



Summary of Comments on ER_CentralizedLogging.pdf


Author: adailey


 Page: 9 Subject: Sticky Note Date: 7/19/2010 5:35:37 AM
Today, I believe we can generate syslog events for external clients. Is this still a requirement?

 Page: 9 Subject: Sticky Note Date: 7/21/2010 2:22:49 PM
The closest thing I can find to this is LSIP200012460, but it doesn't specify external syslog support.


TODO - check with PM


Author: okellner

 Page: 9 Subject: Note Date: 7/19/2010 6:13:45 AM
Need to provide open interface to the event mechanism, so future apps that will run on OSA devices will be able to easily integrate


 Page: 9 Subject: Sticky Note Date: 7/21/2010 2:12:42 PM
Yes. Will note this in the introduction in the next release.


Author: shubbard


 Page: 9 Subject: Sticky Note Date: 7/20/2010 7:21:44 AM
What about failure types for Recovery Guru-like procedures - is this handled as part of the centralized logging or something separate?


 Page: 9 Subject: Sticky Note Date: 7/21/2010 2:13:45 PM
This is addressed in the requirements section of the document, but I'll add an introductory note.

Author: yqi


 Page: 9 Subject: Sticky Note Date: 7/20/2010 1:39:11 PM
John, for the IO VM, we have two instances of IO VMs. Do you consider they are two event sources or one event source? The events for the both IO VMs should be duplicated.
For the NAS events, the scopes of events may be cluster level or node level.

 Page: 9 Subject: Sticky Note Date: 7/21/2010 2:12:03 PM
I assumed that the BVL and DPL on each controller would individually send events to the event router; that is, the event sources on controller A are separate from the event sources on controller B. For a global event in NAS, we'd do all of the logging and alerting processing on the node that originally received the event, and then eventd would dispatch it globally with EVENTD scope. eventd would not do logging/alerting for an event with this scope, since it's already been handled.

 Page: 9 Subject: Sticky Note Date: 7/21/2010 2:28:25 PM
clustered application here implies that one instance of event router per cluster?


 Page: 9 Subject: Sticky Note Date: 7/21/2010 2:42:37 PM
The only implication here is that which is stated - the event routers act as a clustered application to provide HA. The details of how this is implemented is best saved for the detailed architecture.

Author: jologan


 Page: 11 Subject: Sticky Note Date: 7/21/2010 3:09:51 PM

The Management Events FFD defines six levels, the Alert and Event Notification AAD defines four.


Author: jwendel

 Page: 11 Subject: Sticky Note Date: 7/21/2010 8:02:31 PM


Will there be any assistance in filtering events that specific users can't see. Lets say we provision some storage where user X can only see a few of the volumes on the system. Will there be a way to know this even can or can't be shown to them. (the bigger question may be if the above will even happen with OSA with NAS).

 Page: 11 Subject: Sticky Note Date: 7/21/2010 8:01:35 PM

Could you clarify this comment a little more, James? Are you referring to hiding "dependent" events (those that relate to internal objects that exist in the service of some external object?)

 Page: 11 Subject: Sticky Note Date: 7/19/2010 12:12:15 PM

So we only plan on allowing for compile-time variation in event strings?

 Page: 11 Subject: Sticky Note Date: 7/21/2010 3:37:12 PM

Per Yanling's comment I've added parameter substitution. We'll need to document the externally visible aspect of this once we make more progress on the DA.


Author: mjess

 Page: 11 Subject: Comment on Text Date: 7/20/2010 5:25:34 PM

Does this mean that the event source has to specify this?


I think it would be best if the event source did not have to specify this, same for the SNMP trap, email message and EMRS.

I think it should be up to the management client/user to configure what category of events result in what kind of notification. For example, a user may specify that a CRITICAL event should always result in an EMRS data dump, an email and a SNMP trap whereas a WARNING event may only result in a SNMP trap.


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I don't think the product requirement allows for simply tying these fields to severity. They are not specified by the event source, though (that would be making these fields event-specific content and not event type content). The event configuration tables (in BVL, these are the master tables that generate the BVL and MEL event header files, etc.) specify these values per event type.


Author: okellner

 Page: 11 Subject: Note Date: 7/19/2010 6:18:44 AM


Do we really need the 8 severity levels? 4 will be enough: Critical,Error,Warning, Info

 Page: 11 Subject: Sticky Note Date: 7/21/2010 3:00:13 PM

We don't need them today but I believe that it's a good idea to conform our levels to a well-established industry standard.

