



Tertiary Education Commission
Te Amorangi Mātauranga Matua

Electronic Receipting System (ERS)

Web Services Interface Developer Guide

Effective from 1 March 2012
Tertiary Education Commission
44 The Terrace
Wellington

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Introduction

About this document

This document is for software developers implementing XML transactions between a student management system (SMS) and TEC's Electronic Receipting System (ERS). It describes the ERS transactions available as web services for integration with external systems.

Getting help

Matters relating to the scope and nature of the ERS or requests for technical support in integrating with the ERS system should be addressed to:

Tertiary Education Commission Help Desk

Email address: helpdesk@tec.govt.nz

ERS Helpline: 0800 435 737 (0800 HELP ER)

Disclaimer

Every effort has been made to ensure that this document is coordinated with the schema definitions. Where there is any difference in specifications, the schema (as currently posted on the TEC website) should always be taken as the prevailing definition.

General information about ERS

Overview

ERS is a web-based self-service application allowing TEC client providers to submit regular transactions electronically. The current release provides support for the following funds:

- Foundation Focused Training Opportunities
- Youth Guarantee

Two interfaces

ERS can be accessed in two ways, as follows:

Interface	Description
Web forms	TEO staff enter data into ERS via a website interface.
Web services (XML interface)	An external SMS accesses ERS via an XML interface. NOTE: ERS does not strictly implement a full web services interface. It uses a simplified XML over HTTPS approach, which software developers will find very straightforward to integrate into their systems.

Accessing ERS

Managing access

Access to ERS is typically limited to the following:

- Staff of Tertiary Education Organisations (TEOs)
- Individuals acting as agents for TEOs
- TEC staff

Access is managed through the Ministry of Education's "Education Sector Authentication and Authorisation service" (ESAA). Software developers will require access to ERS test (compliance) systems for development and testing.

In ERS, use of National Student Numbers (NSN) is mandatory and ERS users must also be registered for access to the National Student Index (NSI).

To arrange access:

- contact the Sector Service Desk (sector.servicedesk@minedu.govt.nz or 0800 422 599); or
- download an application form from the Ministry's STEO website at [ESAA Downloads](#).

Further information on ESAA is available at [Education Sector Authentication and Authorisation \(ESAA\)](#).

First login – a warning

When you are first issued with a username and password by the Sector Service Desk, that password must be changed the first time you login.

Don't use this password to test your web-services code. You should first go to either the NSI or ERS test websites and you will be prompted there to change your password. Once you have changed your password, you can then use it to access the web-services URLs.

If you don't do this, you may lock yourself out and have to apply for a new password.

URLs

Compliance site

Transaction	Address
Login	https://ers-com.tec.govt.nz/web-service-gateway/WebServiceLogin
Logoff	https://ers-com.tec.govt.nz/web-service-gateway/WebServiceLogoff
Other transactions	https://ers-com.tec.govt.nz/web-service-gateway/WebServiceGateway

Production site

Transaction	Address
Login	https://service.tec.govt.nz/web-service-gateway/WebServiceLogin
Logoff	https://service.tec.govt.nz/web-service-gateway/WebServiceLogoff
Other transactions	https://service.tec.govt.nz/web-service-gateway/WebServiceGateway

The XML interface

Transactional interface

The XML interface is transactional, as opposed to a batch interface. It accepts single transactions and immediately processes that transaction, returning an appropriate reply message.

To use the XML interface, the external SMS must:

- format messages in the XML formats specified in this document;
- be compliant with the XML schema provided in this document;
- POST the message to the ERS URL; and then
- obtain and interpret the returned XML reply message.

Design options for SMS

The external SMS may be designed to accumulate XML enrolments and then send them through as a sequence of files, contained within one login/logoff message. ERS will handle these as a string of individual enrolments, returning a success or failure response after each message is processed. The external SMS would then need to be able to interpret and return information on the success or failure of each file so that appropriate corrections and resubmissions can be made of the unsuccessful enrolments.

This may be advantageous if the TEO:

- wants to complete all enrolments for a programme before submitting the files to ERS; or
- does not want to be constantly connected to the internet whilst enrolling students.

These design considerations are the responsibility of the SMS vendor.

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XML interface standards

The XML interface allows Student Management Systems (SMS) users to interact with ERS directly from their SMS. This interaction appears transparent to SMS users and is a real-time transactional Internet interface. Each XML transaction and response has a defined XML syntax, described by the schemas, detailed below.

