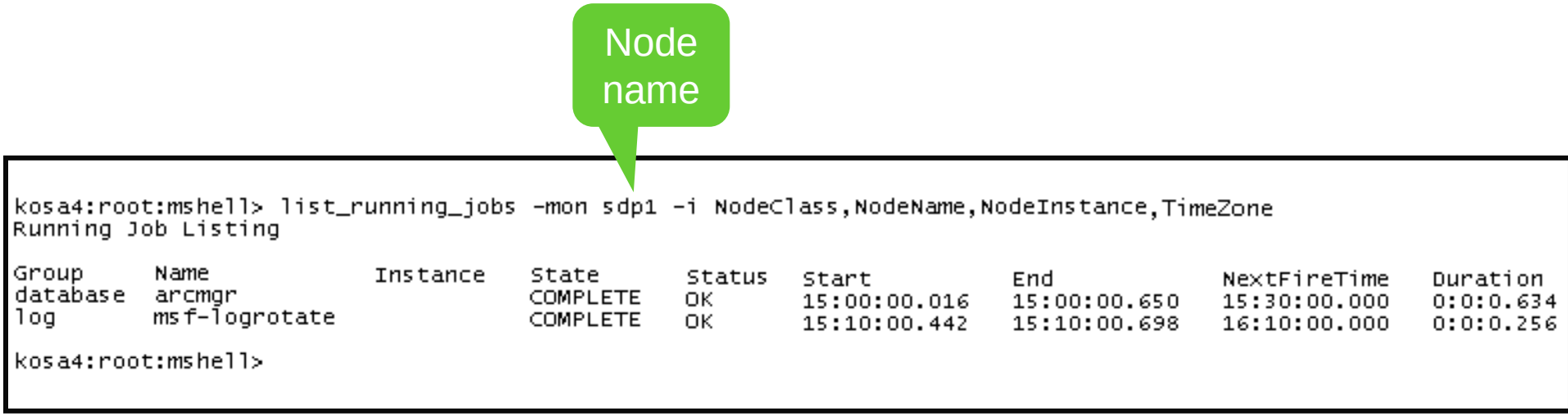
list_jobs

Node name

```
kosa4:root:mshell> list_jobs -mon sdp1 -i NodeClass,NodeName,NodeInstance,TimeZone

Job Listing

 Group          Name                          State    NextFireTime          Valid
 database       arcmgr                        ENABLED  15:30:00 04/30/2008   VALID      --
 database       backup_level0                 ENABLED                        VALID      --
 database       listener_logrotate            ENABLED  23:55:00 04/30/2008   VALID      --
 database       recomp_inv_object             ENABLED  16:30:00 04/30/2008   VALID      --
 database       recomp_inv_object             ENABLED  16:25:00 04/30/2008   VALID      --
 database       run_gather_stats              ENABLED  22:10:00 04/30/2008   VALID      --
 database       run_gather_stats              ENABLED  22:05:00 04/30/2008   VALID      --
 database       tape_backup                   ENABLED                        VALID      --
 log            msf-filetransfer              ENABLED                        VALID      --
 log            msf-logcollect                ENABLED                        VALID      --
 log            msf-logpurge                  ENABLED  23:55:00 04/30/2008   VALID      --
 log            msf-logrotate                 ENABLED  16:10:00 04/30/2008   VALID      --
 log            msf-purgelog                  ENABLED  00:00:00 05/01/2008   VALID      --
 log            msf_event-logcollect          ENABLED                        VALID      --
 log            msf_job-logcollect            ENABLED                        VALID      --
 log            msf_jobdbg-logcollect         ENABLED                        VALID      --
 log            msf_task-logcollect           ENABLED                        VALID      --
 log            ora-logrotate                 ENABLED  23:55:00 04/30/2008   VALID      --
 log            ora_dbc-logpurge              ENABLED  23:55:00 04/30/2008   VALID      --
 log            sdpmon-logrotate              ENABLED  15:45:00 04/30/2008   VALID      --
```

