This document introduces you to the capabilities of integrated Business Rules in Progress OpenEdge. Integrating OpenEdge and Corticon enables you to use ABL data structures (such as ProDataSets and temp-tables) as Corticon data structures (Vocabularies and entities). OpenEdge Business Rules provide tooling support for creating and updating Corticon Vocabularies, and runtime support for simple invocation of Corticon Decision Services.

Note: For a step-by-step guide to the workflow involved in integrating OpenEdge Business Rules, see Web Paper: Integrating OpenEdge Business Rules: an end-to-end workflow.
Business rules

Business applications are composed of the following elements:

- Application or infrastructure logic (security, translations, session, and context management)

- Business or domain logic (application of logic and transformations to a set of business data)

Business logic is created from Business Rules. A rule can be discovered in application code by its structure - typically a condition and the related actions when the condition is true, and its content - a business domain such as life insurance.

In a life insurance scenario, a Business Rule condition might take the following form:

- If a policy applicant is a smoker, then she falls into a high-risk category
  Associated action: Update the applicant's status and report that fact

- The sum of a policy's beneficiaries' allocated percentages must be 100
  Associated action: Stop processing any more rules and return a violation event or message

The consequences of such actions are handled by the application that invokes them. The rules do not result in action by themselves, unlike workflows in Business Process Modeling (BPM). This concept allows different workflows or processes to use the same Business Rules (the same set of knowledge) to perform different tasks.

The Corticon Decision Services Methodology in Progress Corticon provides a way for modeling Business Rules.
Decision Services

A Decision Service automates a discrete decision-making task. It is implemented as a set of Business Rules and exposed as a web service or a Java service. By definition, the rules within a Decision Service are complete and unambiguous. For a given set of inputs, a Decision Service addresses every logical possibility uniquely, ensuring decision integrity.

Corticon Studio builds Ruleflows against a Vocabulary that defines a relational data structure against which rules are applied. This relational data structure contains domains, entities, attributes and relationships (including cardinality), and maps to the ABL's ProDataSet and temp-tables.

After they are deployed to the Corticon server, Ruleflows become Decision Services. Multiple versions of a single Decision Services can be deployed concurrently.
Business Rules Server

Corticon Business Rules Server is a high-performance and scalable system resource that manages pools of Decision Services and executes their rules against incoming requests. It can be easily configured as a Web Services server that exposes Decision Services as true Web Services. For the integration described here, the Rules Server must be running as a Web Services server.
When Corticon met ABL

Consider an OpenEdge application that has been broken into a few distinct elements. The abstract schema shown below is the application’s logical data schema, typically implemented in ProDataSets or temp-tables. The application logic has been split into two; it indicates the technology that implements that logic.

Over time, application logic becomes more stable (less volatile), while business logic remains relatively volatile with factors such as time, regulation, competition, per-client customization, and other market factors influencing the volatility.

ABL iterates over and manipulates business data using a common set of commands to operate against either data persisted in a database, or in-memory or abstract representations of that data in temp-tables and ProDataSets. It is also useful in creating application infrastructure. ABL is a traditional programming language, which means that changes to either business or application logic go through a standard design-develop-test-deploy iteration, and require ABL programming skills.

Corticon acts as a service that only provides business logic; it has no application logic elements. Corticon requires little programming skill - mostly conceptual knowledge around IF-THEN-ELSE logic and the concept of navigating through sets of data (iterating over collections) - and is aimed at the Business Analyst-type user. Additionally, Corticon Studio provides visual tools to speed development of vocabularies and the derivative rule artifacts. It also provides tools to discover gaps and overlaps in rules, as well as easy means of testing these rules, which speeds up the development cycle.
Factors for choosing a technology to implement business logic

An application's business logic can be written in either ABL or Corticon. So, there are a number of factors to consider when deciding whether to implement business logic using Corticon or ABL.

The below questions help indicate whether to use Corticon or ABL for business logic. The more questions answered with a YES, the better fit Corticon is.

