Nov, 19th 2014 from STS

I hope you’re well.  Our development team have come back to me with an initial set of questions which I hope you’ll be able to answer quite quickly:

         Do you have an updated API with the error scenarios? We have been discussing how we deal with retries.  E.g. If a player tries to register and we get a timeout response.  If we try to submit the request again, how will the OTP system handle that, particularly if the previous registration succeeded?  We would also appreciate some visibility of each of the different error responses so we can factor them into our development

There are 4 categories for errors, If the response contains a <Error> element, this element will contain the details.

1. Protocol errors – the service could not process the data or the data was corrupted.
   1. Corrupt request data, the service could not decode request.
   2. Request type required, the service could not find the request in the data after decoding.
2. API errors
   1. Invalid request, the service does not support the request, normally caused by the request being sent to the wrong service
   2. Invalid Client Id, the service could not find the client using the Id supplied in the request data
   3. Invalid Client name, the service could not find the client using the client’s name supplied in the request data. Normally caused by a difference in spelling or case.
   4. Invalid Group Id, the service could not find the group using the Id supplied in the request data.
   5. Invalid Group name, the service could not find the group using the group’s name supplied in the request data. Normally caused by a difference in spelling or case.
   6. RequestId (Invalid), service could not find the OTP record in the database using the supplied request id. Normally caused be the requester using an invalid request id.
   7. Invalid end user, Service could not find the end user using the parameters supplied in the request data. Normally caused by a difference in spelling in the unique user information(such as email), incorrect UserId supplied in the request.
   8. No End User to deleted, Normally caused by a difference in spelling in the unique user information(such as email), incorrect UserId supplied in the request.
   9. RequestId (Invalid), service could not find the OTP record in the database using the supplied request id. Normally caused be the requester using an invalid request id.
   10. Disabled, the request id supplied in the request data is for an OTP record that was already used. Normally caused be the requester using an invalid request id.
   11. "Client Id (Invalid for this OTP), Normally caused by the requester using a client id that was different than the client id used in the request OTP.
   12. OTP missing in request data, Normally caused by the requester.
   13. OTP can't be of zero length, Normally caused by the requester.
3. System Errors
   1. Exceptions (General), The service failed when processing the request. Unplanned service issue, report to MAC for a resolution.
4. Normal Responses, The <Reply> element contains Success if operation was successful, The <Details> element contains the details of the response:
   1. End User Exists, The UserId was not unique and the user is already in the database.
   2. Invalid OTP, Normally caused by the user entered an incorrect OTP,
      1. <Reply>Invalid
      2. <Details>|RequestId:5474b0ec74846901f8540c74|OTPCode:060021|OTPRetriesMax:3|OTPRetriesCurrent:2|OTPExpiredTime:11/25/2014 4:50:12 PM|ClientName:The Client
   3. Timeout, the user waited too long to enter the OTP. Note: the time allotted to enter the OTP is in the details of the reply of the RequestOTP response.

         If a player doesn’t receive a text message and wants to request that another be sent, is it simply a case of us submitting another RequestOTP request.

There is a “Resend OTP” request, should have 2 buttons on the “Enter OTP” page “Submit” and “Resend”. Use tooltips to explain resend “If you didn’t receive the OTP message on your Mobile Device, please click the Resend button. If you have already clicked resend and you have not received the message contact customer service.”

         Have you got a recommended approach for testing?  One specific question is can we register the same mobile number for multiple players?

1. Yes, you can register multiple users with the same phone number. Since your system is generating the unique UserId this should work.
2. There are a couple of debug settings in the web.config file we can set to help you with this:
   1. “Debug” if debug is set the OTP is returned in the response in the “Details” element. You could get the OTP form the response and populate the Enter OTP text box.

         Can the mobile numbers be international as a lot of our testing will be run from outside the US.  What format will the Phone number field support in the register request?

1. MAC only has US phone number support. International support for an additional cost.
2. The MAC system supports deliver via email. You could use this for international.

         How can a player change their mobile number?

