Covering the Basics Roundtable

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INTRODUCTION: EMAIL LOG CREATION: A CASE EXAMPLE

Where would the world be without email. If it weren't for email, I would be outta business in short order. As would most of you. Today's tip is not a retrospective of miles musings about email. No in fact its actually about the email capabilities of Lasso 6, 7 and now 8! But rather than feed you what you already know about the tags, assuming you do...let's take a slightly different tack. And remember folks...you gotta pay for the soup first: TANSTAAFL!

Today's Lasso Tip is about sending log files to an end user. It includes some sample (read that as FREE) code for you to play with and to use, and it includes a descriptor email to go with. Trust me this is a must read today. Not as cohesive as my previous LTfN but definitely a readworthy piece of text. Besides, remember ITS FREE!

Moving on.....

Lasso has some amazing capabilities and one of them is its ability to use email as an effective method to notify users, delayed feedback if you will. To send out everything from username/password pairs to PDF coupons!

Until rather recently (within the last 3 years Im talking), Lasso's email capabilities by today's standards (and even of the day itself) was limited to just text, and not even HTML text at that, not unless you tweaked the hell out of it, it was just text. Suffice it to state that Lasso's climb from email text to email superiority has been long and slow for one reason or another. Time was that if you got Lasso to email at all it was a miracle and you thanked your lucky stars (L2 days). Stepping into the wayback machine for a second, I refer to the Lasso 3 days when you'd set up a msg to get sent out under certain conditions and if Lasso couldn't talk to its intended mail server, after 3 attempts it would drop the issue entirely. Lasso 3 would go so far as to make a log entry like this:

```
05/22/03 14:33:03 ERROR: -104.  Failed 3 times to connect to email host.
```

And that's about as far as you got. And if you got that, you were doing good, at least you knew Lasso TRIED, whether or not the msg actually contained anything was another matter entirely. Today Lasso is much much much better at telling you that an email wasn't sent for a variety of reasons....it doesn't just drop the msg, but tells you exactly what error response it got back from the email server, and instead of 3 tries it stops after the 5th, and instead of discarding the msg, it holds it in memory until YOU do something! Trust me my friends, Lasso has come a long way in terms of email.

Today Lasso can send not just text, but HTML mail as well, and of course it can send attachments....DUH! However I'm willing to wager that you've looked at LP8 and gotten about half way down on the page of specs and said, "WAIT! Hold the phone, it does WHAT ? It will EVEN check a POP3 server ? Where's my CREDIT CARD ?!?!?!?!?". For those of us that have been with Lasso since v1.0 (I was there with 1.1), we understand just what a big deal that is...however if you're coming from another platform. That's a different story altogether. When I saw that LP8 actually will check a POP server for mail, no 3rd party plugins, no tweaking, no fiddling, just straight forward -> GET THE MAIL! I got out my credit card. That's pretty cool stuff when you sit and think about it. That puts Lasso on par with PHP, ASP or ColdFusion.

Of course all three of those had email connectivity about 3 years ago, but better late than never at all I say! (smile)

Ok so Lasso's history with email hasn't been shall we say stellar but its here now and let's take advantage of that for our own nefarious purposes! (giggle)

PART ONE: EMAIL BASICS

Before we get to the fun stuff...the code, there are some rules of the road, Lasso does require that you actually set an SMTP host, however you can specify in the tag itself the host that will be used to send your msg. Because I run a B2B ISP/ASP and my own CMS, I bypass the requirement of having to set the host SMTP. My reason is that because 99 % of the apps Im running I wrote, but for different domains, and each of those domains use their own mail host, not mine, so its pointless to actually set a host, when the individual tag will allow me to set it, that and because of the fact I am running multiple domains off my servers requires that each site have its own host requirements. Another requirement is that you can't send anonymous email. I know that sounds DUMB but there's some validity to it. You actually have to have a valid host to send from, however that host does NOT need to be a valid domain, it can be an IP address. I'll tell you this much though, as anyone who hosts their own stuff will tell you, in today's world sending email out via IP address just isn't gonna fly, its just not gonna happen, mostly because in today's world most spam protection routines prevent that kind of mail from ever getting to an intended recipient by IP address alone. Another rule of the road is that Lasso does actually have an upper limit to the amount of data you can send via email, however you'll probably NEVER reach it, but know that there is a limit. Which is to say, try not to send out dissertations, just the facts please.

