

# Magensa Web Service

## Remote Services for SCRA

RemoteServicesv2 SCRAv2 Operations Manual

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## Table 0.1 - Revisions

Rev Number	Date	By	Notes
10	January 2015	Donnie James	Initial Release
20	May 2015	Rebecca Robinson	Added Input Validation Errors

### NOTICE

The information contained herein is confidential and proprietary to:

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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 Remote Services web service.

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# 1 SCRAv2 Operations

## GetKeyList

A command used to get a list of available SCRA encryption keys that are authorized for use.

### INPUT PROPERTIES

Property (*)	Value	Value Description
<b>CustomerCode *</b>	<string>	Customer code
<b>Username *</b>	<string>	The User Identification credential created and assigned by MagTek.
<b>Password *</b>	<string>	The password for the credential.
<b>BillingLabel</b>	<string>	Billing Label
<b>CustomerTransactionId</b>	<string>	Customer transaction ID

Note: \* = Required

### OUTPUT PROPERTIES

Property	Value	Value Description
<b>CustomerTransactionId</b>	<string>	Customer transaction ID
<b>MagTranId</b>	<string>	Magensa assigned unique transaction ID in GUID form.
<b>Description</b>	<string>	Description for the key name.
<b>ID</b>	<string>	Key ID
<b>KSI</b>	<string>	Key Serial ID
<b>KeyName</b>	<string>	Key name
<b>KeySlotNamePrefix</b>	<string>	Key slot name prefix. Currently not used.

### GetKeyList Request:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:v2="http://www.magensa.net/RemoteServices/v2/"
xmlns:rem="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core">
  <soapenv:Header/>
  <soapenv:Body>
    <v2:GetKeyList>
      <v2:request>
        <rem:Authentication>
          <rem:CustomerCode>123</rem:CustomerCode>
          <rem>Password>Password</rem>Password>
          <rem:Username>Username</rem:Username>
        </rem:Authentication>
        <rem:BillingLabel>Billing</rem:BillingLabel>
        <rem:CustomerTransactionId>456</rem:CustomerTransactionId>
      </v2:request>
    </v2:GetKeyList>
  </soapenv:Body>
</soapenv:Envelope>
```

**GetKeyList Response:**

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <GetKeyListResponse xmlns="http://www.magensa.net/RemoteServices/v2/">
      <GetKeyListResult xmlns:a="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:CustomerTransactionId>456</a:CustomerTransactionId>
        <a:MagTranId>7c7ea90e-8a4b-48b1-9e31-dacabc0a14ca</a:MagTranId>
        <a:Keys>
          <a:Key>
            <a:Description>The test key for Magensa</a:Description>
            <a:ID>7</a:ID>
            <a:KSI>9999990</a:KSI>
            <a:KeyName>Magensa TEST Key</a:KeyName>
            <a:KeySlotNamePrefix>Test</a:KeySlotNamePrefix>
          </a:Key>
          <a:Key>
            <a:Description>the Test key for QwickKey</a:Description>
            <a:ID>8</a:ID>
            <a:KSI>9011400</a:KSI>
            <a:KeyName>QwickKey Test</a:KeyName>
            <a:KeySlotNamePrefix>Test</a:KeySlotNamePrefix>
          </a:Key>
          <a:Key>
            <a:Description>the test key we use for ANSI test</a:Description>
            <a:ID>12</a:ID>
            <a:KSI>9010010</a:KSI>
            <a:KeyName>ANSI Test Key</a:KeyName>
            <a:KeySlotNamePrefix>Test</a:KeySlotNamePrefix>
          </a:Key>
        </a:Keys>
      </GetKeyListResult>
    </GetKeyListResponse>
  </s:Body>
</s:Envelope>
```

## GetKeyLoadCommand

A command used to calculate the command to securely change from one DUKPT key to another.

### INPUT PROPERTIES

Property (*)	Value	Value Description
<b>CustomerCode *</b>	<string>	Customer code
<b>Username *</b>	<string>	The User Identification credential created and assigned by MagTek.
<b>Password *</b>	<string>	The password for the credential.
<b>BillingLabel</b>	<string>	Billing Label
<b>CustomerTransactionId</b>	<string>	Customer transaction ID
<b>KSN *</b>	<string>	Key Serial Number of the reader.
<b>KeyID *</b>	<string>	The ID of the Key to be loaded.
<b>UpdateToken *</b>	<string>	Update token obtained from the reader using command 19.