Standard	Description
Dates	<p>All dates passed in XML function calls should be passed in the following format:</p> <p style="text-align: center;">yyyy-mm-dd (e.g. 2005-03-17)</p> <p>Date is assumed to be in local time, without any time zone adjustment.</p>
Encoding	<p>All top level tags in XML blocks output by ERS include an encoding attribute:</p> <pre><?xml version="1.0" encoding="UTF-8" ?></pre>
Macron encoding	<p>Due to the vintage of the underlying legacy system (Basil), ERS is not designed to process macron encoded text. A validation error may be displayed if macrons are received.</p>
Schema versions	<p>The version number of the schema is contained within the <xs:schema> tag. For example:</p> <pre><xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:eer="http://tec.govt.nz/forms/eer" xmlns="http://tec.govt.nz/forms/amend" targetNamespace="http://tec.govt.nz/forms/amend" elementFormDefault="qualified" attributeFormDefault="unqualified" version="3.0"></pre> <p>The first tag in the schema “ <?xml version="1.0" encoding="UTF-8"?> ” is the version of the xml standard being used to encode the schema, NOT the schema version.</p> <p>Release of ERS schema will generally be in a suite with the same version number. For example, the February 2006 release was version 1.2 of the schema, even though some of the individual schema in the release will not have changed from version 1.1. It is hoped that this will reduce confusion over which version of the schema need to be used with new releases of the ERS software.</p>
Tags	<p>Case</p> <p>All XML tags passed to the ERS system must match the case in the validation schema. For example:</p> <pre><FirstName> is valid; whereas <firstname> and <FIRSTNAME> are not valid</pre> <p>Null field values</p> <p>Null field values will be returned in the format:</p> <pre><tag/></pre> <p>or</p> <pre><tag></tag></pre> <p>However, software developers working to integrate with the ERS should not assume that all null field values will be returned in any given block.</p>

The schemas

Introduction to the schemas

Primary schemas

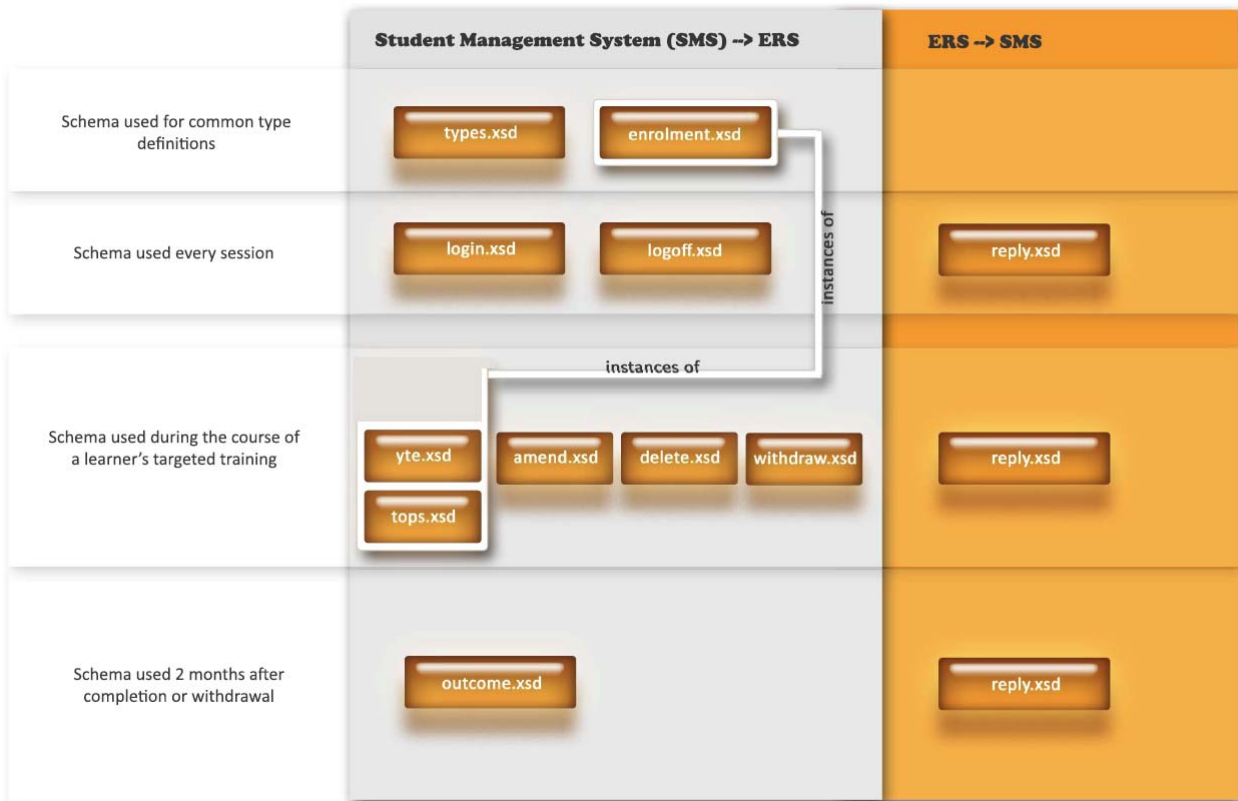
ERS provides the following business transactions:

Transaction	Description
Enrolment	This enrolls a student on a programme. It includes data required to calculate and verify eligibility. Three enrolment transaction types are available: Youth Guarantee (yte.xsd) and Training Opportunities (tops.xsd). The schema enrolment.xsd defined specialised types for these three enrolment transactions.
Withdrawal	<p>This removes a student from a programme. It includes supplementary information on the student's withdrawal reasons. After being withdrawn, a student can immediately enrol in another programme.</p> <p>The withdrawal transaction is needed to withdraw a student from a course prior to its end date. It is not needed at the course end date, as the system auto-withdraws all students at that time.</p>
Delete	<p>This is a special form of withdrawal. It is only available if:</p> <ul style="list-style-type: none"> • the programme hasn't started yet; OR • overnight processing hasn't occurred yet <p>The transaction is controlled by the enrolment's status, which is initially set as "Pending", and changes to "Active" when overnight processing occurs (but only if the programme has started).</p> <p>Only pending enrolments can be deleted. Active enrolments must be withdrawn.</p>
Amend	This allows some details of the original enrolment to be amended (student address and phone number, student travel amount, and student bank account details). It can be lodged at any time after enrolment.
Outcome	This records the market outcome at 60 days after either course completion or course withdrawal. It can be lodged any time between 60 and 90 days after a course completion.