On to the fun stuff...

Sending an email with Lasso is pretty simple stuff. Time was it was 5 subtags as an inline. Today, its a single tag with a few requirements. For those of you upgrading your solutions, there is ONE major change (which was made for security reasons so I gather) the BODY of the msg is NOW an include. So lets take a gander at the email tag itself:

```
[email_send:
    -host='domain.com',
    -to='info@domain.com',
    -from='site@domain.com',
    -subject='MY SUBJECT',
    -body=(include:'email.txt')]
```

1.) **-HOST**, this is your sending host. Or the host that will be used to relay this msg. Lasso doesn't actually send out the msg, the host does that. Keep that in mind when sending MASSIVE amounts of email!

2.) **-TO** is who you're sending this to...pretty simple.

3.) **-FROM** is WHO the msg is from. There's a caveat here that you need to be aware of, which we'll get to in a second but be aware that there's something we'll revisit later on.

4.) **-SUBJECT** line....pretty straight forward, but again we're going to revisit this when we kick it up a notch.

5.) **-BODY**, here's the actual msg. And note that the its a FILE INCLUDE.

The actual body of the msg is contained elsewhere...

Let's break this down a bit....these are the 5 basic subtags you need in order to get Lasso to send a msg. However, there's a whole lot there that you're probably not seeing. Not the least of which is this is a single tag, it can be modified to meet your needs, and that the actual body of the msg can contain Lasso directives!

Which leads me to the actual INCLUDE itself....this is the result of log file that we will send out later on, its the file include that is the aggregate result of a (what you will see) long series of SQL calculations.

```
    Good Morning,
    Here is your daily web log for [date_format: ($v_today), -format='%A, %B %-d %Y'].
    Total Hits: [$v_hits].
    Distinct IP addresss: [$v_ip].
    Hits By Platform
    MAC: [$v_mac]
      PC: [$v_pc]
    UNIX: [$v_other]
    Hits By Browser Type
              msie (mac/pc): [$v_mmsie]/[$v_msie]
                other: [$v_other]
    Hits By Page[records: -inlinename='sql_pagecount']
[field:'page_name'] [field:'page_count'] [field:'ref_count'][/records]
    your report in excel, go here -> [$v_filename_xls]
    your report in txt, go here -> [$v_filename_txt]
    Thank you.
    Your Web Server.
```

Most of this stuff is useless to you, however note that the include is full of Lasso directives and defined variables, and not to mention an INLINE command! So what is the email you're looking at ? Well its part of a larger system that computes log stastics. I didn't like the apache logging routine so I wrote my own. Every time someone hits a page in my CMS it logs to a client database. That data is calculated via a series of SQL statements and then put into variables and then placed here in their final form.   What is of further note is that in the course of a day thousands of hits are registered across my client websites, and this email is sent out in a matter of seconds to all my clients by midnight. It takes about 3 seconds to compute the hits for the day and then to send out this msg. And its done automatically via an event trigger!

I digress, the only reason Im telling you all this is to show you what can be done with the simplest of email tags!

PART TWO: TAKIN IT TO THE NEXT LEVEL!