- Is the business logic the result of relatively complex decisions? Are there many IF-THEN-ELSE blocks and/or CASE statements in the code, relating to setting relatively few, or even just a single, flag or field value(s)?

- Is the business logic customized per customer or tenant (in a multi-tenant model), and who determines the changes in the business logic?

  If changes are per industry (for example, income tax tables) it is more likely that all customers of an application would require an update. If changes are made per customer (for example, with life insurance risk weightings) then the scope of the changes required are limited to that customer.

- Are frequent changes required to the application's business logic, particularly relative to the application vendor's release schedule?

  If business logic changes are relatively infrequent, and releases are relatively frequent, then customers may benefit from the vendor's development and testing expertise, and not have to perform those actions themselves.

- Are business analysts and/or business domain experts readily available at a customer site, but are non-technical?
Integrated development environment

Progress Developer Studio for OpenEdge is the Eclipse-based development environment that helps you:

- Build a user interface and ABL business logic
- Incorporate and manage the application’s data sources
- Run, debug, and deploy ABL code

Progress Corticon is a Business Rules Management System. Its patented "no-coding" rules engine automates sophisticated decision processes. It provides the simple yet powerful Corticon Decision Services Methodology for modeling Business Rules.

Progress Developer Studio for OpenEdge and Progress Corticon are standalone Eclipse-based development environments, so they can be integrated into a single Eclipse environment. Corticon Studio and Corticon Server are separate products and are not packaged with OpenEdge. So you must install Progress Corticon and Progress Developer Studio for OpenEdge separately.
Key roles

Business rules for OpenEdge are intended for programmers who want to develop OpenEdge applications that contain both ABL and Corticon elements.

The following typical roles are involved in ABL and Corticon interaction in an OpenEdge application:

- ABL developers who use Corticon for development and testing and have both, Progress Developer Studio for OpenEdge and Corticon Studio, in the same environment.

- ABL developers who develop and test ABL (unaware of Corticon Studio usage) and share ABL Application development with an ABL developer using Corticon Studio.

The above two types of ABL developers would use Progress Developer Studio for OpenEdge to:

- Develop and/or update ABL business logic
- Export ABL schema: ProDataSets and temp-tables to a Business Rules Vocabulary Definition file
- Add OpenEdge.BusinessRules.pl to the project PROPATH
- Create ABL code to connect to the Business Rules server using Business Rules API and integrate it into the application, and to call Decision Services in the application's Business Entities (or equivalent business logic)

- Business Analysts (domain experts well aware of Corticon Studio usage) who use Corticon Studio to:

  - Import ABL schema as Vocabulary
  - Create Rulesheets and Ruleflows in Corticon Studio
  - Test Ruleflows in Corticon Studio
  - Deploy Ruleflows as Decision Services to the Corticon Server

- Business end-users who want to customize rules as per their business requirements.

- Application Partners, developers at customer sites, provided with source code in which ABL and rules are packaged together.
Business use cases

This section describes the business use cases for development and deployment in an OpenEdge-Corticon integrated environment.

For a detailed description of the workflow involved in an end-to-end scenario of an OpenEdge-Corticon integrated environment, see Web Paper: Integrating OpenEdge Business Rules: an end-to-end workflow.

Business use cases: Development

(Primary) Use case 1(a): Single developer in Progress Studio for OpenEdge

Consider a case where, as a developer in Progress Developer Studio for OpenEdge, familiar with ABL and OpenEdge programming, you want to create a Ruleset using Corticon.

Requirement: To evaluate customers based on recent sales of products, location, and an evaluation by the sales representative of intangibles like friendliness and quality of customer relationship.

In this use case, you create a UI for the sales representative to enter data in a Mobile application, and then respond with the evaluation criteria.

Prerequisites: Assume that you have met the following prerequisites:

- Installed Progress Developer Studio for OpenEdge.
- Installed Corticon Studio in the same Eclipse instance as Progress Developer Studio for OpenEdge.
- Installed Corticon developer runtime for OpenEdge in the Tomcat server included with Progress Developer Studio for OpenEdge.