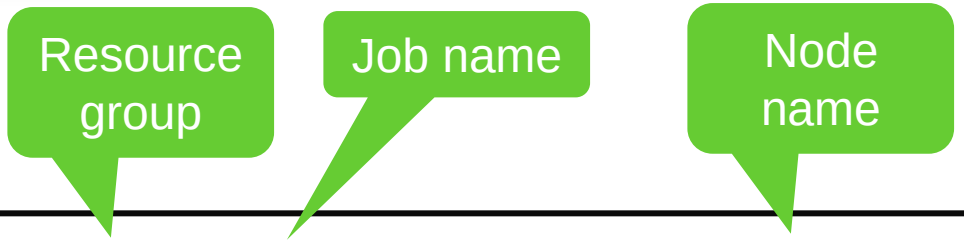
Viewing Currently Running Jobs

list_running_jobs



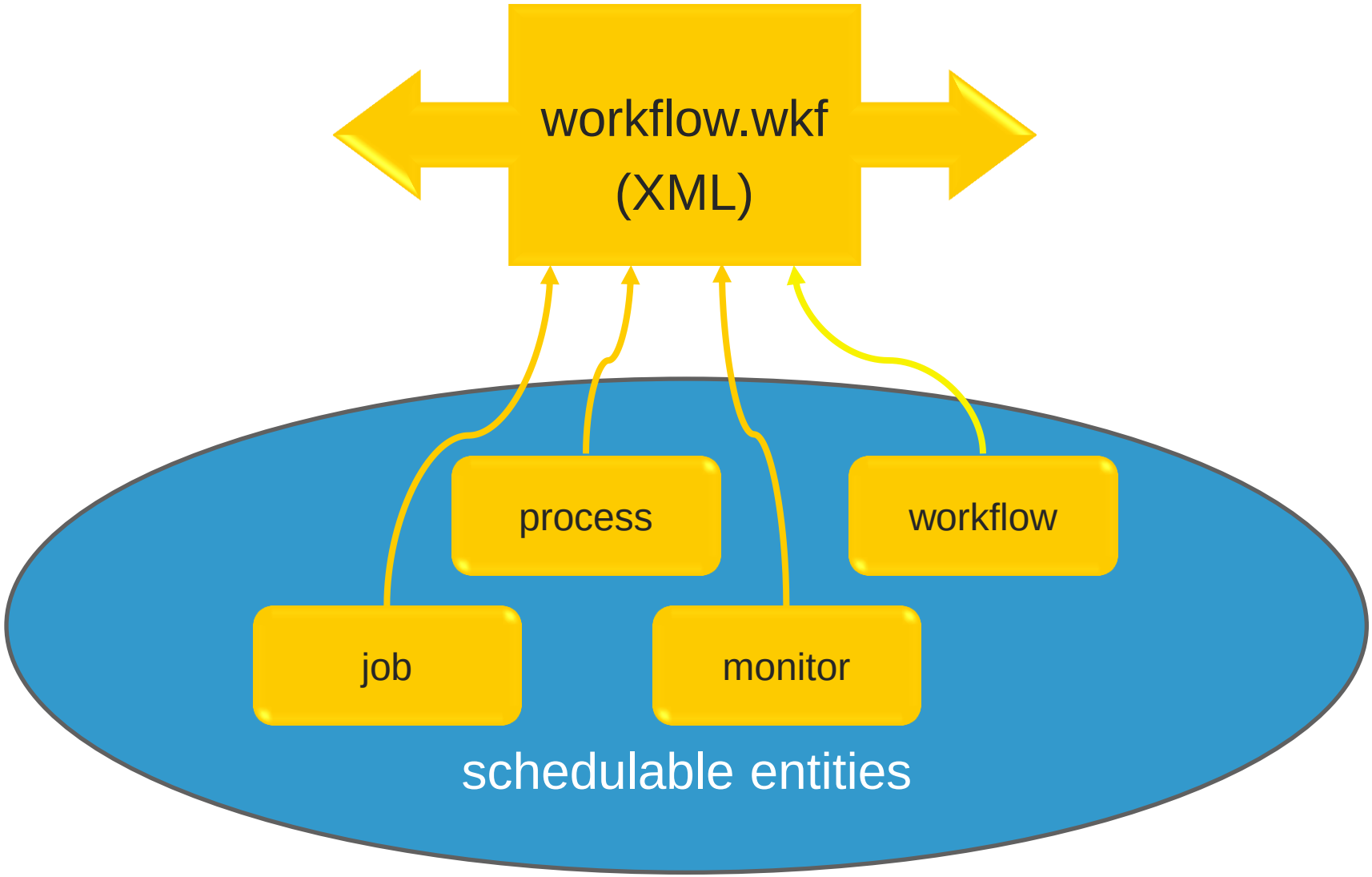
Viewing Jobs Properties

list_jobs_properties



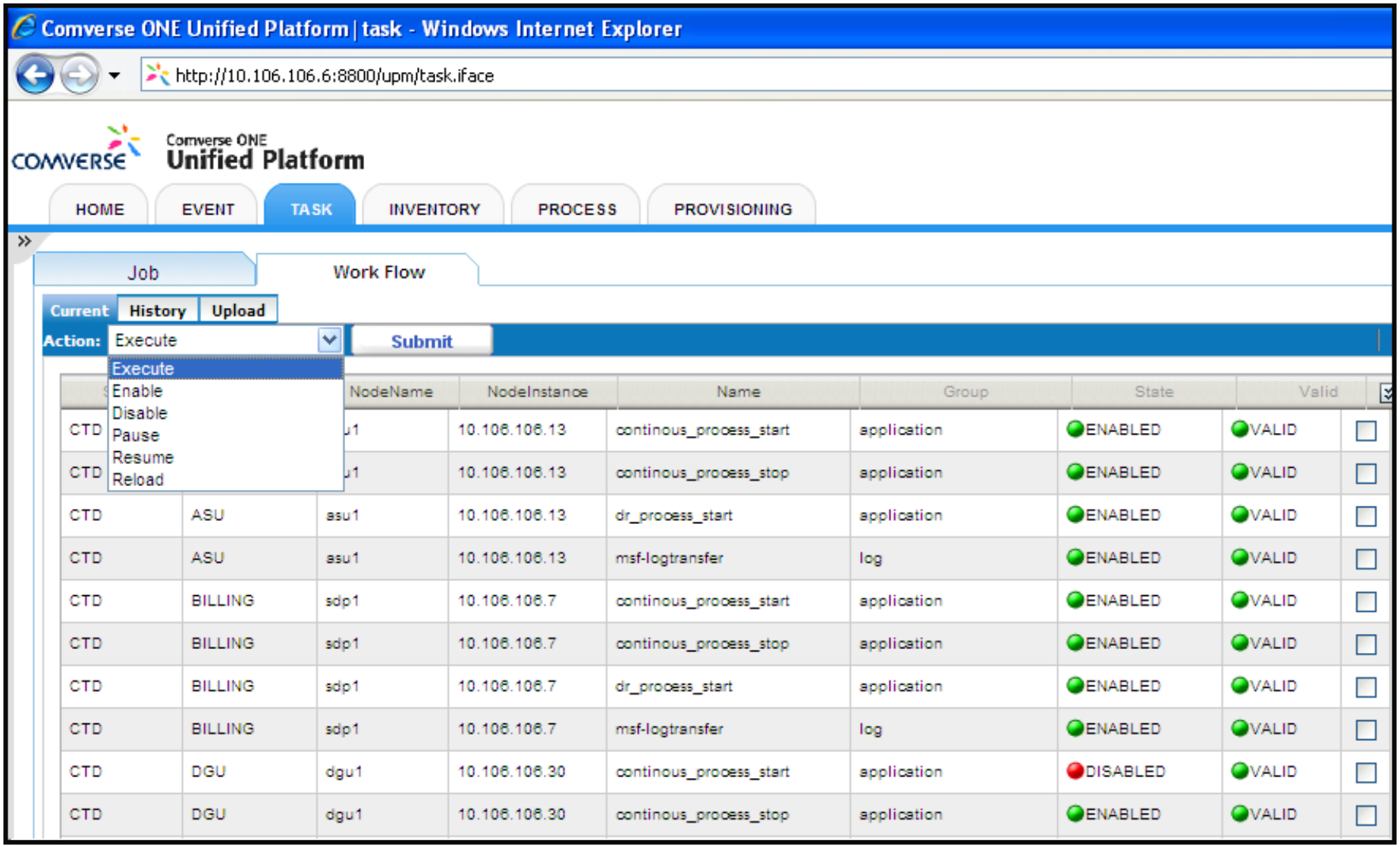

```
kosa4:root:mshell> list_job_properties -g log -j msf-logcollect -mon sdp1
-i NodeClass,NodeName,NodeInstance

LOG.msf-logcollect is currently VALID with a ENABLED state

Name                        Value                                                Message
blackoutPeriod              --                                                   --
handlerPolicy               job                                                  --
handlerType                 job                                                  --
log.1.name                  /usr/local/jboss/log/mshell.*                        --
log.2.name                  /usr/local/jboss/log/wrapper.*                       --
log.collect.path            /var/msf/transfers/logcollection/msf_sdp1-logfiles.z
log.collect.total           2                                                    --
module.description          Collect Logs for Management Agent                    --
module.group                log                                                  --
module.id                   ALERT_LOG                                            --
module.resource.group       host_rg                                              --
module.schedule.format      cron                                                 --
module.valid                valid                                                --
```