So we've got the basics down, there are a few things we need to be aware of...like for instance that because Lasso isn't actually sending out these msgs itself, but the email host is, there are situations (because of the world we live in) where you need a method to VALIDATE who is actually sending the msg that you're wanting to send, and for that reason Lasso has built into it an authentication routine to login to an SMTP server and validate the sending msg:

```
[email_send:
-host='domain.com',
-port= 1-OPTIONAL,
-username= 2-OPTIONAL,
-password= 3-OPTIONAL,
-to='info@domain.com',
-from='site@domain.com',
-subject='MY SUBJECT',
-body=(include:'email.txt')]
```

1.) With the advent of LP8 you can NOW specify the PORT your mail server will respond on. In previous versions LP6/7 this wasn't possible, unless you changed the start up lassoapp. Lasso had port 25 hard coded into itself. So you'd have to modify it to allow for another port.

2.) username. This is the username of the SENDING account! In the case of EIMS, that sending account is: user%domain.com.

3.) password. this is the password of the username above.

Having got past the inane parts of the msg structure...let's move on to the actual FUN parts of this...the HTML mail...so how do you send plain text AND HTML mail at the same time ? Again with the advent of LP8, sending HTML mail is pretty damned simple...you see there's a reason why you upgraded (and no its not because of the hottie on the Lasso box, wait, there is NO hottie on the Lasso box......OP! Hello let's get with the program here...as software developers its a requirement that you throw some scantily clad woman on the box to signify that this is sexy stuff...and that by buying your product we are buying sex sex sex...oh and a really cool app server....AHEM, I digress).

Adding HTML to the mix is this simple:

```
[email_send:
-host='domain.com',
-port= 1-OPTIONAL,
-username= 2-OPTIONAL,
-password= 3-OPTIONAL,
-to='info@domain.com',
-from='site@domain.com',
-subject='MY SUBJECT',
-body=(include:'email.txt'),
-html=(include:'email_html')]
```

How easy is that. One caveat when sending HTML mail, is that any images you wish to embed must be in absolute format, ie: http://www.youdomain.com/images/xxxxx.jpg

What will get sent out is actually a two part msg. Well three if you really sit and think about it. The msg will have to primary parts one in MIME format and the other in TEXT. So what's the 3rd part, the headers which are defining the msg itself.

Lastly, something to keep in the back of your mind, is that in the Admin for Lasso 5/6/7, the email sweep was automatically set to 300 seconds, that means that every 5 minutes, Lasso would check the EMAIL queue for NEW msgs that had to go out. You could of course change this to be whatever you want it to be. With LP8 things are just a lil different. You have more options in the form of an email delay between sweeps as well as space for SMTP AUTH User/Pass pair, and space for a default port.

PART THREE: ITS IN THERE!

Lasso 5 - 8 has some wonderful tools in it, and one of those tools is the event manager. This is how we're going to accomplish sending out our LOG files to an end user. Scheduling an event to happen at a specific date, time, and using a specific URL is pretty damned easy, a lot easier than makin an appointment to go see a dentist and a helluva lot less painful. What does this tip about EMAIL have to do with EVENTS ? The long story short is that there will be times in developing your applications where you're not going to want to send a msgs immediately or during the next email sweep.

In the email above that Im sending out to my clients every morning, the email is the RESULT of an event, and the event as I said earlier is the process of a VERY LONG laundry list of SQL calls and calculations to determine browser type, file sizes, distinct IPs, etc....it then compiles all of that and sends out a msg to the end user to display their morning report...which most clients absolutely LOVE.

There is one tiny hiccup to this process running form another domain OTHER than the client's domain. And it will require you to open up the compatibility.lasso file inside your Lasso Documentation > 3-Language Guide > LassoApps > Startup folder. Find the compatibility file and make 3 modifications to the LOG tag. You're going to comment out the following lines, like so (lines 115 - 118):

```
  //fail_if: #_file->(beginswith: '///'), -9956, '[Log] Cannot write to fully qualified 
paths';
  //fail_if: #_file->(endswith: '/'), -9956, '[Log] Cannot write to a directory';
  //fail_if: (#_file >> '//'), -9956, '[Log] Cannot write to fully qualified paths';
  //fail_if: (#_file >> '..'), -9956, '[Log] Cannot use .. in log paths';
```

You're doing this so that the log tag will be able to write to any path. When you're done, recompile the Startup folder, and then replace the resulting app with your new startup app, then restart lasso. Next up is you'll have to enable permissions for the admin user to run the log tag. Also you'll have to add .txt as a viable file tag that Lasso can manipulate (as well as, XLS...excel files).