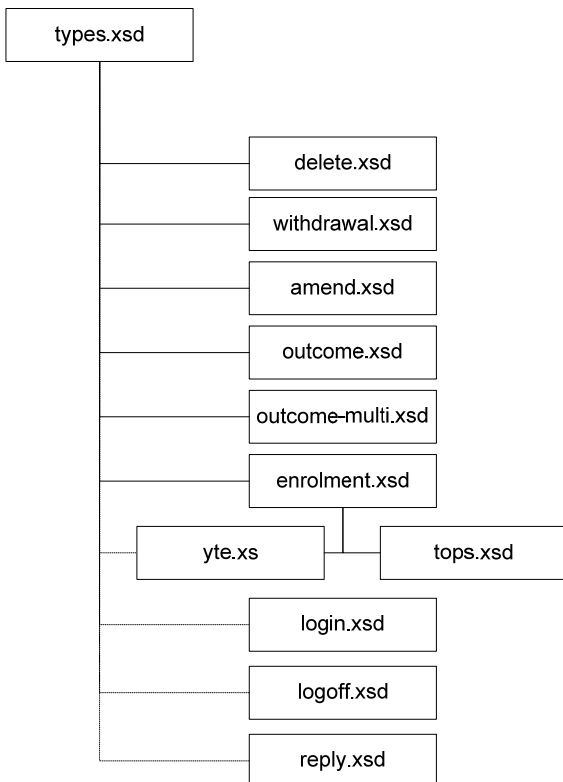
"Support" schemas

- **types.xsd** provides generic type definitions for all other schemas.
- **enrolment.xsd** provides refined type definitions for yte.xsd, tops.xsd and skillEnhancement.xsd, the three enrolment message types.
- **login.xsd** and **logout.xsd** open and close each session.
- **reply.xsd** defines a generic reply message sent by ERS in response to any of the other ERS message types.

ERS STUDENT MANAGEMENT SYSTEM
Interface - Logical Structure



The schemas have a simple hierarchical structure as follows:



The individual schemas are described in the following sections (in alphabetical order). Copies of the actual XML schema files are available at: <http://www.tec.govt.nz/resource-centre/software-tools/ers/developer-information/>. Old versions are also available at that location.

National Student Number (NSN) validation

Only Active NSNs are valid for use with ERS, a record with Partial status does not have residency confirmed, which is a requirement for enrolment.

When an NSN is submitted, as part of an enrolment transaction, a check is performed that the NSN and the Date of Birth match, and that the student's status is Active.

Integration considerations

Developers of this interface should allow for SMS users to also have entered a transaction manually, through the complementary ERS web-forms.

Some facility to flag transactions will probably be required so that they do not get re-processed. Without some thought to supporting a mechanism that would suspend the submission of these types of transactions, they may create a loop of rejections (duplicate submission) and resubmissions.

Amend schema

The amend function updates an existing ERS enrolment record with the new or changed student details supplied. There is a conditional use of the message, dependant on the student's enrolment status.

The transaction is prescribed by the amend.xsd schema. This transaction can amend three groups of information:

- Address information
- Travel amount information
- Bank details information

All the above data elements must be submitted for active placements.

Example of Amend message

```
<?xml version="1.0" encoding="UTF-8"?>
<amd:Amend
  xmlns:amd="http://tec.govt.nz/forms/amend"
  xmlns:gatewayAmend="http://tec.govt.nz/forms/amend/gateway"
  xmlns:eer="http://tec.govt.nz/forms/eer"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://tec.govt.nz/forms/amend/ amend.xsd"
  version="1.0"
  eer:UserId="">
  <eer:NationalStudentNumber>0123456789</eer:NationalStudentNumber>
  <eer:ProgrammeNumber>1234567</eer:ProgrammeNumber>
  <eer:Person>
    <eer:Name>
      <eer:FirstName>John</eer:FirstName>
      <eer:MiddleName></eer:MiddleName>
      <eer:LastName>Smith</eer:LastName>
    </eer:Name>

    <eer:BirthDate>01/01/1952</eer:BirthDate>
    <eer:GenderName></eer:GenderName>
  </eer:Person>
  <eer:Contact>
    <eer:Address>
      <eer:AddressLine1>1 Nowhere Road</eer:AddressLine1>
      <eer:AddressLine2>Nowhere</eer:AddressLine2>
      <eer:SuburbLocaleName>Nowhere</eer:SuburbLocaleName>
      <eer:TownCityName>Nowhere</eer:TownCityName>
      <eer:PostalAddressCode>1234</eer:PostalAddressCode>
    </eer:Address>
    <eer:PhoneNumber>
      <eer:PhoneNumberRole>04</eer:PhoneNumberRole>
      <eer:PhoneAreaCode>1234567</eer:PhoneAreaCode>
      <eer:PhoneLocalNumber></eer:PhoneLocalNumber>
    </eer:PhoneNumber>
    <eer:PhoneNumber>
      <eer:PhoneNumberRole>Other</eer:PhoneNumberRole>
      <eer:PhoneAreaCode>04</eer:PhoneAreaCode>
      <eer:PhoneLocalNumber>2345678</eer:PhoneLocalNumber>
    </eer:PhoneNumber>
  </eer:Contact>
</amd:Amend>
```

