

# Magensa Web Service

## DecryptAndForwardWS Operations

### Programmer's Reference Manual

**April 20, 2016**

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Table 0.1 - Revisions

Rev Number	Date	By	Notes
10	2/25/2015	Donnie James	Initial release.
11	4/21/2015	Andy Deignan	Added information about the “purpose of this document”.
12	1/27/2016	Donnie James	Added ProcessEMVSRED operation. Added replacement variables. Updated ProcessCardSwipe operation with: AdditionalRequestData
20	4/20/2016	Phisa Kelleher	Updated Page 4 Variables

## NOTICE

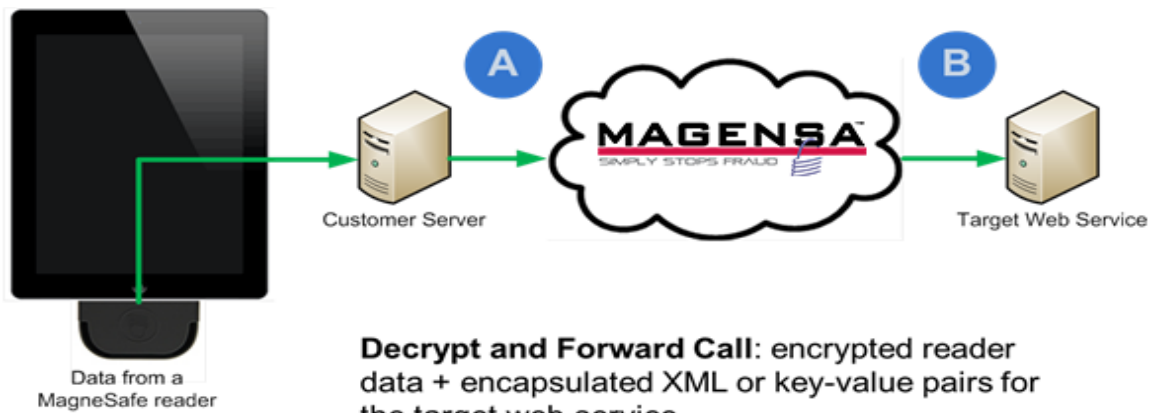
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## Purpose of the document

The purpose of this document is to provide a description of how to call operations of the Magensa Decrypt and Forward Web Services.

Effective use of the Decrypt and Forward Web Services enables users to easily integrate encrypted card swipe data into a payment application where the payment application traditionally transmits unencrypted card swipe data when calling web services for a third-party (or ‘target’) service provider. Users can send Magensa the encapsulated XML (SOAP) or key-value pairs for the third-party service provider, along with encrypted card swipe data from a MagTek MagneSafe reader, and Magensa will decrypt the card swipe data and insert the relevant data, including the unencrypted card data, into the target XML or key-value pairs and call the third-party service provider on behalf of the user. This process will allow a user to support encrypted card swipe data in their payment application without the third-party service provider supporting a decryption service.



**Decrypt and Forward Call:** encrypted reader data + encapsulated XML or key-value pairs for the target web service

**Target Web Service Call:** target web service XML or key-value pairs with inserted, clear text reader data

Examples of third-parties service providers to use with Decrypt and Forward:

- Payment processors
- Tokenization services
- Card fraud alert services
- Gift card processors
- Credit check services
- Special-purpose gateways (EBT, procurement card, etc)

The Decrypt and Forward web service works by decrypting data from a MagneSafe encrypted card swipe and placing the appropriate decrypted data into the target XML or key-value pairs. This is accomplished by using “field replacement variables” that are inserted in-line into the payload. For instance, a target web service might accept a card Primary Account Number (PAN) as an input using the following tag:  
 <PAN></PAN>

To instruct Magensa to place the decrypted PAN from the card swipe into this tag, the field replacement variable '{CCNum}' would be used as follows:

#### Variables

1. {DecryptedData}
2. {CCName}
3. {CCNum}
4. {CCTrack1}
5. {CCTrack1Length}
6. {CCTrack2}
7. {CCTrack2Length}
8. {CCardType}
9. {KSN}
10. {MMYYCCExpdt}
11. {MM\_YYCCExpdt}
12. {DD}
13. {MM}
14. {YY}
15. {YYYY}