The Event in question is below....Ive removed some of the more esoteric items and aggregates...but you'll get the general gist:

```
  <?LassoScript
  //  MAGICMILES SOFTWARE LOG REPORTING. © 2006 magicmiles software.
  //
  //  this is a site report for domains on xxxxxxxxxxxxx.com
  //  each domain is run in 15 second intervals as an event from the
  //  lasso admin.
  //
  //  It sends a report to the users which is culled from the sql statements below for
  //  today's date, each record in the counter db ($v_db_connection) below is uniquely
```

```
tagged with
  //  their unique site_id marker.
  include: 'insert-dbvalues.inc';
  var: 'id'           = (action_param:'id'); //passed site id variable
  var: 'v_today'      = (date_format:(server_date), -format='%Y-%m-%d'); //date
variable
    inline: ($v_db_connection) 'auth_siteid'=($id), -search;
     var: 'v_domain' = (field:'auth_domain');   //domain to run from and to
     var: 'db_name'  = (field:'auth_db');     //database name
     var: 'tb_name'  = (field:'auth_tb');     //table name
     var: 'site_id'  = (field:'auth_siteid');
//site_id matches database field name of same name
     var: 'users'    = (field:'auth_users');    //users to send report to
     var: 'v_user'  = (field:'auth_username'); //username
     var: 'v_pass'  = (field:'auth_password'); //password
    /inline;
  //counts page name values
  var:'sql_pagecount'=(string);
  $sql_pagecount +='SELECT DISTINCT page_name, count(page_name) as page_count FROM '
+ ($tb_name) + ' WHERE site_id = "' + ($site_id) + '"';
  $sql_pagecount +=' AND date_time LIKE "%' + ($v_today) +'%" GROUP BY page_name
ASC';
  //counts referrer hits
  var:'sql_pagereferrer'=(string);
  $sql_pagereferrer +='SELECT DISTINCT referrer_url, count(referrer_url) as ref_count
FROM ' + ($tb_name) + ' WHERE site_id = "' + ($site_id) + '"';
  $sql_pagereferrer +=' AND date_time LIKE "%' + ($v_today) +'%" GROUP BY referrer_
url ASC';
  //counts page ip hits
  var:'sql_pageip'=(string)
  $sql_pageip +='SELECT DISTINCT ip_address FROM ' + ($tb_name) + ' WHERE site_id =
"' + ($site_id) + '"';
  $sql_pageip +=' AND date_time LIKE "%' + ($v_today) +'%" GROUP BY ip_address';
  //similar to pagecount
        var:'sql_hits'=(string);
  $sql_hits +='SELECT a_browser FROM ' + ($tb_name) + ' WHERE site_id = "' + ($site_
id) + '"';
          $sql_hits +=' AND date_time LIKE "%' + ($v_today) +'%"';
        //counts macintosh platform
        var:'sql_pagemac'=(string);
  $sql_pagemac +='SELECT a_browser FROM ' + ($tb_name) + ' WHERE site_id = "' +
($site_id) + '"';
           $sql_pagemac +=' AND date_time LIKE "%' + ($v_today) +'%"';
           $sql_pagemac +=' AND a_browser LIKE "%MAC%"';

        //counts windows platform

        var:'sql_pagepc'=(string);
  $sql_pagepc +='SELECT a_browser FROM ' + ($tb_name) + ' WHERE site_id = "' +
($site_id) + '"';
           $sql_pagepc +=' AND date_time LIKE "%' + ($v_today) +'%"';
           $sql_pagepc +=' AND a_browser LIKE "%WIN%"';
  //counts unix/other platform
  var:'sql_pageother'=(string);