After meeting all the prerequisites, you execute the following stages of tasks:

Stage 1: Make the ABL components work

1. Start Progress Developer Studio for OpenEdge.
2. Create a UI in a Mobile application that has the expected input values for the sales representative (SaleRep) to enter values for the following intangibles:
   - How is your relationship with the customer? (Good/Bad/Excellent)
   - How would you rate the mood of the customer on a scale of 1 to 10, 1 being the worst? (1-10)
   - Is there a defining event that will drive the sale? (Yes, No)
   - When is this event likely to take place? (In 1 week, In 1 month, In 1 Q)
   - Does the customer have a budget? [Yes (>95%), Probably yes (>50%), Probably no (<50%)]
3. Create a response screen to test the UI that returns two values:
   - Likelihood of sale (probability)
   - Target acceptable discount (%)
   - Test the UI and perform ABL-only simple return cases to validate the UI.
   When it starts working, use Corticon for business logic.

4. Define a ProDataSet that generates the Vocabulary expected for the rules.
   The ProDataSet is named SalesSentimentAnalysis and contains the following:
   - Sentiment input (as in Step 2)
   - Sentiment output (as in Step 2)
   - Data from the sales tracking system
     - For the last 10 sales to the customer:
       - Date of first contact
       - Estimate of sale at first contact
       - Date of closing
       - Size of the deal at closing
     - Customer tier (Premier, Gold, or Standard)
     - Customer End-of-Fiscal-Year date
   - Other data:
     - Current date
     - SalesRep tier (ProClub, MeetsExpectations, Other)
     - Close of quarter date

5. Export SalesSentimentAnalysis to a Business Rules Vocabulary Definition (.brvd) file.

6. Create a new SalesSentiment Rules project in Progress Developer Studio for OpenEdge.

7. After the Vocabulary is imported, create some Rulesets, such as:
   - If Customer.Mood is greater than 8, then saleprobability is HIGH.
   - If Customer.Relationship is BAD, then saleprobability is LOW.
   - If Customer.DaysRemainingInFiscalYear < 30, then discount = 0%
• If Salerep.DaysRemainingInQuarter <10, then discount = 40%

**Note:** The values of DaysRemainingInFiscalYear and DaysRemainingInQuarter are newly calculated fields added to the Vocabulary in Corticon.

8. Complete testing the integration with ABL:

   a. In Progress Developer Studio for OpenEdge, deploy SalesSentimentAnalysis to the Development Corticon runtime in the Progress Developer Studio for OpenEdge Tomcat server.

   b. In ABL, pass the ProDataSet to the SalesSentimentAnalysis Ruleset.

      The results are displayed in the Mobile UI.

9. Validate the basic flow and then:

   a. Create ABL test cases to validate the call to OpenEdge Business Rules.

   b. Check in the ABL projects, the Corticon project, and the test cases.

**Stage 2: Refine the rules and Vocabulary**

To refine the rules, do the following:

1. Go back to the Corticon project or perspective and add new rules to the existing ones.

2. Test the rules and add new test cases.

3. Redeploy the new rules to the Tomcat server.

4. Add new ABL tests to the existing ones.

There can be two cases when the Vocabulary must be refined:

• You have to pass in a new variable: CEODirective (If CEODirective = 'DOUBLESALES' then increase discount by 10%)

• You realize that you have never used Customer.State, so you decide to remove it from the ProDataSet

To refine the Vocabulary:

1. In Progress Developer Studio for OpenEdge, change the ProDataSet and re-export it to the Business Rules Vocabulary Definition file.

2. In Corticon, re-import the Vocabulary in which:

   • The two fields, DaysRemainingInFiscalYear and DaysRemainingInQuarter, still exist

   • The rules (if any) that used Customer.State are marked invalid

3. Add the CEODirective rules, test and deploy them.
4. Update the ABL code to test the new cases.

Use case 1(b): ABL developers working with Business Analysts

Requirements: This use case has the following requirements:

- As a business analyst you want to:
  - Create a set of complex rules to represent real business logic used by an OpenEdge application.
  - Know which data you can work with for writing these rules, and test and complete your work with minimal real-time interaction with ABL or OpenEdge.

