

Magensa Web Service

Decrypt And Forward 3.0

Programmer's Manual

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Table 1.1 - Revisions

Rev Number	Date	Notes
10	03/07/2018	Initial release.

NOTICE

The information contained herein is confidential and proprietary to:

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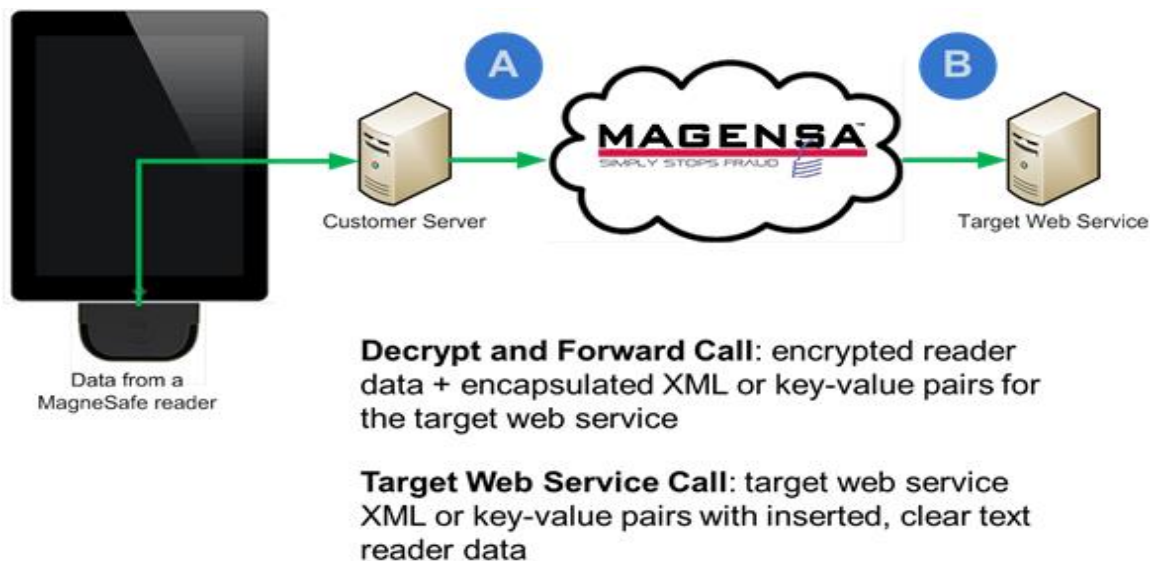
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2 Purpose of the document

The purpose of this document is to provide a description of how to call operations of the Magensa Decrypt and Forward 3.0 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.



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: <PAN>{CCNum}</PAN>

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}
16. {DecryptedBlob}

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 to submit a request to have it added to the service.

A unique, new feature introduced in Decrypt and Forward 3.0 is the ability to send a “batch” of requests in a single call to the service. As a result, all Decrypt and Forward 3.0 service operations take in an array of requests and return an array of responses. The service processes these input requests serially and a specific index/element of response corresponds to the specific index/element of request. All responses have a DecryptForwardFaultException element and in the case of an error or exception raised for that

particular request, the details will be available in the corresponding `DecryptForwardFaultException` element. When successful, the value of this `DecryptForwardFaultException` element will be null.

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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3 Decrypt and Forward 3.0 Operations

3.1 DecryptBlob

A command used to decrypt and forward an encrypted blob of data.

3.1.1 Input Properties

Property (*)	Value	Value Description
AdditionalRequestData	Array of key / value	Contains custom request data required by the target service provider. Elements are expressed as key/value pairs grouped under <KeyValuePairOfstringstring>. See sample request.
CustomerCode *	String	Customer code for credential assigned by Magensa
Password *	String	Password for credential assigned by Magensa
Username *	String	Username for credential assigned by Magensa
CustomerTransactionId	String	Client-assigned transaction ID for easy cross-reference
EncryptedBlob *	String	Encrypted data from device to send to the processor
EncryptionType *	String	Encryption type used for EncryptedBlob: 80 (DUKPT Key Data Variant) 81 (DUKPT Key PIN Variant)
KSN *	String	Key serial number of the device
NumberOfPaddedBytes *	Integer	Number of bytes padded to the end of the decrypted EncryptedBlob to make a multiple of 8 bytes
AdditionalPayloadInfoData	Array of key / value	Contains custom request data required by the target service provider. Elements are expressed as key/value pairs grouped under <KeyValuePairOfstringstring>. See sample request.
Headers	Array of key / value	Contains custom HTTP headers required by the target web service. Elements are expressed as Key/Value pairs grouped under <KeyValuePairOfstringstring>. See examples.
Payload *	String	Payload data Example: <![CDATA[payload]]>
Uri *	String	Address to forward the payload

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Note: * = Required

3.1.2 Output Properties

Property	Value	Value Description
AdditionalOutputData	Array of key / value	Contains additional output data returned by the target web service. Elements are expressed as Key/Value pairs grouped under <KeyValuePairOfstringstring>. See examples.
CustomerTransactionId	String	Client-assigned transaction ID for easy cross-reference
DecryptForwardFaultException	String	Contains a fault exception returned by the target web service. Elements are expressed as Code and Message.
IsReplay	Boolean	Boolean value indicating prior use of KSN from Magensa
MagTranId	String	Transaction ID (GUID) from Magensa
PayloadResponse	String	Response from the Uri input
PayloadToken	String	Hexadecimal format
TransactionUTCTimestamp	String	Transaction timestamp from Magensa

The Web Services Description Language URL for consuming this web service may be located at:

<https://daf.magensa.net/v3/Service.svc?singleWSDL>

3.1.3 Sample Request Payload using key/value, XML, and Client Certificate

```
POST https://daf.magensa.net/v3/Service.svc HTTP/1.1
Content-Type: text/xml;charset=UTF-8
SOAPAction: "http://tempuri.org/IDecryptAndForward/DecryptBlob"
Content-Length: 8528
Host: mthq-dev-app01.magtek.com:444
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:tem="http://tempuri.org/"
xmlns:dec="http://schemas.datacontract.org/2004/07/DecryptAndForwardCoreNSV3"
xmlns:sys="http://schemas.datacontract.org/2004/07/System.Collections.Generic">
  <soapenv:Header/>
  <soapenv:Body>
    <tem:DecryptBlob>
      <tem:decryptBlobRequest>
```

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```
<dec:AdditionalDecryptBlobRequestData>
  <sys:KeyValuePairOfstringstring>
    <sys:key></sys:key>
    <sys:value></sys:value>
  </sys:KeyValuePairOfstringstring>
</dec:AdditionalDecryptBlobRequestData>
<dec:Authentication>
  <dec:CustomerCode>0001</dec:CustomerCode>
  <dec>Password>password</dec>Password>
  <dec:Username>username</dec:Username>
</dec:Authentication>
<dec:CustomerTransactionID>123</dec:CustomerTransactionID>
<dec:DecryptBlobInputs>
  <dec:DecryptBlobInput>
    <dec:AdditionalRequestData>
      <sys:KeyValuePairOfstringstring>
        <sys:key></sys:key>
        <sys:value></sys:value>
      </sys:KeyValuePairOfstringstring>
    </dec:AdditionalRequestData>
    <dec:Authentication>
      <dec:CustomerCode>0001</dec:CustomerCode>
      <dec>Password>password</dec>Password>
      <dec:Username>username</dec:Username>
    </dec:Authentication>
    <dec:CustomerTransactionID>123</dec:CustomerTransactionID>
    <dec:EncryptedBlobInput>
      <dec:EncryptedBlob>B0007B77...</dec:EncryptedBlob>
      <dec:EncryptionType>80</dec:EncryptionType>
      <dec:KSN>9500030000000120014B</dec:KSN>
      <dec:NumberOfPaddedBytes>4</dec:NumberOfPaddedBytes>
    </dec:EncryptedBlobInput>
    <dec:PayloadInfo>
      <dec:AdditionalPayloadInfoData>
        <sys:KeyValuePairOfstringstring>
          <sys:key/>
```

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```
        <sys:value/>
    </sys:KeyValuePairOfstringstring>
</dec:AdditionalPayloadInfoData>
<dec:Headers>
    <sys:KeyValuePairOfstringstring>
        <sys:key>Content-Type</sys:key>
        <sys:value>text/xml; charset=utf-8</sys:value>
    </sys:KeyValuePairOfstringstring>
    <sys:KeyValuePairOfstringstring>
        <sys:key>Base64-Client-Cert</sys:key>
        <sys:value>MIIDujCC...</sys:value>
    </sys:KeyValuePairOfstringstring>
    <sys:KeyValuePairOfstringstring>
        <sys:key>Client-Cert-Password</sys:key>
        <sys:value>Magensa</sys:value>
    </sys:KeyValuePairOfstringstring>
</dec:Headers>

<dec:Payload><![CDATA[TRXTYPE=S&TENDER=C&USER=MagTek&PWD=4f%j@K5jp&PARTNER=MagTek&EXECUTOR=MagTek&
VENDOR=MTPF060620130715&ACCT=4111111111111111&EXPDATE=0119&AMT=0.10]]></dec:Payload>

    <!--
<dec:Payload><![CDATA[TRXTYPE=S&TENDER=C&USER=MagTek&PWD=4f%j@K5jp&PARTNER=MagTek&EXECUTOR=MagTek&
VENDOR=MTPF060620130715&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>
</dec:DecryptBlobInput>

<dec:DecryptBlobInput>
    <dec:AdditionalRequestData>
        <sys:KeyValuePairOfstringstring>
            <sys:key>?</sys:key>
            <sys:value>?</sys:value>
        </sys:KeyValuePairOfstringstring>
    </dec:AdditionalRequestData>
    <dec:Authentication>
        <dec:CustomerCode>0001</dec:CustomerCode>
        <dec>Password>password</dec>Password>
    </dec:Authentication>
</dec:DecryptBlobInput>
</dec:DecryptBlobInput>
```