#### Functions

1. \$Add(Operand1\_Numeric,Operand2\_Numeric,ToStringFormat\_Optional)
2. \$DateTimeNow(Optional\_format,Optional\_0\_Local\_Or\_1\_Universal)
3. \$DecimalToString (Operand1\_Numeric,ToStringFormat\_Optional)
4. \$IndexOf(string,searchString,startPosition,numberOfCharacterPosition)
5. \$IndexIgnoreCaseOf(string,searchString,startPosition,numberOfCharacterPosition)
6. \$Length(string)
7. \$Multiply(Operand1\_Numeric,Operand2\_Numeric,ToStringFormat\_Optional)
8. \$Replace (string,oldValue,newValue)
9. \$Substring(string,startindex,length)
10. \$Substring(string,startindex,length)
11. \$TLVLength(string)
12. \$Trim(string)

Additional variables will be added from time-to-time. If a particular card data element is required for the target web service you wish to use, please contact [support@magensa.net](mailto:support@magensa.net) to submit a request to have it added to the service.

The Decrypt and Forward Web Services do not rely on a pre-existing integration between Magensa and the third-party service provider. As long as the third-party service provider uses web services, and Magensa can call those web services on behalf of the user, the third-party service can be used. In the case where the user has never integrated to the third-party service provider before, it is recommended for the user to integrate to the Decrypt and Forward Web services first, and then certify to the target third-party service provider with Decrypt and Forward in-place. In order for Magensa to call the third-party service provider, consideration must be given to the following:

- a. Whether Magensa's IP addresses and domain names must be whitelisted with the third-party
- b. Whether client and/or server-side certificates are required.

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# 1 DecryptAndForwardWSBackend Operations

## 1.1 ProcessCardSwipe

A command used to decrypt and forward a processed card swipe.

### Input Properties

Property (*)	Value	Value Description
<b>AdditionalRequestData</b>	<string>	A group that contains custom request data required by the target web service. Elements are expressed as Key/Value pairs grouped under <KeyValuePairOfstringstring>. See examples.
<b>CustomerCode *</b>	<string>	Customer code
<b>Password *</b>	<string>	The password for the credential created and assigned by MagTek.
<b>Username *</b>	<string>	The User Identification credential created and assigned by MagTek.
<b>BillingLabel</b>	<string>	Billing label
<b>CustomerTransactionId</b>	<string>	Customer transaction ID
<b>DeviceSN</b>	<string>	Device serial number
<b>KSN *</b>	<string>	Key serial number of the device.
<b>MagnePrint *</b>	<string>	Encrypted MagnePrint
<b>MagnePrintPStatus *</b>	<string>	MagnePrint status
<b>Track1</b>	<string>	Encrypted track1 data
<b>Track2 *</b>	<string>	Encrypted track2 data
<b>Track3</b>	<string>	Encrypted track3 data
<b>Headers</b>	<string>	A group that contains custom HTTP headers required by the target web service. Elements are expressed as Key/Value pairs grouped under <KeyValuePairOfstringstring>. See examples.
<b>Payload *</b>	<string>	Payload data. Example: <![CDATA[payload]]>
<b>Uri *</b>	<string>	Address to forward the data.

Note: \* = Required



## Output Properties

Property	Value	Value Description
AdditionalOutputData	<string>	A group that contains additional output data returned by the target web service. Elements are expressed as Key/Value pairs grouped under <KeyValuePairOfstringstring>. See examples.
CardID	<string>	Card ID
CustomerTransactionId	<string>	Customer transaction ID
IsReplay	<string>	Boolean value informing that the KSN has been used in a prior transaction. Enum values: true – KSN has been used in a prior transaction. false – KSN has not been used prior to current transaction.
MagTranId	<string>	Magensa assigned unique transaction ID in GUID form.
MagnePrintScore	<string>	MagnePrint score
PayloadResponse	<string>	Response from the Uri input.
PayloadToken	<string>	Hexadecimal format.
TransactionUTCTime&amp;	<string>	Transaction timestamp.