 Page: 11 Subject: Note Date: 7/19/2010 6:22:45 AM


Since the events text is for users, it should be in clear language that users can understand. The text should describe the problem, suggest root cause, and list possible corrective actions.

 Page: 11 Subject: Sticky Note Date: 7/21/2010 3:26:35 PM


I think that it's the job of the Recovery Guru functionality to suggest root cause and corrective actions. I will add the guideline for user-targeted language, though.

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Author: shubbard


 Page: 11 Subject: Sticky Note Date: 7/20/2010 8:02:58 AM
John:

We haven't defined the external visible behavior of the Event Viewer (i.e. the GUI that the user will use to view the event log) so there may be other requirements that get trickled down to the Service VM. Just wanted to forewarn you.


 Page: 11 Subject: Sticky Note Date: 7/20/2010 7:28:48 AM

I realize that this is just providing an exact list from the IETF but we don't plan to use all of these in the Amelia product. Don't we want to state which ones we plan to use??


 Page: 11 Subject: Sticky Note Date: 7/21/2010 2:58:20 PM
Yes...will do.

 Page: 11 Subject: Comment on Text Date: 7/20/2010 7:31:11 AM

Do we really need these booleans? Shouldn't the event just be available to whom ever wants to pick it up. For example, the Amelia user would have set up whether they want email and SNMP and then they should just take the events and process them.

 Page: 11 Subject: Sticky Note Date: 7/21/2010 8:07:16 PM

Scott, while that makes a lot of sense, what I did here was refer to existing AADs (such as the Alert and Event Notification AAD, 47083-00, Section 3.2.4: Send alert notification) and just extended the notion of the conditional alert flag on an event to a per-alert-type flag for each event type. Maybe this is the wrong way to go, but it seems that if Dell wants to be able to modify the alert behavior on a per-event-type basis (did I get this requirement wrong?) then we need to be able to specify the alert behavior at this granularity.


 Page: 11 Subject: Sticky Note Date: 7/20/2010 7:35:36 AM

Do we really need "Alternate" tables for the OEMs? Shouldn't we just have the flexibility to customize the ECT and AETT during build time.

 Page: 11 Subject: Sticky Note Date: 7/21/2010 3:24:53 PM

We should discuss how we want to write the external requirement. The notion of an alternate event table might make it easier for use to manage the process of OEM customization, as it results a separation of concerns between the base event definitions (what LSI does) and customizations (what OEMs do). If we try to put everything in one table, we need to build a system by which both OEMs an LSI can manage that one table, which I'd like to avoid if possible. The Alert and Event Notification AAD seems to go down this path, and it calls for building a web interface, etc., which is a lot of extra work and might actually make customization harder than if the OEM could just supply an alternate config file. Remember that the alternate files are overlays; they only contain the settings/messages that the OEM wants to override.

Author: yhazoref

 Page: 11 Subject: Highlight Date: 7/21/2010 2:47:19 PM

This information should be visible for users in simple and clear text.


 Page: 11 Subject: Sticky Note Date: 7/21/2010 2:49:16 PM

This is really an external requirement for Amelia, though, isn't it? I'll make sure that we mention that management clients need to be able to access the event text tables so that they can display the text.

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Text must be clear and simple language

Author: yqi

 Page: 11 Subject: Sticky Note Date: 7/21/2010 2:56:32 PM


The RFC 5424 obsolesces RFC 3164. The syslog-ng implements RFC5424. The current Domain0 (CentOS release 5.3) has the syslogd but the next release of the domain0 will be SLES11 based which has the syslog-ng. Should we move up to syslog-ng and follow RFC5424?

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syslog-ng is an implementation detail and isn't mentioned once in the RFC; the only thing required here is that our severity codes conform to the syslog protocol instead of some non-standard definition.

I didn't realize that 3164 was obsoleted; I'll replace the reference.


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How does it work? Since an event will have variables such as drive in enclosure x, slot y failed, the event text will contain format information?

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Yes. I've added the requirement for substitution. I also added architectural notes that the structure of the ECT and ETT need to be defined in the ER, once we have a DA in place.

Author: jologan


 Page: 12 Subject: Sticky Note Date: 7/21/2010 3:48:26 PM

Jeremy Birzer: The event type does not have a event version or revision #.
When creating parsers that review of the data a working revision # would be very useful.