1. The MAC System has an End User Management service this service can be used to change the phone number, or, Unregister and re-register with new phone number.

         We have concerns about the html Ads from a security perspective and we suspect that a lot of our clients will have similar concerns about injecting html into their site / platform.  Rather than sending html, could you send a link which clients could display in an iframe and you host the ads?

If you have any questions please do not hesitate to contact me.

The ad including the pixel (script) is generated before an OTP request is even made. It is pre-selected or created.  STS and the Client control content of the ad through the Secure Ads portal. The OTP Service treats the ad content as a pass through.

If you have a suggestion on how to further secure the ad content we can make the changes.

Kind regards

**Nick Smith**

DEC 11TH

I hope you’re well.  Please could you review the email below.  The team are trying to replicate each error response to ensure that we handle them correctly but they are unable to replicate the ‘Request Type required’ error.

Kind regards

**Nick Smith**

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**Sent:** 11 December 2014 09:14  
**To:** Nick Smith; Kevin Dodson  
**Cc:** [veena.mshanmukappa@wipro.com](mailto:veena.mshanmukappa@wipro.com); [rohit.kalaghatkar@wipro.com](mailto:rohit.kalaghatkar@wipro.com)  
**Subject:** OTP Questions

Hi Nick,

I am trying to map all the Error Responses sent by MAC. I have attached the document sent by MAC.

 In above document,

I am unable to replicate scenario i.e. Request type required under Protocol errors (Section 1. b)

 I am getting System.ArgumentNullException

 Request,

 URL:

<http://corp.mobileauthcorp.com/macservices/User/StsEndUserRegistration.asmx/WsStsEndUserRegistration>

POST BODY :

Data=992454610eae7484690b40a78c61526571756573743a7c4349443a3533656262303464373438343639316434636533326132377c46697273744e616d653a4a6f686e7c4c6173744e616d653a446f657c50686f6e654e756d6265723a353535353535313231327c456d61696c416464726573733a616161616161616140776970726f2e636f6d7c526567547970653a4f70656e52656769737465727c5573657249643a34383032363831313131323334353637383930313233343536373839307c4150493a535453

Decrypted BODY :

Request:|CID:53ebb04d7484691d4ce32a27|FirstName:John|LastName:Doe|PhoneNumber:5555551212|[EmailAddress:aaaaaaaa@wipro.com](mailto:EmailAddress%3Aaaaaaaaa@wipro.com)|RegType:OpenRegister|UserId:48026811112345678901234567890|API:STS

Error Response returned :

System.ArgumentNullException: Value cannot be null.  
Parameter name: s  
   at MongoDB.Bson.ObjectId.Parse(String s)  
   at MACServices.Utils.EventLogError\_FinalizeXmlResponse(String pServiceName, String pCid, String pErrorToLog, String pErrorNumber) in c:\Development\_OTP\_System\MAC-OTP-System\Dev\R1.0\Libraries\CoreDomain\Utils.cs:line 2818  
   at StsEndUserRegistration.WsStsEndUserRegistration(String data) in d:\Development\_OTP\_System\DefaultCollection\MAC\_R1\MACServices\User\App\_Code\StsEndUserRegistration.cs:line 223

If the following is the request data before encoding then the error is saying that the request verb is missing.

Is:

Request:|CID:53ebb04d7484691d4ce32a27|FirstName:John|LastName:Doe|PhoneNumber:5555551212|[EmailAddress:aaaaaaaa@wipro.com](mailto:EmailAddress%3Aaaaaaaaa@wipro.com)|RegType:OpenRegister|UserId:48026811112345678901234567890|API:STS

Should Be:

Request:EndUserRegister|CID:53ebb04d7484691d4ce32a27|FirstName:John|LastName:Doe|PhoneNumber:5555551212|[EmailAddress:aaaaaaaa@wipro.com](mailto:EmailAddress%3Aaaaaaaaa@wipro.com)|RegType:OpenRegister|UserId:48026811112345678901234567890|API:STS

Thanks Terry,

The point the team are making is that they are intentionally leaving the value for that key blank to try and force the Request Type Required error. Are you able to confirm how they can replicate that exception?  
  