  $sql_pageother +='SELECT a_browser FROM ' + ($tb_name) + ' WHERE site_id = "' +
($site_id) + '"';
          $sql_pageother +=' AND date_time LIKE "%' + ($v_today) +'%"';
          $sql_pageother +=' AND a_browser NOT LIKE "%WIN%" AND a_browser NOT LIKE
"%MAC%"';

       //counts ie-windows browser
    var:'sql_pagemsie'=(string);
       $sql_pagemsie +='SELECT a_browser FROM ' + ($tb_name) + ' WHERE site_id = "' +
($site_id) + '"';
           $sql_pagemsie +=' AND date_time LIKE "%' + ($v_today) +'%"';
           $sql_pagemsie +=' AND a_browser LIKE "%MSIE%"';
           $sql_pagemsie +=' AND a_browser LIKE "%WIN%"';
           $sql_pagemsie +=' AND a_browser LIKE "%WINDOWS%"';
       //counts ie-mac browser

       var:'sql_pagemacmsie'=(string);
   $sql_pagemacmsie +='SELECT a_browser FROM ' + ($tb_name) + ' WHERE site_id = "' +
($site_id) + '"';
          $sql_pagemacmsie +=' AND date_time LIKE "%' + ($v_today) +'%"';
          $sql_pagemacmsie +=' AND a_browser LIKE "%MSIE%"';
          $sql_pagemacmsie +=' AND a_browser LIKE "%MAC%"';

       //counts other browser
  var:'sql_pagebrowser'=(string);
   $sql_pagebrowser +='SELECT a_browser FROM ' + ($tb_name) + ' WHERE site_id = "' +
($site_id) + '"';
          $sql_pagebrowser +=' AND date_time LIKE "%' + ($v_today) +'%"';
          $sql_pagebrowser +=' AND a_browser NOT LIKE "%SAFARI%"' ;
          $sql_pagebrowser +=' AND a_browser NOT LIKE "%NETSCAPE%"';
          $sql_pagebrowser +=' AND a_browser NOT LIKE "%MSIE%"';
          $sql_pagebrowser +=' AND a_browser NOT LIKE "%MAC%"';
          $sql_pagebrowser +=' AND a_browser NOT LIKE "%WIN%"';


        //compiles all sql calls into inlines for variable processing.

  inline: -inlinename='pagereport', ($v_db_connection), -op='cn', 'date_time'=($v_
today), 'site_id'='xxxxxxxxx', -search;/inline;
  inline: -inlinename='sql_pagecount', ($v_db_connection), -SQL=($sql_pagecount);
error_currenterror; /inline;
  inline: -inlinename='sql_pagereferrer', ($v_db_connection), -SQL=($sql_
pagereferrer);/inline;
  inline: ($v_db_connection), -SQL=($sql_pageip);var:'v_ip'=(found_count);/inline;
  inline: ($v_db_connection), -SQL=($sql_hits); var:'v_hits'=(found_count);/inline;
  inline: ($v_db_connection), -SQL=($sql_pagemac);  var:'v_mac'=(found_count);/inline;
  inline: ($v_db_connection), -SQL=($sql_pagepc); var:'v_pc'=(found_count);/inline;
  inline: ($v_db_connection), -SQL=($sql_pageother); var:'v_other'=(found_count);/
inline;
  inline: ($v_db_connection), -SQL=($sql_pagemsie); var:'v_msie'=(found_count);/
inline;
  inline: ($v_db_connection), -SQL=($sql_pagemacmsie);var:'v_mmsie'=(found_count);/
inline;
  inline: ($v_db_connection), -SQL=($sql_pagebrowser); var:'v_browser'=(found_count);/
inline;
  inline: ($v_db_connection), -SQL=($sql_pagemb2);  var:'v_mb2'=(found_count);/inline;
  //this next section defines variables for the report values: date of report, and
logname files.
          var:'v_subdate'=(string_concatenate:'WEB LOG REPORT FOR: ',(date_format:
($v_today), -format='%A, %B %d %Y'));
    var:'v_logname_txt'='///Library/WebServer/Documents/~' + ($v_domain) + '/weblogs/