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```
<dec:Username>username</dec:Username>
  </dec:Authentication>
  <dec:CustomerTransactionID>123</dec:CustomerTransactionID>
  <dec:EncryptedBlobInput>
<dec:EncryptedBlob>76BB43E6...</dec:EncryptedBlob>
<dec:EncryptionType>80</dec:EncryptionType>
<dec:KSN>950003000000012000D6</dec:KSN>
<dec:NumberOfPaddedBytes>7</dec:NumberOfPaddedBytes>
  </dec:EncryptedBlobInput>
  <dec:PayloadInfo>
    <dec:AdditionalPayloadInfoData>
      <sys:KeyValuePairOfStringstring>
        <sys:key>?</sys:key>
        <sys:value>?</sys:value>
      </sys:KeyValuePairOfStringstring>
    </dec:AdditionalPayloadInfoData>
    <dec:Headers>
      <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="2.0.0">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>
```

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```
<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></Track1>
<Track2>;4555555555555584=16121010000000000496?</Track2>
<TransactionID>878776700566774400</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>
```

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```
<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>
</dec:DecryptBlobInput>
</dec:DecryptBlobInputs>
</tem:decryptBlobRequest>
</tem:DecryptBlob>
</soapenv:Body>
</soapenv:Envelope>
```

3.1.4 Sample Response Payload of key/value and XML

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <DecryptBlobResponse xmlns="http://tempuri.org/">
      <DecryptBlobResult
xmlns:a="http://schemas.datacontract.org/2004/07/DecryptAndForwardCoreNSV3"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:AdditionalDecryptBlobResponseData i:nil="true"
xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic"/>
          <a:CustomerTransactionID>123</a:CustomerTransactionID>
          <a:DecryptBlobOutputs>
```

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```
<a:DecryptBlobOutput>
  <a:AdditionalOutputData i:nil="true"
xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic"/>
  <a:CustomerTransactionID>123</a:CustomerTransactionID>
  <a:DecryptForwardFaultException i:nil="true"/>
  <a:IsReplay>true</a:IsReplay>
  <a:MagTranID>f2c9b29d-854f-46df-85dc-311b44ba6740</a:MagTranID>
  <a:PayloadResponse>HTTP/1.1 200 OKConnection: close
Content-Length: 67
Content-Type: text/namevalue
Date: Thu, 21 Sep 2017 15:43:17 GMT
Server: VPS-3.033.00

&amp;RESULT=0&amp;PNREF=A10NA6D80FA0&amp;RESPMSG=Approved&amp;AUTHCODE=007833&amp;IAVS=X</a:PayloadResponse>

<a:PayloadToken>AFAB2B3396AF595D609AB40BC8965369D5768AE94208505CD0D08DAE82EC96A7</a:PayloadToken>
  <a:TransactionUTCTimestamp>2017-09-21 15:43:17Z</a:TransactionUTCTimestamp>
</a:DecryptBlobOutput>
<a:DecryptBlobOutput>
  <a:AdditionalOutputData i:nil="true"
xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic"/>
  <a:CustomerTransactionID>123</a:CustomerTransactionID>
  <a:DecryptForwardFaultException i:nil="true"/>
  <a:IsReplay>true</a:IsReplay>
  <a:MagTranID>81d48cd9-ba69-4189-b21d-9ace422f6cc5</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: Thu, 21 Sep 2017 15:43:17 GMT
Server: Apache

&<JetPayResponse Version="2.0">
  <TransactionID>374984707154457216</TransactionID>
  <ActionCode>000</ActionCode>
  <Approval>TEST95</Approval>
```


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```
<ResponseText>APPROVED</ResponseText>
<UniqueID>QnTkWkQhQlPbRjQnThQlTmPc</UniqueID>
<RRN>726415046807</RRN>
<RawResponseCode>00</RawResponseCode>
</JetPayResponse>]]</a:PayloadResponse>

<a:PayloadToken>EF1F04BC4B8D5FF88A7FA99FB205D1A9D1490EA9C41180412210E00ABFADA110</a:PayloadToken>
  <a:TransactionUTCimestamp>2017-09-21 15:43:18Z</a:TransactionUTCimestamp>
  </a:DecryptBlobOutput>
</a:DecryptBlobOutputs>
</DecryptBlobResult>
</DecryptBlobResponse>
</s:Body>
</s:Envelope>
```

3.2 ProcessCardSwipe

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

3.2.1 Input Properties

Property (*)	Value	Value Description
AdditionalRequestData	Array of key / value	Contains custom request data required by the target service provider. Elements are expressed as key/value pairs grouped under <KeyValuePairOfstringstring>. See sample request.
CustomerCode *	String	Customer code for credential assigned by Magensa
Password *	String	Password for credential assigned by Magensa
Username *	String	Username for credential assigned by Magensa
BillingLabel	String	Billing label
CustomerTransactionId	String	Client-assigned transaction ID for easy cross-reference
EncryptedCardSwipe	String	Container for magnetic stripe card data. This container is optional. EncryptedCardSwipe and all the following properties within shall be omitted if an encrypted card swipe is not available: DeviceSN, KSN, MagnePrint, MagnePrintStatus, Track1, Track2, and Track3.
DeviceSN	String	Device serial number

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Property (*)	Value	Value Description
KSN *	String	Key serial number of the device
MagnePrint *	String	Encrypted MagnePrint
MagnePrintStatus *	String	MagnePrint status
Track1	String	Encrypted track1 data
Track2 *	String	Encrypted track2 data
Track3	String	Encrypted track3 data
AdditionalPayloadInfoData	Array of key / value	Contains custom request data required by the target service provider. Elements are expressed as key/value pairs grouped under <KeyValuePairOfstringstring>. See sample request.
Headers	Array of key / value	Contains custom HTTP headers required by the target web service. Elements are expressed as key/value pairs grouped under <KeyValuePairOfstringstring>. See examples.
Payload *	String	Payload data Example: <![CDATA[payload]]>
Uri *	String	Address to forward the payload

Note: * = Required

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3.2.2 Output Properties

Property	Value	Value Description
AdditionalOutputData	Array of key / value	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 from Magensa
IsReplay	String	Boolean value indicating prior use of KSN from Magensa
MagnePrintScore	String	MagnePrint score
CustomerTransactionId	String	Client-assigned transaction ID for easy cross-reference
DecryptForwardFaultException	String	Contains a fault exception returned by the target web service. Elements are expressed as Code and Message.
MagTranId	String	Magensa assigned unique transaction ID in GUID form.
PayloadResponse	String	Response from the Uri input
PayloadToken	String	Payload token
TransactionUTCTimestamp	String	Transaction timestamp from Magensa

The Web Services Description Language URL for consuming this web service may be located at:

<https://daf.magensa.net/v3/Service.svc?singleWSDL>

3.2.3 Sample Request Payload using key/value, XML, and Client Certificate

```
POST https://daf.magensa.net/v3/Service.svc HTTP/1.1
Accept-Encoding: gzip, deflate
Content-Type: text/xml; charset=UTF-8
SOAPAction: "http://tempuri.org/IDecryptAndForward/ProcessCardSwipe"
Content-Length: 7573
Host: mthq-dev-app01.magtek.com:444
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:tem="http://tempuri.org/"
xmlns:dec="http://schemas.datacontract.org/2004/07/DecryptAndForwardCoreNSV3"
xmlns:sys="http://schemas.datacontract.org/2004/07/System.Collections.Generic">
  <soapenv:Header/>
  <soapenv:Body>
```