Regards

Nick,

I see the exception and need some time to figure out how to fix the problem.

Will let you know when to try the bad request again.

Please continue valid requests.

Warm regards,

Terry

Nick,

I also noticed that the request did not end with "API:STS".

Would be nice as it helps us when searching the event log for requests from STS.

Thanks,

Terry

        Is the Ad div always a fixed size? We’ll need to know this to ensure that we allow for the right dimensions on the page.

Yes, Normally, the size is set when the client creates the ads for the ad campaign. So the client must create the ad with the correct size. The client should have a way to test their ads and MAC can help them with that.

I have a couple of follow on questions on the Ad creation process.  Will the client have a portal they log into and can we enforce the size of the Ads that they create?

The client or STS on behalf of the client will have a portal to the Ad System where they can manage the ad campaigns and the ads within the campaigns. In the STS hosted solution STS would provide the size to the client so they get it right. Also it looks as if it may be a good idea for us (MAC & STS together) to create a "test ads web application" so the everyone can make sure the ads will get displayed correct. What do you think?

We have an option where we display the OTP screen ourselves on behalf of the Operator (as part of our fully hosted solution) and we wouldn’t be able to deal with dynamic sized Ads because our hosted screens will be hosted within iFrames on the Operator’s site.

This will work

         I have proposed the following flow to our developers and want to check that it will work with you

o    We will send a Player the first OTP by SMS

o    When we display the OTP Capture screen we will display a text box for them to enter their OTP along with a ’Submit’ and ‘Resend via SMS’ & ‘Resend via Email’ buttons. The idea I to give the player the option to resend via alternate methods.  I want to make sure that this will work and not cause any problems on your end.

As it is now the deliver method is configured when the client is configured. SMS, Email or (later Voice).  MAC would have to add the select deliver method to the resend logic. Will take some work but MAC will do it if you think its needed. Note: sending the OTP via email is not as secure as SMS because email uses the same channel (web) as the login. Where as SMS is a totally different channel.

OK I misunderstood the Email & SMS Client IDs, I thought we would have the option. In that case we’ll go for SMS to start with

Note: We have setup 2 clients, i configured to send SMS and the other to send email via email so you guys can test if they don't have US phones. Just can't switch.

Dev 15th

Hi Terry,

I hope you’re well.  I have a couple of follow on questions, namely:

         Previously I asked how a player can change their registered mobile number or email address to which you kindly responded ‘The MAC System has an End User Management service this service can be used to change the phone number, or, Unregister and re-register with new phone number.’  How would this end user management service work?  Is there an API version as the end user won’t have access to the MAC system I presume and I can’t see Operator’s wanting to update their player’s details manually.

         As far as the Client ID is concerned, if Merchants can manage their own Ads I presume that we would need to be provided with a unique client Id for each Merchant we on-board.  If so, we have a two level hierarchy for Merchants, there is a top level account and one or more second level accounts.  Our Player ID is unique for each second level account so as an example, an Operator (top level account) could have two different brands (site A and site B).  If Joe Bloggs registers on Site A and Site B he will have 2 unique player IDs.  If the Player ID on our system is always unique per site I presume that we will always use the ClientRegister option as opposed to the GroupRegister or OpenRegister option?

Please let me know if you have any questions or would like further clarification

Kind regards

**Nick Smith**

Nick,

We are all doing well here, hope the same is true at STS.

         Previously I asked how a player can change their registered mobile number or email address to which you kindly responded ‘The MAC System has an End User Management service this service can be used to change the phone number, or, Unregister and re-register with new phone number.’  How would this end user management service work?  Is there an API version as the end user won’t have access to the MAC system I presume and I can’t see Operator’s wanting to update their player’s details manually.

MAC provides a EndUserManagement Web Service for the integrated systems to use to change an end user's phone number. As with the Request OTP and Verify OTP we do not provide and interface for the end user. I assume this would be part of the STS user's interface (part of registration) or provided by STS' clients.