Maintenance Workflow



UPM GUI – Task Tab

build_report



Viewing Workflow Schedule

list_workflows

```
kosa4:root:mshell> list_workflows -mon sdp1 -i NodeClass,NodeName,NodeInstance,TimeZone

Workflow Listing

 Group          Name                        State     NextFireTime          Valid       Blackout
 database       ora_db_backup               ENABLED   00:30:00 05/06/2008   VALID       --
 log            msf-logtransfer             ENABLED                         VALID       --

kosa4:root:mshell>
```

list_running_workflows

```
upm1:root:mshell> list_running_workflows -i NodeClass,NodeName,NodeInstance,TimeZone
Running Job Listing

Group      Name               Instance           State     Status    Start          End    NextFireTime    Duration
log        msf-logtransfer    msf-logtransfer    RUNNING   --        15:50:20.784   --     --              0:2:54.816

upm1:root:mshell>
```

Viewing Workflow Report

build_report

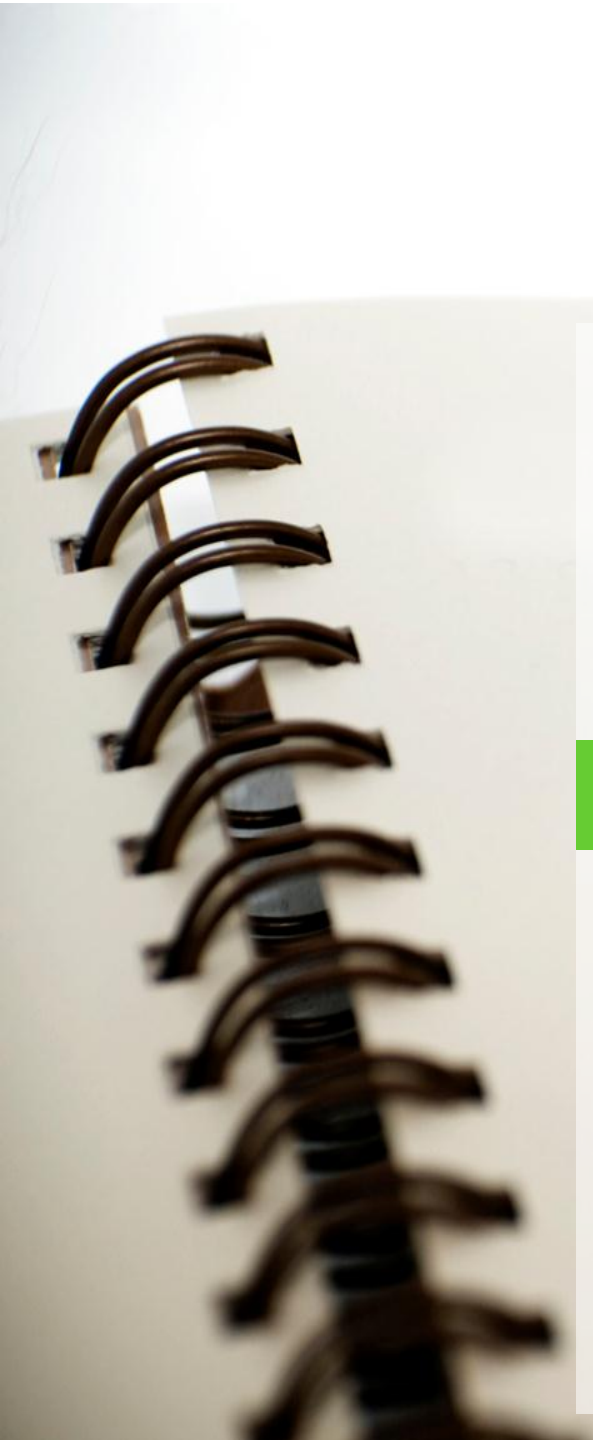
```
upm1:root:mshell> build_report -r workflow -mon sdp1 -i NodeClass,NodeName,TimeZone

WORKFLOW EXECUTION HISTORY REPORT

Date        Time    Name              State      Status    Start          End            Duration

05/13/2008  12:13   MSF-LOGTRANSFER   COMPLETE   OK        12:12:57.432   12:13:13.787   0:0:16.355

upm1:root:mshell>
```

Review Question

Which of the following entities can be part of a workflow?