weblog-' + ($v_today)+'.txt';
    var:'v_logname_xls'='///Library/WebServer/Documents/~' + ($v_domain) + '/weblogs/
weblog-' + ($v_today)+'.xls';
    var:'v_filename_txt'='http://www.' + ($v_domain) + '.com/weblogs/weblog-' + ($v_
today) +'.txt';
    var:'v_filename_xls'='http://www.' + ($v_domain) + '.com/weblogs/weblog-' + ($v_
today) +'.xls';
    //this next section actually creates the reports in the users directory in two
formats: text and excel!
    log: ($v_logname_txt);
      $v_subdate + '\r\r';
      string_uppercase: ($v_domain) + '\r\r';
      '#' + '\t' + 'page' + '\t' + 'date' + '\t' + 'ip' + '\t' + 'domain' + '\t' +
'browser' + '\t' + 'referrer_url' + '\n';
      records: -inlinename='pagereport';
      (loop_count) + '.)' + '\t' + (field:'page_name') + '\t' + (date_format:(field:
'date_time'), -format='%h:%M %p') + '\t' + (field:'ip_address') + '\t' + (field:
'domain_address') + '\t' + (field:'a_browser') + '\t' + (field:'referrer_url') + '\r';
      /records;
    /log;
    log: ($v_logname_xls);
      $v_subdate + '\r\r';
      string_uppercase: ($v_domain) + '\r\r';
      '#' + '\t' + 'page' + '\t' + 'date' + '\t' + 'ip' + '\t' + 'domain' + '\t' +
'browser' + '\t' + 'referrer_url' + '\n';
      records: -inlinename='pagereport';
      (loop_count) + '.)' + '\t' + (field:'page_name') + '\t' + (date_format:(field:
'date_time'), -format='%h:%M %p') + '\t' + (field:'ip_address') + '\t' + (field:
'domain_address') + '\t' + (field:'a_browser') + '\t' + (field:'referrer_url') + '\r';
      /records;
    /log;

    //this next section sends the file report.inc to ($users) variable.

      email_send:
        -From=’xxxxxx@xxxxxxxxxx.com’,
        -to=($users),
        -bcc=’xxxxxx@xxxxxxxxxx.com’,
        -host=’xxxxxxx%xxxxxxxx.com||xxxxxxxxxx||xxxxxxxxxxx.com’,
        -Subject=($v_subdate),
        -Body=(include: ‘report.inc’);
email_send:
        -host=’domain.com’,
        -username=($v_smtp_u),
        -password=($v_smtp_p),
        -to=($users),
        -from=’site@domain.com’,
        -subject=($v_subdate),
        -body=(include:’report.inc’),
        -html=(include:’report-html.inc’);
?>
```

If you can decypher all of that, skipping the SQL parts, you'll note a few things not the least of which is that there is nothing magical about what's being done here...absolutely NOTHING. One thing to note is that because this app runs on both a LP6 server and an LP8 server I had to allow for the proper language for the email send statement. Look at the host line for the commented out LP6 code, note that its username||username||hostname, whereas in LP8 those values are divided out. This logging tool also writes out an actual log file in two formats, txt and excel.

So how is this all run, by an event url, like so:

http://www.xxxxxxxxxxxxx.com/customersite.lasso?id=XXXXXX

In short this is a wonderful logging tool even if I do say so myself...and the best part is that you're getting it for free. If you'd like the DB structure, Im happy to send it to you so that you can start using it today.