### ProcessCardSwipe Request for a target web service using key/value pairs:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:tem="http://tempuri.org/"
xmlns:dec="http://schemas.datacontract.org/2004/07/DecryptAndForwardCoreNSV2"
xmlns:sys="http://schemas.datacontract.org/2004/07/System.Collections.Generic">
  <soapenv:Header/>
  <soapenv:Body>
    <tem:ProcessCardSwipe>
      <tem:processCardSwipeRequest>
        <dec:AdditionalRequestData>
          <!--Zero or more repetitions:-->
          <sys:KeyValuePairOfstringstring>
            <sys:key></sys:key>
            <sys:value></sys:value>
          </sys:KeyValuePairOfstringstring>
        </dec:AdditionalRequestData>
        <dec:Authentication>
          <dec:CustomerCode>1000000000000000</dec:CustomerCode>
          <dec>Password>Password</dec>Password>
          <dec:Username>Username</dec:Username>
        </dec:Authentication>
        <dec:BillingLabel>Bill Me</dec:BillingLabel>
        <dec:CustomerTransactionID>1234</dec:CustomerTransactionID>
        <dec:EncryptedCardSwipe>
          <dec:DeviceSN>B00CB7B</dec:DeviceSN>
          <dec:KSN>9011400B00CB7B00218A</dec:KSN>
        </dec:EncryptedCardSwipe>
        <dec:MagnePrint>04ABF1328C60172956883701613264E5578DEBE625F8E7EDBAC16C4E86856C5999105E630009B0D7D1
465B2F7A5060C45773DA361F690109</dec:MagnePrint>
          <dec:MagnePrintStatus>2098705</dec:MagnePrintStatus>
        </dec:MagnePrint>
        <dec:Track1>07AACA07B80CDB54468728DC88B71E3606AB7971B423D09E2F6D8FC48114C171929F89E15D38B5B5EB900F
4DD9A8F0CF479AA2CAFF9C995C2E888D4D65472DA86D23326E18C137067549D188158DEA79</dec:Track1>
        <dec:Track2>48D88976E700A5E3F8653CB3FD6F71DC91A6AC2C7B41199CF90838EB942A47C6301C1540B3C1E5D1</dec:
Track2>
          <dec:Track3></dec:Track3>
        </dec:Track3>
      </tem:processCardSwipeRequest>
    </tem:ProcessCardSwipe>
  </soapenv:Body>
</soapenv:Envelope>
```

```

</dec:EncryptedCardSwipe>
<dec:PayloadInfo>
  <dec:Headers>
    <!--Zero or more repetitions:-->
    <sys:KeyValuePairOfstringstring>
      <sys:key>Content-Type</sys:key>
      <sys:value>text/xml; charset=utf-8</sys:value>
    </sys:KeyValuePairOfstringstring>
  </dec:Headers>

<dec:Payload><![CDATA[TRXTYPE=A&TENDER=C&USER=User&PWD=12%j@Kabc&PARTNER=Partner&EXECUTOR=Executor
&VENDOR=ABCF012345130715&ACCT={CCNum}&EXPDATE={MM}{YY}&AMT=0.10]]></dec:Payload>
  <dec:Uri>https://payflowpro.paypal.com</dec:Uri>
</dec:PayloadInfo>
</tem:processCardSwipeRequest>
</tem:ProcessCardSwipe>
</soapenv:Body>
</soapenv:Envelope>

```

### ProcessCardSwipe Response:

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <ProcessCardSwipeResponse xmlns="http://tempuri.org/">
      <ProcessCardSwipeResult
xmlns:a="http://schemas.datacontract.org/2004/07/DecryptAndForwardCoreNSV2"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:CardSwipeOutput>
          <a:AdditionalOutputData i:nil="true"
xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic"/>
            <a:CardID i:nil="true"/>
            <a:IsReplay>true</a:IsReplay>
            <a:MagnePrintScore>3.0</a:MagnePrintScore>
          </a:CardSwipeOutput>
          <a:CustomerTransactionID>1234</a:CustomerTransactionID>
          <a:MagTranID>8a87761f-74e4-47bd-831b-ad212adf278b</a:MagTranID>
          <a:PayloadResponse>HTTP/1.1 200 OKConnection: close
Content-Length: 67
Content-Type: text/namevalue
Date: Fri, 20 Nov 2015 17:48:45 GMT
Server: VPS-3.033.00

&amp;RESULT=0&amp;PNREF=AR0NCBB1B047&amp;RESPMSG=Approved&amp;AUTHCODE=000037&amp;IAVS=X</a:PayloadResponse>

          <a:PayloadToken>943153A5AB2D464CB5E14778B1219D0C7CC0EF3B5A066E99DF52888951C81045</a:PayloadToken>
            <a:TransactionUTCTimestamp>2015-11-20 17:48:45Z</a:TransactionUTCTimestamp>
          </ProcessCardSwipeResult>
        </ProcessCardSwipeResponse>
      </s:Body>
    </s:Envelope>

```

### ProcessCardSwipe Request for a target web service using SOAP:

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <ProcessCardSwipe xmlns="http://tempuri.org/">
      <processCardSwipeRequest
xmlns:a="http://schemas.datacontract.org/2004/07/DecryptAndForwardCoreNSV2"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:AdditionalRequestData i:nil="true"
xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic"/>
          <a:Authentication>
            <a:CustomerCode>1000000000000000</a:CustomerCode>
            <a>Password>Password</a>Password>
            <a:Username>Username</a:Username>
          </a:Authentication>

```