Delete schema

Use this transaction to remove a placement with a pending status. Either:

- an enrolment for a course not yet started; or
- an enrolment made in the same working day as the withdrawal.

The transaction is prescribed by the delete.xsd schema.

NOTE: Placements are initially inserted with a status of pending and an overnight process updates the status to active if the course start date has been reached. Pending enrolments can be deleted, active enrolments must be withdrawn (which requires additional data elements).

Example of Delete message

```
<del>Delete
  xmlns="http://www.w3.org/2002/06/xhtml12"
  xmlns:eer="http://tec.govt.nz/forms/eer"
  xmlns:del="http://tec.govt.nz/forms/delete">
  <eer:NationalStudentNumber>0123456789</eer:NationalStudentNumber>
  <eer:ProgrammeNumber>1234567</eer:ProgrammeNumber>
</del>Delete>
```

Enrolment schema

This schema is a building block for the enrolment forms. It takes the definitions from the Types schema and defines further types that are common to all enrolment forms.

Notes on ethnicity

For an enrolment for a learner with multiple ethnicities, the <EthnicityCode> element is repeated within the <StatisticalInformation> complex type. For example:

```
<enr:StatisticalInformation>
  <enr:EthnicityCode>421</enr:EthnicityCode>
  <enr:EthnicityCode>431</enr:EthnicityCode>
  <enr:EthnicityCode>441</enr:EthnicityCode>
  <enr:EmploymentHistoryCode>WGY</enr:EmploymentHistoryCode>
  <enr:PriorActivityCode>UNM</enr:PriorActivityCode>
  <enr:SpecialLiteracyNeedsIndicator>>false</enr:SpecialLiteracyNeedsIndicator>
</enr:StatisticalInformation>
```

Where one of the ethnicities is Maori (211) this must be the first instance of the <EthnicityCode> element for the file to validate against the schema. Subsequent <EthnicityCode> values can then follow in any order. For example:

```
<enr:StatisticalInformation>
<enr:EthnicityCode>211</enr:EthnicityCode>
<enr:EthnicityCode>111</enr:EthnicityCode>
  <enr:TribalAffiliations>
  <enr:MainTribalAffiliationCode>001</enr:MainTribalAffiliationCode>
  <enr:OtherAffiliations>002</enr:OtherAffiliations>
  </enr:TribalAffiliations>
<enr:EmploymentHistoryCode>WGY</enr:EmploymentHistoryCode>
<enr:PriorActivityCode>AS</enr:PriorActivityCode>
<enr:SpecialLiteracyNeedsIndicator>>false</enr:SpecialLiteracyNeedsIndicator>
</enr:StatisticalInformation>
```

Where an <EthnicityCode> value of 211 is included, the <TribalAffiliations> type is mandatory. There must be one instance of the <MainTribalAffiliationCode> element (with value) and there may be any number of instances of the <OtherAffiliations> element (with value).

Login schema

About this schema

This function begins a session with the ERS system by logging the user in. It will be used to ensure that the user performing the call has the necessary security privileges.

The transaction is prescribed by the login.xsd schema and is a simple XML construct with a standard reply structure.

Access is managed by MoE from the ESAA service. ESAA holds information on the access privileges a user has associated with a particular organisation. ERS system checks the login credentials on ESAA to verify a user's access permissions.

The SMS using ERS must initiate a login call prior to performing other ERS functions.

Example of Login message

```
<?xml version="1.0" encoding="UTF-8"?>
<login xmlns="http://tec.govt.nz/forms/login" xmlns:eer="http://tec.govt.nz/forms/eer"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://tec.govt.nz/forms/login login.xsd" version="2.0">
    <username>String</username>
    <password>String</password>
</login>
```

Logoff schema

This function ends the user's ERS session. While the syntax shown is recommended, any POST to the logout URL will terminate the session.

This transaction is prescribed by the logoff.xsd schema and are a simple XML construct with a standard reply structure.

Example of Logoff message

```
<?xml version="1.0" encoding="UTF-8" ?>
<logout></logout>
```

or

```
<?xml version="1.0" encoding="UTF-8" ?>
<logout/>
```

NOTE: The logoff message always returns a success reply message.

Outcomes schema

Use this transaction to record the students outcome at 60 days for any of the three programmes after course completion.

The transaction is prescribed by the outcomes.xsd schema. It requires one of the three outcome choices to be completed.