1. Jobs
2. monitors
3. Workflows
4. All of the above

Agenda



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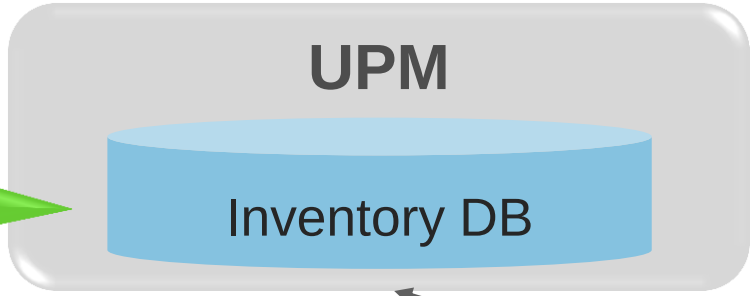
Inventory Management

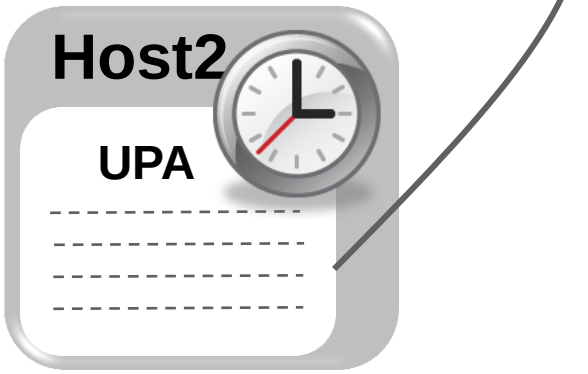
Inventory examples:
- Disk
- Memory
- Processor
- Software
- Network



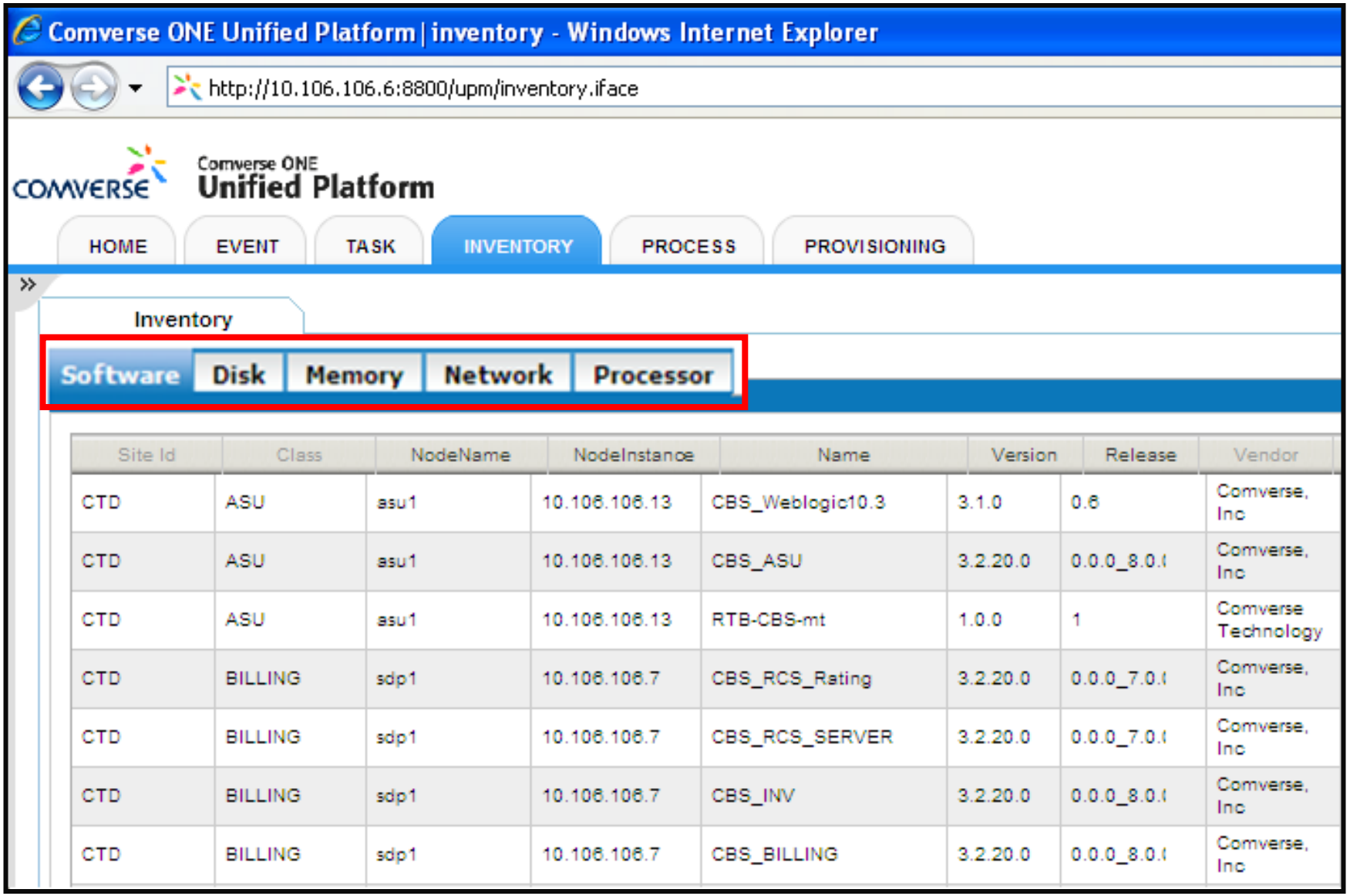
Scripts for each type
- Run on the nodes at predefined schedules
- Collect the local inventory data

Inventory data is forwarded periodically to the UPM

Data is stored in the central System Inventory database on UPM.