```

    <a:BillingLabel i:nil="true"/>
    <a:CustomerTransactionID>dcddee60-f639-4c9d-ba88-
6341989e87a4</a:CustomerTransactionID>
    <a:EncryptedCardSwipe>
      <a:DeviceSN>98D70CE31309160D</a:DeviceSN>
      <a:KSN>95000300000001206236</a:KSN>

<a:MagnePrint>CB321292A6F9E1A7016F16565976DD0B243711DA6BF5F9482D04084C794A64C49D684B4A9C85FABD838A
661DEED4C417A3567585A83530A6</a:MagnePrint>
    <a:MagnePrintStatus>00002200</a:MagnePrintStatus>

<a:Track1>BD356DA16C54704DC6AB3CB0A8279A2A411AB93B1D5775033693E55E7D6AEDF5C2384A5AFBC30A0F154FEBFF
C5EA2FBB075CB6D51B20733F22B3CD92DFCCA041C18CC7E69F79E064</a:Track1>

<a:Track2>89F7E52583A956604D4950775F57BA260BEFE4222A3082B7CC4B061738F058CD3C28BA3932B0A5A6</a:Trac
k2>
    <a:Track3/>
  </a:EncryptedCardSwipe>
  <a:PayloadInfo>
    <a:Headers i:nil="true"
xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic"/>
    <a:Payload><![CDATA[<JetPay Version="2.0"><Application
Version="2.0.0">MAGNEFLEX</Application><Billing><Address>{BillingAddress}</Address><City>{BillingC
ity}</City><Country>{BillingCountry}</Country><Email>{BillingEmail}</Email><Phone>{BillingPhone}</
Phone><PostalCode>99999
</PostalCode><StateProv>{BillingState}</StateProv></Billing><CardExpMonth>{MM}</CardExpMonth><Card
ExpYear>{YY}</CardExpYear><CardName>{CCName}</CardName><CardNum
CardPresent="true">{CCNum}</CardNum><CVV2>{CVV}</CVV2><DeveloperID>V32YHV</DeveloperID><Device>{De
viceID}</Device><Gateway>JetPay</Gateway><IndustryInfo
Type="RETAIL"><BaseAmount>{SubtotalAmount}</BaseAmount><TipAmount>{TipAmount}</TipAmount></Industr
yInfo><Origin>POS</Origin><Password>{Password}</Password><ReaderUsed>MAGNETIC
STRIPE</ReaderUsed><Shipping><Address>{ShippingAddress}</Address><City>{ShippingCity}</City><Count
ry>{ShippingCountry}</Country><CustomerPO>{PurchaseOrder}</CustomerPO><Email>{ShippingEmail}</Emai
l><Name>{ShippingName}</Name><Phone>{ShippingPhone}</Phone><PostalCode>{ShippingZIP}</PostalCode><
ShippingMethod>{ShippingMethod}</ShippingMethod><StateProv>{ShippingState}</StateProv></Shipping><
TaxAmount>{TaxAmount}</TaxAmount><TerminalID>TESTMCC5111X</TerminalID><TotalAmount>100</TotalAmoun
t><Track1>%{CCTrack1}?</Track1><Track2>;{CCTrack2}?</Track2><TransactionID>GHC3X09P72YZP-
KB49</TransactionID><TransactionType>SALE</TransactionType></JetPay>]]></a:Payload>
    <a:Uri>https://test1.jetpay.com/jetpay</a:Uri>
  </a:PayloadInfo>
</processCardSwipeRequest>
</ProcessCardSwipe>
</s:Body>
</s:Envelope>

```

## ProcessCardSwipe Response:

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <ProcessCardSwipeResponse xmlns="http://tempuri.org/">
      <ProcessCardSwipeResult
xmlns:a="http://schemas.datacontract.org/2004/07/DecryptAndForwardCoreNSV2"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:CardSwipeOutput>
          <a:AdditionalOutputData i:nil="true"
xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic"/>
          <a:CardID i:nil="true"/>
          <a:IsReplay>true</a:IsReplay>
          <a:MagnePrintScore>0.8966783</a:MagnePrintScore>
        </a:CardSwipeOutput>
        <a:CustomerTransactionID>dcddee60-f639-4c9d-ba88-
6341989e87a4</a:CustomerTransactionID>
        <a:MagTranID>1a766aee-895c-4452-b829-88a19cc251ed</a:MagTranID>
        <a:PayloadResponse><![CDATA[HTTP/1.1 200 OKVary: Accept-Encoding
Keep-Alive: timeout=5, max=1000
Connection: Keep-Alive
Transfer-Encoding: chunked