Data recorded in ERS from an outcome transaction cannot be subsequently amended through ERS. If an amendment is required, the user should contact TEC directly, where staff will make the necessary amendment to the outcome.

Labour market outcomes record the student's status at 60 days after course completion. Accordingly, these transactions cannot be entered prior to this date, and a 30 day window is provided for the information to be supplied. Data cannot be entered later than 90 days after the course completion.

Outcomes not returned within the 90 day period default to a status of "Not Known", which can have funding implications. As with amendments, mentioned above, TEC staff can alter late results for users, where necessary.

NOTE: The schema is a little complex to read as it incorporates a choice between the three outcome options: EMP (Employed) , FPT (Further Training) and OTH (Other).

Example of Outcome message

```
<?xml version="1.0" encoding="UTF-8"?>
<oc:Outcome
  xmlns:oc="http://tec.govt.nz/forms/outcome"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:eer="http://tec.govt.nz/forms/eer"
  eer:UserId="atest"
  version="1.0"
  xsi:schemaLocation="http://tec.govt.nz/forms/outcome outcome.xsd">
  <eer:NationalStudentNumber>0</eer:NationalStudentNumber>
  <eer:PlacementDetails>
    <eer:ProgrammeNumber>2</eer:ProgrammeNumber>
    <eer:StartDate>2011-01-11</eer:StartDate>
  </eer:PlacementDetails>
  <oc:LearnerDestination>
    <oc:LearnerDestinationCode>EMP</oc:LearnerDestinationCode>
    <oc:OutcomeCode>CDT</oc:OutcomeCode>
    <oc:LearnerDestinationOther></oc:LearnerDestinationOther>
    <oc:EmployerName>TEC Testing Ltd</oc:EmployerName>

  <oc:LearnerDestinationRelatersToProgrammeIndicator></oc:LearnerDestinationRelatersToProgrammeIndicator>
    <oc:ContactPersonName>John</oc:ContactPersonName>
    <oc:ContactPhoneNumber>04 123456</oc:ContactPhoneNumber>
    <oc:FaxNumber>04 654321</oc:FaxNumber>
    <oc:Email>john@tec.govt.nz</oc:Email>
    <oc:Comment>an uploaded comment</oc:Comment>
  </oc:LearnerDestination>
</oc:Outcome>
```

Reply schema

All message types return a reply message.

Result

The element containing the status for a submitted message

The content of the result-code is always either SUCCESS or FAILURE.

When the content is FAILURE, further information is supplied in the warning elements (details below) which are repeated for each error encountered.

Example of success Reply message

A successful message submission is indicated by the return of a successful result message:

```
<?xml version="1.0" encoding="UTF-8"?>
<result>
  <resultCode>SUCCESS</resultCode>
  <eligibilityCodeReturned>SL18+</eligibilityCodeReturned>      (enrolments only)
</result>
```

Example of failure Reply message

```
<?xml version="1.0" encoding="UTF-8"?>
<result>
  <resultCode>String</resultCode>
  <warnings>
    <errorCode>String</errorCode>
    <errorPath>String</errorPath>
    <errorMessage>String</errorMessage>
    <errorInformation>String</errorInformation>
  </warnings>
</result>
```

Training Opportunities enrolment schema

Use this schema to insert a placement on Training Opportunities programmes.

This transaction is prescribed by the tops.xsd schema. It also draws on the enrolment.xsd schema and the types.xsd schema.

Eligibility

After message validation is performed, eligibility rules are applied. It is not uncommon to submit a valid but ineligible record.

Error messages will sometimes provide reasons for ineligibility, but on other occasions will indicate little more than that the record is ineligible. If there is more than one reason why an enrolment is invalid, only the first problem encountered will be reported.

See the “Targeted Training Funding Guidelines” for comprehensive eligibility business rules.

Example of Training Opportunities enrol message

```

<?xml version="1.0" encoding="UTF-8"?>
<tops:Enrolment
  xmlns:yte="http://tec.govt.nz/forms/enrol/yte"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:eer="http://tec.govt.nz/forms/eer"
  xmlns:enr="http://tec.govt.nz/forms/enrol"
  xmlns:tops="http://tec.govt.nz/forms/enrol/tops"
  eer:Comment=""
  eer:DocumentId=""
  eer:EdumisNo="0"
  eer:ProgrammeName="TOP Programme"
  eer:UserId="test"
  version="1.0"
  xsi:schemaLocation="http://tec.govt.nz/forms/enrol/yte yte.xsd">
  <eer:NationalStudentNumber>0</eer:NationalStudentNumber>
  <eer:Person>
    <eer:Name>
      <eer:FirstName>John</eer:FirstName>
      <eer:LastName>Smith</eer:LastName>
    </eer:Name>

    <eer:BirthDate>1994-02-04</eer:BirthDate>
    <eer:GenderName>male</eer:GenderName>
  </eer:Person>
  <eer:Contact>
    <eer:Address>
      <eer:AddressLine1>1 Main Road</eer:AddressLine1>
      <eer:AddressLine2/>
      <eer:SuburbLocaleName>Gulf Harbour</eer:SuburbLocaleName>
      <eer:TownCityName>AUCKLAND</eer:TownCityName>
      <eer:PostalAddressCode>1234</eer:PostalAddressCode>
    </eer:Address>

    <eer:PhoneNumber>
      <eer:PhoneNumberRole>Contact</eer:PhoneNumberRole>
      <eer:PhoneAreaCode>021</eer:PhoneAreaCode>
      <eer:PhoneLocalNumber>1122334</eer:PhoneLocalNumber>
    </eer:PhoneNumber>

    <eer:PhoneNumber>
      <eer:PhoneNumberRole>Other</eer:PhoneNumberRole>
      <eer:PhoneAreaCode>027</eer:PhoneAreaCode>
      <eer:PhoneLocalNumber>1122334</eer:PhoneLocalNumber>
    </eer:PhoneNumber>
  </eer:Contact>

  <eer:PlacementDetails>
    <eer:ProgrammeNumber>0</eer:ProgrammeNumber>
    <eer:StartDate>2012-02-13</eer:StartDate>
  </eer:PlacementDetails>
</tops:Eligibility>

