KIP-887: Add ConfigProvider to make use of environment variables

Status

Current state: *Accepted*

Discussion thread: *here*

JIRA:
> ⚠️ *Unable to render Jira issues macro, execution error.*

Please keep the discussion on the mailing list rather than commenting on the wiki (wiki discussions get unwieldy fast).

Motivation

So far it is not possible to inject additional configurations stored in environment variables. This topic came up in several projects and would be a useful feature to have as a Kafka config feature similar to file/directory providers, example configuration:

> *config.providers=env*
>
> *config.providers.env.class=org.apache.kafka.common.config.provider.EnvVarConfigProvider*
>
> *ssl.key.password=${env:KEY_PASSPHRASE}*

Public Interfaces

A new implementation of the interface **org.apache.kafka.common.config.provider.ConfigProvider** will be added.

Affected components:

- org/apache/kafka/common

The provider will expose a configuration to restrict the environment variables accessing by the provider.

Name: allowlist.pattern
Type: String
Documentation: A pattern / regular expression that needs to match for environment variables to be used by this config provider
Default: .*

Proposed Changes

A class **EnvVarConfigProvider** implementing the **ConfigProvider** interface will be added. Core functionality is to provide the map returned by **System.getEnv()** via the get methods of the **ConfigProvider**.

Example implementation: https://github.com/Schm1tz1/kafka-config-provider-env-var was already added to https://github.com/Schm1tz1/kafka/tree/kip-887

Compatibility, Deprecation, and Migration Plan

No compatibility issues as this will add a new separate functionality and configuration options.

Test Plan

No breakages expected. Integration testing with a client (producer/consumer) along with unit testing should be sufficient.

Rejected Alternatives

No currently known alternatives with a provider. One existing workaround that some implementations use are templates for configs and scripts to replace environment variables.