This makes review of logs via parsing utilities easier to handle changes that might exist between two CFW versions.

 Page: 12 Subject: Sticky Note Date: 7/21/2010 3:47:25 PM

Another good topic for group discussion. RPC schemes often allow for the concurrent definition of multiple interface versions; we could do the same in the ECT/ETT.

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Jeremy Birzer: When describing event specific content it would recommend recording of the serial number of field replaceable unit events.

Example: It would be useful within when a drive fails to know the serial number of that drive within the log. It would also be useful to know the serial number of the device that replaced it.

This may also prove to be useful if parsing for errors relative to a specific device.

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As with other similar fields, we could make this a base field that is optionally filled out, or we could include this as part of the variable content.

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Jeremy Birzer: Given the customer has the ability to hide events, filter events & time stamps are altered to local time, export of controller log in a binary or raw format with a built in check sum would be useful.

(This collection would include events that would be invisible to the management clients as defined in the ECT & AECT)

Possible suggestions:

It may provide to be useful to add functionality to allow for some form of user event where it is a user defined message.


Example : Some form of book mark and/ or unix "logger" type entries.

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Added raw log export to section 6.1.

Actually I appear to have deleted the requirement definition for event sources being able to submit logs. It included the ability for management clients to act as event sources. The idea of a user-generated (bookmark) event is a good one; while it falls out naturally from the above statement, I'll see about working it into the text as a "reminder" to developers.

Bookmark events at arbitrary locations in the log are probably better handled via a separate table of annotations, as the sequence of events is already established and there are no gaps.

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JeremyBirzer: Management clients may incrementally browse the event log by retrieving retrieve ranges of events from the event router.

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Fixed typo.

Author: okellner


 Page: 12 Subject: Note Date: 7/19/2010 6:24:04 AM

What is the added value in the logging time? Why do users care?


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Good question. The logging time information is useful to support personnel in identifying whether there are problems with event delivery, but maybe this isn't user-visible information. If management clients want to retrieve events by log time, then log time would need to be exposed externally.

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to keep it readable for users better use object names instead of IDs

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changing "user-visible fields" to "fields visible to the management client"

 Page: 12 Subject: Note Date: 7/19/2010 6:29:24 AM


Did we consider storing the events in a database of soem sort instead of text file? this will make search/sort/filter operations as simple as a query to the events DB

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I consider this a topic for the DA and not the ER. That said, we need to refine our log access requirements (based on what Amelia needs) to understand whether a database better serves our needs. Right now the log access requirements (3.2.4) that I have are placeholders.

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Where this number came from? Doesn't it make more sense to keep the events for a defined period of time (1 day? 1 week? 1 month?) instead of # of messages?

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See the other comments regarding this. I believe it makes sense to retain as many messages as we can and only get rid of them when we absolutely must.


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Author: shubbard

 Page: 12 Subject: Sticky Note Date: 7/20/2010 7:50:42 AM

How does this line up with the contents that is displayed today in the SANtricity? It seems that there are some missing items such as:

1. Description of the event
2. Have we abandoned the raw data that came from the DPL MEL log or is that at least still part of the support bundle?
3. Event severity
4. User (where applicable)

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The description and severity are the event text associated with the event type.


If the "user" field is a where-applicable, could it be located in the variable-length component for the event?

Similarly, all MEL events could have a variable length component that contains the raw data along with any other event-specific data.

I think this is another item that it might be good to discuss in a group context.

 Page: 12 Subject: Comment on Text Date: 7/20/2010 7:37:23 AM

Can you explain this further? Not sure what this really means.


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This component contains additional data that does not fit the base schema defined by the above fields. Think of it as the "union" component of the event - each event type defines a type-specific structure for this variable-length component (which I realize now that I didn't document in the previous section, will fix...)


 Page: 12 Subject: Comment on Text Date: 7/20/2010 7:40:14 AM

Are you talking about BVL setup volumes or regular volumes? Also, what about the NAS side (i.e. the management virtual server)?


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I think this requirement was left over from when I was trying to define a service that was able to persist events event when both controllers could not access the event persistent store. I'm backing off from that now (see the Lockdown Handling section), so I've deleted this requirement.

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Will this be configurable by the user as far as the purge behavior?