UPM GUI – Inventory Tab



Site Id	Class	NodeName	NodeInstance	Name	Version	Release	Vendor
CTD	ASU	asu1	10.106.106.13	CBS_Weblogic10.3	3.1.0	0.6	Comverse, Inc
CTD	ASU	asu1	10.106.106.13	CBS_ASU	3.2.20.0	0.0.0_8.0.(	Comverse, Inc
CTD	ASU	asu1	10.106.106.13	RTB-CBS-mt	1.0.0	1	Comverse Technology
CTD	BILLING	sdp1	10.106.106.7	CBS_RCS_Rating	3.2.20.0	0.0.0_7.0.(	Comverse, Inc
CTD	BILLING	sdp1	10.106.106.7	CBS_RCS_SERVER	3.2.20.0	0.0.0_7.0.(	Comverse, Inc
CTD	BILLING	sdp1	10.106.106.7	CBS_INV	3.2.20.0	0.0.0_8.0.(	Comverse, Inc
CTD	BILLING	sdp1	10.106.106.7	CBS_BILLING	3.2.20.0	0.0.0_8.0.(	Comverse, Inc

View Inventory Types

```
upm1:root:mshell> list_inventory_type


LIST INVENTORY TYPE

NodeClass  NodeName        NodeInstance       Name
MANAGER    MANAGER1        10.210.156.164     disk
MANAGER    MANAGER1        10.210.156.164     software
MANAGER    MANAGER1        10.210.156.164     memory
MANAGER    MANAGER1        10.210.156.164     networkadaptor
MANAGER    MANAGER1        10.210.156.164     processor
MANAGER    MANAGER1        10.210.156.164     switch
MANAGER    MANAGER1        10.210.156.164     port

upm1:root:mshell>
```

View Inventory

Inventory type

```
upm1:root:mshell> list_inventory -inv memory
SiteID     NodeClass  NodeName        NodeInstance     Name            TotalSize    SwapSize
DITSITE    MANAGER    MANAGER1        10.210.156.164   --              503MB        996MB
DEVSITE    ONRATER    perfslu18       10.230.18.16     --              2006MB       1898MB
PREDIT41   SAPI       sapi_dit4_1     10.230.20.158    --              1898MB       1898MB
DEVSITE    SDP        MAIN1           10.230.19.221    mem0            7808MB       --
DEVSITE    SDP        MAIN2           10.230.19.224    mem0            7808MB       --
DEVSITE    SGU        kssp1           10.230.17.149    --              2006MB       1898MB

upm1:root:mshell>
```

Exporting Inventory Data – Sample

Create the export file

Inventory type

Node class

```
upm:root:mshell> export_inventory -inv memory -c sdp
Status message:
                Operation Successful
```

Locate it

```
root@upm: /> cd /var/msf/transfers/export/
root@upm: export>  ls
 upm_inventory_memory_sdp_export.csv
```

Review Questions

How can you see all available inventory reports?

1. Using the GUI
2. Using List_inverntory_type CLI command
3. Using List_inverntory CLI command
4. Using export_inventory CLI command

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- UPM Alarms and Events
- UPM Process Management
- UPM Jobs and Workflows
- UPM Inventory Reports
- **Logs and File Management**
- Administering the UPM