- As a PDSOE developer, familiar with ABL and OpenEdge programming, you want to easily exchange information on data structures with the business analysts, and quickly incorporate their work in your code base.

- As an OpenEdge Quality Analyst, you want to run or test the application and ensure that the rules work seamlessly with the OpenEdge ABL code.

Prerequisites: Assume that you have met the following prerequisites:

- Installed Progress Developer Studio for OpenEdge.
- Installed Corticon Studio in the same Eclipse instance of Progress Developer Studio for OpenEdge.
- Bob, a business analyst installed Corticon Studio on a different machine.
- Developers, including you, installed Corticon Developer runtime on their Progress Developer Studio for OpenEdge machines.
- Another developer, Ana, has not installed Corticon developer runtime on her Progress Developer Studio for OpenEdge machine, but has access to a centrally installed QA Integration machine where the Corticon Server is installed.

This use case involves the following stages of tasks:

Stage 1: Agree on Vocabulary and terminology

The assumption here is that you and Bob agree on what is important for this use case up front. Consider that you have met Bob in advance, or at least communicated with him at some level to:

- Determine the data available in the database
- Prototype the Vocabulary schema using a UML editor or Corticon

Consider that only you have the above list of points that were agreed upon. At this point, you execute the same tasks as in the “(Primary) Use case 1(a): Single developer in Progress Studio for OpenEdge” section on page 10.
Stage 2: Get the ABL components working

1. As an ABL developer, you start Progress Developer Studio for OpenEdge.

Your workflow is almost identical to Stage 1: Make the ABL components work of Use Case 1(a) and your goal is to:

- Define a ProDataSet that matches the schema (input and output)
- Create a basic project for Corticon that contains the Business Rules Vocabulary Definition and some simple test cases
- Define ABL procedures that use this service
- Define ABL procedures for QA to test this service

2. Once you have achieved your goals, pass on the skeleton project to Bob.

3. Configure a test server for the other developers to use.

   The build process is configured to populate the server Ruleset as part of the build. Ana (and other ABL developers) can automatically point to this server if they open your ABL project.

Stage 3: Refine the rules and Vocabulary

Unlike the (Primary) Use case 1(a): Single developer in Progress Studio for OpenEdge, in this case, you will not refine the rules. The Business Analyst, Bob, performs this task.

To refine the rules, Bob:

1. Installs Corticon studio on his machine.

2. Checks out or opens the Corticon Rules project that you provide.

3. Ensures that he can run your test cases.

4. Modifies the rules by:

   - Adding new rules to existing Rulesets
   - Adding new Ruleflows as appropriate
   - Adding new fields to the Vocabulary
   - Adding test cases for each new situation

5. Checks the rules back into the source control.

There can be the following two cases when Bob must refine the Vocabulary:

- He wants to add a new variable or field: **CEODirective** (If CEODirective = 'DOUBLESALES' then increase discount by 10%)

- He realizes he has never used **Customer.State**, so he decides to remove it from the ProDataSet
To refine the Vocabulary:

1. Bob informs you about the changes.

2. You access Progress Developer Studio for OpenEdge and do the following:
   a. Add the new ProDataSet elements.
   b. Re-export the ProDataSets to the Business Rules Vocabulary Definition file.
   c. Re-import it locally and modify the Corticon project.
   d. Test it and change the ABL code to invoke the Ruleset.