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No. The user cannot directly purge the event log. I'd very much prefer that the management clients decide how much of the event log to retrieve and use:


- There can be a global value that limits how much information can be displayed in the event browser.
- There can be per-user limits that get set when a user says "purge the event log". Rather than purging the actual event log, this simply constrains the user's view of the log to events that occur after the purge.

What good comes from purging the event log prematurely?


 Page: 12 Subject: Comment on Text Date: 7/20/2010 7:53:33 AM

What do you mean by "virtually" trim the event log?

Today, in SANtricity, we do have a Clear Log function available to the user that does, in fact, remove entries from the event log.


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I'm suggesting that we maintain the Clear Log function while not actually removing entries in response to the request. See my above comment.


 Page: 12 Subject: Cross-Out Date: 7/20/2010 7:53:46 AM

Author: wjeong

 Page: 12 Subject: Typewritten Text Date: 7/19/2010 4:03:10 PM


 Page: 12 Subject: Sticky Note Date: 7/19/2010 4:04:29 PM

Will we need to keep both a source local ESN and a global ESN?


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The only user visible field is the "global" ESN assigned by the router. If there is a need for an associator assigned by the event source for, say, asynchronous acknowledgement, that's an implementation detail. I've added text to note that the event router assigns the ESN when it receives the event. Do you see any externally visible reason for a source-specified ESN?

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 Page: 12 Subject: Sticky Note Date: 7/21/2010 3:51:59 PM

Do we want to force all of the event sources to have access to a unique identifier (i.e. chassis serial number of somesuch) to indicate the local controller? Seems like, we can infer the controller at the event aggregator via the IP address. That way we don't force the event sources to find out the source identifier.


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Another good point worth discussing.

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How are object IDs assigned? By source type? By source instance? How do these identifiers get generated?

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The source specifies this content, which is presumed to be usable by the management client for correlation to the client's internal managed objects.

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The requirement as written forces us to persist logs on spinning disk via the IOVM. If we relax and/or change this requirement we could consider persisting logs to flash only which could simplify central logging.


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Yes, but then we would need to mirror the flash volumes that store the log messages, or implement database replication, so this complexity must be taken into account.

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Where did this value come from? Might we consider keeping logs of all severity up to a certain number then keep only high severity logs thereafter to extend our log time coverage? IOW we can keep this value but be smart about which events are persisted.


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I figured that it would be better to specify capacity at the user-visible level (num of events) instead of the storage level (MB of event capacity), so I used 50MB, and roughly 256 bytes per event.

If we implement such a requirement for fancy retention policies, I'd suggest that using a database would make it much easier to implement. Do we really need this though? We should look at the "typical" event generation rate, and the event log capacity, to determine how much history we get, and decide whether that's enough.


 Page: 12 Subject: Highlight Date: 7/19/2010 4:11:49 PM

Author: yhazoref

 Page: 12 Subject: Sticky Note Date: 7/20/2010 3:48:21 AM


Please add:

The Parent object nameID - for example the pool name for which the volume name belong to and is the issue of the event. This relation will save time to correlate events that start from an object and propagate to all it's child objects

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This approach doesn't allow for correlation on an event-by-event basis, only on an object-by-object basis. Would it be better to have a field for "parent ESN" that identifies the event that is the antecedent of the new event?

Author: yqi

 Page: 12 Subject: Sticky Note Date: 7/20/2010 3:34:54 PM


Does this mean

1. we will have the coupler driver in the service VM
2. we will pre-config BVL volume and map the volume to the coupler driver initiator of the service VMs (both service VMs)
3. since the BVL volume has controller-ownership model, we will use AVT for failover?


 Page: 12 Subject: Sticky Note Date: 7/21/2010 4:19:15 PM

- 1.) Yes, if the log persistence is performed by the SVCVM. One approach would be to the Flint BVL facility for logging. Even in this case though, there may be other Service VM services that require persistent store that survives controller swap/disk adoption.
- 2.) Yes. The Serviceability Storage Infrastructure DA that AJ is working on covers this.
- 3.) I think that the Storage Infrastructure document needs to address this; I don't know what AJ is planning in this regard.

Author: gyarnell


 Page: 13 Subject: Sticky Note Date: 7/16/2010 2:52:54 PM

Should the "clear" event be something other than Critical (like Informational or Notice).