```

Content-Type: text/plain; charset=UTF-8  
Date: Fri, 20 Nov 2015 16:57:48 GMT  
Server: Apache

```
&<JetPayResponse Version="2.0"><TransactionID>GHC3X09P72YZP-KB49</TransactionID>  
<ActionCode>000</ActionCode>  
<Approval>TEST44</Approval>  
<CVV2>P</CVV2>  
<ResponseText>APPROVED</ResponseText>  
<UniqueID>QkVjYnYmQnQjRkQmUlTcQoWj</UniqueID>  
<RRN>532416449062</RRN>  
<RawResponseCode>00</RawResponseCode>  
<AddressMatch>Y</AddressMatch>  
<ZipMatch>Y</ZipMatch>  
<AVS>Y</AVS>  
</JetPayResponse>]]></a:PayloadResponse>  
  
<a:PayloadToken>C49587D6FCA40054F4433C1056A4FED5980C13C339DBCC27BA48F574E729A4B5</a:PayloadToken>  
  <a:TransactionUTCTimestamp>2015-11-20 16:57:48Z</a:TransactionUTCTimestamp>  
  </ProcessCardSwipeResult>  
  </ProcessCardSwipeResponse>  
</s:Body>  
</s:Envelope>
```

## 1.2 ProcessEMVSRED

A command used to decrypt and forward an EMV transaction.

### Input Properties

Property (*)	Value	Value Description
<b>AdditionalRequestData</b>	<string>	A group that contains custom request data required by the target web service. Elements are expressed as Key/Value pairs grouped under <KeyValuePairOfstringstring>. See examples.
<b>CustomerCode *</b>	<string>	Customer code
<b>Password *</b>	<string>	The password for the credential created and assigned by MagTek.
<b>Username *</b>	<string>	The User Identification credential created and assigned by MagTek.
<b>BillingLabel</b>	<string>	Billing label
<b>CustomerTransactionId</b>	<string>	Customer transaction ID
<b>EMVSREDData *</b>	<string>	Encrypted EMV transaction data (ARQC) from device to send to the processor.
<b>EncryptionType *</b>	<string>	The encrypted transaction data encryption type used for EMVSREDData. Use value 80. 80 = DUKPT Key Data Variant
<b>KSN *</b>	<string>	Key serial number of the device.
<b>NumberOfPaddedBytes *</b>	<string>	Number of bytes padded to the end of the decrypted EMVSREDData to make a multiple of 8 bytes.
<b>Headers</b>	<string>	A group that contains custom HTTP headers required by the target web service. Elements are expressed as Key/Value pairs grouped under <KeyValuePairOfstringstring>. See examples.
<b>Payload *</b>	<string>	Payload data Example: <![CDATA[payload]]>
<b>Uri *</b>	<string>	Address to forward the data.

Note: \* = Required

## Output Properties

Property	Value	Value Description
CustomerTransactionId	<string >	Customer transaction ID
AdditionalOutputData	<string >	A group that contains additional output data returned by the target web service. Elements are expressed as Key/Value pairs grouped under <KeyValuePairOfstringstring>. See examples.
CardID	<string >	Card ID
IsReplay	<string >	Boolean value informing that the KSN has been used in a prior transaction. Enum values: true – KSN has been used in a prior transaction. false – KSN has not been used prior to current transaction.
MagTranId	<string >	Magensa assigned unique transaction ID in GUID form.
PayloadResponse	<string >	Response from the Uri input.
PayloadToken	<string >	Hexadecimal format.
TransactionUTCTimestamp	<string >	Transaction timestamp.