Log and File Management

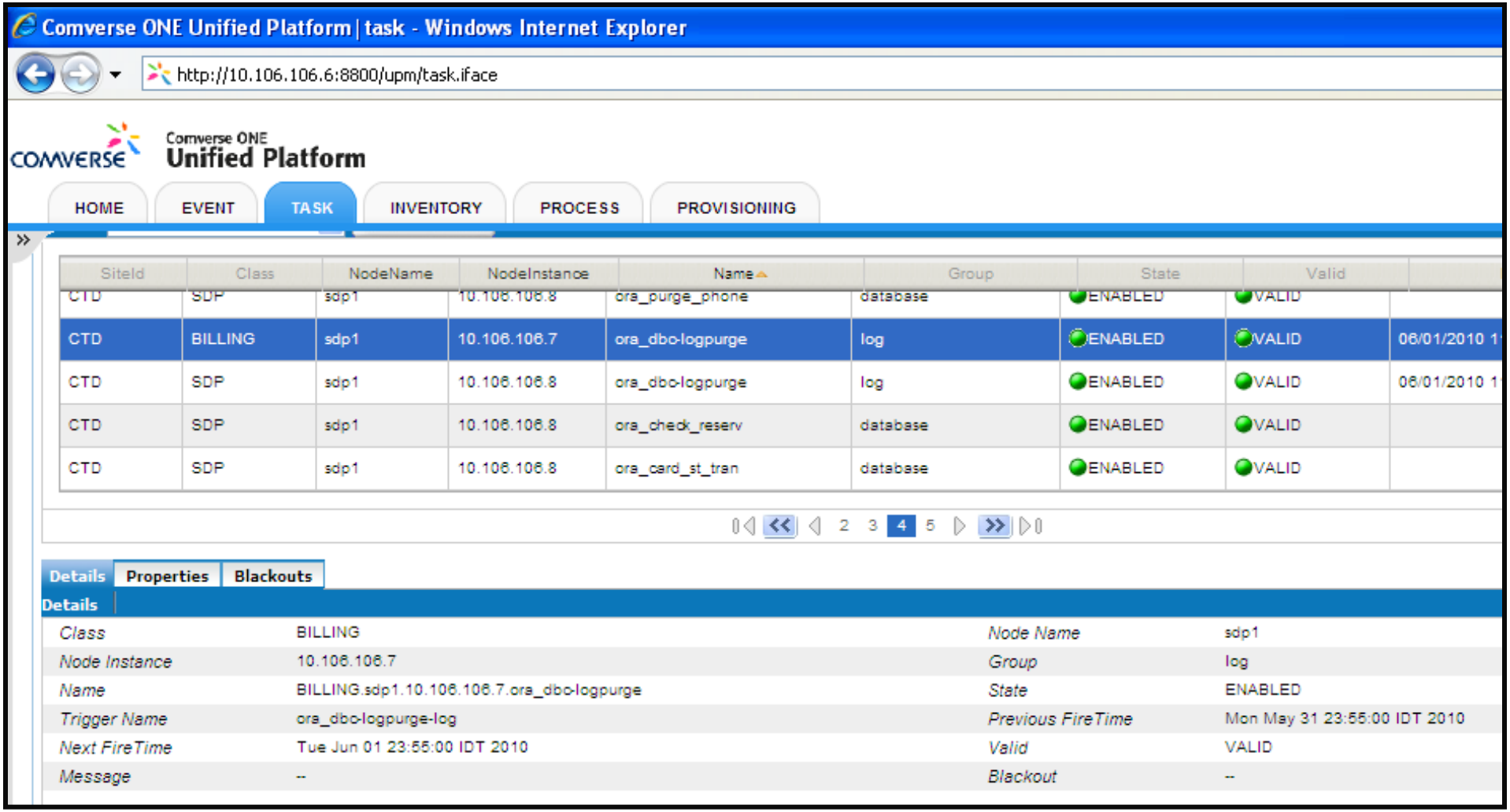
Log Management

- Rotating logs according to size or date
- Purging logs according to age
- Archiving specified logs to a specified location

File Management

- Transfer of files to and from an external host or the UPM

UPM GUI – Task Tab

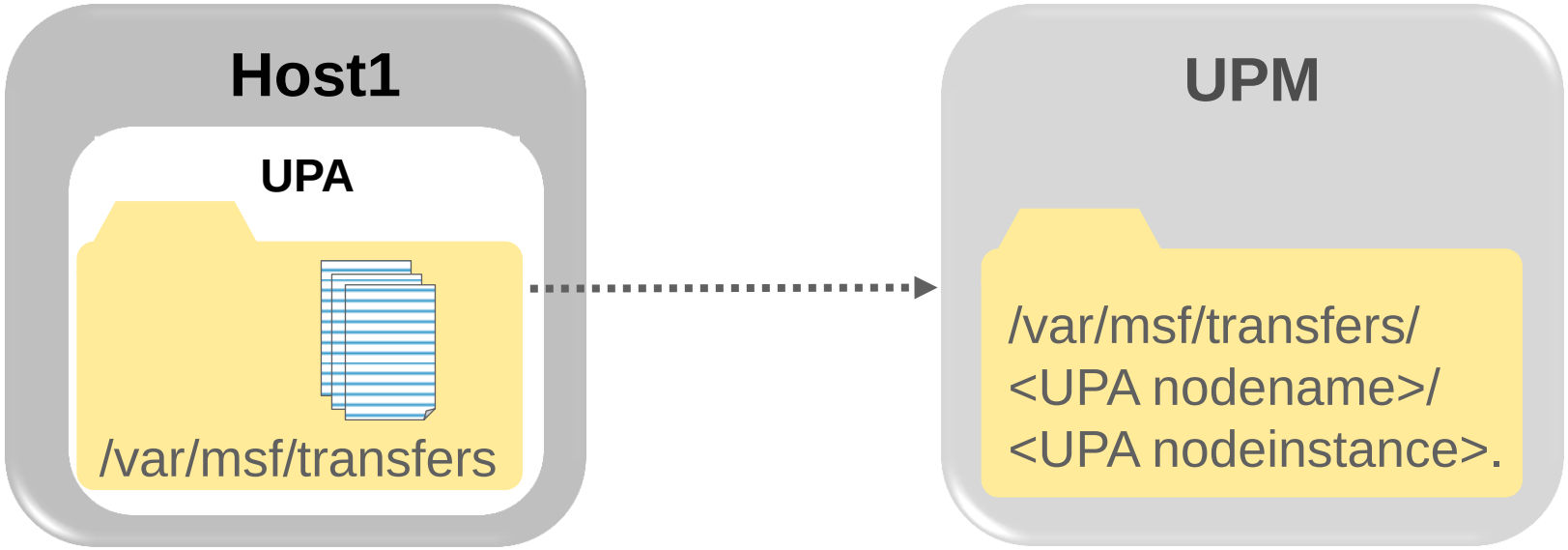


Transferring Files from the UPA to UPM Manually

File location and name

From node

```
upm1:root:mshell> file_send -l /logcollection/msf_sdp1-logfiles.zip -mon sdp1

NodeClass  NodeName   NodeInstance    FileName                                Message
BILLING    sdp1       10.230.19.65    /logcollection/msf_sdp1-logfiles.zip    Operation Successful

upm1:root:mshell>
```