Note: \* = Required

### OUTPUT PROPERTIES

Property	Value	Value Description
<b>CustomerTransactionId</b>	<string>	Customer transaction ID
<b>MagTranId</b>	<string>	Magensa assigned unique transaction ID in GUID form.
<b>Description</b>	<string>	Description of the command response.
<b>ExecutionTypeEnum</b>	<string>	Execution type enumeration
<b>ID</b>	<string>	ID of the command response.
<b>Name</b>	<string>	Name representing the function for Value.
<b>Value</b>	<string>	When Name is ChangeKey, this is the value to send to the SCRA device. When Name is KCV, this is the Key Check Value of the key to be injected.

### GetKeyLoadCommand Request:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:v2="http://www.magensa.net/RemoteServices/v2/"
xmlns:rem="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core">
  <soapenv:Header/>
  <soapenv:Body>
    <v2:GetKeyLoadCommand>
      <v2:request>
        <rem:Authentication>
          <rem:CustomerCode>123</rem:CustomerCode>
          <rem>Password>Password</rem>Password>
          <rem:Username>Username</rem:Username>
        </rem:Authentication>
        <rem:BillingLabel>Billing</rem:BillingLabel>
        <rem:CustomerTransactionId>456</rem:CustomerTransactionId>
        <rem:KSN>9010010B28C0DC000038</rem:KSN>
        <rem:KeyID>12</rem:KeyID>
      </v2:request>
    </v2:GetKeyLoadCommand>
  </soapenv:Body>
</soapenv:Envelope>
```

### GetKeyLoadCommand Response:

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <GetKeyLoadCommandResponse xmlns="http://www.magensa.net/RemoteServices/v2/">
      <GetKeyLoadCommandResult
xmlns:a="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:CustomerTransactionId>456</a:CustomerTransactionId>
        <a:MagTranId>95093624-3993-4d4e-8c05-0d53e367431b</a:MagTranId>
        <a:Commands>
          <a:Command>
            <a:Description>To SCRA Device</a:Description>
            <a:ExecutionTypeEnum>ALL</a:ExecutionTypeEnum>
            <a:ID>0</a:ID>
            <a:Name>ChangeKey</a:Name>
            <a:Value>223142323843304443313031353134414100019010010B28C0DC000000C8CA8836AC81EE8C45D9AAA6419B38A
9E512F571090E</a:Value>
          </a:Command>
          <a:Command>
            <a:Description>Key Check Value</a:Description>
            <a:ExecutionTypeEnum>ALL</a:ExecutionTypeEnum>
            <a:ID>0</a:ID>
            <a:Name>KCV</a:Name>
            <a:Value>00311A2A3D</a:Value>
          </a:Command>
        </a:Commands>
      </GetKeyLoadCommandResult>
    </GetKeyLoadCommandResponse>
  </s:Body>
</s:Envelope>
```

## GetCommandList

A command used to retrieve the list of available configuration commands.

### INPUT PROPERTIES

Property (*)	Value	Value Description
<b>CustomerCode *</b>	<string>	Customer code
<b>Username *</b>	<string>	The User Identification credential created and assigned by MagTek.
<b>Password *</b>	<string>	The password for the credential.
<b>BillingLabel</b>	<string>	Billing Label
<b>CustomerTransactionId</b>	<string>	Customer transaction ID
<b>ExecutionType *</b>	<string>	The Execution Type can be one of the following values: ALL, KSN, MUT

Note: \* = Required

### OUTPUT PROPERTIES

Property	Value	Value Description
<b>CustomerTransactionId</b>	<string>	Customer transaction ID
<b>MagTranId</b>	<string>	Magensa assigned unique transaction ID in GUID form.
<b>Description</b>	<string>	Description of the command response.
<b>ExecutionTypeEnum</b>	<string>	The Execution Type can be one of the following values: ALL, KSN, MUT
<b>ID</b>	<string>	Command ID to be used for the following operations: GetCommandByMUT, GetCommandByKSN
<b>Name</b>	<string>	Name of the command.
<b>Value</b>	<string>	Value. Response may return a nil for this operation.