 Page: 13 Subject: Sticky Note Date: 7/21/2010 7:19:03 PM

Yes. In the Alert and Event Notification AAD (47083-00) these are called out as INFORMATIONAL events. I added descriptions of the severity levels to the Event Types section above based on this AAD, and will change the text here.

Author: jwendel

 Page: 13 Subject: Sticky Note Date: 7/19/2010 12:16:40 PM

Will this hook in with the CIMOM we will be using for Amelia (SFCB with the LSI providers)? Can you further explain how these hook together?

 Page: 13 Subject: Sticky Note Date: 7/21/2010 6:47:29 PM

Sridhar provided the input for this requirement. I haven't explored the details of how we'd access the event logs at the CIM level, but one approach I think we could use is to subclass the CIM_RecordLog class so that basic log access would use the CIM_RecordLog methods, and advanced features such as query capabilities would be new extrinsic methods on the subclass.

The Amelia application logic is going to go the CIMOM for everything, right? That is, it would not bypass the CIMOM to go directly to something like the log access API.

Author: mjess

 Page: 13 Subject: Comment on Text Date: 7/20/2010 5:36:47 PM

What is the relationship between events and recovery guru procedures?

Are all CRITICAL events faults or do we have some kind of table mapping events to faults/recovery guru procedures?

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I think in the existing DPL, CRITICAL events and faults are unrelated; it's only convention that dictates that a CRITICAL event must accompany a failure. I'm using the Alert and Event Notification DA (47557-00) as my source here.

I'm advocating no change to this policy. I think we need to force event sources to adapt to the new centralized logging interface so that we can get push-based unified event logging, but I don't want to require that every OSA component change their existing fault reporting capabilities; the providers should do the adaptation here.


Author: okellner

 Page: 13 Subject: Note Date: 7/19/2010 6:41:10 AM

how is this different from the filetr described in 3.2.4.3? Seems like retrieving by time range is just one example of specific filter.

 Page: 13 Subject: Sticky Note Date: 7/21/2010 6:41:17 PM

Retrieving a range on these criteria provides the foundation for incremental browsing of the event log, which is why I called out this requirement and worded it this way. You are absolutely correct that it is a subset of a general query capability.

 Page: 13 Subject: Note Date: 7/19/2010 6:45:15 AM

Filtering is a generic mechanism. Why it needs to know about the specifics of DPL,BVL or NAS?


 Page: 13 Subject: Sticky Note Date: 7/21/2010 7:09:15 PM


I don't believe that what limited filtering we do today is generic. AFAIK we have inserted specific logic to filter events for DPL volumes, because they are subsidiary to BVL volumes. That does not seem generic.

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Unless I can see examples of what needs to be filtered, I'm not sure if I can give you a good generic mechanism for how that filtering will take place. Certainly we can try an implementation where every event includes an antecedent ESN, and try to ensure that all event sources track antecedent ESNs and include them in their dependent events. Does it sound easy to do this for every possible case? I don't even know what all the cases are - we need requirements here, and that's why there's an architectural note asking for the scenarios that we need to support.


Author: shubbard

 Page: 13 Subject: Comment on Text Date: 7/20/2010 7:56:22 AM
Is there a requirement for the Amelia Client to provide a way for the user to specify the time zone?


 Page: 13 Subject: Sticky Note Date: 7/21/2010 7:12:16 PM
I don't know if there's a PR for this, but I think that it's clear that we should allow for a default timezone configuration in both out-of-box config (virtually every computer system includes this as part of installation), and as a regular setting.


Allowing users to override the default in their settings (as with locale) is almost certainly a Pnot, though it would be nice to have, and we can certainly allow for it in the architecture.

 Page: 13 Subject: Comment on Text Date: 7/20/2010 7:58:20 AM
In the past, we only triggered Needs Attention conditions when a Critical event occurred. However, with the increased number of Event severities, there will need to be investigation as to what severities cause failure types to be generated. It will be more than just critical events.

 Page: 13 Subject: Sticky Note Date: 7/21/2010 8:16:14 PM
Noted. Does that mean that I should just say that the event source should generate some corresponding event without mentioning severity? Would it be useful to have a flag in the event that notes that a failure transition occurred (so that a management client knows to check failure type state?)

Author: wjeong


 Page: 13 Subject: Sticky Note Date: 7/19/2010 4:14:52 PM
Is this one of the "DELL" requirements? Who can we talk to to clarify what it is that DELL wants with this capability?