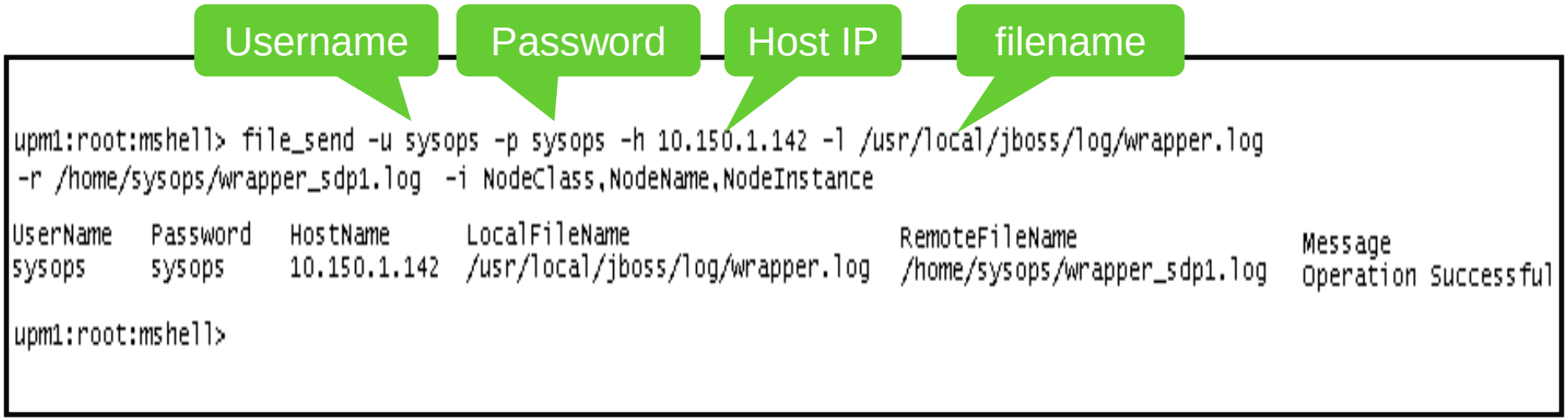
Displaying a List of Files Available for File Transfer

```
upm1:root:mshell> list_files -mon sdp1

 List Files
 NodeClass   NodeName    NodeInstance       Name                          File    Timestamp

 BILLING     sdp1        10.230.19.65       logcollection                 --      12:12 05/13/2008
 BILLING     sdp1        10.230.19.65       graphs                        --      12:01 01/16/2008

upm1:root:mshell> list_files -mon sdp1 -d logcollection

 List Files
 NodeClass   NodeName    NodeInstance       Name                          File    Timestamp

 BILLING     sdp1        10.230.19.65       msf_sdp1-logfiles.zip         Y       12:12 05/13/2008

upm1:root:mshell>
```

Directories

File

Transferring Files to an External Host Manually



Viewing the File Transfer History

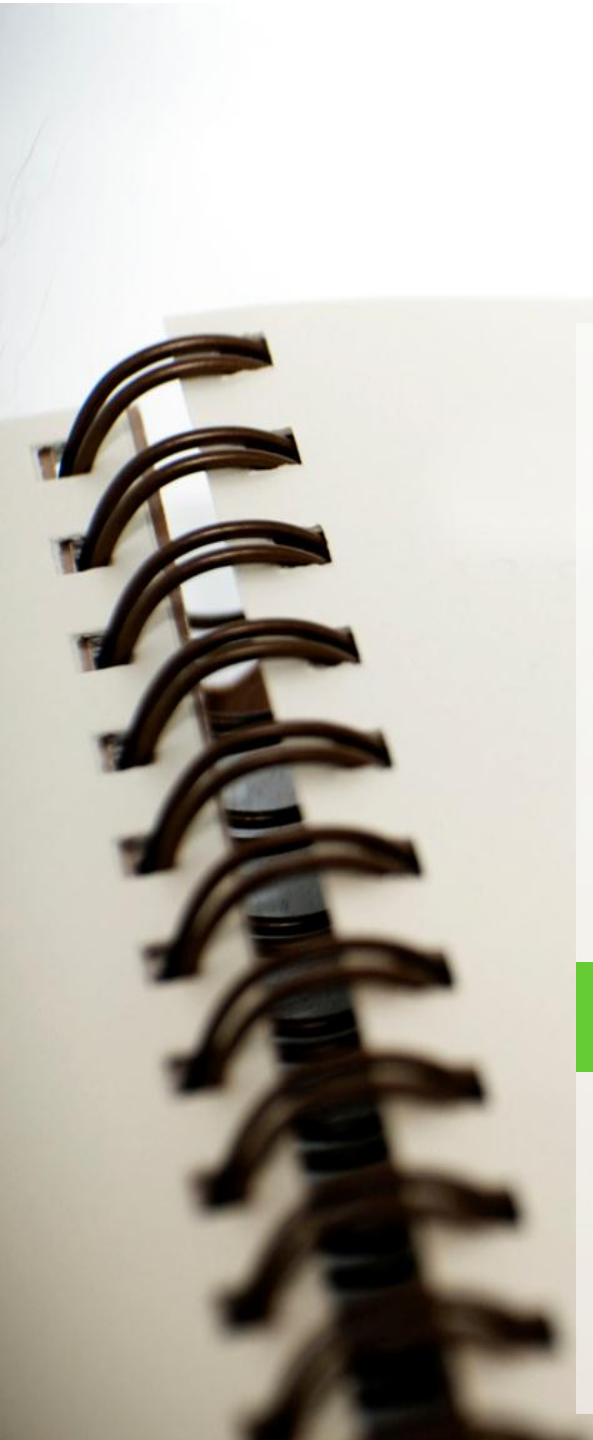
Report type

```
upm1:root:mshell> build_report -r filetransfer -mon sdp1 -i NodeClass,NodeName,NodeInstance,LocalFile,Start,
End,Duration

FILE TRANSFER EXECUTION HISTORY REPORT

Date        Time    Name        Mode      State  Status    RemoteHost    RemoteFile            Info

05/19/2008  09:10   FILE_SEND   EMBEDDED  OK     COMPLETE  10.230.12.57  /SDP1/10.230.19.65/   OPERATION SUCCESSFUL

upm1:root:mshell>
```