```

```

<tops:LeftSchoolDate>2011-08-15</tops:LeftSchoolDate>
<tops>LastSecondarySchoolNumber>158</tops>LastSecondarySchoolNumber>
<tops:HighestQualificationLevelCode>C81</tops:HighestQualificationLevelCode>
<tops:LearnerReferrerCode>SCHOOL</tops:LearnerReferrerCode>
<tops:SWNNumber>0</tops:SWNNumber>
<tops:JobSeekerStatusCode>A</tops:JobSeekerStatusCode>
<tops:BenefitCode>DPB</tops:BenefitCode>

<tops:WorkAndIncomeYouthClientIndicator>true</tops:WorkAndIncomeYouthClientIndicator>

<tops:OnYTWWithinLastThreeMonthsIndicator>>false</tops:OnYTWWithinLastThreeMonthsIndicator>
>

<tops:OnTOWWithinLastSixMonthsIndicator>>false</tops:OnTOWWithinLastSixMonthsIndicator>
  <tops:RefugeeStatusGrantedIndicator>>false</tops:RefugeeStatusGrantedIndicator>
  <tops:EligibilityCode>WINZREF</tops:EligibilityCode>
</tops:Eligibility>

<enr:StatisticalInformation>
  <enr:EthnicityCode>111</enr:EthnicityCode>
  <enr:EmploymentHistoryCode>NVR</enr:EmploymentHistoryCode>
  <enr:PriorActivityCode>AS</enr:PriorActivityCode>
  <enr:SpecialLiteracyNeedsIndicator>>false</enr:SpecialLiteracyNeedsIndicator>
</enr:StatisticalInformation>

</tops:Enrolment>

```

Withdrawal schema

Use this transaction to remove a placement with an Active status:

- for a course already started; AND
- where the placement occurred prior to “today”.

This transaction is prescribed by the withdraw.xsd schema.

NOTE: Placements are initially inserted with a status of pending and an overnight process updates the status to active if the course start date has been reached. Pending enrolments can be deleted, active enrolments must be withdrawn (which requires additional data elements).

Example of Withdrawal message

```

<?xml version="1.0" encoding="UTF-8"?>
<wd:Withdrawal
  xmlns:wd="http://tec.govt.nz/forms/withdrawal"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:eer="http://tec.govt.nz/forms/eer"
  eer:UserId="test"
  version="1.0"
  xsi:schemaLocation="http://tec.govt.nz/forms/withdrawal withdraw.xsd">
  <eer:NationalStudentNumber>0</eer:NationalStudentNumber>
  <eer:ProgrammeNumber>222222222</eer:ProgrammeNumber>
  <wd:WithdrawalDetails>

```

```

    <wd:WithdrawalDate>2011-11-10</wd:WithdrawalDate>
    <wd>LastAttendanceDate>2011-10-09</wd>LastAttendanceDate>
  </wd:WithdrawalDetails>
  <wd:LearnerDestination>
    <wd:LearnerDestinationCode>EMP</wd:LearnerDestinationCode>
    <wd:EmployerName>testing inc</wd:EmployerName>
    <wd:HoursPerWeekValue>50</wd:HoursPerWeekValue>

  <wd:LearnerDestinationRelatesToProgrammeIndicator>true</wd:LearnerDestinationRelatesToPro
  grammeIndicator>
    <wd>ContactPersonName>Murray</wd>ContactPersonName>
    <wd>ContactPhoneNumber>
      <eer:PhoneNumberRole>Contact</eer:PhoneNumberRole>
      <eer:PhoneAreaCode>04</eer:PhoneAreaCode>
      <eer:PhoneLocalNumber>4779955</eer:PhoneLocalNumber>

    </wd>ContactPhoneNumber>
  </wd:LearnerDestination>
</wd:Withdrawal>

```

Youth Guarantee enrolment schema

Use this schema to insert a placement on Youth Guarantee programmes.

The transaction is prescribed by the yte.xsd schema. It also draws on the enrolment.xsd and types.xsd schema.

Eligibility

After message validation is performed, eligibility rules are applied. It is not uncommon to submit a valid but ineligible record.