#### GetCommandList Request:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:v2="http://www.magensa.net/RemoteServices/v2/"
xmlns:rem="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core">
  <soapenv:Header/>
  <soapenv:Body>
    <v2:GetCommandList>
      <v2:request>
        <rem:Authentication>
          <rem:CustomerCode>123</rem:CustomerCode>
          <rem>Password>Password</rem>Password>
          <rem:Username>Username</rem:Username>
        </rem:Authentication>
        <rem:BillingLabel>Billing</rem:BillingLabel>
        <rem:CustomerTransactionId>456</rem:CustomerTransactionId>
        <rem:ExecutionType>ALL</rem:ExecutionType>
      </v2:request>
    </v2:GetCommandList>
  </soapenv:Body>
</soapenv:Envelope>
```

#### GetCommandList Response:

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <GetCommandListResponse xmlns="http://www.magensa.net/RemoteServices/v2/">
      <GetCommandListResult
xmlns:a="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:CustomerTransactionId>456</a:CustomerTransactionId>
      </GetCommandListResult>
    </GetCommandListResponse>
  </s:Body>
</s:Envelope>
```



```
<a:MagTranId>4e2a2cd3-605d-4934-8d18-b4711fb837bb</a:MagTranId>
<a:Commands>
  <a:Command>
    <a:Description>Change Reader to HID Mode</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>1</a:ID>
    <a:Name>MODE_HID</a:Name>
    <a:Value i:nil="true"/>
  </a:Command>
  <a:Command>
    <a:Description>Change Reader to Keyboard Emulation</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>2</a:ID>
    <a:Name>MODE_KBE</a:Name>
    <a:Value i:nil="true"/>
  </a:Command>
  <a:Command>
    <a:Description>Change Reader to Security Level 3</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>3</a:ID>
    <a:Name>SECLEV_3</a:Name>
    <a:Value i:nil="true"/>
  </a:Command>
  <a:Command>
    <a:Description>Encrypt using PIN Variant</a:Description>
    <a:ExecutionTypeEnum>MUT</a:ExecutionTypeEnum>
    <a:ID>41</a:ID>
    <a:Name>ENC_VARIANT_PIN</a:Name>
    <a:Value i:nil="true"/>
  </a:Command>
  <a:Command>
    <a:Description>Encrypt using Data Variant</a:Description>
    <a:ExecutionTypeEnum>MUT</a:ExecutionTypeEnum>
    <a:ID>42</a:ID>
    <a:Name>ENC_VARIANT_DATA</a:Name>
    <a:Value i:nil="true"/>
  </a:Command>
  <a:Command>
    <a:Description>Bulk Encryption Restricted</a:Description>
    <a:ExecutionTypeEnum>MUT</a:ExecutionTypeEnum>
    <a:ID>43</a:ID>
    <a:Name>Bulk_Encryption_Restricted</a:Name>
    <a:Value i:nil="true"/>
  </a:Command>
  <a:Command>
    <a:Description>Bulk Encryption Unrestricted</a:Description>
    <a:ExecutionTypeEnum>MUT</a:ExecutionTypeEnum>
    <a:ID>44</a:ID>
    <a:Name>Bulk_Encryption_Unrestricted</a:Name>
    <a:Value i:nil="true"/>
  </a:Command>
</a:Commands>
</GetCommandListResult>
</GetCommandListResponse>
</s:Body>
</s:Envelope>
```

## GetCommandByMUT

A command used to calculate the command to securely change a configuration option by requesting a MagTek Update Token from the SCRA Reader (Command 19).

### INPUT PROPERTIES

Property (*)	Value	Value Description
<b>CustomerCode *</b>	<string>	Customer code
<b>Username *</b>	<string>	The User Identification credential created and assigned by MagTek.
<b>Password *</b>	<string>	The password for the credential.
<b>BillingLabel</b>	<string>	Billing Label
<b>CustomerTransactionId</b>	<string>	Customer transaction ID
<b>CommandID *</b>	<string>	The Command ID obtained from the GetCommandList response.
<b>KSN *</b>	<string>	Key Serial number obtained by sending a command 09 to the reader. For this operation the KSN should be obtained from the reader before obtaining the update token.
<b>UpdateToken *</b>	<string>	Update token obtained from the reader using command 19.

Note: \* = Required

### OUTPUT PROPERTIES

Property	Value	Value Description
<b>CustomerTransactionId</b>	<string>	Customer transaction ID
<b>MagTranId</b>	<string>	Magensa assigned unique transaction ID in GUID form.
<b>Description</b>	<string>	Description of the command response.
<b>ExecutionTypeEnum</b>	<string>	The Execution Type can be one of the following values: ALL, KSN, MUT
<b>ID</b>	<string>	The ID echoed back from CommandID in the request.
<b>Name</b>	<string>	Name of the command.
<b>Value</b>	<string>	Value to be sent to the SCRA device.