## ProcessEMVSRED Request for a target web service using key/value pairs:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:tem="http://tempuri.org/"
xmlns:dec="http://schemas.datacontract.org/2004/07/DecryptAndForwardCoreNSV2"
xmlns:sys="http://schemas.datacontract.org/2004/07/System.Collections.Generic">
  <soapenv:Header/>
  <soapenv:Body>
    <tem:ProcessEMVSRED>
      <tem:processEMVSREDRequest>
        <dec:AdditionalRequestData>
          <!--Zero or more repetitions:-->
          <sys:KeyValuePairOfstringstring>
            <sys:key/>
            <sys:value/>
          </sys:KeyValuePairOfstringstring>
        </dec:AdditionalRequestData>
        <dec:Authentication>
          <dec:CustomerCode>1000000000000000</dec:CustomerCode>
          <dec:Password>Password</dec:Password>
          <dec:Username>Username</dec:Username>
        </dec:Authentication>
        <dec:BillingLabel>Bill Me</dec:BillingLabel>
        <dec:CustomerTransactionID>1234</dec:CustomerTransactionID>
        <dec:EMVSREDInput>
<dec:EMVSREDData>B0007B7747CCC0DB3E5732D58712A19813274B2A1EE70047DE581CE7D06516A0CA05FC4DBED9EAF44
50A6DFA0D9EC6EE9F3D752CB8021CEF4F8C140871101BC6CB5CA76CC4D62DCC0876A869E1BA39548F9F02C0FCB09672352
EDB774E579EF16F7E6F39962898238C653D5F0F79C9A34E6B44A23002DC228E6A61482E42E461156A361A08D8D8CFD37D4
C19F80EAA1AD50C5C205E40E9E33CC0B96985D9374013AE590AB32FA3E483EF38D83C1859FCEF26226DC8E50A33C0064FC
90A21BA831D7F9C3E89AB1400B9DC30D01F4A45BEB1EF3997333DBB19A43D622752CD97BB</dec:EMVSREDData>
          <dec:EncryptionType>80</dec:EncryptionType>
        </dec:EMVSREDInput>
      </tem:processEMVSREDRequest>
    </tem:ProcessEMVSRED>
  </soapenv:Body>
</soapenv:Envelope>
```

```

    <dec:KSN>950003000000120014B</dec:KSN>
    <dec:NumberOfPaddedBytes>4</dec:NumberOfPaddedBytes>
  </dec:EMVSREDInput>
  <dec:PayloadInfo>
    <dec:Headers>
      <!--Zero or more repetitions:-->
      <sys:KeyValuePairOfstringstring>
        <sys:key>Content-Type</sys:key>
        <sys:value>text/xml; charset=utf-8</sys:value>
      </sys:KeyValuePairOfstringstring>
    </dec:Headers>
  <dec:Payload><![CDATA[TRXTYPE=S&TENDER=C&USER=MagTek&PWD=123456789&PARTNER=Partner&EXECUTOR=Execut
or&VENDOR=Vendor7890123456&ACCT={5A}&EXPDATE=${SubString( {5F24} , 2, 2)$SubString( {5F24} , 0, 2)&AMT=0.10
]]></dec:Payload>
    <dec:Uri>https://pilot-payflowpro.paypal.com</dec:Uri>
  </dec:PayloadInfo>
</tem:processEMVSREDRequest>
</tem:ProcessEMVSRED>
</soapenv:Body>
</soapenv:Envelope>

```

### ProcessEMVSRED Response:

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <ProcessEMVSREDResponse xmlns="http://tempuri.org/">
      <ProcessEMVSREDResult
xmlns:a="http://schemas.datacontract.org/2004/07/DecryptAndForwardCoreNSV2"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:CustomerTransactionID>1234</a:CustomerTransactionID>
        <a:EMVSREDOutput>
          <a:AdditionalOutputData i:nil="true"
xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic"/>
            <a:CardID i:nil="true"/>
            <a:IsReplay>true</a:IsReplay>
          </a:EMVSREDOutput>
          <a:MagTranID>71e13103-4d15-45a3-a248-194e6631f47d</a:MagTranID>
          <a:PayloadResponse>HTTP/1.1 200 OKConnection: close
Content-Length: 67
Content-Type: text/namevalue
Date: Wed, 27 Jan 2016 17:52:44 GMT
Server: VPS-3.033.00

&amp;RESULT=0&amp;PNREF=A70N8CA932EF&amp;RESPMSG=Approved&amp;AUTHCODE=009067&amp;IAVS=X</a:PayloadResponse>
        <a:PayloadToken>6479D61DD30D563B4A8D042C9CB5DFDAC99D55B568961DFB25D90CCFB27F5BEE</a:PayloadToken>
        <a:TransactionUTCTimestamp>2016-01-27 17:52:45Z</a:TransactionUTCTimestamp>
      </ProcessEMVSREDResult>
    </ProcessEMVSREDResponse>
  </s:Body>
</s:Envelope>