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```
<tem:ProcessCardSwipe>
  <tem:processCardSwipeRequest>
    <dec:AdditionalProcessCardSwipeRequestData>
      <sys:KeyValuePairOfstringstring>
        <sys:key/>
        <sys:value/>
      </sys:KeyValuePairOfstringstring>
    </dec:AdditionalProcessCardSwipeRequestData>
    <dec:Authentication>
      <dec:CustomerCode>0001</dec:CustomerCode>
      <dec>Password>password</dec>Password>
      <dec:Username>username</dec:Username>
    </dec:Authentication>
    <dec:CustomerTransactionID>123</dec:CustomerTransactionID>
    <dec:ProcessCardSwipeInputs>
      <dec:ProcessCardSwipeInput>
        <dec:AdditionalRequestData>
          <sys:KeyValuePairOfstringstring>
            <sys:key/>
            <sys:value/>
          </sys:KeyValuePairOfstringstring>
        </dec:AdditionalRequestData>
        <dec:Authentication>
          <dec:CustomerCode>0001</dec:CustomerCode>
          <dec>Password>password</dec>Password>
          <dec:Username>username</dec:Username>
        </dec:Authentication>
        <dec:BillingLabel>billing</dec:BillingLabel>
        <dec:CustomerTransactionID>123</dec:CustomerTransactionID>
        <dec:EncryptedCardSwipe>
          <dec:DeviceSN>B00CB7B</dec:DeviceSN>
          <dec:KSN>950003000000012000D5</dec:KSN>
          <dec:MagnePrint>C3477786...</dec:MagnePrint>
          <dec:MagnePrintStatus>00002200</dec:MagnePrintStatus>
          <dec:Track1>1EBFCC94...</dec:Track1>
          <dec:Track2>22B6D05B...</dec:Track2>
```

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```
<dec:Track3/>
</dec:EncryptedCardSwipe>
<dec:PayloadInfo>
  <dec:AdditionalPayloadInfoData>
    <sys:KeyValuePairOfstringstring>
      <sys:key/>
      <sys:value/>
    </sys:KeyValuePairOfstringstring>
  </dec:AdditionalPayloadInfoData>
  <dec:Headers>
    <sys:KeyValuePairOfstringstring>
      <sys:key>Content-Type</sys:key>
      <sys:value>text/xml; charset=utf-8</sys:value>
    </sys:KeyValuePairOfstringstring>
    <sys:KeyValuePairOfstringstring>
      <sys:key>Base64-Client-Cert</sys:key>
      <sys:value>MIIDujCC...</sys:value>
    </sys:KeyValuePairOfstringstring>
    <sys:KeyValuePairOfstringstring>
      <sys:key>Client-Cert-Password</sys:key>
      <sys:value>Magensa</sys:value>
    </sys:KeyValuePairOfstringstring>
  </dec:Headers>
<dec:Payload><![CDATA[TRXTYPE=A&TENDER=C&USER=MagTek&PWD=4f%j@K5jp&PARTNER=MagTek&EXECUTOR=MagTek&
VENDOR=MTPF060620130715&ACCT={CCNum} &EXPDATE={MM} {YY} &AMT=0.10]]></dec:Payload>
  <dec:Uri>https://pilot-payflowpro.paypal.com</dec:Uri>
</dec:PayloadInfo>
</dec:ProcessCardSwipeInput>
<dec:ProcessCardSwipeInput>
  <dec:AdditionalRequestData>
    <sys:KeyValuePairOfstringstring>
      <sys:key/>
      <sys:value/>
    </sys:KeyValuePairOfstringstring>
  </dec:AdditionalRequestData>
  <dec:Authentication>
```

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```
<dec:CustomerCode>0001</dec:CustomerCode>

<dec>Password>password</dec>Password>

<dec:Username>username</dec:Username>

</dec:Authentication>

<dec:BillingLabel>billing</dec:BillingLabel>

<dec:CustomerTransactionID>123</dec:CustomerTransactionID>

<dec:EncryptedCardSwipe>

  <dec:DeviceSN>B30E86A092916AA</dec:DeviceSN>

  <dec:KSN>9010010B30E86A0002A5</dec:KSN>

  <dec:MagnePrint>6D3A7B8D...</dec:MagnePrint>

  <dec:MagnePrintStatus>61403000</dec:MagnePrintStatus>

  <dec:Track1>D9FBA7F8...</dec:Track1>

  <dec:Track2>204B0419...</dec:Track2>

  <dec:Track3/>

</dec:EncryptedCardSwipe>

<dec:PayloadInfo>

  <dec:AdditionalPayloadInfoData>

    <sys:KeyValuePairOfstringstring>

      <sys:key/>

      <sys:value/>

    </sys:KeyValuePairOfstringstring>

  </dec:AdditionalPayloadInfoData>

  <dec:Headers>

    <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="2.0.0">MAGNEFLEX</Application><Billing><Address>{BillingAddress}</Address><City>{BillingCity}</City><Country>{BillingCountry}</Country><Email>{BillingEmail}</Email><Phone>{BillingPhone}</Phone><PostalCode>99999

</PostalCode><StateProv>{BillingState}</StateProv></Billing><CardExpMonth>{MM}</CardExpMonth><CardExpYear>{YY}</CardExpYear><CardName>{CCName}</CardName><CardNum
CardPresent="true">{CCNum}</CardNum><CVV2>{CVV}</CVV2><DeveloperID>V32YHV</DeveloperID><Device>{DeviceID}</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><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><
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```

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```
TaxAmount>{TaxAmount}</TaxAmount><TerminalID>TESTMCC5111X</TerminalID><TotalAmount>100</TotalAmount><Track1>{%CCTrack1}?</Track1><Track2>{%CCTrack2}?</Track2><TransactionID>GHC3X09P72YZP-KB49</TransactionID><TransactionType>SALE</TransactionType></JetPay>]]</dec:Payload>

    <dec:Uri>https://test1.jetpay.com/jetpay</dec:Uri>

  </dec:PayloadInfo>

</dec:ProcessCardSwipeInput>

</dec:ProcessCardSwipeInputs>

</tem:processCardSwipeRequest>

</tem:ProcessCardSwipe>

</soapenv:Body>

</soapenv:Envelope>
```

3.2.4 Sample Response Payload of key/value and XML

```
<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/DecryptAndForwardCoreNSV3"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">

        <a:AdditionalProcessEMVSREDResponseData i:nil="true"
xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic"/>

        <a:CustomerTransactionID>123</a:CustomerTransactionID>

        <a:ProcessCardSwipeOutputs>

          <a:ProcessCardSwipeOutput>

            <a:AdditionalProcessCardSwipeResponseData i:nil="true"
xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic"/>

            <a:CardSwipeOutput>

              <a:AdditionalOutputData i:nil="true"
xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic"/>