### GetCommandByMUT Request:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:v2="http://www.magensa.net/RemoteServices/v2/"
xmlns:rem="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core">
  <soapenv:Header/>
  <soapenv:Body>
    <v2:GetCommandByMUT>
      <v2:request>
        <rem:Authentication>
          <rem:CustomerCode>123</rem:CustomerCode>
          <rem>Password>Password</rem>Password>
          <rem:Username>Username</rem:Username>
        </rem:Authentication>
        <rem:BillingLabel>Billing</rem:BillingLabel>
        <rem:CustomerTransactionId>456</rem:CustomerTransactionId>
        <rem:CommandID>41</rem:CommandID>
        <rem:KSN>9010010B28C0DC000001</rem:KSN>
      </v2:request>
      <rem:UpdateToken>423238433044433130313531344141004D53434B545354303031BEA4220A408C5D065097</rem:UpdateToken>
    </v2:GetCommandByMUT>
  </soapenv:Body>
</soapenv:Envelope>
```

**GetCommandByMUT Response:**

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <GetCommandByMUTResponse xmlns="http://www.magensa.net/RemoteServices/v2/">
      <GetCommandByMUTResult
xmlns:a="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:CustomerTransactionId>456</a:CustomerTransactionId>
        <a:MagTranId>7cfa6113-b133-4a72-9e9e-c6f7c42718fb</a:MagTranId>
        <a:Command>
          <a:Description>Encrypt using PIN Variant</a:Description>
          <a:ExecutionTypeEnum>MUT</a:ExecutionTypeEnum>
          <a:ID>41</a:ID>
          <a:Name>ENC_VARIANT_PIN</a:Name>
          <a:Value>01065400243D8504</a:Value>
        </a:Command>
      </GetCommandByMUTResult>
    </GetCommandByMUTResponse>
  </s:Body>
</s:Envelope>
```

## GetCommandByKSN

A command used to calculate the command to securely change a configuration option by requesting the current key serial number KSN from the SCRA Reader (Command 09)

### INPUT PROPERTIES

Property (*)	Value	Value Description
<b>CustomerCode *</b>	<string>	Customer code
<b>Username *</b>	<string>	The User Identification credential created and assigned by MagTek.
<b>Password *</b>	<string>	The password for the credential.
<b>BillingLabel</b>	<string>	Billing Label
<b>CustomerTransactionId</b>	<string>	Customer transaction ID
<b>CommandID *</b>	<string>	The Command ID obtained from the GetCommandList response.
<b>KSN *</b>	<string>	Key Serial number obtained by sending a command 09 to the reader. For this operation the KSN should be obtained from the reader before obtaining the update token.
<b>KeyID *</b>	<string>	The ID of the Key to use for the calculation. This is obtained from the GetKeyList Response.

Note: \* = Required

### OUTPUT PROPERTIES

Property	Value	Value Description
<b>CustomerTransactionId</b>	<string>	Customer transaction ID
<b>MagTranId</b>	<string>	Magensa assigned unique transaction ID in GUID form.
<b>Description</b>	<string>	Description of the command response.
<b>ExecutionTypeEnum</b>	<string>	The Execution Type can be one of the following values: ALL, KSN, MUT
<b>ID</b>	<string>	The ID echoed back from CommandID in the request.
<b>Name</b>	<string>	Name of the command.
<b>Value</b>	<string>	Value to be sent to the SCRA device.

**GetCommandByKSN Request:**

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:v2="http://www.magensa.net/RemoteServices/v2/"
xmlns:rem="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core">
  <soapenv:Header/>
  <soapenv:Body>
    <v2:GetCommandByKSN>
      <v2:request>
        <rem:Authentication>
          <rem:CustomerCode>123</rem:CustomerCode>
          <rem:Password>Password</rem:Password>
          <rem:Username>Username</rem:Username>
        </rem:Authentication>
        <rem:BillingLabel>Billing</rem:BillingLabel>
        <rem:CustomerTransactionId>456</rem:CustomerTransactionId>
        <rem:CommandID>7</rem:CommandID>
        <rem:KSN>9010010B28C0DC000001</rem:KSN>
        <rem:KeyID>12</rem:KeyID>
      </v2:request>
    </v2:GetCommandByKSN>
  </soapenv:Body>
</soapenv:Envelope>
```

**GetCommandByKSN Response:**

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <GetCommandByKSNResponse xmlns="http://www.magensa.net/RemoteServices/v2/">
      <GetCommandByKSNResult
xmlns:a="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:CustomerTransactionId>456</a:CustomerTransactionId>
        <a:MagTranId>e007c08f-cc90-4ec4-8d53-d50ce574bb68</a:MagTranId>
        <a:Command>
          <a:Description>Polling time to 5 millisecond</a:Description>
          <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
          <a:ID>7</a:ID>
          <a:Name>POLL_05MS</a:Name>
          <a:Value>010602056A191D3E</a:Value>
        </a:Command>
      </GetCommandByKSNResult>
    </GetCommandByKSNResponse>
  </s:Body>
</s:Envelope>
```

## 2. Status Codes and Messages

Status Codes and Messages returned by Magensa for SCRAv2 Operations.

### INTERNAL ERRORS

Code	StatusMsg	Notes
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	
609	KeyName is required	
615	CustomerTransactionID is not valid	
616	BillingLabel is not valid	
621	XMLString is required	
622	SerialNumber is required	
623	SerialNumber is not valid	Value was not HEX or too long.
701	Access Denied	Returned when user cannot be authenticated or authorized for any reason such as invalid username, invalid password, or account locked.
702	Device Not Allowed	