         As far as the Client ID is concerned, if Merchants can manage their own Ads I presume that we would need to be provided with a unique client Id for each Merchant we on-board.

Yes each client has an unique id that never changes, The MAC OTP system will contain all the ad related configuration for each client. The Ad system will manage the campaigns and ads through it's portal.

 If so, we have a two level hierarchy for Merchants, there is a top level account and one or more second level accounts.  Our Player ID is unique for each second level account so as an example, an Operator (top level account) could have two different brands (site A and site B).  If Joe Bloggs registers on Site A and Site B he will have 2 unique player IDs.  If the Player ID on our system is always unique per site I presume that we will always use the ClientRegister option as opposed to the GroupRegister or OpenRegister option?

In that case yes ClientRegister would work. The system doesn't care how many times you register an end user and long as the ID is unique.

If you needed to separate "Merchants" within "Site A", the online gift shop, online venue ticket sales and online gaming. Then you could use the GroupRegister. Where "Site A" was the group and "Site A's gift shop", "Site A's ticket sales" and "Site A's online gaming" where clients under the Site A's group.

OpenRegister is only used where you the end user to register once and be accessed by every client in the system. IE. registering under a credit card that is accepted by any client.

Hi Terry,

All well on this side thank you.  Please see below

Kind regards

**Nick Smith**

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**From:** Terry Davis [mailto:[tdavis@mobileauthcorp.com](mailto:tdavis@mobileauthcorp.com)]   
**Sent:** 15 December 2014 18:27  
**To:** Nick Smith  
**Cc:** Kevin Dodson  
**Subject:** Re: Further Questions

Nick,

We are all doing well here, hope the same is true at STS.

         Previously I asked how a player can change their registered mobile number or email address to which you kindly responded ‘The MAC System has an End User Management service this service can be used to change the phone number, or, Unregister and re-register with new phone number.’  How would this end user management service work?  Is there an API version as the end user won’t have access to the MAC system I presume and I can’t see Operator’s wanting to update their player’s details manually.

MAC provides a EndUserManagement Web Service for the integrated systems to use to change an end user's phone number. As with the Request OTP and Verify OTP we do not provide and interface for the end user. I assume this would be part of the STS user's interface (part of registration) or provided by STS' clients.  Please could you provide the Web Service details so that we can incorporate this functionality?

         As far as the Client ID is concerned, if Merchants can manage their own Ads I presume that we would need to be provided with a unique client Id for each Merchant we on-board.

Yes each client has an unique id that never changes, The MAC OTP system will contain all the ad related configuration for each client. The Ad system will manage the campaigns and ads through it's portal. Ok thanks, we will store the OTP Client ID against each of our Operator Sites

 If so, we have a two level hierarchy for Merchants, there is a top level account and one or more second level accounts.  Our Player ID is unique for each second level account so as an example, an Operator (top level account) could have two different brands (site A and site B).  If Joe Bloggs registers on Site A and Site B he will have 2 unique player IDs.  If the Player ID on our system is always unique per site I presume that we will always use the ClientRegister option as opposed to the GroupRegister or OpenRegister option?

In that case yes ClientRegister would work. The system doesn't care how many times you register an end user and long as the ID is unique.

If you needed to separate "Merchants" within "Site A", the online gift shop, online venue ticket sales and online gaming. Then you could use the GroupRegister. Where "Site A" was the group and "Site A's gift shop", "Site A's ticket sales" and "Site A's online gaming" where clients under the Site A's group.  Thanks, we will have to go down the ClientRegister route.  We issue unique player IDs so you in your example a player would have 3 separate Player IDs, 1 for ‘Site A Gift Shop’, another for ‘Site A Ticket Sales’ and a third for ‘Site A Online Gaming’ so we can’t send you a single player ID anyway for that player to be shared across all three sites

DEC 16TH

Hi Terry,

I’m reviewing our technical team’s design and when digging deeper into your spec I’m a little confused about the RequestOTP and VerifyOTP responses, particularly in reference to the OTP retry and expiry time.