              <a:CardID>iLA5jUB1MdEzL2eo6PKpTLwY4be3jrhQH9UEznsz7UE=</a:CardID>

              <a:IsReplay>true</a:IsReplay>

              <a:MagnePrintScore>.9571234</a:MagnePrintScore>

            </a:CardSwipeOutput>

            <a:CustomerTransactionID>123</a:CustomerTransactionID>

            <a:DecryptForwardFaultException i:nil="true"/>

            <a:MagTranID>deefac55-fac5-40ac-b164-c1315520680c</a:MagTranID>

            <a:PayloadResponse>HTTP/1.1 200 OKConnection: close

          </a:ProcessCardSwipeOutput>

        </a:ProcessCardSwipeOutputs>

      </a:ProcessCardSwipeResult>

    </ProcessCardSwipeResponse>

  </s:Body>

</s:Envelope>

Content-Length: 67
Content-Type: text/namevalue
```

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Date: Thu, 21 Sep 2017 15:07:39 GMT

Server: VPS-3.033.00

&RESULT=0&PNREF=A70NA53FE36D&RESPMSG=Approved&AUTHCODE=020807&IAVS=X</a:PayloadResponse>

<a:PayloadToken>943153A5AB2D464CB5E14778B1219D0C7CC0EF3B5A066E99DF52888951C81045</a:PayloadToken>

<a:TransactionUTCTimestamp>2017-09-21 15:07:39Z</a:TransactionUTCTimestamp>

</a:ProcessCardSwipeOutput>

<a:ProcessCardSwipeOutput>

<a:AdditionalProcessCardSwipeResponseData i:nil="true"

xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic"/>

<a:CardSwipeOutput>

<a:AdditionalOutputData i:nil="true"

xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic"/>

<a:CardID>GwrWWwwf00RZZdDjwC2qbBnGvkEXJa7ED2aAqft5LU=</a:CardID>

<a:IsReplay>true</a:IsReplay>

<a:MagnePrintScore>0.9571234</a:MagnePrintScore>

</a:CardSwipeOutput>

<a:CustomerTransactionID>123</a:CustomerTransactionID>

<a:DecryptForwardFaultException i:nil="true"/>

<a:MagTranID>4fa5a983-614f-4d2e-9f98-13271aba42e8</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: Thu, 21 Sep 2017 15:07:39 GMT

Server: Apache

&<JetPayResponse Version="2.0">

<TransactionID>GHC3X09P72YZP-KB49</TransactionID>

<ActionCode>000</ActionCode>

<Approval>TEST42</Approval>

<ResponseText>APPROVED</ResponseText>

<UniqueID>QnTkWkQhQlPbRjQnPlSbTnYo</UniqueID>

<RRN>726415046794</RRN>

<RawResponseCode>00</RawResponseCode>

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```

<AddressMatch>Y</AddressMatch>

<ZipMatch>Y</ZipMatch>

<AVS>Y</AVS>

</JetPayResponse>]]></a:PayloadResponse>

<a:PayloadToken>C49587D6FCA40054F4433C1056A4FED5980C13C339DBCC27BA48F574E729A4B5</a:PayloadToken>

    <a:TransactionUTCTimestamp>2017-09-21 15:07:40Z</a:TransactionUTCTimestamp>

    </a:ProcessCardSwipeOutput>

    </a:ProcessCardSwipeOutputs>

    </ProcessCardSwipeResult>

    </ProcessCardSwipeResponse>

</s:Body>

</s:Envelope>

```

3.3 ProcessEMV

A command used to decrypt and forward an EMV transaction.

3.3.1 Input Properties

Property (*)	Value	Value Description
AdditionalRequestData	Array of key / value	Contains custom request data required by the target service provider. Elements are expressed as key/value pairs grouped under <KeyValuePairOfstringstring>. See sample request.
CustomerCode *	String	Customer code for credential assigned by Magensa
Password *	String	Password for credential assigned by Magensa
Username *	String	Username for credential assigned by Magensa
BillingLabel	String	Billing label
CustomerTransactionId	String	Client-assigned transaction ID for easy cross-reference
EMVData *	String	EMV transaction data from device to send to the processor
AdditionalPayloadInfoData	Array of key / value	Contains custom request data required by the target service provider. Elements are expressed as key/value pairs grouped under <KeyValuePairOfstringstring>. See sample request.
Headers	Array of key / value	Contains custom HTTP headers required by the target web service. Elements are expressed as Key/Value pairs grouped under <KeyValuePairOfstringstring>. See examples.
Payload *	String	Payload data

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Property (*)	Value	Value Description
		Example: <![CDATA[payload]]>
Uri *	String	Address to forward the payload

Note: * = Required

3.3.2 Output Properties

Property	Value	Value Description
AdditionalOutputData	Array of key / value	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.
CustomerTransactionId	String	Client-assigned transaction ID for easy cross-reference
DecryptForwardFaultException	String	Contains a fault exception returned by the target web service. Elements are expressed as Code and Message.
CardID	String	Card ID from Magensa
IsReplay	Boolean	Boolean value indicating prior use of KSN from Magensa
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 from Magensa

The Web Services Description Language URL for consuming this web service may be located at:

<https://daf.magensa.net/v3/Service.svc?singleWsd1>

3.3.3 Sample Request Payload using key/value, XML, and Client Certificate

```
POST https://daf.magensa.net/v3/Service.svc HTTP/1.1
Accept-Encoding: gzip,deflate
Content-Type: text/xml; charset=UTF-8
SOAPAction: "http://tempuri.org/IDecryptAndForward/ProcessEMV"
Content-Length: 12411
Host: mthq-dev-app01.magtek.com:444
Connection: Keep-Alive
```

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User-Agent: Apache-HttpClient/4.1.1 (java 1.5)

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:tem="http://tempuri.org/"
xmlns:dec="http://schemas.datacontract.org/2004/07/DecryptAndForwardCoreNSV3"
xmlns:sys="http://schemas.datacontract.org/2004/07/System.Collections.Generic">

  <soapenv:Header/>

  <soapenv:Body>
    <tem:ProcessEMV>
      <tem:processEMVRequest>
        <dec:AdditionalProcessEMVRequestData>
          <sys:KeyValuePairOfstringstring>
            <sys:key/>
            <sys:value/>
          </sys:KeyValuePairOfstringstring>
        </dec:AdditionalProcessEMVRequestData>
        <dec:Authentication>
          <dec:CustomerCode>0001</dec:CustomerCode>
          <dec>Password>password</dec>Password>
          <dec:Username>username</dec:Username>
        </dec:Authentication>
        <dec:CustomerTransactionID>123</dec:CustomerTransactionID>
        <dec:ProcessEMVInputs>
          <dec:ProcessEMVInput>
            <dec:AdditionalRequestData>
              <sys:KeyValuePairOfstringstring>
                <sys:key/>
                <sys:value/>
              </sys:KeyValuePairOfstringstring>
            </dec:AdditionalRequestData>
            <dec:Authentication>
              <dec:CustomerCode>0001</dec:CustomerCode>
              <dec>Password>password</dec>Password>
              <dec:Username>username</dec:Username>
            </dec:Authentication>
            <dec:BillingLabel>Bill me</dec:BillingLabel>
            <dec:CustomerTransactionID>123</dec:CustomerTransactionID>
          </dec:ProcessEMVInput>
        </dec:ProcessEMVInputs>
      </tem:processEMVRequest>
    </tem:ProcessEMV>
  </soapenv:Body>
</soapenv:Envelope>
```

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```
<dec:EMVData>FC8200D8...</dec:EMVData>
<dec:PayloadInfo>
  <dec:AdditionalPayloadInfoData>
    <sys:KeyValuePairOfstringstring>
      <sys:key/>
      <sys:value/>
    </sys:KeyValuePairOfstringstring>
  </dec:AdditionalPayloadInfoData>
  <dec:Headers>
    <sys:KeyValuePairOfstringstring>
      <sys:key>Content-Type</sys:key>
      <sys:value>text/xml; charset=utf-8</sys:value>
    </sys:KeyValuePairOfstringstring>
    <sys:KeyValuePairOfstringstring>
      <sys:key>Base64-Client-Cert</sys:key>
      <sys:value>MIIDujCC...</sys:value>
    </sys:KeyValuePairOfstringstring>
    <sys:KeyValuePairOfstringstring>
      <sys:key>Client-Cert-Password</sys:key>
      <sys:value>Magensa</sys:value>
    </sys:KeyValuePairOfstringstring>
  </dec:Headers>
<dec:Payload><![CDATA[TRXTYPE=S&TENDER=C&USER=MagTek&PWD=4f%j@K5jp&PARTNER=MagTek&EXECUTOR=MagTek&
VENDOR=MTPF060620130715&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>
</dec:ProcessEMVInput>
<dec:ProcessEMVInput>
  <dec:AdditionalRequestData>
    <sys:KeyValuePairOfstringstring>
      <sys:key/>
      <sys:value/>
    </sys:KeyValuePairOfstringstring>
  </dec:AdditionalRequestData>
  <dec:Authentication>
    <dec:CustomerCode>0001</dec:CustomerCode>
```

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```
<dec:Password>password</dec:Password>
<dec:Username>username</dec:Username>
</dec:Authentication>
<dec:BillingLabel>Bill me</dec:BillingLabel>
<dec:CustomerTransactionID>123</dec:CustomerTransactionID>
<dec:EMVData>0123F982...</dec:EMVData>
<dec:PayloadInfo>
  <dec:AdditionalPayloadInfoData>
    <sys:KeyValuePairOfstringstring>
      <sys:key/>
      <sys:value/>
    </sys:KeyValuePairOfstringstring>
  </dec:AdditionalPayloadInfoData>
  <dec:Headers>
    <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="2.0.0">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>
```

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```
<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></Track1>
<Track2>;$Replace({57},D,=)?</Track2>
<TransactionID>973154823743260672</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>
```