3. You then give Bob the modified project.

4. Bob adds new rules or modifies the existing ones.

5. Bob checks the rules into the source control.

Stage 4: Provide the rules to ABL developers and Quality Analysts

To provide the rules to the ABL developers and for testing purposes:


2. The build validates the rules and deploys them to the integration domains.

3. The QA tests use the integrated Corticon Server.

4. The developers can continue development by doing either of the following:
   
   • You (and other developers that have Corticon installed locally) can deploy the Ruleset locally to the Tomcat server in Progress Developer Studio for OpenEdge
   • Ana (and other developers who do not have Corticon installed) can run your ABL code (as required) by changing the configuration to have their local environment (ABL setup) point to the QA or integration machine.
Use case 1(c): Business analysts or users modifying rules after deployment to customer sites

Requirement: A customer wants to customize the Business Rules that are called by an OpenEdge-based application.

Assume that you, Ana, and Bob have developed a sales automation tool in OpenEdge that has been sold to a variety of end-users. As part of a consulting arrangement or installation setup, a business end-user has been supplied with the following:

- A copy of Corticon Studio
- A project for SalesSentimentAnalysis that contains:
  - Default rules supplied by you and the other developers
  - Test cases (.ert) files for all the rules

This use case involves the following stages of tasks:

Stage 1: Refine the rules

To refine the rules, the business user:

- Reviews the rules and adds new test cases that represent key use cases.
- Modifies the rules using Corticon Studio by:
  - Changing thresholds
  - Changing the priority or overriding the nature of some rules
  - Modifying the sentiment-based rules to match the company's rules
- Tests the new rules, saves the project, and calls in the consultants again.

Stage 2: Update the rules in production

Some combination of business users and/or developers deploy the new Rulesets to the working Corticon Servers that host the rules. The rules cannot be modified in terms of input or output Vocabulary. The new rules go into effect when published.
Business use cases: Deployment

To deploy rules without issues, we recommend that you consider the following:

- Check the new Rulesets (Rules project) into source control and build from there
- Try the rules first in a test environment, and then deploy them to production

Use case 2(a): Rules and ABL deployed as one package

Requirement: To treat the ABL code and the created Rulesets as one package, so that when the application is installed at a customer site all the pieces work seamlessly together.

Consider that CaseAB has created a Sales Automation tool that includes a **SalesSentimentAnalysis** component based on OpenEdge Business Rules. CaseAB has sold this to an end-user: Enders, Inc, who wants to deploy the entire package.

This use case involves the following stages of tasks:

Stage 1: Deploy an OpenEdge Corticon application

To deploy an OpenEdge Corticon application, CaseAB does the following:

1. Installs the OpenEdge application at Enders, Inc.
2. Installs Corticon Server (with or without the embedded Tomcat server), in addition to traditional ABL components (Web Server, Clients, AppServer, Sonic Adapter, Admin Servers, OEM, etc.) on a machine accessible to the ABL clients that call it.
3. Configures the server with the Ruleset for **SalesSentimentAnalysis**.
4. Opens the web service ports and URLs to this server.
5. Configures the ABL code to use this URL as the location of the OpenEdge Business Rules service.

Use case 2(b): Rules are modified after deployment of ABL and changed regularly

Requirement: To be able to customize the Business Rules called by an OpenEdge-based application and supplied by an application partner.

This use case is identical to Use case 2(a): Rules and ABL deployed as one package, where the developer is a business end-user at a post-deployment site.
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OVERVIEW
This package contains C software to implement JPEG image compression and decompression. JPEG (pronounced "jay-peg") is a standardized compression method for full-color and gray-scale images. JPEG is intended for compressing "real-world" scenes; line drawings, cartoons and other non-realistic images are not its strong suit. JPEG is lossy, meaning that the output image is not exactly identical to the input image. Hence you must not use JPEG if you have to have identical output bits. However, on typical photographic images, very good compression levels can be obtained with no visible change, and remarkably high compression levels are possible if you can tolerate a low-quality image. For more details, see the references, or just experiment with various compression settings. This software implements JPEG baseline, extended-sequential, and progressive compression processes. Provision is made for supporting all variants of these processes, although some uncommon parameter settings aren't implemented yet.

For legal reasons, we are not distributing code for the arithmetic-coding variants of JPEG; see LEGAL ISSUES. We have made no provision for supporting the hierarchical or lossless processes defined in the standard.