Error messages will sometimes provide reasons for ineligibility, but on other occasions will indicate little more than that the record is ineligible. If there is more than one reason why an enrolment is invalid, only the first problem encountered will be reported.

See the “Targeted Training Funding Guidelines” for comprehensive eligibility information.

Example of Youth Guarantee enrol message

```

<?xml version="1.0" encoding="UTF-8"?>
<yte:Enrolment xmlns:yte="http://tec.govt.nz/forms/enrol/yte"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:eer="http://tec.govt.nz/forms/eer" xmlns:enr="http://tec.govt.nz/forms/enrol"
eer:Comment="" eer:DocumentId="" eer:EdumisNo="303" eer:ProgrammeName="Non-
Trade+Level+1" eer:UserId="dev-apratt" version="1.0"
xsi:schemaLocation="http://tec.govt.nz/forms/enrol/yte yte.xsd">
  <eer:NationalStudentNumber>132719440</eer:NationalStudentNumber>
  <eer:Person>
    <eer:Name>
      <eer:FirstName>Ben</eer:FirstName>
      <eer:MiddleName>Marama</eer:MiddleName>
      <eer:LastName>Biddle</eer:LastName>

```

```

    </eer:Name>
    <eer:BirthDate>1994-02-04</eer:BirthDate>
    <eer:GenderName>male</eer:GenderName>
  </eer:Person>
  <eer:Contact>
    <eer:Address>
      <eer:AddressLine1>10 Midshipman Court</eer:AddressLine1>
      <eer:AddressLine2/>
      <eer:SuburbLocaleName>Gulf Harbour</eer:SuburbLocaleName>
      <eer:TownCityName>AUCKLAND</eer:TownCityName>
      <eer:PostalAddressCode>1234</eer:PostalAddressCode>
    </eer:Address>
    <eer:PhoneNumber>
      <eer:PhoneNumberRole>Contact</eer:PhoneNumberRole>
      <eer:PhoneAreaCode>021</eer:PhoneAreaCode>
      <eer:PhoneLocalNumber>2355962</eer:PhoneLocalNumber>
    </eer:PhoneNumber>
  </eer:Contact>
  <eer:PlacementDetails>
    <eer:ProgrammeNumber>27120001</eer:ProgrammeNumber>
    <eer:StartDate>2012-02-13</eer:StartDate>
  </eer:PlacementDetails>
  <yte:Eligibility>
    <yte:LeftSchoolDate>2010-08-15</yte:LeftSchoolDate>
    <yte:LastSecondarySchoolNumber>54</yte:LastSecondarySchoolNumber>
    <yte:HighestQualificationLevelCode>C80</yte:HighestQualificationLevelCode>
    <yte:EligibilityCode>YG</yte:EligibilityCode>
  </yte:Eligibility>
  <enr:StatisticalInformation>
    <enr:EthnicityCode>111</enr:EthnicityCode>
    <enr:EmploymentHistoryCode>WGY</enr:EmploymentHistoryCode>
    <enr:PriorActivityCode>UNM</enr:PriorActivityCode>
    <enr:SpecialLiteracyNeedsIndicator>>false</enr:SpecialLiteracyNeedsIndicator>
  </enr:StatisticalInformation>
</yte:Enrolment>

```

Appendix

Business rules and eligibility matrix

This document outlines the combinations of elements required to support a successful transaction, in particular for enrolments.

The elements in the enrolment schema are required in differing combinations, depending on the circumstances described in the Funding Guide. The ERS eligibility rules engine will award a valid eligibility code when supplied with sufficient information to satisfy the first criteria it can find in the tree.

Another aspect of the eligibility is the provision of a suitable educational history for each eligibility type. The business rules can be read in conjunction with the Funding Guide to summarise these requirements.

Note the eligibility matrix is provided as a tab in the spreadsheet. It is a guide to which elements are required for each eligibility type.

A soft copy of the matrix is available at <http://www.tec.govt.nz/Resource-Centre/Software-tools/ERS/Developer-information/>

Code examples

Sample code for interfacing to ERS is available for Microsoft environments.

The Microsoft sample code is available at <http://www.tec.govt.nz/Resource-Centre/Software-tools/ERS/Developer-information/>

This code is provided as example source code. TEC does not warrant this code in any way, but you may copy, modify and distribute this code in any way that will assist you to interface to ERS.

Java source code is available on request. Please contact the help desk (helpesk@tec.govt.nz)

Testing your application

The submission of well formed and syntactically valid XML is only part of the challenge in working with ERS. Behind the initial XML validations there lies in wait a business rules checking process that determines if the business rules have been met for any particular transaction. This is most relevant for placement (enrolment) transactions.

The funding guide, eligibility matrix and business rules can be used to determine the various conditions under which an enrolment is deemed valid. You will need to be familiar with these requirements.

Soft copies of example test scripts are available at <http://www.tec.govt.nz/Resource-Centre/Software-tools/ERS/Developer-information/>

Document revision history

This summarises major changes to the document.