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```
<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>
</dec:ProcessEMVInput>
</dec:ProcessEMVInputs>
</tem:processEMVRequest>
</tem:ProcessEMV>
</soapenv:Body>
</soapenv:Envelope>
```

3.3.4 Sample Response Payload of key/value and XML

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <ProcessEMVResponse xmlns="http://tempuri.org/">
      <ProcessEMVResult
xmlns:a="http://schemas.datacontract.org/2004/07/DecryptAndForwardCoreNSV3"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:AdditionalProcessEMVResponseData i:nil="true"
xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic"/>
          <a:CustomerTransactionID>123</a:CustomerTransactionID>
          <a:ProcessEMVOutputs>
            <a:ProcessEMVOutput>
              <a:AdditionalOutputData i:nil="true"
xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic"/>
                <a:CustomerTransactionID>123</a:CustomerTransactionID>
                <a:DecryptForwardFaultException i:nil="true"/>
                <a:MagTranID>36743cec-7069-47d3-a3a3-e79296abac84</a:MagTranID>
```

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```
<a:PayloadResponse>HTTP/1.1 200 OKConnection: close
Content-Length: 67
Content-Type: text/namevalue
Date: Thu, 21 Sep 2017 16:02:51 GMT
Server: VPS-3.033.00

&amp;RESULT=0&amp;PNREF=A10NA6D8215C&amp;RESPMSG=Approved&amp;AUTHCODE=011837&amp;IAVS=X</a:PayloadResponse>

<a:PayloadToken>6479D61DD30D563B4A8D042C9CB5DFDAC99D55B568961DFB25D90CCFB27F5BEE</a:PayloadToken>

  <a:TransactionUTCTimestamp>2017-09-21 16:02:51Z</a:TransactionUTCTimestamp>
</a:ProcessEMVOutput>

  <a:ProcessEMVOutput>

    <a:AdditionalOutputData i:nil="true"
xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic"/>

      <a:CustomerTransactionID>123</a:CustomerTransactionID>

      <a:DecryptForwardFaultException i:nil="true"/>

      <a:MagTranID>28667fd2-5af7-4d03-bf4a-97764aecbfd</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: Thu, 21 Sep 2017 16:02:52 GMT
Server: Apache

&<JetPayResponse Version="2.0">

  <TransactionID>130307464504997872</TransactionID>

  <ActionCode>000</ActionCode>

  <Approval>TEST19</Approval>

  <ResponseText>APPROVED</ResponseText>

  <UniqueID>QnTkWkQhQlPbRjQmPiUiTmRj</UniqueID>

  <RRN>726416046820</RRN>

  <RawResponseCode>00</RawResponseCode>

  <ICC>

    <ATC>0035</ATC>

    <IssuerAuthData>472AD94F9FECD47D3030</IssuerAuthData>
```


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```
<IssuerScript2>9F180430303031860E04DA9F580903C0DC6EF04E9C8A09860E04DA9F590908460C835744CE4E5C</IssuerScript2>  
</ICC>
```

3.4 ProcessEMVSRED

A command used to decrypt and forward an SRED EMV transaction.

3.4.1 Input Properties

Property (*)	Value	Value Description
AdditionalRequestData	Array of key / value	Contains custom request data required by the target service provider. Elements are expressed as key/value pairs grouped under <KeyValuePairOfstringstring>. See sample request.
CustomerCode *	String	Customer code for credential assigned by Magensa
Password *	String	Password for credential assigned by Magensa
Username *	String	Username for credential assigned by Magensa
BillingLabel	String	Billing label
CustomerTransactionId	String	Client-assigned transaction ID for easy cross-reference
EMVSREDData *	String	Encrypted EMV transaction data (ARQC) from device to send to the processor. Tags from which the value may be located: DFDF59
EncryptionType *	String	The encrypted transaction data encryption type used for EMVSREDData. Use value 80. 80 = DUKPT Key Data Variant Tags from which the value may be located: DFDF57
KSN *	String	Key serial number of the device.

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Property (*)	Value	Value Description
		Tags from which the value may be located: DFDF56
NumberOfPaddedBytes *	Integer	Number of bytes padded to the end of the decrypted EMVSREDDData to make a multiple of 8 bytes. Tags from which the value may be located: DFDF58
AdditionalPayloadInfoData	Array of key / value	Contains custom request data required by the target service provider. Elements are expressed as key/value pairs grouped under <KeyValuePairOfstringstring>. See sample request.
Headers	Array of key / value	Contains custom HTTP headers required by the target web service. Elements are expressed as Key/Value pairs grouped under <KeyValuePairOfstringstring>. See examples.
Payload *	String	Payload data Example: <![CDATA[payload]]>
Uri *	String	Address to forward the payload

Note: * = Required

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3.4.2 Output Properties

Property	Value	Value Description
CustomerTransactionId	String	Client-assigned transaction ID for easy cross-reference
DecryptForwardFaultException	String	Contains a fault exception returned by the target web service. Elements are expressed as Code and Message.
AdditionalOutputData	Array of key / value	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 from Magensa
IsReplay	Boolean	Boolean value indicating prior use of KSN from Magensa
MagTranId	String	Magensa assigned unique transaction ID in GUID form.
PayloadResponse	String	Response from the Uri input
PayloadToken	String	Payload token
TransactionUTCTimestamp	String	Transaction timestamp from Magensa

The Web Services Description Language URL for consuming this web service may be located at:

<https://daf.magensa.net/v3/Service.svc?singleWSDL>

3.4.3 Sample Request Payload using key/value, XML, and Client Certificate

```
POST https://daf.magensa.net/v3/Service.svc HTTP/1.1
Accept-Encoding: gzip,deflate
Content-Type: text/xml;charset=UTF-8
SOAPAction: "http://tempuri.org/IDecryptAndForward/ProcessEMVSRED"
Content-Length: 8422
Host: mthq-dev-app01.magtek.com:444
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:tem="http://tempuri.org/"
xmlns:dec="http://schemas.datacontract.org/2004/07/DecryptAndForwardCoreNSV3"
xmlns:sys="http://schemas.datacontract.org/2004/07/System.Collections.Generic">
  <soapenv:Header/>
  <soapenv:Body>
```

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```
<tem:ProcessEMVSRED>
  <tem:processEMVSREDRequest>
    <dec:AdditionalProcessEMVSREDRequestData>
      <sys:KeyValuePairOfstringstring>
        <sys:key/>
        <sys:value/>
      </sys:KeyValuePairOfstringstring>
    </dec:AdditionalProcessEMVSREDRequestData>
    <dec:Authentication>
      <dec:CustomerCode>0001</dec:CustomerCode>
      <dec>Password>password</dec>Password>
      <dec:Username>username</dec:Username>
    </dec:Authentication>
    <dec:CustomerTransactionID>123</dec:CustomerTransactionID>
    <dec:ProcessEMVSREDInputs>
      <dec:ProcessEMVSREDInput>
        <dec:AdditionalRequestData>
          <sys:KeyValuePairOfstringstring>
            <sys:key/>
            <sys:value/>
          </sys:KeyValuePairOfstringstring>
        </dec:AdditionalRequestData>
        <dec:Authentication>
          <dec:CustomerCode>0001</dec:CustomerCode>
          <dec>Password>password</dec>Password>
          <dec:Username>username</dec:Username>
        </dec:Authentication>
        <dec:BillingLabel>Bill me</dec:BillingLabel>
        <dec:CustomerTransactionID>123</dec:CustomerTransactionID>
        <dec:EMVSREDInput>
          <dec:EMVSREDData>B0007B77...</dec:EMVSREDData>
          <dec:EncryptionType>80</dec:EncryptionType>
          <dec:KSN>9500030000000120014B</dec:KSN>
          <dec:NumberOfPaddedBytes>4</dec:NumberOfPaddedBytes>
        </dec:EMVSREDInput>
        <dec:PayloadInfo>
```

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```
<dec:AdditionalPayloadInfoData>
  <sys:KeyValuePairOfstringstring>
    <sys:key/>
    <sys:value/>
  </sys:KeyValuePairOfstringstring>
</dec:AdditionalPayloadInfoData>
<dec:Headers>
  <sys:KeyValuePairOfstringstring>
    <sys:key>Content-Type</sys:key>
    <sys:value>text/xml; charset=utf-8</sys:value>
  </sys:KeyValuePairOfstringstring>
  <sys:KeyValuePairOfstringstring>
    <sys:key>Base64-Client-Cert</sys:key>
    <sys:value>MIIDujCC...</sys:value>
  </sys:KeyValuePairOfstringstring>
  <sys:KeyValuePairOfstringstring>
    <sys:key>Client-Cert-Password</sys:key>
    <sys:value>Magensa</sys:value>
  </sys:KeyValuePairOfstringstring>
</dec:Headers>
<dec:Payload><![CDATA[TRXTYPE=S&TENDER=C&USER=MagTek&PWD=4f*j@K5jp&PARTNER=MagTek&EXECUTOR=MagTek&
VENDOR=MTPF060620130715&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>
</dec:ProcessEMVSREDInput>
<dec:ProcessEMVSREDInput>
  <dec:AdditionalRequestData>
    <sys:KeyValuePairOfstringstring>
      <sys:key/>
      <sys:value/>
    </sys:KeyValuePairOfstringstring>
  </dec:AdditionalRequestData>
  <dec:Authentication>
    <dec:CustomerCode>0001</dec:CustomerCode>
    <dec>Password>password</dec>Password>
```