We provide a set of library routines for reading and writing JPEG image files, plus two sample applications "cjpeg" and "djpeg", which use the library to perform conversion between JPEG and some other popular image file formats. The library is intended to be reused in other applications.

In order to support file conversion and viewing software, we have included considerable functionality beyond the bare JPEG coding/decoding capability; for example, the color quantization modules are not strictly part of JPEG decoding, but they are essential for output to colormapped file formats or colormapped displays. These extra functions can be compiled out of the library if not required for a particular application. We have also included "jpegtrans", a utility for lossless transcoding between different JPEG processes, and "rdjpgc" and "wrjpgc", two simple applications for inserting and extracting textual comments in JFIF files.

The emphasis in designing this software has been on achieving portability and flexibility, while also making it fast enough to be useful. In particular, the software is not intended to be read as a tutorial on JPEG. (See the REFERENCES section for introductory material.) Rather, it is intended to be reliable, portable, industrial-strength code. We do not claim to have achieved that goal in every aspect of the software, but we strive for it.

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The Unix configuration script "configure" was produced with GNU Autoconf.
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The same holds for its supporting scripts (config.guess, config.sub, ltconfig, ltmain.sh). Another support script, install-sh, is copyright by M.I.T. but is also freely distributable.

It appears that the arithmetic coding option of the JPEG spec is covered by patents owned by IBM, AT&T, and Mitsubishi. Hence arithmetic coding cannot legally be used without obtaining one or more licenses. For this reason, support for arithmetic coding has been removed from the free JPEG software. (Since arithmetic coding provides only a marginal gain over the unpatented Huffman mode, it is unlikely that very many implementations will support it.)

So far as we are aware, there are no patent restrictions on the remaining code.

The IJG distribution formerly included code to read and write GIF files.

To avoid entanglement with the Unisys LZW patent, GIF reading support has been removed altogether, and the GIF writer has been simplified to produce “uncompressed GIFs”. This technique does not use the LZW algorithm; the resulting GIF files are larger than usual, but are readable by all standard GIF decoders.

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A "png_get_copyright" function is available, for convenient use in "about" boxes and the like:

```c
printf("%s",png_get_copyright(NULL));
```

Also, the PNG logo (in PNG format, of course) is supplied in the files "pngbar.png" and "pngbar.jpg" (88x31) and "pngnow.png" (98x31).

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Glenn Randers-Pehrson

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September 1, 2001

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zlib 1.1.3 is a general purpose data compression library. All the code is thread safe. The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files ftp://ds.internic.net/rfc/rfc1950.txt (zlib format), rfc1951.txt (deflate format) and rfc1952.txt (gzip format). These documents are also available in other formats from ftp://ftp.uu.net/graphics/png/documents/zlib/zdoc-index.html

All functions of the compression library are documented in the file zlib.h (volunteer to write man pages welcome, contact jloup@gzip.org). A usage example of the library is
given in the file example.c which also tests that the library is working correctly. Another example is given in the file minizip.c. The compression library itself is composed of all source files except example.c and minizip.c.

To compile all files and run the test program, follow the instructions given at the top of Makefile. In short "make test; make install" should work for most machines. For Unix: "configure; make test; make install"

For MSDOS, use one of the special makefiles such as Makefile.msc.

For VMS, use Make_vms.com or descrp.mms.

Questions about zlib should be sent to <zlib@quest.jpl.nasa.gov>, or to Gilles Vollant <info@winimage.com> for the Windows DLL version.

The zlib home page is http://www.cdrom.com/pub/infozip/zlib/

The official zlib ftp site is ftp://ftp.cdrom.com/pub/infozip/zlib/

Before reporting a problem, please check those sites to verify that you have the latest version of zlib; otherwise get the latest version and check whether the problem still exists or not.