 Page: 13 Subject: Sticky Note Date: 7/21/2010 6:56:18 PM
From Rebecca: You are correct that Dell has requested this more than once, and it makes sense for anyone. However, it sounds non-trivial and not isolated to host software. So our first goal is to not be worse than EOS 10. Though being better would obviously be ideal.

Regarding EOS 10, Leslie is pretty sure this has not been agreed to for Chessie 2, but she thought Rod might know more about what may have been agreed to with Dell.

From Rod: This is related to some work that we are doing for Dell in Chessie 2, but I am not aware that anyone is assigned to this directly. We need to make sure we account for the Dell Requirements - this is being done by Patrick Flynn. Copying Patrick. It would be good to have a discussion with him. He may be able to help us here as well.

 Page: 13 Subject: Highlight Date: 7/19/2010 4:13:59 PM

 Page: 13 Subject: Sticky Note Date: 7/19/2010 4:18:10 PM
Do we have any requirements regarding how localized text is enabled/configured? Is it okay for this to be compiled or must it be dynamically configurable? Who maintains the localized text? Do we want this dictionary managed by Amelia? Currently with Flint, the event text is a compiled module managed within BVL.

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The main requirements are for the architecture to be localization-ready, but there are no POs for specific localizations.

My preference would be for each user to be able to set their own locale and timezone, as well as to have a default locale and timezone, and possible a separate locale and timezone for generated alerts.

From Rebecca:

The requirement is to be localization-ready. We have no plans to do actual translations, but need to use unicode, isolate text, etc.

Here's the actual text of PR 39727:

Block - Yes File - Yes DAS - Yes All strings must be isolated and UTF-8 in order to accommodate double-byte character sets. Any graphic that has text content would need to be translatable also. Additional comments: - It is not a requirement to accommodate vertical or right-to-left languages; everything can display in left-to-right format. - There is a standing requirement from OEM to be able to display the correct foreign language EULA for the locale, regardless of what language the mgmt software is in. - It is likely that an English language version of Amelia might be running under a foreign-language browser. This is commonly done but should be a test case. - This PR is not a request for translations, only that the product be ready to translate if a partner chooses to do so. (updated based on historical knowledge and conversations with Oded--R. Holt)

Also FYI there is the below entry in the PRD. However it is classified as a P1 rather than a P0 and does not have a corresponding PR and is not part of the plan. Yet the isolation aspect needs to be taken into account in initial design:

CLI localization:

CLI Commands do not translate. The same "English" command syntax is kept.

Command output and error messages can be in local language.

GUI text such as menu items, dialog strings etc... is "localizable".

All events messages are "localizable"

On Line Help can be localized

Icons and splash screens are "localizable"




Author: yqi




Comments from page 13 continued on next page


Should we support event listener registration here? The event consumer adds itself for event notification.

 Page: 13 Subject: Sticky Note Date: 7/21/2010 7:14:44 PM

IMO, not as an external requirement. I'll add it as an architectural note in an appropriate place (I really don't want to have to write an AR document :)


 Page: 13 Subject: Sticky Note Date: 7/20/2010 3:53:41 PM


Should we add the communication mechanism between event source and event router and between event consumers and event router?


 Page: 13 Subject: Sticky Note Date: 7/21/2010 7:13:01 PM


I'm not sure what you mean here, Yanling. Can you clarify?

Author: adailey


 Page: 14 Subject: Highlight Date: 7/19/2010 5:52:02 AM
How does this relate to the flags in the ECT then (section 3.1.1)? In ECT, there are flags to specify which events generate alerts.


 Page: 14 Subject: Sticky Note Date: 7/21/2010 7:20:15 PM
This is an inconsistency - will fix.

 Page: 14 Subject: Sticky Note Date: 7/19/2010 5:35:19 AM
How would the user know that an event was dropped, if not proactively examining the trace buffers? Can we add an event that says events may have been dropped (I wasn't clear on the meaning of the event listed in 5.1, may be this is already it).


 Page: 14 Subject: Sticky Note Date: 7/21/2010 7:41:34 PM
Yes. I didn't think about indicating that possibility of event in the event text for such events - that's a good idea. I think we need to do a very critical review of the reliability approach I've proposed here - I'm trying to keep things simple and not overengineer for rare cases, but we need to agree that the reliability described here is sufficient.