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```
<dec:Username>username</dec:Username>
</dec:Authentication>
<dec:BillingLabel>Bill me</dec:BillingLabel>
<dec:CustomerTransactionID>123</dec:CustomerTransactionID>
<dec:EMVSREDInput>
  <dec:EMVSREDData>76BB43E6...</dec:EMVSREDData>
  <dec:EncryptionType>80</dec:EncryptionType>
  <dec:KSN>950003000000012000D6</dec:KSN>
  <dec:NumberOfPaddedBytes>7</dec:NumberOfPaddedBytes>
</dec:EMVSREDInput>
<dec:PayloadInfo>
  <dec:AdditionalPayloadInfoData>
    <sys:KeyValuePairOfstringstring>
      <sys:key/>
      <sys:value/>
    </sys:KeyValuePairOfstringstring>
  </dec:AdditionalPayloadInfoData>
  <dec:Headers>
    <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="2.0.0">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>
```

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```
<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></Track1>
<Track2>;$Replace({57},D,=)?</Track2>
<TransactionID>451783951808924416</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>
```

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```
<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>
</dec:ProcessEMVSREDInput>
</dec:ProcessEMVSREDInputs>
</tem:processEMVSREDRequest>
</tem:ProcessEMVSRED>
</soapenv:Body>
</soapenv:Envelope>
```

3.4.4 Sample Response Payload of key/value and XML

```
<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/DecryptAndForwardCoreNSV3"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:AdditionalProcessEMVSREDResponseData i:nil="true"
xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic"/>
          <a:CustomerTransactionID>123</a:CustomerTransactionID>
          <a:ProcessEMVSREDOutputs>
            <a:ProcessEMVSREDOutput>
```


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```

    <a:CustomerTransactionID>123</a:CustomerTransactionID>

    <a:DecryptForwardFaultException i:nil="true"/>

    <a:EMVSREDOutput>

        <a:AdditionalOutputData
xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic">

            <b:KeyValuePairOfStringstring>

                <b:key>EMVSREDDDataMasked</b:key>

                <b:value>FC8200D85710000000000000000000000000000000000000005A0800000000000000082025C008E12000000000000
000000000000000000000000950540400000009A031508189B02E8009C01005F24030000005F25030905015F2A0208405F3
401009F0206000000001009F0607A00000000310109F0702FF009F0802008C9F0902008C9F0D05F060AC88009F0E05001
00000009F0F05F068BC98009F100706010A03A4A1009F1A0208409F26085D28923FA304DEA29F2701809F3303E0F8C89F3
4034102029F3501229F360200319F370416587CF79F40057000B0B001</b:value>

            </b:KeyValuePairOfStringstring>

        </a:AdditionalOutputData>

        <a:CardID i:nil="true"/>

        <a:IsReplay>true</a:IsReplay>

    </a:EMVSREDOutput>

    <a:MagTranID>e7568078-08e1-4c23-8220-adbe7d345658</a:MagTranID>

    <a:PayloadResponse>HTTP/1.1 200 OKConnection: close

Content-Length: 67

Content-Type: text/namevalue

Date: Thu, 21 Sep 2017 16:12:04 GMT

Server: VPS-3.033.00

&amp;RESULT=0&amp;PNREF=A70NA54017B8&amp;RESEMSG=Approved&amp;AUTHCODE=029352&amp;IAVS=X</a:PayloadResponse>

<a:PayloadToken>6479D61DD30D563B4A8D042C9CB5DFDAC99D55B568961DFB25D90CCFB27F5BEE</a:PayloadToken>

    <a:TransactionUTCTimestamp>2017-09-21 16:12:04Z</a:TransactionUTCTimestamp>

</a:ProcessEMVSREDOutput>

<a:ProcessEMVSREDOutput>

    <a:CustomerTransactionID>123</a:CustomerTransactionID>

    <a:DecryptForwardFaultException i:nil="true"/>

    <a:EMVSREDOutput>

        <a:AdditionalOutputData
xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Generic">

            <b:KeyValuePairOfStringstring>

                <b:key>EMVSREDDDataMasked</b:key>

                <b:value>FC8200DD571300000000000000000000000000000000000000000005A0A0000000000000000082025C008A02593

```

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```
18E0E0000000000000000000000000095050080000009A031511239B02E8009C01005F2403000005F25030907015F2  
A0208405F3401019F02060000000001009F0607A00000000310109F0702FF009F0802008D9F0902008C9F0D05F04000880  
09F0E0500100000009F0F05F0400098009F100706010A03A099009F1A0208409F2608292CAF79D395A8819F2701809F330  
3E0F8C89F34031E03009F3501229F360200EB9F3704A0E9D3EA9F40057000B0B001</b:value>
```

```
    </b:KeyValuePairOfStringstring>  
    </a:AdditionalOutputData>  
    <a:CardID i:nil="true"/>  
    <a:IsReplay>true</a:IsReplay>  
</a:EMVSREDOOutput>  
    <a:MagTranID>ad73e00a-03d1-426c-9a34-c821f6b4b29b</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: Thu, 21 Sep 2017 16:12:04 GMT

Server: Apache

```
&<JetPayResponse Version="2.0">
```

```
    <TransactionID>451783951808924416</TransactionID>
```

```
    <ActionCode>000</ActionCode>
```

```
    <Approval>TEST74</Approval>
```

```
    <ResponseText>APPROVED</ResponseText>
```

```
    <UniqueID>QnTkWkQhQlPbRjQmQiPoTmRo</UniqueID>
```

```
    <RRN>726416046823</RRN>
```

```
    <RawResponseCode>00</RawResponseCode>
```

```
    <ICC>
```

```
        <ATC>0035</ATC>
```

```
        <IssuerAuthData>472AD94F9FECD47D3030</IssuerAuthData>
```

```
<IssuerScript2>9F180430303031860E04DA9F580903C0DC6EF04E9C8A09860E04DA9F590908460C835744CE4E5C</Iss  
uerScript2>
```

```
</ICC>
```

```
</JetPayResponse]]></a:PayloadResponse>
```

```
<a:PayloadToken>351AF6C7C35EE4F1408F34F46D89119272DD31CAEDB0F5FA06F219808554E8AB</a:PayloadToken>
```

```
    <a:TransactionUTCTimestamp>2017-09-21 16:12:04Z</a:TransactionUTCTimestamp>
```

```
</a:ProcessEMVSREDOOutput>
```

```
</a:ProcessEMVSREDOOutputs>
```

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```
</ProcessEMVSREDResult>  
  </ProcessEMVSREDResponse>  
</s:Body>  
</s:Envelope>
```

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4 Status Codes and Messages

Status Codes and Messages returned by Magensa for Decrypt and Forward 3.0 web service operations.

Internal errors

Code	Message	Notes
5000	Unknown Error	

Input Validation errors

Code	Message	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	MagnePrint is required	
612	EncryptedData/EMVData is required	
614	MagnePrint status is required	
701	Access Denied	
707	Payload is required	
708	EncryptionType is required	
709	EncryptedBlob 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	

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721	Payload post failed	
722	URI is not authorized	
738	Invalid EMVSREDData	

5 Template Functions

The following functions can be used in conjunction with field replacement variables in order to build processor payloads. A space is not needed between commas which delimit the parameters, unless specifically needed as part of the parameter. All parameters shall not be enclosed in quotations (“”).

5.1 \$Add()

This function adds two numbers.

```
$Add(Operand1_Numeric,Operand2_Numeric,ToStringFormat_Optional)
```

Parameter	Value	Value Description
Operand1_Numeric	Numeric	Number 1
Operand2_Numeric	Numeric	Number 2
ToStringFormat_Optional	String	Optional output string format specifier

Return Value:

The numeric sum of Operand1_Numeric and Operand2_Numeric.

5.2 \$DateTimeNow()

This function returns the current date and time.

```
$DateTimeNow(Optional_format,Optional_0_Local_Or_1_Universal)
```

Parameter	Value	Value Description
Optional_format	String	Optional standard or custom date and time format string. Examples but not limited to: yyyyMMddhhmmss – 4 digit year in 12 hour format yyMMddHHmmss – 2 digit year in 24 hour format
Optional_0_Local_Or_1_Universal	Integer	Optional flag to return local time or global time. 0 – Local time 1 – Global time

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Return Value:

A string of the current date and time.

5.3 `$DecimalToString()`

This function converts a numeric value to an equivalent string.