Mark Nelson <markn@tiny.com> wrote an article about zlib for the Jan. 1997 issue of Dr. Dobb's Journal; a copy of the article is available in http://web2.airmail.net/markn/articles/zlibtool/zlibtool.htm

The changes made in version 1.1.3 are documented in the file ChangeLog.

The main changes since 1.1.2 are:

- fix "an inflate input buffer bug that shows up on rare but persistent occasions" (Mark)
- fix gzread and gztell for concatenated .gz files (Didier Le Botlan)
- fix gzseek(..., SEEK_SET) in write mode
- fix crc check after a gseek (Frank Faubert)
- fix miniunzip when the last entry in a zip file is itself a zip file (J Lillge)
- add contrib/asm586 and contrib/asm686 (Brian Raiter)

See http://www.muppetlabs.com/~breadbox/software/assembly.html

- add support for Delphi 3 in contrib/delphi (Bob Dellaca)
- add support for C++Builder 3 and Delphi 3 in contrib/delphi2 (Davide Moretti)
- do not exit prematurely in untgz if 0 at start of block (Magnus Holmgren)
- use macro EXTERN instead of extern to support DLL for BeOS (Sander Stoks)
- added a FAQ file
plus many changes for portability.

Unsupported third party contributions are provided in directory "contrib". A Java implementation of zlib is available in the Java Development Kit 1.1 at http://www.javasoft.com/products/JDK/1.1/docs/api/Package-java.util.zlib.html

See the zlib home page http://www.cdrom.com/pub/infozip/zlib/ for details.

A Perl interface to zlib written by Paul Marquess <pmarquess@bfsec.bt.co.uk> is in the CPAN (Comprehensive Perl Archive Network) sites, such as:

A Python interface to zlib written by A.M. Kuchling <amk@magnet.com> is available in Python 1.5 and later versions, see http://www.python.org/doc/lib/module-zlib.html

A zlib binding for TCL written by Andreas Kupries <a.kupries@westend.com> is available at http://www.westend.com/~kupries/doc/trf/man/man.html

An experimental package to read and write files in .zip format, written on top of zlib by Gilles Vollant <info@winimage.com>, is available at http://www.winimage.com/zLibDll/unzip.html and also in the contrib/minizip directory of zlib.

Notes for some targets:

- To build a Windows DLL version, include in a DLL project zlib.def, zlib.rc and all .c files except example.c and minigzip.c; compile with -DZLIB_DLL

The zlib DLL support was initially done by Alessandro Iacopetti and is now maintained by Gilles Vollant <info@winimage.com>. Check the zlib DLL home page at http://www.winimage.com/zLibDll

From Visual Basic, you can call the DLL functions which do not take a structure as argument: compress, uncompress and all gz* functions.

See contrib/visual-basic.txt for more information, or get http://www.tcfb.com/dowseware/cmp-z-it.zip

- For 64-bit Irix, deflate.c must be compiled without any optimization. With -O, one libpng test fails. The test works in 32 bit mode (with the -n32 compiler flag). The compiler bug has been reported to SGI.

- zlib doesn't work with gcc 2.6.3 on a DEC 3000/300LX under OSF/1 2.1 it works when compiled with cc.

- on Digital Unix 4.0D (formely OSF/1) on AlphaServer, the cc option -std1 is necessary to get gzprintf working correctly. This is done by configure.

- zlib doesn't work on HP-UX 9.05 with some versions of /bin/cc. It works with other compilers. Use "make test" to check your compiler.

- gzdopen is not supported on RISCOS, BEOS and by some Mac compilers.

- For Turbo C the small model is supported only with reduced performance to avoid any far allocation; it was tested with -DMAX_WBITS=11 -DMAX_MEM_LEVEL=3
For PalmOs, see http://www.cs.uit.no/~perm/PASTA/pilot/software.html
Per Harald Myrvang <perm@stud.cs.uit.no>

Acknowledgments:

The deflate format used by zlib was defined by Phil Katz. The deflate and zlib
specifications were written by L. Peter Deutsch. Thanks to all the people who reported
problems and suggested various improvements in zlib; they are too numerous to cite
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