Author: gyarnell

 Page: 14 Subject: Sticky Note Date: 7/16/2010 2:54:31 PM
...except as noted in the AECT?


 Page: 14 Subject: Sticky Note Date: 7/21/2010 7:24:18 PM
ECT and ACT control alert generation, not severity as I (wrongly) called out here.


Author: jwendel

 Page: 14 Subject: Sticky Note Date: 7/19/2010 12:15:31 PM
Does this mean that this centralized logging system will push events out through the already existing providers/cimom? Couldn't this collide with the existing indication system within our providers?


 Page: 14 Subject: Sticky Note Date: 7/21/2010 8:20:43 PM
I thought that event dispatch formed the basis for the indication system. Is this not the case? If a component fails or recovers, or if there's a lifecycle event (an object is created or destroyed), don't we use the event to generate the corresponding CIM indication?


Author: mjess

 Page: 14 Subject: Note Date: 7/21/2010 8:18:38 PM
So this is not configurable?

 Page: 14 Subject: Sticky Note Date: 7/21/2010 7:20:59 PM
Good to see everyone caught this :)

Author: okellner

 Page: 14 Subject: Note Date: 7/19/2010 6:54:27 AM
This can be the default behaviour, but I would leave to user to configure what events to be send by SNMP, email, etc...


 Page: 14 Subject: Sticky Note Date: 7/21/2010 7:26:01 PM
User-configurable alerting is not a PR. If it becomes one, then the flag definitions in the AECT need to be configurable at runtime, and the event router needs to expose an interface for configuring these flags (and the GUI needs to allow the user to override any event!)

Comments from page 14 continued on next page

Author: shubbard

 Page: 14 Subject: Comment on Text Date: 7/20/2010 7:59:31 AM


Again, it won't just be critical events moving forward. There will be other events with other severities that would cause notifications and failure types.

 Page: 14 Subject: Sticky Note Date: 7/21/2010 7:20:36 PM

Agreed. This text is wrong.


 Page: 14 Subject: Comment on Text Date: 7/20/2010 8:00:51 AM


Just marking that this can be events other than just critical now.

 Page: 14 Subject: Sticky Note Date: 7/21/2010 7:38:11 PM

Good catch. I'll fix this.

Author: wjeong


 Page: 14 Subject: Highlight Date: 7/19/2010 4:22:15 PM

 Page: 14 Subject: Sticky Note Date: 7/19/2010 4:25:22 PM


I'll do some research into how email notification is implemented in the network-based SVM product. I'm wondering if there are more options for configuring email notification. For example, are there ways to customize the events that generate email notifications? Do we want to restrict alerts to only CRITICAL and delayed events? Do we want to generate all of these indications listed for every critical and delayed event? Do we want some sort of configurability of this behavior?

 Page: 14 Subject: Sticky Note Date: 7/21/2010 7:27:09 PM

Yes. It is configurable by event type.

 Page: 14 Subject: Sticky Note Date: 7/19/2010 4:32:16 PM

I'm not sure I fully understand the requirements for delayed alerts. Which events are monitored in a delayed fashion? Is it the event router that manages the delayed state and generates indications for all of the event clients (i.e. SNMP, CIM, etc.) or is this an EM server concept?

 Page: 14 Subject: Sticky Note Date: 7/21/2010 7:37:41 PM


I clarified that the management client is responsible for implementing the delayed alert. I also added the delayed alerts called out in the Management Events FFD (36169-00).

 Page: 14 Subject: Highlight Date: 7/19/2010 4:29:50 PM


Author: yqi

 Page: 14 Subject: Sticky Note Date: 7/20/2010 3:58:02 PM

do we fire snmp trap from one service VM or both service VM?

 Page: 14 Subject: Sticky Note Date: 7/21/2010 7:29:18 PM

Current thinking is that we would use the NAS SNMP daemon, which runs on each node, so SNMP traps would come from either controller. We need to see if this is acceptable...it would certainly be nicer if these came from the external cluster IP address.


 Page: 14 Subject: Sticky Note Date: 7/20/2010 3:59:47 PM

Do we send email only from the service VM in which the event router is actively running?



 Page: 14 Subject: Sticky Note Date: 7/21/2010 7:30:21 PM

As with SNMP, email and EMRS dumps run on both controllers; these are locally generated. Logging and CIM indications are services that use internal cluster IP addresses.

