KIP-96 - Add per partition metrics for in-sync and assigned replica count

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

Currently Kafka only reports metrics on the in-sync state of a partition, but does not give finer level detail on the number of in- / out-of- sync replicas per partition.

This proposal would add the number of in-sync replicas, as well as the number of replicas per topic-partition, as reported by the partition leader.

Public Interfaces

Monitoring

This proposal would add the following two yammer metrics (and resulting JMX metrics):

- `"kafka.cluster:type=Partition,name=InSyncReplicasCount,topic={topic},partition={partition}"` – one gauge per topic partition leader
- `"kafka.cluster:type=Partition,name=ReplicasCount,topic={topic},partition={partition}"` – one gauge per topic partition leader

Proposed Changes

This proposal would add the yammer gauges described above to the kafka.cluster.Partitions class, similar to the existing "UnderReplicated" metric in that class.

Performance impact should be minimal, since the new metrics rely on the same information already used to define the "UnderReplicated" metric.

Compatibility, Deprecation, and Migration Plan

- *The change is fully backwards compatible.*
- *Users relying on custom MetricsReporter implementations would have to support the new metrics.*

Rejected Alternatives

None