Date	Revision	Sections changed	Description of changes
15/11/2005	01		Draft
8/12/2005	02 (V1.0)	Updated schema	Compatible for Schema Versions 1.1
7/02/2006	03 (V1.1)	XML Interface	Expanded explanation of the XML interface mechanism to include commentary on possible batch implementation.
		Youth Guarantee Enrolment	Changed reference from "Funding Guide" to "Targeted Training Funding Guidelines." Amended the description of error handling.
		NSN Validation	Changed "Pending" to "Partial" NSN status.
		Schema Versions	New section added on how schema will be versioned.
		Updated schema	Corrections related to V1.2 schema. Descriptions of schema elements have had information added as to how they correlate to on-screen items in web forms, and list items have descriptions for codes. All XML examples have had encoding changed from "ISO-8859-1" to "UTF-8"
		Login	Maximum size of username and password values restricted to 25 characters.
		Withdrawal schema	Changed Further Training code from FTR to FPT.
		Outcomes schema	Changed Further Training code from FTR to FPT. Changed Other full time training code from OTF to OFT in table.
		Appendix G	New Appendix added to show relationship between the Stats iwi code and the enumerated value in the Types schema.
25/02/2006	04 (V1.2)	Login Schema	Maximum size of username and password values increased to 32 characters from 25.
		Enrolment Schema	SpecialLiteracyNeedsIndicator made mandatory.
		Youth Guarantee Enrolment Schema	EligibilityCodeType ASSESSYT changed to ASSESYT.
		Appendix G	Modified Iwi code table: Removed ERS012 – covered by ERS096, ERS136; Removed ERS053 – covered by ERS056, ERS138; ERS100 – updated MoE code to "n/a"
		PhoneNumber Type	PhoneCountryCode made optional
7/03/2006	05 (V1.2.1)	Repaginated	Corrected helpdesk phone number from 0800 437 737 to 0800 435 737
		Contacts	Changed reference to all tags being lowercase, to all tags being case sensitive and added examples.
		XML Interface Standards	Explanation added.
		Provider Bulk Travel Indicator	Modified example to include more possible fields. Now shows EligibilityCode being supplied as an empty element.
		TOP schema	Modified example to include more possible fields. Now shows EligibilityCode being supplied as an empty element.
		YTE schema	Modified example to include both public and private travel elements

Date	Revision	Sections changed	Description of changes
		<p>Amend schema</p> <p>Withdrawal schema</p> <p>Reply Schema</p> <p>Appendix E</p> <p>Appendix H</p>	<p>Added "HoursPerWeekValue" as a required element for employment outcome.</p> <p>Add "EligibilityCodeReturned" to success message. This will be included in the next release of ERS.</p> <p>Added complete list of error codes into the appendix , for quick reference.</p> <p>Added list of Ethnicity Codes accepted by the system.</p>
18/05/2006	06 (V1.3)	<p>Phone Number Type</p> <p>Types schema</p> <p>Enrolment schema</p> <p>TOP schema</p> <p>YTE schema</p>	<p>Made mandatory, for at least one instance of PhoneNumberType.</p> <p>JSRNumberType Changed description to 1-9 digits, from 7-9 digits.</p> <p>Added note to TravelDetails that this element is not permitted for PPS enrolments.</p> <p>Modified QualificationLevelCodeType table to remove C39 & C40 and include C80 & C81.</p> <p>Modified QualificationLevelCodeType table to remove C39 & C40 and include C80 & C81.</p>
4/12/2006	07 (V1.4)	<p>Links checked</p> <p>ESAA References</p>	<p>Web references and contacts checked and corrected</p> <p>Replaced all references to Tertiary Web Access with ESAA references.</p> <p>Added references to Skill Enhancement information throughout the user guide</p>
29/01/2008	A363645 V1.0	<p>This document's revision number</p> <p>The whole document was edited for readability and correction of out-of-date information.</p> <p>XML schema files now documented automatically</p> <p>Skill Enhancement added</p> <p>IWI and ethnicity codes removed</p>	<p>Changed revision references to TEC's document management system document number and version.</p> <p>The document structure has changed slightly, content removed where it became repetitious. An additional diagram has been added to better illustrate how the schema files relate to each other and to the overall ERS suite of transactions. Too many minor changes to note in detail.</p> <p>Schema definitions have been re-published using the XMLSpy 2005 documenter to guarantee accurate correlation to the schema files. Detailed documentation is now presented on the ERS developer Internet website and have been removed from this document.</p> <p>Documentation for ERS Skill Enhancement enrolment has been added.</p> <p>IWI and ethnicity code tables have been removed from this document as they are detailed in the separate schema documentation.</p>

Date	Revision	Sections changed	Description of changes
10/02/2012	A363645 v3.0	<p>Removed Skill Enhancement</p> <p>Update of schemas</p> <p>Updated links to TEC Website</p> <p>Youth Training</p>	<p>Skill Enhancement is no longer an available fund</p> <p>Updated the following schemas to incorporate the YG and FFTO funds: Types.xsd Amend.xsd Enrolment.xsd Tops.xsd Yte.xsd Outcome.xsd + outcome-multi.xsd</p> <p>Some links pointing to the TEC Website were incorrect, so have updated them to point to the right place</p> <p>Replaced Youth Training with Youth Guarantee</p>