Comments from page 14 continued on next page

 Page: 14 Subject: Sticky Note Date: 7/20/2010 4:01:11 PM



The EMRS sometime needs to loadup OS specific trace/dump so that the trace/dump needs to be collected on a specific instance of the NAS VM or service VM

  Page: 14 Subject: Sticky Note Date: 7/21/2010 7:30:58 PM

It is. See my previous note.


 Page: 14 Subject: Sticky Note Date: 7/20/2010 4:09:32 PM

Will the event router failover to the other service VM in the case of controller failure?


  Page: 14 Subject: Sticky Note Date: 7/21/2010 7:42:19 PM

Yes, but this will not be externally visible (except for the brief disruption and need for request retry).

Author: gyarnell

 Page: 15 Subject: Sticky Note Date: 7/16/2010 2:59:16 PM

Event router may not be running if both controllers are locked down.


 Page: 15 Subject: Sticky Note Date: 7/21/2010 7:47:06 PM

Greg, could you clarify this comment? Which part of this section does it pertain to? I took a stab at your meaning and rewrote as follows:


Events being processed by an event router are not lost when a single controller enters the lockdown state, provided that the other controller is not locked down.

Events being processed by an event router are not lost when a single controller leaves the lockdown state.

Author: wjeong


 Page: 15 Subject: Sticky Note Date: 7/19/2010 4:34:11 PM


Does this imply that the event router is restartable? IOW, is this requirement meant to handle the case where the event router or the Service VM as a whole crashes and is restarted? What happens in an OnStor Cougar gateway if eventd crashes? Does the entire controller get rebooted?

 Page: 15 Subject: Sticky Note Date: 7/21/2010 7:43:05 PM


No. From Jonathan:

PM notifies rmc clients and servers that someone has gone down so they can retransmit messages. But only with a single OS/VM. A pm running in the service vm will not notify apps in another VM as far as the current implementation goes.


 Page: 15 Subject: Highlight Date: 7/19/2010 4:32:25 PM


 Page: 15 Subject: Sticky Note Date: 7/19/2010 4:35:12 PM


What is service mode? Is this a mode of the controller when VMs are not running?


 Page: 15 Subject: Sticky Note Date: 7/21/2010 7:43:56 PM

Service mode is the mode that we use to update firmware, and also (I think) for running certain diagnostics.

 Page: 15 Subject: Highlight Date: 7/19/2010 4:34:11 PM

 Page: 16 Subject: Highlight Date: 7/19/2010 4:35:12 PM


 Page: 16 Subject: Sticky Note Date: 7/19/2010 4:36:00 PM
Does this imply that the event interface must support a sync and an async mode?

 Page: 16 Subject: Sticky Note Date: 7/21/2010 7:47:20 PM
Yes.

Author: mjess


 Page: 17 Subject: Note Date: 7/20/2010 5:33:14 PM


Is this where we would describe the event viewing UI in Amelia too? (not the actual UX design, but the functionality also described in section 3.2.4.1)

 Page: 17 Subject: Sticky Note Date: 7/21/2010 7:48:59 PM


Yes. Will add a note. Since management clients can themselves log events, I'll add both event submission and retrieval interfaces to this note.


Author: okellner

 Page: 19 Subject: Note Date: 7/19/2010 6:56:00 AM
and from GUI


 Page: 19 Subject: Sticky Note Date: 7/21/2010 8:22:27 PM
Changed to "management clients and offline tools".

Author: yqi

 Page: 19 Subject: Sticky Note Date: 7/20/2010 4:07:39 PM
The centralize logging should not delay the boot process of the service VM if the BVL log volume doesn't exist. We need to boot the controllers without drives.

 Page: 19 Subject: Sticky Note Date: 7/21/2010 7:54:48 PM
I'll add a section about unavailability of storage to the reliable operation section.


Author: mjess

 Page: 20 Subject: Note Date: 7/20/2010 5:27:42 PM

How does this new mechanism fit with the Flint event log mechanism, i.e., the IOVM? How do the Flint events map to these events?

And what about the NAS elog, how does that map into this?

And domain 0 syslog?

 Page: 20 Subject: Sticky Note Date: 7/21/2010 7:57:23 PM

Good question. That's what makes the whole notion of a unified log "interesting" (http://en.wikipedia.org/wiki/May_you_live_in_interesting_times :)

The "how" is what we need to tackle in the DA. This document is trying to address the "what".