General Features

- Automates all DataPower administration tasks -- configuration export, configuration import, copying files to the appliance, deleting files on the appliance, backups, quiescence and many others.

- Does not require any knowledge of DataPower CLI commands or SOMA/AMP XML management interface or XSLT; all you need is basic understanding of Apache Ant to get started.

- DPBuddy can be used to implement a build/deployment process of any complexity, including the one recommended by IBM. A suggested process accompanied by detailed examples is documented in DPBuddy's User Guide.

- DPBuddy comes with detailed documentation, samples and templates to quickly get you started.

- Works well with your build/deployment management tool of choice -- Jenkins/Hudson, Bamboo, Rundeck, Chef, Ansible, etc.

- Close integration with Ant and Groovy/Gradle; Apache Maven is supported as well.

- Ability to easily create environment-neutral templates out of exported DataPower configuration files; Ant/Groovy/Gradle variables can be used anywhere in any file managed by DPBuddy.

- Can be used from Eclipse for development of XSLT and other DataPower-related artifacts.

- Facilitates and simplifies integration with version control.

- Powerful and easy-to-use XML transformation capabilities supported by key DPBuddy functions (export, import, copy). You can add/delete/modify any XML element/attribute or text based on XPath or based on DataPower type and object names. Transformations can be used in addition to or in conjunction with DataPower deployment policies to prepare configuration and other files for deployment into target environment. Transformation declarations can be reused across multiple tasks or scripts. Defining the transformations requires no knowledge of XSLT.

- All key commands support regular expression patterns defining what services, objects and files to apply the commands to. You can select objects based on matching object type (class) and/or object name. E.g., you can export only the objects with matching names and types or only the objects with matching names irrespective of their types.

- All DPBuddy commands parse the response from the device and present it in a nicely formatted way; you never need to deal with raw XML or SOAP.

- Sophisticated logic for validating the state of imported configuration -- DPBuddy will check the operational state, verify that services are listening on ports and automatically pull the relevant error messages form DataPower logs in case of issues.

- Execution of all potentially disruptive DPBuddy commands is audited. DPBuddy creates an XML-based audit log of all changes made to a domain. The audit log is kept locally as well as in each domain where changes occurred. The audit log captures names of updated configuration objects, information about uploaded files, user names and other relevant data elements.

Configuration Import

- Imported configuration and files can be transformed using XPath-based transformation functions. Transformations can be applied to both XML and ZIP import formats. DPBuddy will automatically un-zip/re-zip archives when needed.

- Imported files can contain Ant and Groovy/Gradle variables that will be resolved automatically.

- Support for deployment policies and the use of Ant/Groovy/Gradle variables (in addition to DataPower Version 6 variables).

- Detailed report explaining what objects and files have been imported.

- Special "transformOnly" mode to help develop configuration transformation policies.

Checkpoints and Rollbacks

- Checkpoints could be created automatically as part of configuration import.

- Support for rollbacks, including rollback to the last checkpoint.

- Automatic rollback in case of import errors.

- Cleanup/deletion of checkpoints based on patterns.

File Management

- Ability to copy files to the appliance in bulk; supports all the capabilities of the regular Ant copy command.

- DPBuddy's copy command automatically reproduces local directory structure on the device.

- Any XML file can be transformed on the fly using DPBuddy's XML transformation capabilities.

- References to variables are automatically resolved.

- Delete command can remotely delete files and directories based on matching regular expression patterns.

- You can download multiple files, directories or directory trees from the device. The remote directory structure will be replicated locally.

State and Status Verification

- DPBuddy is able to verify operational state of DataPower services and objects and report the objects that are not in the desired state. DPBuddy will automatically scan the DataPower log and display error messages related to the objects in question to facilitate troubleshooting. This function can be executed after importing configuration to ensure that all imported objects started successfully. Additionally, state and status verification functions can be used to perform operational monitoring of DataPower appliances.

- DPBuddy is capable of querying the state of DataPower services and verifying that the services are actually listening on ports.

- DPBuddy provides a generic "assertStatus" command that allows for retrieving run-time parameters of any object and validating that the parameters meet certain conditions. The conditions are defined using Groovy expressions.

Configuration Export

- You can use regular expressions to define what objects and object types to export.

- Export automatically formats exported XML configuration and removes unneeded elements. This makes it easy to keep DataPower configuration files under version control.

- Exported configuration could be transformed "on the fly" to create "templatized" configuration files.

- Support for zip and XML configuration formats.

- Support for deployment policies (similar to the "Export Configuration" DataPower WebGUI screen).

Log Analysis

- Ability to "tail" remote DataPower logs and search for patterns. "tail" can be run in continuous mode similar to "tail -f" Unix command. You can tail logs across multiple domains; DPBuddy will consolidate relevant log entries.

- Support for setting log levels on the device.

- Ability to add a log entry to the DataPower log; useful for auditing/tracking purposes.

Quiescence Support

- DPBuddy supports quiescence/un-quiescence of an entire domain or specific services. As with many other DPBuddy tasks, you can select the services using regular expressions.

- DPBuddy will automatically wait for a configured period of time for all services and objects to reach their target operational state after quiescence/un-quiescence. DPBuddy will report all objects that failed to reach this state.

Backup Support

- You can backup one or multiple domains with a single DPBuddy command; domains are selected based on patterns.

- Support for secure backups; secure backup files are automatically downloaded from the device for archiving once the backup is done.

Cache Management

- Ability to flush stylesheet and XML document caches for one or multiple or all XML managers; useful for frequent remote file updates during development.

- You can use DPBuddy to flush DNS, RBM and various other DataPower caches.

Domain Management

- Support for domain reset and restart.

- Support for deleting/creating domains.

Miscellaneous Functions

- Supports dynamic management of load-balancing group members, including disabling/enabling and addition of members.

- Flexible mechanism for defining environment properties. For example, common properties can be defined at a device level; more specific ones can be specified at a domain level. Environment properties (or any other Ant or Groovy/Gradle variable) can be referenced in any DataPower configuration file managed by DPBuddy.

- DPBuddy can be easily extended by defining XML templates utilizing DataPower XML management interface (SOMA). The templates can be embedded inside DPBuddy tasks or defined externally.