```
$DecimalToString(Operand1_Numeric, ToStringFormat_Optional)
```

Parameter	Value	Value Description
Operand1_Numeric	Numeric	Decimal number to convert
ToStringFormat_Optional	String	Optional output string format specifier

Return Value:

A string equivalent of the Operand1_Numeric.

5.4 `$IndexOf()`

This function finds the position of one string within another.

```
$IndexOf(string, searchString, startPosition, numberOfCharacterPosition)
```

Parameter	Value	Value Description
string	String	The source string
searchString	String	The string to seek.
startPosition	String	The search starting position.
numberOfCharacterPosition	String	The number of character positions to examine.

Return Value:

The zero-based index position of value from the start of the current instance if that string is found, or -1 if it is not. If string is empty, the return value is startPosition.

5.5 `$IndexIgnoreCaseOf()`

This function finds the position of one string within another and is case insensitive.

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`$IndexIgnoreCaseOf(string, searchString, startPosition, numberOfCharacterPosition)`

Parameter	Value	Value Description
string	String	The source string
searchString	String	The string to seek
startPosition	String	The search starting position
numberOfCharacterPosition	String	The number of character positions to examine

Return Value:

The zero-based index position of value from the start of the current instance if that string is found, or -1 if it is not. If string is empty, the return value is startPosition.

5.6 \$Length()

This function returns the number of characters in a string.

`$Length(string)`

Parameter	Value	Value Description
string	String	String to count

Return Value:

The string length.

5.7 \$Multiply()

This function multiplies two numbers.

`$Multiply(Operand1_Numeric, Operand2_Numeric, ToStringFormat_Optional)`

Parameter	Value	Value Description
Operand1_Numeric	Numeric	Number 1
Operand2_Numeric	Numeric	Number 2
ToStringFormat_Optional	String	Optional output string format specifier

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Return Value:

The product of Operand1_Numeric and Operand2_Numeric.

5.8 \$Replace()

This function replaces a substring within another string.

```
$Replace(string,oldValue,newValue)
```

Parameter	Value	Value Description
string	String	Source string
oldValue	String	String being sought
newValue	String	New value of string to replace the old value

Return Value:

A string of which all instances of an oldValue substring has been replaced with a newValue substring.

5.9 \$Substring()

This function retrieves a substring of the source string.

```
$Substring(string, startindex, length)
```

Parameter	Value	Value Description
string	String	The source string
startindex	Integer	The zero-based starting character position of the string
length	Integer	The number of characters in the substring

Return Value:

A string that is equivalent to the substring of specified length.

5.10 \$TLVLength()

This function returns the length of the data portion for a single TLV element string.

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`$TLVLength(string)`

Parameter	Value	Value Description
string	String	<p>Tag octet of the TLV element</p> <p>Example of full TLV:</p> <p>When Application PAN TLV=5A081234567890123456, <code>\$TLVLength(5A)</code> returns 08</p> <pre>+++Literal-----+ +-Function----- -+ +-Field variable---- - -+ 5A\$TLVLength(5A){5A} constructs to=> 5A081234567890123456</pre>

Return Value:

The hexadecimal data length of the TLV element.

5.11 \$Trim()

This function removes leading and trailing spaces from a string.

`$Trim(string)`

Parameter	Value	Value Description
string	String	String to trim

Return Value:

A string without leading and trailing spaces.

5.12 \$RegexIsMatch()

This function evaluates a regular expression to find a match in the input string.

`$RegexIsMatch(InputString, patternString, RegexOptionsStringOptional)`

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Parameter	Value	Value Description
InputString	String	Input string to search for a match
patternString	String	Pattern string to match
RegexOptionsStringOptional	String	Optional regular expression options

Return Value:

“True” string if the regular expression finds a match, otherwise returns “False”.

5.13 \$RegexReplace()

This function replaces all strings that match a regular expression with a replacement string.

```
$RegexReplace (InputString, PatternString, ReplacementString, RegexOptionsStringOptional)
```

Parameter	Value	Value Description
InputString	String	Input string to search for a match
PatternString	String	Pattern string to match
ReplacementString	String	String to replace a match
RegexOptionsStringOptional	String	Optional regular expression options

Return Value:

A new string that is identical to the input string, except that the replacement string takes the place of each matched string. If pattern is not matched, the input string is returned.

5.14 \$RegexUnescape()

This function converts an expression into its unescaped form.

```
$RegexUnescape (InputString)
```

Parameter	Value	Value Description
InputString	String	String containing the text to convert

Return Value:

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A string of characters with any escaped characters converted to their unescaped form.

5.15 \$If()

This function evaluates an expression and returns either a true or false result string.

```
$If (ConditionBool, ResultTrueString, ReturnFalseStringOptional)
```

Parameter	Value	Value Description
ConditionBool	Expression	Expression to evaluate
ResultTrueString	Expression	String returned if ConditionalBool evaluates as True
ResultFalseStringOptional	Expression	Optional string returned if ConditionalBool evaluates as False

Return Value:

The True result string if the Boolean condition is true, otherwise the False result string.

5.16 \$NotBool()

This function negates a Boolean value.

```
$NotBool (OperandBool)
```

Parameter	Value	Value Description
OperandBool	Boolean	Boolean to negate

Return Value:

“True” string when OperandBool is false. “False” string when OperandBool is true.

5.17 \$AndBool()

This function performs an AND operation on two Boolean values.

```
$AndBool (Operand1Bool, Operand2Bool)
```

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Parameter	Value	Value Description
Operand1Bool	Boolean	Boolean value 1
Operand2Bool	Boolean	Boolean value 2

Return Value:

“True” string when both Operand1Bool and Operand2Bool are true, otherwise returns “False”.

5.18 \$OrBool()

This function performs an OR operation on two Boolean values.

```
$OrBool (Operand1Bool, Operand2Bool)
```

Parameter	Value	Value Description
Operand1Bool	Boolean	Boolean value 1
Operand2Bool	Boolean	Boolean value 2

Return Value:

“True” string when both Operand1Bool and Operand2Bool are true,

“True” string when either Operand1Bool or Operand2Bool are true, otherwise returns “False”.

5.19 \$IsContains()

This function checks if the source string contains a substring.

```
$IsContains (String, ContainsString, IgnoreCaseBool)
```

Parameter	Value	Value Description
String	String	Source string sought
ContainsString	String	String to seek
IgnoreCaseBool	Boolean	Flag to make the search be case insensitive false – Search is case sensitive true – Search is case insensitive

Return Value:

“True” string when ContainsString is found, otherwise returns “False”.

5.20 \$IsEqualStrings()

This function compares two strings.

```
$IsEqualStrings (Operand1String, Operand2String, IgnoreCaseBool)
```

Parameter	Value	Value Description
Operand1String	String	String to compare
Operand2String	String	String to compare
IgnoreCaseBool	Boolean	Flag to make the search be case insensitive false – Search is case sensitive true – Search is case insensitive

Return Value:

“True” string when Operand1String and Operand2String match, otherwise returns “False”.

5.21 \$IsEqualNumbers()

This function compares for the equality of two numbers.

```
$IsEqualNumbers (Operand1Number, Operand2Number)
```

Parameter	Value	Value Description
Operand1Number	Numeric	Number to compare
Operand2Number	Numeric	Number to compare

Return Value:

“True” string when Operand1Number and Operand2Number match, otherwise returns “False”.

5.22 \$IsGreaterOrEqual()

This function compares for the inequality of two numbers.

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`$IsGreaterOrEqual (Operand1Number, Operand2Number)`

Parameter	Value	Value Description
Operand1Number	Numeric	Number to compare
Operand2Number	Numeric	Number to compare

Return Value:

“True” string when Operand1Number is greater than or equal to Operand2Number, otherwise returns “False”.

6 Sample Code

The following is sample code in C# for consuming the Decrypt and Forward 3.0 web service.

6.1 DecryptBlob

```
//Create the web service objects
DAFv3WS.Service DAFWebservice = new DAFv3WS.Service();
DAFv3WS.DecryptBlobRequest Request = new DAFv3WS.DecryptBlobRequest();
DAFv3WS.DecryptBlobInput[] Inputs = new DAFv3WS.DecryptBlobInput[2];

Request.Authentication = new DAFv3WS.Authentication();
Request.Authentication.CustomerCode = "0001";
Request.Authentication.Username = "username";
Request.Authentication.Password = "password";