As per the spec STS Questions document attached, section 3.a. mentions that the RequestOTP response will include the expiry time of the OTP

 3)      Normal operational errors

a.       End User Exists, The UserId was not unique and the user is already in the database.

b.      Invalid OTP, Normally caused by the user entered an incorrect OTP,  the retry count was exceeded or the OTP was retried after it timed out. Display re-enter OTP.  Note: the retry count is in the details of the response.

c.       Timeout, the user waited too long to enter the OTP. Note: the time allotted to enter the OTP is in the details of the reply of the RequestOTP response.

However, the RequestOTP response description as per the attached Integration document does not include that information

<?xml version="1.0" encoding="utf-8"?>

<macResponse totalProcessTime="841ms"><calledMethod>WsRequestOtp()</calledMethod>

<Reply>RequestId:5446d6637484691328eab102|DeliveryMethod:Sms|Ad:3C64697620646174612D61642D69643D27456E7465724F54505F4731273E3C61207461726765743D275F626C616E6B2720687265663D27687474703A2F2F6C6F63616C686F73743A383031302F64656D6F732F52656469722E617370783F693D4731273E3C696D67207372633D27687474703A2F2F6C6F63616C686F73743A383031302F64656D6F732F6164732F676F6C662F676F6C662D6164312E6A706727207374796C653D276D61782D77696474683A2033333570782021696D706F7274616E743B77696474683A20313030252021696D706F7274616E743B2720626F726465723D2730273E3C2F613E3C2F6469763E|ContentAd:3C64697620646174612D61642D69643D27456E7465724F54505F4731273E3C61207461726765743D275F626C616E6B2720687265663D27687474703A2F2F6C6F63616C686F73743A383031302F64656D6F732F52656469722E617370783F693D4731273E3C696D67207372633D27687474703A2F2F6C6F63616C686F73743A383031302F64656D6F732F6164732F676F6C662F676F6C662D6164312E6A706727207374796C653D276D61782D77696474683A2033333570782021696D706F7274616E743B77696474683A20313030252021696D706F7274616E743B2720626F726465723D2730273E3C2F613E3C2F6469763E </Reply>

<Details>SendOtp|Scottsdale Golf Store|Sms</Details>

</macResponse>

I’m also a little confused by the success response of the Verify OTP request

3.       Verify OTP request

3.1.1          Successful response details

3.1.1.1    Example:

<?xml version="1.0" encoding="utf-8"?>

<macResponse totalProcessTime="361ms"><calledMethod>WsValidateOtp()</calledMethod>

<Details>|RequestId:5446d01f74846913287bf412|OTPRetriesMax:3|OTPRetriesCurrent:0|OTPExpiredTime:10/21/2014 10:05:49 PM|ClientName:Scottsdale Golf Store

</Details>

</macResponse>

3.1.1.1.1           Details:

3.1.1.1.1.1     Key  “RequestId”  Value “5446d01f74846913287bf412” –  Request correlation number.

3.1.1.1.1.2     Key “OTPRetriesMax” Value “3” – Maximum retries.

3.1.1.1.1.3     Key “OTPRetriesCurrent” value “0” – Current

3.1.1.1.1.4     Key “OTPExpiredTime” value “10/21/2014 10:05:49 PM” – Time OTP will expire.

3.1.1.1.1.5     Key “ClientName” value “Scottsdale Golf Store” – Name of client.

Which field explicitly confirms that the VerifyOTP request was successful?  It seems strange that this response is in the Verify Response unless this was a response from a failed retry where it confirms how many more verify requests can be submitted.

I would appreciate if you could provide an initial response via email so that I can finalise our design but I think it would be really helpful to get an updated Integration document with all of the requests, error responses and missing web service interfaces (Resend OTP, change player details (mobile / email address) included so that we can work to a single and final document.  At the moment we are referring to multiple documents and emails and I don’t want this to result in integration issues & code changes later down the line.

If you would like to have a phone call to discuss then please let me know.

Kind regards

**Nick Smith**