```

### ProcessEMVSRED Request for a target web service using SOAP:

```

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:tem="http://tempuri.org/"
xmlns:dec="http://schemas.datacontract.org/2004/07/DecryptAndForwardCoreNSV2"
xmlns:sys="http://schemas.datacontract.org/2004/07/System.Collections.Generic">
  <soapenv:Header/>
  <soapenv:Body>
    <tem:ProcessEMVSRED>
      <tem:processEMVSREDRequest>
        <dec:AdditionalRequestData>
          <!--Zero or more repetitions:-->
          <sys:KeyValuePairOfstringstring>
            <sys:key></sys:key>
            <sys:value></sys:value>
          </sys:KeyValuePairOfstringstring>
        </dec:AdditionalRequestData>
      </tem:processEMVSREDRequest>
    </tem:ProcessEMVSRED>
  </soapenv:Body>
</soapenv:Envelope>

```

```

    <dec:Authentication>
      <dec:CustomerCode>1000000000000000</dec:CustomerCode>
      <dec:Password>Password</dec:Password>
      <dec:Username>Username</dec:Username>
    </dec:Authentication>
    <dec:BillingLabel>Bill Me</dec:BillingLabel>
    <dec:CustomerTransactionID>1234</dec:CustomerTransactionID>
    <dec:EMVSREDInput>

<dec:EMVSREDData>E60A6C69C3DBB68C0AA285D05003407CC6895CBF8101410189962D1A9A5DAEB01B590E830CD26594A
E3D00446CF7BF002A25596AE7373BB21BA628736B93A994FE734CC5197AD59932CEADC8CB5492E40337FFDAA87BF3F61A8
66D68B98FD9A67FD2D9DB8569B98A8E019097252F26F4A867BA89C1A4824B8907ACBE4C7882FAE2772BCB11F9DE606118D
8FE1FAC778AFE97E1665B880B4CB45E033092909C0AE6107C8F374AD20DF7DF32B48BA9EDCCD379D4A9DA57E44357E1715
73D29A2310EB6A431A918DEA6A5921750CC090CB329AAABF6515A4066E9EC36A2237E33AF</dec:EMVSREDData>
    <dec:EncryptionType>80</dec:EncryptionType>
    <dec:KSN>9500030000000120014B</dec:KSN>
    <dec:NumberOfPaddedBytes>4</dec:NumberOfPaddedBytes>
  </dec:EMVSREDInput>
  <dec:PayloadInfo>
    <dec:Headers>
      <!--Zero or more repetitions:-->
      <sys:KeyValuePairOfstringstring>
        <sys:key>Content-Type</sys:key>
        <sys:value>text/xml;charset=utf-8</sys:value>
      </sys:KeyValuePairOfstringstring>
    </dec:Headers>
    <dec:Payload><![CDATA[
      <JetPay Version="2.0">
<Application Version="2.0">MAGNEFLEX</Application>
<DeveloperID>V32YHV</DeveloperID>
<Device>{DeviceID}</Device>
<EMVKernel Version="1.0">30050877</EMVKernel>
<Gateway>JetPay</Gateway>
<IndustryInfo Type="RETAIL">
  <BaseAmount>{SubtotalAmount}</BaseAmount>
  <TipAmount>{TipAmount}</TipAmount>
</IndustryInfo>
<Origin>POS</Origin>
<Password>{Password}</Password>
<ReaderUsed>CHIP</ReaderUsed>
<Shipping>
  <Address>{ShippingAddress}</Address>
  <City>{ShippingCity}</City>
  <Country>{ShippingCountry}</Country>
  <CustomerPO>{PurchaseOrder}</CustomerPO>
  <Email>{ShippingEmail}</Email><Name>{ShippingName}</Name>
  <Phone>{ShippingPhone}</Phone><PostalCode>{ShippingZIP}</PostalCode>
  <ShippingMethod>{ShippingMethod}</ShippingMethod>
  <StateProv>{ShippingState}</StateProv>
</Shipping>
<TaxAmount>{TaxAmount}</TaxAmount>
<TerminalID>TESTMCC5111X</TerminalID>
<TotalAmount>100</TotalAmount>
<Track1>%{CCTrack1}?</Track1>
<Track2>,$Replace({57},D,=)?</Track2>
<TransactionID>123456789012345678</TransactionID>
<TransactionType>SALE</TransactionType>
<Verification>
  <ICC>
    <AID>{9F06}</AID>
    <AIP>{82}</AIP>
    <ARQC>{9F26}</ARQC>
    <ATC>{9F36}</ATC>
    <AppUsageControl>{9F07}</AppUsageControl>
    <AuthorizedAmount>{9F02}</AuthorizedAmount>
    <CVMResult>{9F34}</CVMResult>
    <CardSeqNum>{5F34}</CardSeqNum>
    <CryptInfoData>{9F27}</CryptInfoData>
    <CurrencyCode>{5F2A}</CurrencyCode>
    <CustomerExclusiveData>{9F7C}</CustomerExclusiveData>
    <DFName>{84}</DFName>
    <FormFactor>{9F6E}</FormFactor>
    <IFDSerialNum>{9F1E}</IFDSerialNum>