//Build Inputs.Auth
Inputs[0] = new DAFv3WS.DecryptBlobInput();
Inputs[0].Authentication = new DAFv3WS.Authentication();
Inputs[0].Authentication.CustomerCode = "0001";
Inputs[0].Authentication.Username = "DAFWSTestUser";
Inputs[0].Authentication.Password = "Password";

//Build Inputs.EncryptedBlobInput
Inputs[0].EncryptedBlobInput = new DAFv3WS.EncryptedBlobInput();
Inputs[0].EncryptedBlobInput.EncryptedBlob = "B0007B77";
Inputs[0].EncryptedBlobInput.EncryptionType = "80";
Inputs[0].EncryptedBlobInput.KSN = "9500030000000120014B";
Inputs[0].EncryptedBlobInput.NumberOfPaddedBytes = 4;

//Build Inputs.PayloadInfo
Inputs[0].PayloadInfo = new DAFv3WS.PayloadInfo();
Inputs[0].PayloadInfo.Payload =
"TRXTYPE=S&TENDER=C&USER=MagTek&PWD=4f%j@K5jp&PARTNER=MagTek&EXECUTOR=MagTek&VE
NDOR=MTPF060620130715&ACCT=4111111111111111&EXPDATE=0119&AMT=0.10";
Inputs[0].PayloadInfo.Uri = "https://pilot-payflowpro.paypal.com";

//Build any additional Inputs[]
Inputs[1] = new DAFv3WS.DecryptBlobInput();
.
.
.

//Assign Inputs to the DecryptedBlobInputs array
Request.DecryptBlobInputs = Inputs;

//Send the Request to the web service
txtStatus.Text += "\r" +
DAFWebservice.DecryptBlob(Request).DecryptBlobOutputs[0].PayloadResponse;
```


6.2 ProcessCardSwipe

```
//Create the web service objects
DAFv3WS.Service DAFWebservice = new DAFv3WS.Service();
DAFv3WS.ProcessCardSwipeRequest Request = new
DAFv3WS.ProcessCardSwipeRequest();
DAFv3WS.ProcessCardSwipeInput[] Inputs = new DAFv3WS.ProcessCardSwipeInput[2];

Request.Authentication = new DAFv3WS.Authentication();
Request.Authentication.CustomerCode = "0001";
Request.Authentication.Username = "username";
Request.Authentication.Password = "password";

//Build Inputs.Auth
Inputs[0] = new DAFv3WS.ProcessCardSwipeInput();
Inputs[0].Authentication = new DAFv3WS.Authentication();
Inputs[0].Authentication.CustomerCode = "0001";
Inputs[0].Authentication.Username = "username";
Inputs[0].Authentication.Password = "password";

//Build Inputs.EncryptedCardSwipe
Inputs[0].EncryptedCardSwipe = new DAFv3WS.EncryptedCardSwipe();
Inputs[0].EncryptedCardSwipe.DeviceSN = "B00CB7B";
Inputs[0].EncryptedCardSwipe.KSN = "950003000000012000D5";
Inputs[0].EncryptedCardSwipe.MagnePrint = "C347778618FBC523";
Inputs[0].EncryptedCardSwipe.MagnePrintStatus = "00002200";
Inputs[0].EncryptedCardSwipe.Track1 = "1EBFCC94DA7E6B35";
Inputs[0].EncryptedCardSwipe.Track2 = "22B6D05B11A37EBD";

//Build Inputs.PayloadInfo
Inputs[0].PayloadInfo = new DAFv3WS.PayloadInfo();
Inputs[0].PayloadInfo.Payload =
"TRXTYPE=A&TENDER=C&USER=MagTek&PWD=4f%j@K5jp&PARTNER=MagTek&EXECUTOR=MagTek&VE
NDOR=MTPF060620130715&ACCT={CCNum}&EXPDATE={MM}{YY}&AMT=0.10";
Inputs[0].PayloadInfo.Uri = "https://pilot-payflowpro.paypal.com";

//Build any additional Inputs[]
Inputs[1] = new DAFv3WS.ProcessCardSwipInput();
.
.
.

//Assign Inputs to the ProcessCardSwipeInputs array
Request.ProcessCardSwipeInputs = Inputs;

//Send the Request to the web service
txtStatus.Text += "\r" +
DAFWebservice.ProcessCardSwipe(Request).ProcessCardSwipeOutputs[0].PayloadRespo
nse;
```

6.3 ProcessEMV

```
//Create the web service objects
DAFv3WS.Service DAFWebservice = new DAFv3WS.Service();
DAFv3WS.ProcessEMVRequest Request = new DAFv3WS.ProcessEMVRequest();
DAFv3WS.ProcessEMVInput[] Inputs = new DAFv3WS.ProcessEMVInput[2];

Request.Authentication = new DAFv3WS.Authentication();
Request.Authentication.CustomerCode = "0001";
Request.Authentication.Username = "username";
Request.Authentication.Password = "password";

//Build Inputs.Auth
Inputs[0] = new DAFv3WS.ProcessEMVInput();
Inputs[0].Authentication = new DAFv3WS.Authentication();
Inputs[0].Authentication.CustomerCode = "0001";
Inputs[0].Authentication.Username = "username";
Inputs[0].Authentication.Password = "password";

//Build Inputs.EMVData
Inputs[0].EMVData = "FC8200D857104111";

//Build Inputs.PayloadInfo
Inputs[0].PayloadInfo = new DAFv3WS.PayloadInfo();
Inputs[0].PayloadInfo.Payload =
"TRXTYPE=S&TENDER=C&USER=MagTek&PWD=4f%j@K5jp&PARTNER=MagTek&EXECUTOR=MagTek&VE
NDOR=MTPF060620130715&ACCT={5A}&EXPDATE=${SubString({5F24},2,2)}${SubString({5F24}
,0,2)}&AMT=0.10";
Inputs[0].PayloadInfo.Uri = "https://pilot-payflowpro.paypal.com";

//Build any additional Inputs[]
Inputs[1] = new DAFv3WS.ProcessEMVInput();
.
.
.

//Assign Inputs to the ProcessEMVInput array
Request.ProcessEMVInputs = Inputs;

//Send the Request to the web service
txtStatus.Text += "\r" +
DAFWebservice.ProcessEMV(Request).ProcessEMVOutputs[0].PayloadResponse;
```

6.4 ProcessEMVSRED

```
//Create the web service objects
DAFv3WS.Service DAFWebservice = new DAFv3WS.Service();
DAFv3WS.ProcessEMVSREDRequest Request = new DAFv3WS.ProcessEMVSREDRequest();
DAFv3WS.ProcessEMVSREDInput[] Inputs = new DAFv3WS.ProcessEMVSREDInput[2];

Request.Authentication = new DAFv3WS.Authentication();
Request.Authentication.CustomerCode = "0001";
Request.Authentication.Username = "username";
Request.Authentication.Password = "password";

//Build Inputs.Auth
Inputs[0] = new DAFv3WS.ProcessEMVSREDInput();
Inputs[0].Authentication = new DAFv3WS.Authentication();
Inputs[0].Authentication.CustomerCode = "0001";
Inputs[0].Authentication.Username = "username";
Inputs[0].Authentication.Password = "password";

//Build Inputs.EMVSREDInput
Inputs[0].EMVSREDInput = new DAFv3WS.EMVSREDInput();
Inputs[0].EMVSREDInput.EMVSREDData = "B0007B7747CCC0DB";
Inputs[0].EMVSREDInput.EncryptionType = "80";
Inputs[0].EMVSREDInput.KSN = "9500030000000120014B";
Inputs[0].EMVSREDInput.NumberOfPaddedBytes = 4;

//Build Inputs.PayloadInfo
Inputs[0].PayloadInfo = new DAFv3WS.PayloadInfo();
Inputs[0].PayloadInfo.Payload =
"TRXTYPE=S&TENDER=C&USER=MagTek&PWD=4f%j@K5jp&PARTNER=MagTek&EXECUTOR=MagTek&VE
NDOR=MTPF060620130715&ACCT={5A}&EXPDATE=${SubString({5F24},2,2)}$SubString({5F24}
,0,2)&AMT=0.10";
Inputs[0].PayloadInfo.Uri = "https://pilot-payflowpro.paypal.com";

//Build any additional Inputs[]
Inputs[1] = new DAFv3WS.ProcessEMVSREDInput();
.
.
.

//Assign Inputs to the ProcessEMVSREDInputs array
Request.ProcessEMVSREDInputs = Inputs;

//Send the Request to the web service
txtStatus.Text += "\r" +
DAFWebservice.ProcessEMVSRED(Request).ProcessEMVSREDOutputs[0].PayloadResponse;
```