Review Questions

1. Which tab is used for log management?
   a. Event
   b. Task
   c. Inventory
   d. Processes
2. What is the default location on the UPM of files transferred?
   a. /var/msf/transfers
   b. /var/msf/incoming
   c. /var/msf/transfers/ <UPA nodename>/ <UPA nodeinstance>.
3. Which CLI command is used to view which files are available for transfer?
   a. List_files
   b. Send_file
   c. Build report -r filetransfer

Agenda



- UPM Overview and Concepts
- UPM Alarms and Events
- UPM Process Management
- UPM Jobs and Workflows
- UPM Inventory Reports
- Logs and File Management
- **Administering the UPM**

Stop and Start Commands

From mShell

- restart -mon <node_name>
- status

Recommended method of restart

From UNIX

- agent start
- agent stop
- agent dump
- agent restart

```
[root@localhost root]# agent start
Starting Management Agent...
[root@localhost root]# agent status
Management Agent is running (1776).
[root@localhost root]# mshell
```

Version and Status

Check the version of your operating system, by typing:

mshell> version

```
upm1:root:mshell> version -i NodeClass,NodeName,NodeInstance

BuildID              Platform       OS Version          OS Model    OS Arch    Base
05/02/2008 02:39     Linux          2.6.18-8.el5        i686        i386       3.0.0.4


upm1:root:mshell>
```

Determining Operational Status of a UPA or UPM

```
upm1:root:mshell> status -mon sdp1 -i NodeClass,NodeName,NodeInstance

Name                          Registered  State       Uptime
LogWorkflowManager            true        Started     4 hrs and 2 mins
ProcessManager                true        Started     4 hrs and 2 mins
ApplicationWorkflowManager    true        Started     4 hrs and 2 mins
ApplicationResourceMonitor    true        Started     4 hrs and 2 mins
BoyScoutService               true        Started     4 hrs and 2 mins
EventTrapReceiver             true        Started     4 hrs, 1 min and 52 secs
WorkflowManager               true        Started     4 hrs and 2 mins
InventoryCollector            true        Started     4 hrs and 2 mins
EventTrapEmitter              true        Started     4 hrs, 1 min and 52 secs
DatabaseTaskManager           true        Started     4 hrs, 2 mins and 1 sec
InternalProcessController     true        Started     4 hrs and 2 mins
InternalResourceMonitor       true        Started     4 hrs and 2 mins
DatabaseProcessController     true        Started     4 hrs and 2 mins
DatabaseResourceMonitor       true        Started     4 hrs and 2 mins
EventSMSEmitter               true        Started     4 hrs, 1 min and 52 secs
ProcessHandler                true        Started     4 hrs, 1 min and 51 secs
MonitorManager                true        Started     4 hrs and 2 mins
Recovery                      true        Started     4 hrs, 1 min and 52 secs
DefaultWorkflowManager        true        Started     4 hrs and 2 mins
```

Viewing the Log Trace Level of UPA or UPM Loggers

```
upm2:root:mshell> get_trace_level

Loggers listing.

LoggerName                                      TraceLevel

org.jboss.management                            INFO
EventXMLReceiver                                DEBUG
EventTrapReceiver                               DEBUG
EventObjectReceiver                             DEBUG
EventLogEmitter                                 DEBUG
EventTrapEmitter                                DEBUG
EventSMSEmitter                                 DEBUG
EventObjectEmitter                              DEBUG
EventSMTPEmitter                                DEBUG
ConfigurationManager                            DEBUG
ConfigurationDataCollector                      DEBUG
ConfigRepositoryManager                         DEBUG
EventAPEmitter                                  DEBUG
BoyScoutService                                 DEBUG
EventManager                                    DEBUG
AsyncTaskAgent                                  DEBUG
AsyncTaskManager                                DEBUG
SessionAgent                                    WARN
SessionManager                                  WARN
Recovery                                        DEBUG
```

Provide logger name or view all

-r <loggername>

-mon <node>

Trace levels can be:

- ERROR
- WARN
- INFO
- DEBUG
- TRACE

Changing the Log Trace Level of UPA or UPM Loggers

- Log files are located in the $JBOSS_HOME/log directory.
- Changes to log trace levels take effect immediately and do not require a restart of the UPA/UPM.


```
upm1:root:mshell> set_trace_level -r EventTrapEmitter -mon hsgu3b -l info

NodeClass  NodeName        NodeInstance       Message
SGU        hsgu3b          10.230.19.112      Level set to INFO for EventTrapEmitter

upm1:root:mshell>
```

Shutting Down the UPM

```
root@upm1 ~]#                  su - oracle8

upm1:/oracle>                  cd /oracle/oracle8/dba
upm1:/oracle/oracle8/dba>      ./listener_start_stop stop
upm1:/oracle/oracle8/dba>      ./oracle_start_stop stop all
upm1:/oracle/oracle8/dba>      exit

[root@upm1 ~]#                 manager stop
```

Starting Up the UPM

```
root@upm1 ~]#                  su - oracle8

upm1:/oracle>                  cd /oracle/oracle8/dba
upm1:/oracle/oracle8/dba>      ./oracle_start_stop start all
upm1:/oracle/oracle8/dba>      ./listener_start_stop start
upm1:/oracle/oracle8/dba>      exit

[root@upm1 ~]#                 manager start
```

Summary

This lesson has covered UPM functionality and the relevant operation for each service:

- Alarm and event
- Job management
- Process management
- File transfer