```



```

        <IssuerAppData>{9F10}</IssuerAppData>
        <IssuerAuthData>{91}</IssuerAuthData>
        <IssuerScript1>{71}</IssuerScript1>
        <IssuerScript2>{72}</IssuerScript2>
        <IssuerScriptResults>{9F5B}</IssuerScriptResults>
        <OtherAmount>{9F03}</OtherAmount>
        <TVR>{95}</TVR>
        <TermAppVer>{9F09}</TermAppVer>
        <TermCapCode>{9F33}</TermCapCode>
        <TermCountryCode>{9F1A}</TermCountryCode>
        <TermType>{9F35}</TermType>
        <TransCategoryCode>{9F53}</TransCategoryCode>
        <TransDate>{9A}</TransDate>
        <TransSeqNum>{9F41}</TransSeqNum>
        <TransType>{9C}</TransType>
        <UnpredictableNumber>{9F37}</UnpredictableNumber>
    </ICC>
</Verification>
</JetPay>
    ]]></dec:Payload>
    <dec:Uri>https://test1.jetpay.com/jetpay</dec:Uri>
    </dec:PayloadInfo>
    </tem:processEMVSREDRequest>
    </tem:ProcessEMVSRED>
    </soapenv:Body>
</soapenv:Envelope>

```

## ProcessEMVSRED Response:

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <ProcessEMVSREDResponse xmlns="http://tempuri.org/">
      <ProcessEMVSREDResult
xmlns:a="http://schemas.datacontract.org/2004/07/DecryptAndForwardCoreNSV2"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:CustomerTransactionID>1234</a:CustomerTransactionID>
        <a:EMVSREDOutput>
          <a:AdditionalOutputData i:nil="true"
xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic"/>
            <a:CardID i:nil="true"/>
            <a:IsReplay>>false</a:IsReplay>
          </a:EMVSREDOutput>
          <a:MagTranID>be5e2eb9-96c5-4f7a-81c0-333e116e2994</a:MagTranID>
          <a:PayloadResponse><![CDATA[HTTP/1.1 200 OKVary: Accept-Encoding
Transfer-Encoding: chunked
Content-Type: text/plain; charset=UTF-8
Date: Fri, 20 Nov 2015 16:49:59 GMT
Server: Apache

&<JetPayResponse Version="2.0"><TransactionID>848651570341795840</TransactionID>
<ActionCode>000</ActionCode>
<Approval>TEST81</Approval>
<CVV2>P</CVV2>
<ResponseText>APPROVED</ResponseText>
<UniqueID>QkVjYnYmQnQjRkQmTbUbQiPi</UniqueID>
<RRN>532416448793</RRN>
<RawResponseCode>00</RawResponseCode>
<ICC><ATC>0035</ATC>
<IssuerAuthData>472AD94F9FECD47D3030</IssuerAuthData>
<IssuerScript2>9F180430303031860E04DA9F580903C0DC6EF04E9C8A09860E04DA9F590908460C835744CE4E5C</IssuerScript2>
</ICC>
</JetPayResponse]]></a:PayloadResponse>

<a:PayloadToken>B67076087E35F7911F63A0F53E76262B61ED66CE97EF9453BDD11F851A46A553</a:PayloadToken>
  <a:TransactionUTCTimestamp>2015-11-20 16:49:59Z</a:TransactionUTCTimestamp>
  </ProcessEMVSREDResult>
</ProcessEMVSREDResponse>
</s:Body>
</s:Envelope>

```

## 2 Status Codes and Messages

Status Codes and Messages returned by Magensa for DecryptAndForwardWSBackend Operations

Internal errors

Code	StatusMsg	Notes
1000	Success	
5000	Unknown Error	

Input Validation errors

Code	StatusMsg	Notes
602	KSN is required	
603	CustomerCode is required	
604	Username is required	
605	Password is required	
607	KSN is not valid	
610	EncryptedTrack2 is required	
611	EncryptedMP is required	
612	EncryptedData is required	
701	Access Denied	
707	Payload is required	
708	EncryptionType is required	
711	GetResponse FaultException	
712	Decrypt web service failed	
714	Decrypt web service exception	
715	Decrypt web service failed. DecryptCardSwipeResponse is null	
716	Invalid Track data after Decryption	
721	Payload post failed	
722	URI is not authorized	